The Journal of Indian Thought and Policy Research

(द जर्नल ऑफ इण्डियन थॉट एण्ड पॉलिसी रिसर्च) (English & Hindi Bilingual Research Journal)

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सम्पादकीय

लोक व्यवहार में हम चेतन जीवों के शरीर में प्रकट रुग्णता को उनका अस्वस्थ होना कहते हैं. लेकिन भारतीय चिन्तन में स्वास्थ्य का व्यापक स्वरूप और आयाम है। व्यक्ति से लेकर सृष्टि तक प्रकृति में जो भी विकार आते हैं, वह सब अस्वस्थता के ही लक्षण हैं, उसे समझे बिना स्वास्थ्य की अवधारणा का बोध नहीं हो सकता। पृथ्वी के सभी जड़ एवं चेतन तत्व की एक विशेष गुण-धर्म और संतुलन की अवस्था होती है। यह अवस्था विशेष उनका मुल भाव, स्थान या स्वरूप है। जब इनमें किसी प्रकार की विकृति आ जाती है या इनके गुण, कर्म और स्वभाव अपने स्थान से च्युत हो जाते हैं तब वे अस्वस्थ कहे जाते हैं अर्थात् स्व स्थान से च्युत की अवस्था को ही अस्वस्थ होना कहा जाता है। व्यक्ति के गुण, धर्म एवं स्वभाव में विकृति का उसके दैहिक स्वास्थ्य पर प्रत्यक्ष प्रभाव दिखाई पड़ता है, जबकि अप्रत्यक्ष प्रभाव सम्पूर्ण समाज पर भी पड़ता है। समष्टि की विकृति के प्रभाव से सभी का प्रभावित होना स्वाभाविक है, इसलिए स्वास्थ्य पर विमर्श केवल व्यक्ति के स्वास्थ्य तक ही सीमित नहीं हो सकता, इसमें सभी को समाहित करना पड़ेगा। जड़ और चेतन के अनुसार इस पर विमर्श के भिन्न-भिन्न क्षेत्र हो सकते हैं, जैसे- प्रदूषण, पर्यावरण असंतूलन, आहार-विहार में विकृति आदि-आदि।

अतः स्पष्ट है कि जहाँ तक मानव के स्वास्थ्य का प्रश्न है वह केवल मानव के शरीर पर ही निर्भर नहीं है बल्कि उसके आहार-विहार, व्यवहार, चिंतन, प्रकृति, परिवेश और पर्यावरण के द्वारा प्रभावित होता है। शरीर-क्रिया विज्ञान के अध्ययन से शारीरिक व्याधि को तो समझा जा सकता है, लेकिन उसके कारण और निदान के लिए उन सभी तत्त्वों को समझना आवश्यक है जिनसे उसका सम्बन्ध है। व्यक्ति की व्याधि से प्रारंभ कर उसके आहार-विहार, भाव, संस्कार, परिवेश सभी को समझे बिना निदान संभव नहीं है। आयुर्वेद में स्वस्थ व्यक्ति की परिभाषा इस प्रकार बताई है-

> समदोषः समाग्निश्च समधात् मलक्रियाः। प्रसन्नात्मेन्द्रियमनाः स्वस्थः इत्यभिधीयते।।¹

जिस व्यक्ति के दोष (वात, पित्त और कफ) समान हों, अग्नि सम हो, सात धातुयें भी सम हों, तथा मल भी सम हो, शरीर की सभी क्रियायें सम भाव में हों, इसके अलावा मन, सभी इंद्रियाँ तथा आत्मा प्रसन्न हो, वह मनुष्य स्वस्थ कहलाता है । यहाँ 'सम' का अर्थ 'संतुलित' (न बहुत अधिक न बहुत कम) है।

आचार्य चरक के अनुसार स्वास्थ्य की परिभाषा-सममांसप्रमाणस्त् समसंहननो नरः।

स्थ्रत संहिता, सूत्रस्थान 15/10

दृढेन्द्रियो विकाराणां न बलेनाभिभूयते।। क्षुत्पिपासातपसहः शीतव्यायामसंसहः। समपक्ता समजरः सममांसचयो मतः।।²

अर्थात् जिस व्यक्ति का मांस धातु समप्रमाण में हो, जिसका शारीरिक गठन समप्रमाण में हो, जिसकी इन्द्रियाँ थकान से रहित सुदृढ़ हों, रोगों का बल जिसको पराजित न कर सके, जिसका व्याधिक्ष समत्व बल अर्थात प्रतिरक्षा बढ़ी हुई हो, जिसका शरीर भूख, प्यास, धूप, शीत को सहन कर सके, जिसका शरीर व्यायाम को सहन कर सके, जिसकी पाचनशक्ति (जठराग्नि) संतुलित अवस्था में कार्य करती हो, निश्चित कालानुसार ही जिसका बुढ़ापा आये, जिसमें मांसादि की चय-उपचय क्रियाएँ समान होती हों- ऐसे दस लक्षणों लक्षणों वाले व्यक्ति को आचार्य चरक ने स्वस्थ माना है।

स्वास्थ्य के नियम आधारभूत ब्रह्मांडीय एकता पर निर्भर हैं। ब्रह्मांड एक सिक्रय इकाई है, जहाँ प्रत्येक वस्तु निरन्तर परिवर्तित होती रहती है; कुछ भी अकारण और अकस्मात् नहीं होता और प्रत्येक कार्य का प्रयोजन और उद्देश्य हुआ करता है। स्वास्थ्य को व्यक्ति के स्व और उसके परिवेश से तालमेल के रूप में परिभाषित किया जा सकता है। विकृति या रोग होने का कारण व्यक्ति के स्व का ब्रह्मांड के नियमों से ताल-मेल न होना या बिगड जाना है।

स्वास्थ्य के सम्बन्ध में आयुर्वेद की व्यापक अवधारणा के अनुसार मानव के समष्टि प्रकृति का अंग होने के कारण प्राकृतिक नियमों के साथ उसके शरीर एवं मन की एक लयबद्धता (रिदम) है अर्थात प्रकृति के नियमों के साथ वह बधा हुआ है, उसमें जब विकृति उत्पन्न होती है तब मानव अस्वस्थ हो जाता है। व्यक्ति के शारीरिक और मानसिक विकृति से केवल व्यक्ति अस्वस्थ होता है, लेकिन प्रदूषण द्वारा पर्यावरण की विकृति, रासायनिक उर्वरक, कीटनाशक आदि के द्वारा आहार की विकृति और अपसंस्कृति द्वारा मनोभाव और व्यवहार की विकृति से पूरा समाज अस्वस्थ हो जाता है।

वास्तव में अस्वस्थ होने के भी अलग-अलग कारण हैं। कभी व्यक्ति अपने कर्मदोषों के कारण अस्वस्थ होता है तो कभी समष्टि के कर्मदोषों के कारण अस्वस्थ होता है। व्यक्ति के आहार-विहार एवं कर्म के कारण शरीर में जो दोष उत्पन्न होते हैं उसका प्रमुख कारण उसकी मानसिक अस्वस्थता या बुद्धि का विकृत होना है, जिसके फलस्वरूप वह दुर्व्यसन और दुराचरण में संलिप्त होता है। आयुर्वेद में इसे प्रज्ञापराध कहा गया है।

धी धृति स्मृति विभ्रष्टः कर्मयत् कुरुतऽशुभम्। प्रज्ञापराधं तं विद्यातं सर्वदोष प्रकोपणम्³

अर्थात् धी (बुद्धि), धृति (धारण करने की क्रिया, गुण या शक्ति/धैर्य) और स्मृति (स्मरण शक्ति) के भ्रष्ट हो जाने पर मनुष्य जब अशुभ कर्म करता है तब सभी शारीरिक और मानसिक दोष प्रकुपित हो जाते हैं। इन अशुभ कर्मों को प्रज्ञापराध कहा जाता है। जो प्रज्ञापराध करेगा उसके शरीर और स्वास्थ्य की हानि

² चरक संहिता, सूत्रस्थान-21/18-19

³ चरक संहिता; शरीर. 1/102

होगी और वह रोगग्रस्त हो ही जाएगा।

व्यक्ति को स्वस्थ रहने के लिए शरीर, मन और बुद्धि का संतुलन एवं आत्मिक शांति की आवश्यकता होती है, लेकिन व्यक्ति के शरीर, मन और बुद्धि के स्वास्थ्य के लिए उसकी सभी इन्द्रियों द्वारा आहरित अर्थात ग्रहण किये गए विषयों का सम्यक, संतुलित और शुभ होना आवश्यक है। यही कारण है कि वैदिक वाङ्मय में प्रार्थना की गई है कि हम अपने कानों से कल्याणकारी सुने, आँखों से कल्याणकारी देखें, नीरोग इन्द्रियों एवं स्वस्थ देह के माध्यम से स्तुति करते हुए प्रजापित ब्रह्मा द्वारा जो आयु नियत की गई है उसे प्राप्त करें।

भद्रं कर्णेभिः शृणुयाम देवा भद्रं पश्येमाक्षभिर्यजत्राः। स्थिरैरङ्गेस्तुष्टुवांसस्तन्भिर्व्यशेम देवहितं यदायुः।।⁴

हम तभी मंगलमय देख सकते हैं, सुन सकते हैं या ग्रहण कर सकते हैं जब हमारा चतुर्दिक वातावरण मंगलमय हो। इस चतुर्दिक वातावरण को मंगलमय होने के लिए सम्पूर्ण वातावरण यानी हमें आवृत्त करनेवाले, आच्छादित करनेवाले या ढकने वाले तत्व पञ्च महाभूत (पृथ्वी, अग्नि, जल, वायु और आकाश) और उससे उत्पन्न जगत मंगलमय अर्थात संतुलित, शुद्ध और स्वस्थ होने चाहिए। इसीलिए वेदों में सभी के शांति की प्रार्थना की गई है 'द्युलोक शान्तिदायक हो, अन्तिरक्ष लोक शान्तिदायक हो, पृथ्वीलोक शान्तिदायक हो, जल, औषधियाँ और वनस्पतियाँ शान्तिदायक हों, सभी देवता यानी सृष्टि की सभी शक्तियाँ शान्तिदायक हों, ब्रह्म अर्थात महान परमेश्वर हमें शान्ति प्रदान करने वाले हों, सम्पूर्ण चराचर जगत शान्ति पूर्ण हो अर्थात् सब जगह शान्ति ही शान्ति हो। ऐसी शान्ति मुझे प्राप्त हो और वह सदा बढ़ती ही रहे। अभिप्राय यह है कि सृष्टि का कण-कण हमें शान्ति प्रदान करने वाला हो। समस्त पर्यावरण ही सुखद व शान्तिप्रद हो।

ॐ द्यौ शांतिरन्तिरक्षः शांतिः पृथ्वी शांतिरापः शान्तिः रोषधयः शान्तिः। वनस्पतयः शान्तिर्विश्चे देवाः शान्तिब्रह्म शान्तिः सर्वैः शान्तिः शान्तिः शान्तिः सा मा शान्तिरेधि। ॐ शान्तिः शान्तिः शान्तिः ॐ।।

वैदिक ऋषियों द्वारा की गई यह स्तुति केवल स्तुति ही नहीं हमारी जीवन पद्धित थी। यही कारण था कि भारतीय संस्कृति में नदी, सरोवर से लेकर गाय, वृक्ष, वनस्पित, पर्वत सभी की पूजा अर्थात उनकी दिव्य शक्ति को शुद्ध एवं शांतिप्रद रखने का विधान किया गया था। पाश्चात्य संस्कृति एवं ज्ञान-विज्ञान ने इसके गूढ़ रहस्य को न समझकर सदैव इसका उपहास उड़ाया। आज विज्ञान के नाम पर प्रकृति के साथ जो अत्याचार किया जा रहा है उसका परिणाम केवल मानव ही नहीं सभी जड़-चेतन भुगतने के लिए अभिशप्त हैं। पृथ्वी, जल, वायु और आकाश सभी प्रदूषित हो चुके हैं। न अन्न शुद्ध रह गया है, न जल शुद्ध रह गया है और न ही वायू शुद्ध रह गई है। ऐसे में मानव का स्वस्थ रहना कैसे संभव है?

आज हम प्रदूषित खाद्यान्न खाने के लिए अभिशप्त हैं, क्योंकि अधिक से अधिक उत्पादन की प्रतिस्पर्धा में कृषि में रासायनिक उर्वरक, कीटनाशक, खरपतवार नाशक आदि के अनियंत्रित उपयोग ने सम्पूर्ण

⁴ ऋग्वेद मंडल 1, सूक्त 89, मंत्र 8

⁵ यजुर्वेद-36.17

कृषि उत्पाद को विषयुक्त बना दिया है। आधुनिक कृषि के नाम पर भारत की गौ आधारित कृषि व्यवस्था को दुर्लक्ष्य कर दिया गया। भूमि प्रदूषण निवारण हेतु अनेक उपाय वैदिक साहित्य में उपलब्ध हैं। उन उपायों में यज्ञ महत्वपूर्ण है, जिससे पृथ्वी सस्यादि से पृष्ट होकर सुख देने वाली बनती है। वैदिक ऋषि कहते हैं कि विस्तृत द्युलोक तथा भूमि हमारे इस यज्ञ का सेवन करे और वे यज्ञ से पोषण प्राप्त कर, हमारा भरण-पोषण करें क्योंकि यजमान द्वारा अनुष्ठीयमान यज्ञ वर्षाकारक इंद्र की शक्ति को बढ़ाता है और भू-लोक को विविध अनाज आदि से पृष्ट करता है। गीता में भी भगवान श्रीकृष्ण स्पष्ट कहते हैं कि भूतों अर्थात जीवों की उत्पत्ति अत्र से होती है और अत्र पर्जन्य से उत्पन्न होता है अर्थात पर्जन्य वर्षा आदि वह अवस्था है जो अत्र उत्पादन के अनुकूल वातावरण बनाती है और इस पर्जन्य की उत्पत्ति यज्ञ से होती है तथा यज्ञ का उद्भव कर्म से होता है। इससे स्पष्ट है कि मानव का वह कर्म जो प्रकृति में अत्र उत्पादन का वातावरण बनता है वह यज्ञ है। वास्तव में, भारतीय संस्कृति में वह कर्म जो सभी क्षेत्रों में सृष्टि के संतुलन का कारक है वही यज्ञ है। आज हमारे जीवन में इस संतुलन यानी यज्ञ भाव का अभाव हो गया, जिसके परिणाम स्वरूप व्यक्तिगत स्तर पर व्यक्ति का शरीर ही नहीं मन और बुद्धि सभी अस्वस्थ होते जा रहे हैं और समष्टिगत रूप में प्रकृति और पर्यारण, संस्कृति और समाज सभी अस्वस्थ हो रहे हैं।

वर्त्तमान काल में ज्ञान और विज्ञान की दिशाहीन प्रगित और उपयोग ने मानव सभ्यता के विकास को उस मोड़ पर ला कर खड़ा कर दिया है जहाँ इसके दुष्प्रभाव से बचने का मार्ग यदि न ढूढ़ा गया तो केवल व्यक्ति या समाज ही नहीं सम्पूर्ण सृष्टि संकट ग्रस्त हो जाएगी। आज पुनः उस प्राचीन ज्ञान-विज्ञान एवं भाव के पुनर्मीमांसा की आवश्यकता है, जिसने अतीत में भारतीय संस्कृति का संरक्षण और संवर्धन किया था और जिसके आधार पर हम सभ्यता के उच्चतम शिखर पर पहुंचे थे। व्यक्ति का व्यक्तिगत एवं सामाजिक जीवन प्रकृति, पर्यावरण ही नहीं सम्पूर्ण सृष्टि के साथ एकात्म और समरस था। वर्त्तमान विकास के प्रारूप में एकात्मक भाव का लोप हो गया और हम प्रत्येक समस्या का खंड-खंड में विचार करने लगे परिणामस्वरूप किसी एक समस्या के समाधान ने दूसरी समस्या का सृजन कर दिया। आधुनिक चिकित्सा विज्ञान भी इससे अछूता नहीं है।

द जर्नल ऑफ़ इंडियन थॉट एंड पालिसी रिसर्च के प्रस्तुत अंक में ऐसे आलेखों को समाहित किया गया है जो आरोग्य, आहार एवं पर्यावरण की दृष्टि से भारतीय चिंतन के आधार पर आज के परिवेश में एक स्वस्थ दिशा प्रदान कर सकें। आशा है यह प्रयास विमर्श को आगे बढ़ाने में सहायक सिद्ध होगा।

- डॉ. चन्द्र प्रकाश सिंह

⁶ ऋग्वेद 1/22/13 तथा 8/14/5

⁷ अत्राद्भविन्ति भतानि पर्जन्यादत्रसम्भवः।

यज्ञाद्भवति पर्जन्यो यज्ञः कर्मसम्द्भवः।। श्रीमद्भगवद्गीता - 3/14

BHARATIYA APPROACHES TO HEALTH, AS OBSERVED BY A WESTERNER

Dr Melissa Kapoor¹

Five years ago, I knew very little about India and nothing about Hinduism or Bharatiya civilisation. My family tree extends through generations of East European Catholics and Scandinavian Protestants. Looking even further back, genealogical DNA testing shows that my genetic roots are exclusively European.

There are many, many people immensely more knowledgeable about Hindu approaches to health than me. Yet the fact that I am so early in my journey of discovering Bharat and embracing Hinduism is perhaps why I can make an important contribution to this journal. I am perhaps at the point in my journey where I can see the differences between the western mindset and Hindu philosophy most starkly; operating on a professional level within the western framework but feeling an ever growing tug to embrace Hindu practices and philosophies on a personal level.

Since completing my BSc in Physics and then PhD in Statistics applied to medical imaging from University of Oxford, I have worked in evidence-based medicine and particularly medical technology research, development, and market access. I have a start-up company that splits its time between in-house medical technology development and providing evidence-based medicine consultancy to other companies developing medical technologies and pharmacological drugs. Our areas of expertise are in generating clinical trial evidence of the effectiveness of a novel technology and building models to estimate the cost-savings that the technology could create for healthcare providers.

It is perhaps because I work in evidence-based medicine that I have been able

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to embrace Hinduism so readily. Health is one of the fields in which the differences between Hindu philosophy and western mindsets are particularly palpable. Physics has sub-atomic particles in particle accelerators, biology has strains of cell lines in petri dishes, and chemistry has a periodic table of chemical elements to react in test tubes. But medicine is in the privileged position of having at its disposal the experimental instrument that is most intuitively understood and easily observed by us - our physical bodies and our states of mind.

Science advances by drawing conclusions about the physical world after evidence of a physical phenomenon is generated. *Dharmic* philosophies, of which Hindu *Dharma* is by far the oldest, richest, and most prevalently followed, go a step further. Instead of relying solely on physical evidence, they draw on meta-physical intelligence to make advances. In Hindu *Dharma*, this meta-physical intelligence is Brahman, or the universal consciousness that we are all part of and can strengthen connection to through *BaktiYog*, *Kriya Yog*, *Karma Yog* or *Gyan Yog*. When the instrument of the physical evidence is the same as the instrument receiving this universal consciousness (i.e. the human body and mind), new knowledge of both the physical and meta-physical can emerge at an accelerated rate.

In this essay, I will describe how Hindu/Hindutva philosophy allowed discoveries in medicine and health to be made thousands of years ago in India. Some of these ancient discoveries and practices are so sophisticated and complex that modern-day technologies are only beginning to be able to explain their effectiveness. I will then describe how the loss and distortion of ancient Hindu wisdom by invaders and westernisation is leading to serious physical and mental health problems in modern-day India. I will draw on events during the COVID-19 pandemic to show that the ancient Hindu wisdom is very relevant today, and still "in the DNA" of Hindu Indians. I will then explain how the best health outcomes can be achieved by carefully bringing a few, but certainly not all, aspects of western medicine into a full embrace of ancient Hindu knowledge and practices. I draw on my professional experience to suggest concrete steps that could be taken to achieve this. Finally, I explain how a revival of the ancient Hindu approach to health, could drive the direction of very fundamental physical and meta-physical scientific discoveries in the future.

Ancient Hindu approaches to health and medicine

While humans in the west were living as hunter-gatherer nomads, Bharat had well-planned cities with multi-storied buildings made of baked bricks, large paved

roads, drainage, aqueducts, private and public baths, a sophisticated education system and effective agricultural practices.

There are three inter-related reasons why ancient India (thousands of years older than the ancient Greeks) was such an advanced civilisation: 1. the land's abundant natural resources, 2. the existence of enlightened humans (Rishis), and 3. the divine transmission of Hindu *Dharma* (a comprehensive, progressive and seeking philosophy) to these *Rishis* for the benefit of all beings.

One aspect of Hindu *Dharma* that was transmitted to mankind was Ayurveda, which translates as the *Veda* (science/divine knowledge) of Ayur (life). This science was passed from Lord Brahma, creator of the universe and the Vedas, to *Surya Dev* (the Sun), *Surya Dev's* children, *Indra* (ruler of Swarga Lok), *Dhanvantari* (an avatar of Lord Vishnu and Deva of Ayurveda) and finally to *Rishis* including Atreya Susruta, Charak, Harita and Agnivesha. These *Rishis* each developed areas of specialism, such as Susruta in surgery and Agnivesha in ophthalmology. Their specialist knowledge was passed down over thousands of years and eventually recorded in *Samhitas* or compendiums. Some but not all sections of these *Samhitas* have survived to this day, meaning that we can only appreciate a fraction of the *Ayurveda*. Nevertheless, the surviving contents make it clear that *Ayurveda* contains knowledge about health and medicine that modernday humans have yet to rediscover using their purely physical scientific approaches and methods. Indeed, *Rigveda* describes human life expectancy as 100 years. Yet the country with the highest average life expectancy today (Hong Kong) can only boast an average life expectancy of 85 years.

Core to Ayurveda is the understanding that every physical body and *Jeevatma* (the true self within the physical body) is different from every other. This understanding stems from a fundamental belief of Hindu *Dharma* that material form emerges from a creative, feminine energy called *Prakriti*. This energy manifests in every living being as unique balances of the five elements of air, earth, water, ether and fire. We all have our own unique balance of elements which gives us our own balance of *Doshas*, or traits for behaviour, spirituality, physiology, health, wellness and predisposition. There are three *Doshas* (the *Tridosha*): *Pitta* or metabolism, *Vata* or motion, and *Kapha* or structure.

Hindu *Dharma* identifies imbalance of the three *Doshas* as the cause of ill health. It also recognises that the majority (but not all) of illness is related to lifestyle. Since the opportunity our current lives give our *Jeevatma* to achieve *Moksha* (enlightenment) are

divine gifts, Hindu *Dharma* makes it clear that it is our duty to keep our *Jeevaatma's* physical instruments (our bodies and minds) primed for achieving *Moksha*. This means taking a proactive approach to preventing disease and keeping physically, mentally, spiritually healthy, including by keeping the *Tridosha* as balanced as possible.

Just as the three *Doshas* characterise the unique but holistic state of an individual, so too must methods to balance the *Doshas* be personalised and holistic in nature. Personalisation is key because it makes it more likely for the prescribed treatment to be effective and less likely for it to create negative side-effects.

The ancient Samhitas on Ayurveda contain detailed descriptions of a wide range of illnesses, diagnostic indicators, and treatments. For example, the earliest account of diabetes is found in the *Susrata Samhita*, where it is referred to as *madhumeha* (honey-like urine). The *Samhita* identifies that the disease primarily affects wealthy individuals and is related to excessive consumption of rice, cereals and sweets². Two types of the disease were identified by Susrata, which we now know as Type 1 and Type 2 diabetes³.

Other examples of diseases on which the *Samhitas* provide remarkable pathogenesis, diagnosis and disease management information include epilepsy and tuberculosis. Epilepsy was correctly understood to be a disturbance in brain function and diagnosed by amnesia, loss of consciousness and seizure⁴. Loss of weight and blood-spitting were key diagnostic criteria for tuberculosis².

The *Samhitas* explain that physical ailments should be treated by proper diet, moderate physical exercise, and medicine. For mental illnesses, however, it is explained that use of mantras, reading of Shastras and yogic therapies such as meditation and pranayama are also required to pacify the psychological disturbances of a patient⁵.

They mention that good hygiene is necessary for both physical and mental health. For example, the *Samhitas* include detailed accounts on oral hygiene, promoting the careful brushing of teeth twice a day, tongue-scaping, and chewing of herbs for clean teeth, fresh breath, a good relish for food and cheerfulness of the mind⁵. Manu, the first king and progenitor of humanity, is credited as a great sanitary reformer who

- 2 Ackernecht, E. H., 1982. A Short History on Medicine.
- Frank LL. "Diabetes mellitus in the texts of old Hindu medicine (Charaka, Susruta, Vagbhata)" *Am I Gastroenterol.* 1957;27:76–95.
- 4 Arya, R., 2018. "Ancient Indian concepts about phenomenology, biology, and therapeutics of epilepsy". *Journal of the History of the Neurosciences*, 27(1), pp.56-71.
- 5 Kumar, A., 2019. Ancient Hindu Science: Its Transmission and Impact on World Cultures.

promoted the daily practice of rising early, cleaning teeth, anointing the body with oil, bathing, exercising, massage, two modest meals, rinsing of the mouth before and after meals and chewing of pan to stimulate the gastric juices⁶.

The elaborate system of drainage existing in prehistoric India, which transported waste-water from houses and streets to outside the city boundaries, is evidence that their knowledge on hygiene was put into practice. High standards of hygienic living remain in India today: removing of shoes before entering the house, change of clothes upon returning home, thorough daily cleaning of the home, refusal to share eating and drinking vessels, thorough washing of ingredients, bathing every day, and greeting with Namaskaram rather than with a handshake, a hug or a kiss. Indians may find it odd that I consider these activities noteworthy, but rest assured that they seem extraordinary to most Westerners! And for very good reason, as the current COVID-19 pandemic has shown more on this later.

Modern validation of ancient Hindu knowledge

It should come as no surprise that ancient Hindu knowledge of diseases such as diabetes, epilepsy and tuberculosis has proven to be correct, nor that the Hindu approach to healthy living, including hygiene, has very sound reasoning. It is also reasonably well-known that there is modern-day evidence of the effectiveness of hundreds of medicinal plants and surgical methods mentioned in the Samhitas.

Medicinal plants described in the *Samhitas* for which there is modern-day evidence of their effectiveness include *Mustadi Kwatha Ghanavati* (a mixture of nine herbs) for reducing fasting blood glucose, urine glucose, cholesterol and blood pressure in patients with Type 2 diabetes⁷, *Guggal* tree extract and *Arjun* tree extract for reducing cholesterol⁸, *Triphala* as an effective mouthwash for reducing plaque, gingival inflammation and gum bleeding⁹, and *Ksheera Basti* with *Guggal* for reducing

⁶ Muthu, C., 1913. "A Short Review of the History of Ancient Hindu Medicine". *Proceedings of the Royal Society of Medicine*, 6 (Sect_Hist_Med), pp.177-190.

Kushwaha, V. and Kar, A., 2017. "Clinical study on Ayurvedic herbal drug (MustadiKwathaGhanavti) therapy in patients with Type 2 Diabetes".

Singh, B.B., Vinjamury, S.P., Der-Martirosian, C., Kubic, E., Mishra, L.C., Shepard, N.P., Singh, V.J., Meier, M. and Madhu, S.G., 2007. "Ayurvedic and collateral herbal treatments for hyperlipidemia: a systematic review of randomized controlled trials and quasi-experimental designs". In *Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews* [Internet]. Centre for Reviews and Dissemination (UK).

⁹ Penmetsa, G.S., Vivek, B., Bhupathi, A.P. and Sudha Rani, P., 2019. "Comparative Evaluation of

pain and stiffness in people with sciatica¹⁰. Some of these medicinal plants have been found to be so effective and side-effects either so minimal or non-existent, that there are calls for some serious medical conditions to be treated using these plants instead of chemical pharmacological compounds, e.g. haldi/turmeric for treating Crohn's disease and ulcerative colitis¹¹.

Modern-day surgical procedures that find their roots in the methods described in Susruta Samhita include the procedures for hernia, amputation, tumours, restoration of nose, skin grafting, extraction of cataracts and caesarean section⁵. Some of these ayurvedic surgical methods are still being done today. It is unsurprising when one considers the effectiveness that these methods seem to have had. For example, *Rig Veda* tells us that the lower limb of Rani Vispala was severed in a battle. She was operated upon, given an artificial limb, and carried on military campaigns soon after. Another example is skeletal evidence of 9,000-year old dentistry, including perfectly drilled holes into molar crowns and fillings made from medicinal plants¹².

Modern-day validation of other aspects of Ayurveda are less well-known, however. This is in part because the sheer complexity of the ancient knowledge made it impossible for modern-day scientists to prove it until equally complex technologies were recently developed.

For example, both preventative and personalised medicine is a very recent concept in the west. The western approach to medicine has always been to consider each body organ, body system and disease in isolation. It assumes every liver is the same as anyone else's liver, every lung is the same as anyone else's lung, etc. It waits until disease occurs and then prescribes the standard treatment. If that treatment does not work, then a different standard treatment is attempted. And so continues the trial

Triphala, Aloe vera, and chlorhexidine mouthwash on gingivitis: A randomized controlled clinical trial". *Contemporary Clinical Dentistry*, 10(2), p.333

¹⁰ Kumar, J., Bhatted, S.K., Dharmarajan, P. and Kumar, A., 2019. "Evaluation of efficacy of BrimhanaKsheera Basti with GugguluTiktakaGhrita in lumbar disc degeneration induced Gridhrasi (sciatica): A clinical study". *Journal of Indian System of Medicine*, 7(3), p.146.

¹¹ Cunha Neto, F., Marton, L.T., de Marqui, S.V., Lima, T.A. and Barbalho, S.M., 2019. "Curcuminoids from Curcuma Longa: New adjuvants for the treatment of crohn's disease and ulcerative colitis". *Critical reviews in food science and nutrition*, 59(13), pp.2136-2143.

¹² Coppa, A., Bondioli, L., Cucina, A., Frayer, D.W., Jarrige, C., Jarrige, J.F., Quivron, G., Rossi, M., Vidale, M. and Macchiarelli, R., 2006. "Early Neolithic tradition of dentistry". *Nature*, 440(7085), pp.755-756.

and error until a treatment is found that happens to work, the body heals itself, the person makes the best of life with the disease, or they die.

The first, basic evidence of personalised medicine in the West came in 1907, when selective blood transfusions based on blood group began in New York¹³. The full potential of personalised medicine for identifying individually suited treatment and lifestyle recommendations only began to be realised when DNA was first sequenced in the 1970s, and methods for speeding up this sequencing developed in the decades that followed.

DNA sequencing can now be conducted mass-scale. This has enabled scientists to look for associations between genes and *Doshas*, i.e. to prove that there is genetic basis to the medicine performed by the ancient Rishis and physicians of India for thousands of years.

Several studies have proven important associations. For example, a statistically significant correlation has been found between human leukocyte antigen alleles, which are genes that determine susceptibility and resistance to many common diseases including rheumatoid arthritis, and $Dosha^{14}$. A subsequent study went further to show that inflammatory pathways give rise to arthritis in individuals with strong Vata, whereas in individuals with strong Pitta it is pathways involved in oxidative stress that leads to the disease¹⁵.

Other studies have proven a genetic basis of *Doshas* in:

- The ability of a human to adapt to high-altitude and be responsive in low-oxygen situations¹⁶,

Ottenberg, R., 1922. "Medicolegal application of human blood grouping: Third communication: Sources of error in blood group tests, and criteria of reliability in investigations on heredity of blood groups". *Journal of the American Medical Association*, 79(26), pp.2137-2139

¹⁴ Patwardhan, B. and Bodeker, G., 2008. "Ayurvedic genomics: establishing a genetic basis for mind-body typologies". *The Journal of Alternative and Complementary Medicine*, 14(5), pp.571-576

¹⁵ Juyal, R.C., Negi, S., Wakhode, P., Bhat, S., Bhat, B. and Thelma, B.K., 2012. "Potential of ayurgenomics approach in complex trait research: leads from a pilot study on rheumatoid arthritis". *PloS one*, 7(9).

¹⁶ Aggarwal, S., Negi, S., Jha, P., Singh, P.K., Stobdan, T., Pasha, M.Q., Ghosh, S., Agrawal, A., Prasher, B., Mukerji, M. and Indian Genome Variation Consortium, 2010. "EGLN1 involvement in high-altitude adaptation revealed through genetic analysis of extreme constitution types defined in Ayurveda". Proceedings of the National Academy of Sciences, 107(44), pp.18961-18966

- The likelihood of an individual to suffer thrombosis or bleeding when taking warfarin, which is a commonly used drug to prevent strokes and heart attacks¹⁷,
- The likelihood for an individual with Type 2 diabetes to also have a heart disorder or kidney disorder¹⁸,
- The rate at which an individual metabolises drugs including Vallium and antidepressants¹⁹. This is important because it means people require different doses of these drugs for the effects to be experienced and to minimise negative side-effects.

Westernisation is creating dangerous health hazards for India

This backdrop to the health of India's people today paints a picture of a people who are "rich in health". This means that because they take preventative action and have a vast system of native health knowledge at their disposal, they have good health and low requirement for more interventional healthcare (pharmacological drugs, surgical treatments, etc.). Contrast this to the west where "rich in health" instead refers instead to paying high insurance premiums to be able to avail of expensive healthcare when it is required, i.e. reactive healthcare, because preventative healthcare is largely ignored.

On the face of things, India appears to still be benefiting from its ancient wisdom on healthy living. For example, International Diabetes Federation statistics find 8.8% prevalence of diabetes in Indians aged 20 to 79 compared to 11.0% in China, 13.1% in the USA and 16.7% in neighbouring Pakistan²⁰. However, this masks the fact that there is substantial variation across the country. According to Indian Council of Medical Research – India Diabetes Study 2015, prevalence rate of obesity varies between 11.8% and 31.3%, i.e. obesity is almost three times as great in urban India and metros

¹⁷ Prasher, B., Varma, B., Kumar, A., Khuntia, B.K., Pandey, R., Narang, A., Tiwari, P., Kutum, R., Guin, D., Kukreti, R. and Dash, D., 2017. "Ayurgenomics for stratified medicine: TRISUTRA consortium initiative across ethnically and geographically diverse Indian populations". *Journal of ethnopharmacology*, 197, pp. 274-293.

¹⁸ Banerjee, S., Chattopadhyay, K., Biswas, T.K. and Chattopadhyay, B., 2019. "Comparative analysis of the biochemical parameters among the three Prakriti individuals having Type 2 diabetes mellitus".

¹⁹ Ghodke, Y., Joshi, K. and Patwardhan, B., 2011. "Traditional medicine to modern pharmacogenomics: Ayurveda Prakriti type and CYP2C19 gene polymorphism associated with the metabolic variability". *Evidence-Based Complementary and Alternative Medicine*.

²⁰ International Diabetes Federation Diabetes Atlas 2019 https://diabetesatlas.org/upload/resources/material/20200302 133351 IDFATLAS9e-final-web.pdf

than rural India. In some urban areas, almost one-third of the population is considered obese²¹.

These statistics indicate that increasing numbers of today's Indians are not applying the ancient Hindu wisdom of healthy living to themselves and their children. This is the result of urban Indians adopting a lifestyle more closely related to that of Western nations, i.e. sedentary lifestyles and consumption of high-calorie, low-nutrient foods²². It is warned that if this trend in unhealthy living is not aggressively addressed, the burden of non-communicable diseases (heart disease, stroke, diabetes, kidney disease, cancer, etc.) will severely stunt India's development. Indians will be complicit in Colonialization 2.0, this time via consumerism, marketing and products made less healthy than western versions to cater for a more cost-constrained and less regulated market. As someone who enjoys a glass of orange juice in the UK, I cannot abide the high-sugar content of packaged orange juice in India. Even the colour is off-putting.

The phenomenon of deteriorating health of Indians is not limited to physical health, as there are worrying trends in mental health too. It is estimated that during 2017 alone, 14.3% of India's population experienced a mental disorder. The contribution of mental disorders to the total disability-adjusted life years in India increased from 2.5% in 1990 to 4.7% in 2017, i.e. the contribution of poor mental health to overall ill health has almost doubled in one generation²³. Once again, there is strong evidence that rejection of traditional attitudes, activities, and culture in favour of western influences, and particularly shifts towards consumerism, is driving this regrettable trend.

The International Journal of Epidemiology paper 'Is modern Western culture a health hazard?' Presents the epidemiological evidence for western culture, and particularly its materialistic and individualistic tendencies, being associated with poorer mental health than cultures that hold spirituality and collectiveness as central tenets²⁴.

²¹ Pradeepa, R., Anjana, R.M., Joshi, S.R., Bhansali, A., Deepa, M., Joshi, P.P., Dhandania, V.K., Madhu, S.V., Rao, P.V., Geetha, L. and Subashini, R., 2015. "Prevalence of generalized & abdominal obesity in urban & rural India-the ICMR-INDIAB Study (Phase-I)[ICMR-INDIAB-3]". *The Indian journal of medical research*, 142(2), p.139.

²² Ahirwar, R. and Mondal, P.R., 2019. "Prevalence of obesity in India: A systematic review". *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 13(1), pp.318-321.

Sagar, R., Dandona, R., Gururaj, G., Dhaliwal, R.S., Singh, A., Ferrari, A., Dua, T., Ganguli, A., Varghese, M., Chakma, J.K. and Kumar, G.A., 2020. "The burden of mental disorders across the states of India: the Global Burden of Disease Study 1990–2017". *The Lancet Psychiatry*, 7(2), pp.148-161.

²⁴ Eckersley, R., 2006. "Is modern Western culture a health hazard?" International journal of epidemi-

The paper explains that materialism heightens risk of chronic disappointment, anxiety, depression, isolation and anger because, no matter how much material wealth a materialistic person possesses or how high their social status becomes, it will never satiate their basic human need for security, safety, self-worth and sense of connection. That is why marketing, which in recent decades has pervaded Indian society with relentless force, is so effective; it promises us that we will be happy when we possess a certain object or consume a certain product. However, only we can make ourselves happy, and that is why cultures that foster intrinsic goals, such as close relationships, self-knowledge, and personal growth, deliver wellbeing, even in the face of poverty and trauma.

The paper also explains how the "individualism" that characterises western society comes at a serious cost. Although it is desirable for everyone to be liberated to experience their full potential, the west has confused autonomy (the ability to act according to our own values and beliefs) as independence (not being reliant or influenced by others); thinking *for* ourselves versus thinking *of* ourselves. This has resulted in a heightened sense of insecurity because people lack a clear frame of reference or social norms by which to live their lives. They have increased pressure to feel successful, as now the burden of their success lies entirely with them.

I can attest to the ability of *Hindutva* (being a Hindu) to protect mental health. I have found great strength in experiencing Hinduism's deep respect for and devotion of Shakti, the feminine force of the universe which assumes every form, from caring mother to fierce warrior, and from peaceful teacher to expressive artist. I have felt incredibly humbled by the challenges faced by India's historic figures, such as Ma Sita and Devaki ji. I have had my worries put into perspective by thinking about the vast time-scales upon which the universe operates, as described in the Vedas thousands of years before it was confirmed by modern-day scientists. I have developed a greater sense of connection to the world and beauty of nature. I have less aversion to making myself vulnerable, e.g. to voice my opinions or to take professional risks, because Vedanta has taught me that my aversion was only ego: a guise to protect my feelings of self-worth. And I have learnt not to have intense mortal fear as we all are only a beautiful manifestation of Brahman: *Tat Tvam Asi* – You are that.

COVID-19

Just like some people, particularly westerners, may find it surprising to read that Indians have incredibly high standards of hygiene, they may also find it surprising that Indians have very great concern for their health and the health of their friends and family. After all, *Swachh Bharat*, Prime Minister Modi's initiative to clean up the country, was very much needed. Similarly, the worrying trends in lifestyle-related diseases in contemporary India I mentioned in the previous section indicate a people who do not know how to live healthily.

Neither of these is true -I am always amazed by how much concern my Indian family has for my health and the health of everyone we are related to or know. Health is the chief topic of every phone call we make to India. Most forwards that I receive on social media from Indians relate to different preparations of Indian spices for boosting immunity.

Nevertheless, as I say, *Swachh Bharat* is very much needed and the lifestyle-related disease prevalence and mortality rates are correct. I believe this is because the invaders, and particularly the British Raj, destroyed native pride in Hindu culture in order to make Indians more reliant on its colonisers. This not only resulted in loss of ancient knowledge but created an upper-class Indian who lost respect and love for *Ma Bharati* - their beautiful country. Westernisation, and relentless advertising of western products, usually in a cheaper and less healthy form, is chiefly responsible for rise in obesity and lifestyle-related diseases.

However, as I say, it is "in the DNA" of Hindus to have very high standards of hygiene and to have great concern about health. This has proven very beneficial to India during the COVID-19 pandemic. As of writing, India has one of the lowest rates of COVID-19 cases in the world, despite being home to three of the five most densely populated cities in the world and certain sections of society that had a tendency to flout the lockdown rules.

As already mentioned, taking off shoes outside the house, changing clothes when entering the house, daily bathing and greeting with Namaste, rather than with a handshake, hug, or kisses, will all have contributed to this low rate. Another factor is that Indians have respect for health and life, and the COVID-19 pandemic gave me a front-row seat from which to observe this.

I happened to be on holiday in India in the weeks just before the lockdown and

flew back to the UK on the very last flight departing to Europe. This allowed me to experience first-hand the differences in approach of India and the UK in responding to the rapidly unfolding situation. For example, despite the UK being weeks ahead of India in terms of COVID-19 prevalence, India took a faster and more decisive approach to prevent infection from entering the country (stopping international travel) and spreading (locking down on non-essential movement).

As of writing, UK airports still do not conduct health checks whereas I was checked four times in one day on my last day in India. India's position has always been very clear: minimise the number of people who become infected, whereas the UK's initial response was to build up herd immunity, even if that meant putting many tens of thousands of people's lives at risk. Whereas in the UK people are treating the closure of workplaces and schools during the lockdown as an excuse to go on holiday, visit the beach, etc., people in India are much more compliant with the instruction to remain at home. When the Ministry of AYUSH (Ayurveda, Yoga & Naturopathy) was giving clear messaging on practical steps to take to boost immunity, e.g. Yoga asanas, Pranayam, Dhyan for 30 minutes a day, and daily drinking of Kadha (made from tulsi leaves, cinnamon, black pepper, dry ginger and raisins), the UK did not offer any advice to its people. While many Indians were wearing masks on my flight to India weeks before the lockdown, the official guidance of London Heathrow airport was to not wear a face mask (which I ignored)! All in all, it was clear to me that Hindus have much greater respect for health and life than people in the UK.

Another area in which ancient Hindu wisdom has proven beneficial during the lockdown is mental health. In the UK I was providing consultancy to medical technology companies to help them respond to the UK Government's multi-million-pound call for solutions to help people access mental health services remotely. But India did something much less expensive and much more effective: it aired the 1980s *Ramayan*, *Mahabharat* and Uttar Ramayan series on DD National, a state-owned television channel. I chose to follow India's approach, syncing with almost a billion Indians at 4.30 PM UK time as they watched each episode. Hindu wisdom and Itihas (histories *Ramayan*, *Mahabharat*) helped hundreds of millions navigate the difficult times of COVID with calmness.

But there were some (largely rich, upper class) Indians who chose instead to tune in to lectures by psychologists following western methods. My sense was they were the ones who were finding the uncertainty of the lockdown the most difficult to cope with. It reminds me of an occasion where I accompanied a member of my family to a lecture about healthy diet. The entire neighbourhood was waiting with bated breath for the lecture to start and afterwards they discussed the content with great enthusiasm. I found this very perplexing because the lecture was delivered by an Indian doctor who spent the lecture advocating diets developed in the west by western doctors. These diets had one thing in common: a gimmicky name and a best-selling book that all the neighbours were eager to buy. How strange when everyone in the audience probably has copies of Hindu scriptures providing far greater insight into ideal nutrition collecting dust in a cupboard.

Suggestions for Bharat

It would be unfair of me to dismiss all the recent advancements that the west has made in medicine. These technologies should supplement the ancient knowledge that has proven successful in maintaining the overall health of Indians for thousands of years. Similarly, the opportunity exists for this ancient knowledge to supplement the approaches that have been developed in modern times. However, for this to happen, India must strengthen the evidence base for its ancient knowledge. This includes by using western approaches for validating effectiveness in order to persuade both the west and, increasingly, Indians, that there is significant value to be gained by integrating the ancient knowledge with the new.

As described earlier in this essay, there is already generous evidence for the effectiveness of the ancient Hindu knowledge for managing health, e.g. the studies validating the genetic basis of the *Doshas*^{13,14,15,16,17,18}, and utility of *Mustadi Kwatha Ghanavati* in Type 2 diabetes⁷. However, a weakness with many of these studies is that they are relatively small, and few are randomised control trials (RCTs). RCTs are the gold-standard method for generating clinical trial data. In these trials, participants are split into groups at random and, during the analysis stage, any differences that existed between the groups at the start of the trial are statistically taken into account so that the only variable between the groups is the intervention being investigated. When I conduct systematic literature reviews for medical technology and pharmaceutical clients, a large, well-designed RCT carries more weight than 100 small, non-randomised trials. Health Technology Assessment, the global gold-standard methodology for evaluating the clinical and cost-effectiveness of a health technology, is almost exclusively reserved for RCTs and systematic reviews (i.e. reviews of a whole field of literature, including multiple RCTs).

A major reason why very few large randomised control trials have been conducted thus far to robustly demonstrate the effectiveness of the ancient Hindu knowledge is that these are the most complex and expensive trials to conduct. They require more specialist knowledge than a single academic or clinical research group can offer. My sense from reading the academic literature is that there have been few such collaborative efforts operating in India in the past. The Ministry of AYUSH, which was formed under the Narendra Modi Government in 2014, has the potential to change this.

For the Ministry to fully unlock the potential of Ayurveda, I believe it should:

- 1. Develop a process for identifying and prioritising key research questions. Criteria determining this prioritisation could include likelihood for a positive result, potential impact of a positive result, and feasibility of the method for gathering robust evidence.
- 2. Launch a competitive process for selecting, funding, and supporting the best collaborative research teams submitting applications to conduct research answering these questions. It is a requirement for most of the publicly funded research projects that I am involved within the UK to involve academic, clinical, and industrial partners, i.e. only multidisciplinary research or research spanning at least two universities, are eligible for funding.
- 3. Develop guidelines on how to conduct high-quality trials: RCTs where possible and quasi-RCTs where not. There are significant practical challenges involved in conducting RCTs for certain interventions. Significant effort has been made globally by governmental organisations, academics and powerful commercial organisations such as pharmaceutical companies to devise guidelines on how to adapt the RCT design and evaluation technique to be able to generate as high-quality data as possible in these situations. However, negligible effort has been made to consider the best way to generate high-quality evidence of traditional healthcare models, e.g. how to determine whether an individual is doing yoga asanas with devotion and full Hindu rules of 'yama' and 'niyama' rather than simply following the postures. These challenges are not insurmountable, but they will require the collaboration of creative and experienced clinical trial methodologists, social scientists, statisticians, engineers, and technologists to overcome.

4. Develop a mechanism for high-quality trial results to shape traditional and modern healthcare practices. I am involved in supporting medical technologies companies to submit their evidence of clinical and cost-effectiveness to the National Institute for Clinical and Care Excellence (NICE) to help the National Health Service (NHS) adopt the best technologies. Where RCT evidence is strong, a positive recommendation is quite likely. Although the NICE guidance and recommendations are not legally binding, healthcare providers can be summoned to the civil courts if they do not apply them.

Although the UK's evidence-based medicine processes are deemed world-leading, I feel India should opt for a more flexible approach to account for the humanness inherent in healthcare. After all, the human body and mind are free-willed; they are not pre-programmed machines. This has implications for the effectiveness of the methods used to assess effectiveness of different healthcare interventions. The COVID-19 pandemic provides a startling case study in why I think this.

As I mentioned earlier, UK authorities have advised against the wearing of face masks for at least the first few months of the COVID-19 pandemic. Their argument was that there was not yet any evidence that face masks could reduce the spread of COVID-19. I found this very odd; just because the experiment has not yet been conducted it does not mean that there is no place for the second-best thing, which is common sense. There surely could not be any harm in wearing a face mask, as it protects the two main channels for virus to enter the body (nose and mouth) and subconsciously fosters social distancing, hand washing and other behaviours conducive to keeping the virus at bay. Yet the UK's approach remained to wait for the evidence before acting, like a machine awaiting instructions on the next operation to perform.

Now 7 weeks later, they have started asking people to wear masks. People are not listening because the messaging has been so confused. This has impacted the UK government's strategy to ease the lockdown and control the outbreak. Ministers are now saying in private that they should not have listened to "experts".

The COVID-19 period has also made me see that Hindus have a superior understanding of the "human" aspect of healthcare. Whereas the UK presented a mixed view on the seriousness of the virus and the best approach to take (including on face masks), the messages devolved to the people from the Indian government has been very clear and consistent. They understood this as necessary to win the cooperation of the people. This understanding is not something that can be elicited from a clinical

trial. It comes from being in touch with the heartbeat of the people.

The results are startling. As of 14th May, the UK with a population of 66 million has a Government-declared death toll of 33,000 deaths. Most experts say that numbers are closer to 50,000 as non-hospital deaths have not been fully accounted. India with a population of 1.35 billion has 2,500 deaths. UK has had 400 times or 40,000% more deaths than India adjusted for population!

Ancient Hindu health knowledge can drive scientific discoveries

As described earlier, modern-day scientists have developed technologies to validate the ancient Hindu theory of Tri-dosha. I propose that this could also run in reverse; ancient Hindu knowledge could be used to drive future scientific discoveries. For example, could the ancient Hindu understanding of human health, and particularly mental health and wellbeing, provide the key to validating the most fundamental scientific and philosophical questions, including is there a universal consciousness?

Young's two-slit experiment in physics showed that atomic-scale particles, such as light particles (photons) adjust their behaviour depending on whether they are being observed. When no-one is watching them, they form one pattern. When they are being observed, e.g. by a photon detector, they make a different pattern. This finding in 1801 was the first evidence of a quantum existence, namely that atomic-scale particles exist in multiple states (superposition) until they are observed. Only when they are observed do they collapse into one of the possible states. Schrödinger's Cat is a thought-experiment used to explain this phenomenon; a cat in a box is both alive and dead until its state is observed. It is interesting to note that, in his book "My View of the World", Schrödinger described the "profound rightness of the basic conviction in Vedanta" 25.

This is as far as physics can go: making observations on the physical world using equipment made of physical materials (which can include our bodies, i.e. the scientific field of biophysics). 220 years after Young first conducted his double-slit experiment and 85 years after Schrödinger presented his cat paradox, the reason for these startling findings still eludes the brightest minds. I feel that we will only be able to answer these questions if science returns to how it was in ancient India, when enlightened Rishis

used consciousness as their equipment to make startling scientific discoveries.

There is growing evidence that connecting to supreme consciousness, like Hindu Rishis do, leads to biophysical changes and health benefits. For example, a study conducted by neuroscientists and language experts at Harvard, Columbia, and Trento universities, reported unprecedented increase in brain grey matter density and thickness – literally brain power - in individuals versed in Sanskrit Shlokas, as measured using MRI. In some areas of the brain, grey matter density was almost 40% greater than very well-matched controls (e.g. matched by number of languages spoken)²⁶. Can this startling difference be completely explained only by physical processes such as increase in memorisation capacity and training of brain areas involved in speech processing and phonemics (as the Shlokas must be recited with very great precision)? Or could there be another reason?

Sanskrit which was created by Lord Brahma and named so because it inculcates ("krit") moral values ("Sanskars"). Its words and sounds contain divine vibrations, revealing divine intelligence on Brahman. Could this help to explain why the difference from controls in the above experiment is so very large? Whether this metaphysical cause contributes to the physical change or not, the physical change is clearly very pronounced. The author of the study is interested to investigate the physical health benefits of this extra brain power and suggests that it is reasonable to assume that reciting the Shlokas brings protective benefits to the brain. He says this is consistent with anecdotal evidence that these individuals are protected against age-related ailments such as Alzheimer's Disease. In a similar vein, very many studies, including the gold-standard trial type of RCT, indicate benefits of yogic practices such as meditation and yoga asanas. The very rapid uptake of so-called "yoga" and meditation/mindfulness around the world is testament to the benefits it brings to physical and mental health. In just four years, between 2012 and 2016, the number of Americans "doing yoga" grew by an incredible 50%, increasing 300% in people aged 50+.

However, as every Hindu knows, only a tiny fraction of the *yoga* practised worldwide is actual *yoga*. *Yoga* means union with Brahman, and *yoga* asanas (*yoga* postures) and meditation are two vehicles that help to facilitate this union. It therefore only by running controlled trials on groups of people engaging with true *yoga*, i.e.

²⁶ Hartzell, J.F., Davis, B., Melcher, D., Miceli, G., Jovicich, J., Nath, T., Singh, N.C. and Hasson, U., 2016. "Brains of verbal memory specialists show anatomical differences in language, memory and visual systems". *Neuroimage*, 131, pp. 181-192.

conducting it as an entirely spiritual practice, as it should be, that the full health benefits of this ancient practice can be appreciated.

Evidence of the physical health benefits of yoga asanas are plentiful. For example, the ability of "true yoga" to decrease heart rate, systolic and diastolic blood pressures, cholesterol levels and blood glucose has repeatedly been shown to be statistically significant^{27,28,29,30}. Its benefits for mental health, e.g. for reducing symptoms of anxieties such as obsessive-compulsive disorder and for treating depression, are also proven^{31,32,33,34}.

Depression is when a person gets so disconnected from his/her real self that they cannot experience their true self anymore, and they cannot find a way back to their true self. In other words, a depressed person is so dissociated from his/her true consciousness (Brahman) that they are sad or unhappy beyond any reason³⁵.

Pathological mental states provide the greatest opportunity for reclaiming knowledge on the metaphysical that has been lost from humanity in recent millennia.

²⁷ Selvamurthy, W., Sridharan, K., Ray, U.S., Tiwary, R.S., Hegde, K.S., Radhakrishnan, U. and Sinha, K.C., 1998. "A new physiological approach to control essential hypertension". *Indian journal of physiology and pharmacology*, 42, pp.205-213.

Damodaran, A., Malathi, A., Patil, N., Shah, N. and Marathe, S., 2002. "Therapeutic potential of yoga practices in modifying cardiovascular risk profile in middle aged men and women". *The Journal of the Association of Physicians of India*, 50(5), pp.633-640.

Gokal, R., Shillito, L. and Maharaj, S.R., 2007. "Positive impact of yoga and pranayam on obesity, hypertension, blood sugar, and cholesterol: a pilot assessment". *The Journal of Alternative and Complementary Medicine*, 13(10), pp.1056-1058

³⁰ Khatri, D., Mathur, K.C., Gahlot, S., Jain, S. and Agrawal, R.P., 2007. "Effects of yoga and meditation on clinical and biochemical parameters of metabolic syndrome". *Diabetes Research and Clinical Practice*, 78(3), pp.e9-e10.

³¹ Gupta, N., Khera, S., Vempati, R.P., Sharma, R. and Bijlani, R.L., 2006. "Effect of yoga based lifestyle intervention on state and trait anxiety". *Indian journal of physiology and pharmacology*, 50(1), p.41.

³² Pilkington, K., Kirkwood, G., Rampes, H. and Richardson, J., 2005. "Yoga for depression: the research evidence". *Journal of affective disorders*, 89(1-3), pp.13-24.

³³ Shapiro, D., Cook, I.A., Davydov, D.M., Ottaviani, C., Leuchter, A.F. and Abrams, M., 2007. "Yoga as a complementary treatment of depression: effects of traits and moods on treatment outcome". *Evidence-based complementary and alternative medicine*, 4(4), pp.493-502.

³⁴ Kirkwood, G., Rampes, H., Tuffrey, V., Richardson, J. and Pilkington, K., 2005. "Yoga for anxiety: a systematic review of the research evidence". *British journal of sports medicine*, 39(12), pp.884-891.

³⁵ Agarwal, A. https://ishittva.org/yoga/how-yoga-can-save-you-from-depression-diseases/

For example, neuro-imaging of individuals with dissociative identity disorder (DID) (otherwise known as multiple personality disorder) reveal changes in brain activity when these individuals take on different personalities³⁶. One DID clinical case study is particularly startling: a woman with one personality that is blind but whose other personalities are not blind. Electroencephalography (EEG) found that the brain's visual cortex replicated these personalities. Her brain activity was consistent with that of a blind individual when she took on the blind personality. But her brain activity was consistent with the brain activity of a sighted individual when she took on one of the sighted personalities³⁷. Dr Bernard Kastrup argues that this is a compelling demonstration of the literally blinding power of the extreme forms of dissociation, a condition in which the human body gives rise to multiple, operationally separate centres of consciousness, each with a distinct personality and sense of identity. He suggests that this is evidence that we are all dissociated personalities of universal consciousness and that it is from this consciousness that reality emerges. For thousands of years, Hindus have known and experienced this universal consciousness as Brahman.

Conclusion

In this essay, we have seen that Hindu systems of medicine, surgery and health are extremely advanced and for several thousands of years have guided Indians to great health. Despite centuries of invasions and concerted attempts to destroy this knowledge, invaders and colonisers were not able to fully destroy it. Humanity should be grateful to Hindus who protected and nurtured this knowledge because it is crucial to solving today's severe health problems.

Many of today's physical and mental health challenges can be cheaply and effectively addressed only through a whole scale adoption of the Hindu approach to medicine and health. However, for this to happen, India must strengthen the evidence base for its ancient knowledge, use western approaches for validating effectiveness in order to persuade both the west and, increasingly, Indians, that there is significant value to be gained by integrating the ancient knowledge with the new.

More crucially still, India must decolonise its citizens' minds, civil service,

Schlumpf, Y.R., Reinders, A.A., Nijenhuis, E.R., Luechinger, R., van Osch, M.J. and Jäncke, L., 2014. "Dissociative part-dependent resting-state activity in dissociative identity disorder: a controlled of MRI perfusion study". *PLoS One*, 9(6).

³⁷ Strasburger, H. and Waldvogel, B., 2015. "Sight and blindness in the same person: Gating in the visual system". *PsyCh Journal*, 4(4), pp.178-185.

and education system. Westernisation is creating dangerous health hazards for India. Lifestyle diseases like diabetes and mental problems have grown sharply in the last decade. There is strong evidence that rejection of traditional attitudes, activities, and culture in favour of western influences, and particularly shifts towards consumerism, is driving this. Hindus are blessed to have the solution to many of the world's health problems through their ancient knowledge and Ayurveda. It would be a disaster for all humanity if they discard this and adopt the worst from the west.

IMPACT OF PESTICIDE RESIDUES ON ANIMAL AND HUMAN HEALTH AND ITS REVERSAL USING COWPATHY

R. S. Chauhan¹ & Tulsa Devi²

In the thirst of modernization and industrialization man has contributed pollution to the life and ecology of plants, animals and microbes. An increased demand for food and fiber has lead to the chemicalization of agriculture and we have reached at such a stage that modern agriculture is dependent on high yielding varieties, which can only be grown under the influence of fertilizers and pesticides. Pesticides are the man-made chemicals which are being used to produce enough cheap food. In India, 2, 16,703 MT of technical grade pesticides was produced during 2018-2019 to control pests and plant diseases. The pesticides are classified as insecticides, fungicides, weedicides, rodenticides, plant growth promotor and biopesticides.

Majority of these pesticides are beneficial when used for specific purposes, handled properly and applied as per the recommendations of the manufacturer. However, over the years, there has been a mounting fear and concern that indiscriminate and improportionate use of pesticides may lead to their residues in food chain which may exert their harmful effects in human beings and animals. In an ideal pesticide application, the chemical should fall exactly on the target and be degraded completely to harmless compounds but this never occurs and only some part of the pesticide hits the target pests while remaining drifts into the environment.

If we look retrospectively, we find that the use of pesticides started during second world war when these hazardous and toxic poisons were considered as chemical weapons. A Swiss scientist Paul Muller invented DDT in the year 1939 which was considered as a wonder chemical that kills the insects, pests and was found wonderful

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in malaria control programmes. But soon after the discovery of DDT, its harmful effects also came into the knowledge of the scientists. In 1944, A famous biologist found harmful effects of DDT in birds, which produced thin shelled eggs, easily broken in nests resulting into failure of reproduction and decline of bird population.

The amount of pesticides used in India is very low (only 0.5 kg/ha) as compared to other developed countries (Table 1), even then we have much higher pesticide residues in food of our country.

Table 1. Consumption of pesticides in different countries

	Country	Consumption (kg/ha)
1.	India	0.5
2.	Mexico	0.75
3.	Germany	3.0
4.	Korea	6.6
5.	USA	7.0
6.	Japan	12.0

There is a gradual increase in production and consumption of pesticides during the last few decades. The pesticide consumption increased from 2353 MT during 1955 to 48,743.55 MT (technical grade) in the year 2018-2019. (Table 2).

Table 2. Consumption of pesticides in India(Technical Grade, MT)

S. No.	Pesticides	2014-15	2015-16	2016-17	2017-18	2018-19
1.	Insecticides	6740.02	7121.26	11542.65	3945.29	9478.05
						(19.44 %)
2.	Fungicides	6322.64	7400.14	8789.28	9078.84	8962.21
						(18.38 %)
3.	Weedicides	4475.85	3543.28	4075.28	2969.62	3998.45
						(8.20 %)

4.	Rodenticides	270.73	274.55	409.39	185.92	291.16
						(0.59 %)
5.	Plant Growth	17858.56	18418.70	24986.24	16213.86	22817.74
	Regulator					(46.81 %)
6.	Bio-Pesti-	2941.94	2999.94	4385.79	3472.92	3195.94
	cides					(6.55 %)
Grand		38,609.74	39,757.87	EA100 62	35866.45	48,743.55
Total		30,009.74	39,/3/.8/	54166.05	33000.43	40,743.33

Source: Directorate of Plant Protection and Quarantine, Faridabad

About 20% of Indian food products contain pesticide residues above tolerance level compared to only 2% globally. No detectable residues are found in 49% Indian food products compared to 80% globally. It is all because of the following reasons which needs to be looked in order to reduce the level of pesticide residues in animal products and other food material below MRL value. Table 3 includes the MRL in meat and eggs.

Table 3. Maximum residual level (MRL) {mg/ kg (ppm)} of some commonly used pesticides in animal products.

	Name of the pesticide	Animal product	Maximum residual level mg/kg (ppm)
1.	Aldrin/ Dieldrin	Meat	0.2
1.	Adding Diedini	Egg	0.1
2.	Panamyl	Meat	0.1
۷.	Benomyl	Egg	0.1
3.	Carbendazim	Meat	0.1
3.	Carbeildaziiii	Egg	0.1
4.	Chlamazzainhaa	Meat	0.1
4.	Chlorpyriphos	Egg	0.1
5	Carbofuran	Meat	0.1
5.	Carboiuran	Egg	0.1

		Meat	0.2
6.	. Chlorfenviphos		
7	0 4:	Egg	0.2
7.	Cypermethrin	Meat	0.2
8.	2,4-D	Meat	0.05
	_,	Egg	0.05
9.	DDT	Meat	7.0
	551	Egg	0.5
10.	Edinfenphos	Meat	0.02
10.	Edifferiphos	Egg	0.01
11.	Ethion	Meat	0.2
11. Etnion	Eunon	Egg	0.2
12.	Fenthion	Meat	2.0
13.	Fenvalerate	Meat	1.0
14.	Fexachloricyclohexane	Meat	2.0
14. (HCH)	(HCH)	Egg	0.1
15.	Lindane	Meat	2.0
13.	Lindane	Egg	0.1
1.6	M 1 4 1	Meat	0.02
16.	Monochrotophos	Egg	0.02
17	D1 .1	Meat	0.05
17.	Phenthioate	Egg	0.05
10	D.:	Meat	5.0
18.	Primiphos methyl	Egg	0.05
19.	Carbofuran	Meat	0.1
20	D1 11 1	Meat	0.05
20.	Phenthoate	Egg	0.05

Reasons for more pesticide residues in India

1. Indiscrimate use of pesticides

The use of pesticides is comparatively more in certain crops while in some it is negligible (Table 4). The farmers use pesticides more frequently and in increased doses than the recommended doses or procedures. It leads to the presence of high amount of residues in food commodities.

Table 4. Pesticides share in different crops

	Name of the Crop	Percent share of pesticides
1.	Cotton	52-55
2.	Rice	17-18
3.	Vegetables/ Fruits	13-14
4.	Plantation	7-8
5.	Cereals/oil seeds	6-7
6.	Sugarcane	2-3
7.	Others	1-2

2. Improportionate use of pesticides

The pesticides are used improportionately in India in relation to places and the amount of pesticides residue varies from one place to another. Tamilnadu consumes 1.2-2.0 kg/ha of land followed by Andhra Pradesh and Punjab where 0.8-1.2 kg is the rate of consumption. Pesticide residues in the feed and fodder are solely responsible for their accumulation in animal and poultry. The states like Tamilnadu, AP, Punjab, Haryana, and Karnataka have highest use of pesticides in order to get more production while on the other hand the states like Bihar, West Bengal, North eastern states have lowest use of pesticides. It is because of illetracy of farmers, poor economic conditions or due to lack of awareness. So the food commodities in high using states have more residues of pesticides.

3. Lack of education

Most of the farmers or labours working in the agricultural fields are either illiterate or having low formal education. They are not able to understand and read the instructions mentioned on pesticide containers or in the literature supplied with them. Their tendency is to use comparatively higher quantity of pesticides than recommended by the scientists/ manufacturers. They ignore the required dilution factor and use much higher concentration of the pesticides. They are even not aware of the harmful effects of the pesticides and do not properly dispose the used containers of the pesticides.

4. Lack of extension activities

In spite of Krishi Vigyan Kendra, Krishi Gyan Kendras and a network of extension workers of the Government/NGO's, there is a lack or deficiency in proper extension activities in India. The farmers are not fully aware about how to use pesticides, what precautions they should take in order to reduce the acute and chronic effects of pesticides? Farmers do not keep proper difference between the last application of pesticide and harvesting the crop, which leads to increased level of pesticide residue in food items and ultimately in animal products.

5. Inadequate literature supplied by the manufacturers

The pamphlets/ literature supplied by the manufactures along with the pesticide packing is incomplete and inadequate. Though it is written in many regional languages/ scripts but the printing, letter size and quality of paper is so poor that even an educated person cannot read and understand it what to talk of farmers or labours. It has been observed that one of the reasons to use a much higher concentration than the recommended ones is lack of proper literature.

6. For want of more production and profit

Most of the farmers have the impression that more spray/use of a pesticide will lead to a higher production. Therefore, the desire of more production and profit leads to indiscriminate use of pesticides in crops which ultimately enters in the food chain.

7. Lack of safer pesticides

So far very few pesticides have been discovered which are harmless to human

being or other domestic animals. Therefore, farmers have to use the available pesticides only which have a very narrow safety margin.

8. Use of banned pesticides

In our country most of the banned pesticides (Table 5) are available in the market and are used in various agricultural operations. This is primary because of the failure of Govt. to formulate and implement effective policies regarding the use of pesticides. Secondly, the socioeconomic condition of the farmers does not allow to strictly monitor the use of dangerous pesticides in agriculture and animal husbandry. These pesticides have been banned because of their acute/chronic harmful effects on the animal/human health. Thus their use adds to the misery and poor health of farmers and consumers.

In spite of the ban, DDT and BHC are still produced in India and we have 77% DDT and 95% BHC in India out of their total production in world.

Table 5. LIST OF PESTICIDES WHICH ARE BANNED, REFUSED REGISTRATION AND RESTRICTED IN USE

(As on 29.02.2020)

I. PESTICIDES/FORMULATIONS BANNED IN INDIA

A	Pesticides Banned for manufacture, import and use.			
1.	Aldicard	2.	Aldrin	
3.	Benzene Hexachloride	4.	Benomyl	
5.	Calcium Cyanide	6.	Carbaryl	
7.	Chlorbenzilate	8.	Chlordane	
9.	Chlorofenvinphos	10.	Copper Acetoarsenite	
11.	Diazinon	12.	Dibromochloropropane (DBCP)	
13.	Dieldrin	14.	Endosulfron	
15.	Endrin	16.	Ethyl Mercury Chloride	
17.	Ethyl Parathion	18.	Ethylene Dibromide (EDB)	

19.	Fenarimol	20.	Fenthion
21.	Heptachlor	22.	Lindane (Gamma-HCH)
23.	Linuron	24.	Maleic Hydrazide
25.	Menazon	26.	Methoxy Ethyl Mercury Chloride
27.	Methyl Parathion	28.	Metoxuron
29.	Nitrofen	30.	Paraquat Dimethyl Sulphate
31.	Pentachloro Nitroben-	32.	Pentachlorophenol
	zene		
33.	Phenyl Mercury acetate	34.	Sodium Cyanide
35.	Sodium Methane Arson-	36.	Tetradifon
	ate		
37.	Thiometon	38.	Toxaphene
39.	Tridemorph	40.	Trichloro acetic acid
B.	Pesticide formulations banned for import, manufacture and use		
1.	Carbofuron 50 % SP	2.	Methomyl 12.5 % L
3.	Methomyl 24 % formu-	4.	Phosphamidon 85 % SL
	lation		
C.	Pesticide / Pesticide form	ulations	s banned for use but continued to
	manufacture for export		
1.	Captafol 80 % Powder	2.	Nicotin Sulfate
D.	Pesticides Withdrawn		
1.	Dalapon	2.	Ferbam
3.	Formothion	4.	Nickel Chloride
5.	Paradichlorobenzene	6.	Simazine
	(PDCB)		
7.	Sirmate	8.	Warfarin

II. PESTICIDES REFUSED REGISTRATION

S. No.	Name of Pesticides			
1.	2,4, 5-T	2.	Ammonium Sulphamate	
3.	Azinphos Ethyl	4.	Azinphos Methyl	
5.	Binapacryl	6. Calcium Arsenate		
7.	Carbophenothion	8.	Chinomethionate (Morestan)	
9.	Dicrotophos	icrotophos 10. EPN		
11.	Fentin Acetate 12. Fentin Hydroxide		Fentin Hydroxide	
13.	Lead Arsenate	14.	. Leptophos (Phosvel)	
15.	Mephosfolan	16.	Mevinphos (Phosdrin)	
17.	Thiodemeton / Disulfoton	18.	Vamidothion	

III. PESTICIDES RESTRICTED FOR USE IN THE COUNT

S. No.	Name of Pesticides		
1.	Aluminium Phosphide	2.	Captafol
3.	3. Cypermethrin		Dazomet
5.	Dichloro Diphenyl Trichlo-		Fenitrothion
	roethane (DDT)		
7.	Methyl Bromide	8.	Monocrotophos
9.	Trifluralin		

IV. PESTICIDES WHICH SHALL BE PHASED OUT VIDE GAZETTE NOTIFICATION NO. S.O. 3951 (E).

S. No.	Name of Pesticide		
1.	Alachlor	2.	Dichlorovos
3.	Phorate	4.	Phosphamidon
5.	Triazophos	6.	Trichlorfon

Source: Directorate of Plant Protection and Quarantine, Faridabad

9. Man is the ultimate consumer

Man is the ultimate consumer of pesticide residues. Through fodder, water, air and other feed stuffs pesticide residues reach into the animals and then through milk, meat, egg and other animal products accumulates in human being. Various pesticide residues have been reported from animal products in our country important among them are DDT, Carbaryl, Hepatochlor, PCB etc. These pesticide residues in animal products and other food items ultimately get accumulated in the human bodies especially in the adipose tissue, blood and lymphoid organs. Most of the research on pesticide toxicity has been directed towards the assessment of their acute effects. When fed to man or animals at very low doses daily for months or years, these accumulated pesticides in body, may harm the normal functions causing various diseases in man and animals.

Status of pesticide residues in India

The presence of pesticide residues have been detected in various items and in food chain. The levels of the pesticides are found much higher than expected level because of the heavy contamination of the environment. A list of the commodities is given in which very significant levels of pesticides are recorded (Table 6). Besides, human milk, fat or tissue samples were screened for the presence of the pesticide residues, which were also found to have very significant levels of harmful pesticides. The BHC has been found from 0.120 to 1.22 PPM in human fat samples. Heptachlor, an organochlorine pesticide was found to be 0.425 PPM and DDT from 0.195 to 1.695 PPM. Even human breast milk is not free from DDT, which was found to have even 2.39 PPM levels. Similarly human blood was found to have a much higher concentration of 12.00 PPM as against of 0.050-PPM safe levels (no effect levels).

Table 6. Pesticide residues in food chain

	Items	Pesticide residues detected
1.	Soil and water	Permethrin, Cypermethrin, Fenvelerate, Deltamethrin, DDT,
		Aldrin, Dieldrin, BHC, Heptachlor, Lindane, Endosulfan
2.	Air	DDT, BHC
3.	Fodder (Lu-	Monocrotophos, Phosphomidon, Endosulfan
	cerne)	

4.	Cattle feed	Cypermethrin, DDT, BHC		
5.	Pasture & Hay	DDT, Aldrin, Dieldrin, BHC, Heptachlor, Lindane		
6.	Rice, wheat	DDT, BHC		
	flour, oils			
7.	Dairy Prod-	DDT, BHC, HCB, PCB, Heptachlor		
	ucts, Baby milk			
	powder, Butter,			
	Ghee, Cow/			
	buffalo milk			
8.	Meat, Eggs	DDT, Heptachlor, PCB, Carbaryl		
9.	Liver, Kidneys,	Cypermethrin		
	Hair, skin			
10.	Vegetables	Endosulfan		
11.	Adipose tissue	BHC, DDT, PCB, HCB, Heptachlor, Aldrin		
	of man			
12.	Human breast	BHC, DDT, Aldrin, Heptachlor, HCH		
	milk			
13.	Blood of man	BHC, DDT, Aldrin, Heptchlor, HCH		

The primary concern of the chronic low dose toxicity in man and animals is related to the carcinogenic, teratogenic, mutagenic, immune-toxic, immunopathological and/or neuropathic effects of pesticides. The perusal of literature in this regard reveals the studies directed towards only one or two pesticides while in nature, when a large number of pesticides are present and their combined effect has not been measured; which of course will give a very dangerous view. Various Pathological effects of low doses of pesticides in animals and man are as under:

1. Immunopathological effects

Immunopathological effects of pesticides in animals and humans are classified under acquired immunodeficiency or immunosuppression, autoimmunity and hypersensitivity.

- a) Acquired Immunodeficiency: Most of the pesticides studied during last two decades are found to exert immunosuppressive effect on both the wings of immune system i.e. humoral and CMI. Organochlorines, organophosphates, carbamates and synthetic pyrethroid pesticides were found immunotoxic at "no adverse effect dose" levels in poultry, sheep, and in bovine calves. However, the organochlorines are comparatively much more harmful to immune system. They are considered to be the cause of vaccinal failures or occurrence of disease epidemics in animals due to lowered immunocompetence. It has also been reported that a state of immunosuppression for a longer period may also lead to the development of neoplasms as the immune surveillance mechanism becomes defective. Such animals also exhibit recurrent bacterial infections due to the defective phagocytic machinery of the body. Immunosuppressive state of animal for a longer duration may also lead to development of cancers in the absence or defective immune surveillance in body. Since the pesticides affect specific as well as paraspecific immune system adversely, the immuno surveillance in body becomes defective. Though, there is no direct correlation but for an example, there is an increased incidence of eye cancer (squamous cell carcinoma of eye) in cattle and buffaloes in western UP during last few years. Similarly the occurrence of canine venereal tumours also increased in dogs during last decade. It is an indication of the adverse effects of polluted environment and may be related with a state of immunosuppression.
- b) Autoimmunity: Pesticides are also known to initiate autoimmune reactions in body particularly organochlorine group of pesticides binds with certain proteins of the body to become antigen leading to initiation of an autoimmune response in body. Autoimmune glomerulonephritis or autoimmune hemolytic anemia or autoimmune rheumatoid arthritis are such manifestations in animals and man. Lindane when fed with 'no adverse effect dose' level in lambs for a period of 4 months resulted in autoimmune glomerulonephritis as has been detected by the presence of immune complexes in glomerular basement membrane using indirect immunoperoxidase techniques.
- c) Hypersensitivity: Hypersensitive reactions are reported due to consumption of pesticide contaminated food stuffs. Pesticides may act as haptens but antibodies against them have been detected in body. Eczema in man was found due to maneb,

2,4-D and 2,4,5-T. DDT has also been known to cause type I hypersensitivity reaction. The dust of pesticides is cause of allergic respiratory disorders like asthma. Cutaneous allergy has been known to occur due to contact of pesticide contaminated food items. However, the studies showed a depression of CMI response on delayed type hypersensitivity reaction using chemical allergens.

2. Carcinogenic effects

Some pesticides exert their carcinogenic effects either directly or indirectly through their metabolites. Most of organochlorine pesticides like dieldrin, gamma isomer of BHC, DDT and PCB may cause cancer in liver and lung. However, there is a lack of sufficient literature to support this belief that the pesticides are having carcinogenic effects. Indirectly, a state of immunosuppression for a longer period is helpful in increasing the susceptibility of an animal for malignancy. Since many pesticides are known to cause mutation in chromosomes of man and animals, it is considered that they may also lead to carcinogenicity.

3. Mutagenicity

Pesticides may cause alterations in structure or number of chromosomes resulting in translocations, mutations and chromosomal breakage. The altered chromosomal number may become lethal during fetal stage. Several pesticides like DDT, Endrin, PCB and HCB are known to cause chromosomal aberrations. The mutagenic effect of pesticide poses a more serious threat to the future of human race.

4. Teratogenicity

The accumulation of pesticides in body tissue and congenital birth defects in children has not been well correlated so far. However, there are certain pesticides which causes teratogenic defects in animals. Carbaryl, thiram, propoxur, parathion, leptaphos, 2,4-D, lindane and diazinon are having teratogenic defects in animals. In mice, cypermethrin, alphemethrin and malathian are found to exert birth defects in baby mice.

5. Neuropathy

Most of the organophosphates, organochlorines carbamates may cause neutrotoxic effects in man and animals including increased irritation, loss of memory, in coordination of movement, ataxia, delayed response, convulsions, spasms and paralysis. Such changes appear due to demyelination of nerves in central and peripheral nervous system. Pesticide residues are also responsible for marked behavioural changes in man and animals.

6. Nephropathy

The pesticide residues present in food stuff may act as hapten and when they bind with certain body proteins, they may become antigenic. This antigenicity is responsible for initiation of immune response in body and a continuous presence of antigen and antibodies in body may lead to the formation of immune complexes. The immune complexes when produced in excess are deposited in glomerular basement membrane leading to glomerulonephritis, commonly known as renal failure for which patient needs dialysis after a regular interval to survive.

7. Hepatotoxicity

The pesticide residues in food may harm liver tissue as they are metabolized here. There are instances of chronic liver disorders leading to cirrhosis. Certain pesticides are not so dangerous but their metabolites cause severe damage to hepatic parenchyma. The cirrhosis once starts, it never stops even after withdrawal of the primary cause.

8. Reproductive Disorders

It has been observed that the pesticides are lethal to dividing cells of genitalia. They may cause abnormalities in sperms leading to decrease their ability for fertilization. On the other hand the ova becomes defective and not able to implant on the uterine surface leading to early abortion or miscarriage. DDT has been found to cause weak egg shell in birds leading to their decreased population. The pesticide residues in food, thus may ultimately lead to sterility, early abortion, still births or repeat breeding.

9. Recurrent Infections

Animals having reduced immunocompetence due to pesticides are more liable to attract infections very frequently. A good treatment provides relief to animal but soon after recovery, the same disease occurs again due to immunosuppressive state of animal. Needless to emphasize that most of the antibiotics are bacteriostatic, which do not kill the organism but prevent their growth. In such conditions the suppressed growth

of bacteria flares up just after withdrawal of the antibiotic therapy in the absence of defective immune system of body due to pesticides.

Cowpathy in control of harmful effect of pesticides

Cowpathy is just like any other system of medicine such as Homeopathy, Allopathy or Naturopathy. In this, the human or animal ailments are treated with products of cow also known as Panchgavya i.e. five things derived from cows i.e. milk, clerified butter (ghee), curd (dahi), urine and dung. In the ancient literature of Ayurveda it is described as Panchgavya Chikitsa. In the recent years, an interest has been generated among the scientific community of the world to develop or scientifically validate the Indigenous Technical Knowledge (ITK) as an alternate therapeutic or preventive approach. As is evident from the trends of modern allopathic treatments particularly the development of resistance in microorganisms and side effects, the alternative system of medicine has gained momentum not only in India but the WHO has also established recognition to such systems. In fact in the western world also, scientists/ clinicians are facing problem in handling the multiple drug resistance in micro-organisms, presence of antibiotic residues in food chain and/or associated allergies and autoimmune disorders in man. As per WHO, the twentieth century wonder drugs "antibiotics" will not remain useful and become almost ineffective by the year 2020, then one has to think over the alternative therapeutic approaches to control the infections. In fact most of the antibiotic drugs are bacteriostatic in nature and as such they do not kill the bacteria rather they stop or check their growth and bacteria have to be destroyed by the body's own defense mechanism known as "Phagocytic System" through macrophages (monocytes of the blood). During the last few years it has been observed that the efficiency of these macrophages reduced drastically as a result of the environmental pollution and presence of pesticides, heavy metals, fungal toxins etc. in the food chain. That is attributed to the heavy use of agrochemicals in agriculture and poor storage conditions of food grains. Any how deficient functioning of macrophages leads to inefficacy of antibiotic drugs, development of resistance in bacteria, recurrent infections, and or decreased immune status of an individual.

Recent researches showed that cow urine enhances the immune status of an individual through activating the macrophages and augmenting their engulfment power as well as bactericidal activity. This research opened a new era in the medical science

and CSIR has got a patent from the US on cow urine for its bio-enhancing properties and its use in tuberculous patients. Along with traditional therapy of tuberculous drugs, if one also consumes cow urine, the anti-tuberculous drugs act faster even in low doses thereby reducing the cost of treatment and its duration. Recently, researches have found that the use of cow urine along with the antibiotics prevents the development of resistance in microorganisms against the antibiotics. It is thought that the cow urine blocks the R-factor, a part of plasmid genome of bacteria responsible for the development of antibacterial resistance. Several scientists from different laboratories of CSIR, AIIMS, G.B. Pant University Pantnagar, and IVRI, besides some of the NGOs have been working on different medicinal properties of cow urine. In fact there are several medicinal preparations available with NGOs who are also marketing cowpathy drugs under FDA license and some of the NGOs are even not able to cope up with the demand of the public. Several students of M.Sc., M.V.Sc., M.D. and/or Ph.D. are working on the medicinal properties of cow urine and other products of cows. It has been found to enhance the body's immunity and resistance power to fight with infections.

Cow urine has antioxidant properties; it neutralizes the oxidative stress produced in body through action on free radicals. It has been found to repair the damaged DNA and thus is effective for the cancer therapy. Scientists proved that the pesticides even at very low doses cause apoptosis (cell suicide) in lymphocytes of blood and tissues through fragmentation of DNA and cow urine helps the lymphocytes to survive and not to commit suicide, it also repairs the damaged DNA. Besides, in poultry cow urine enhances the immunocompetence of birds and provides better protection along with vaccination. It also increases egg production, egg shell quality and egg weight. Moreover, by using cow urine in poultry ration one can enhance the productivity that too without using antibiotics and the fear of antibiotic residues in poultry products.

On the basis of chemical fingerprinting through modern equipments like HPLC, it has also been observed during the scientific research that the urine of Indian cows are highly effective and almost nil or few medicinal properties are present in the urine of crossbred, exotic cows, buffaloes, etc. The Indigenous cow urine contains "Rasayan" tatva, which is responsible for modulating immune system and acts as bioenhancer. It is not only the cow urine but others like dung, milk, ghee and curd are also equally effective for various ailments and other operations. Cow urine as such and/or after

addition of neem leaves is a wonderful biopesticide. Such biopesticides are safe to use, do not accumulate in the food chain and as such do not have the harmful effects like chemical pesticides. Cow dung is an excellent farm yard manure and if processed and prepared vermi-compost, very small amount of vermi-compost is sufficient for a large field. Similarly, many medicines are prepared from the cow milk, ghee and curd. However, a scientific validation of many of these products is still required.

Cowpathy is an age old system of medicine described in ancient Indian literature 'Ayurveda' as 'Panchgavya Chikitsa". In Ayurvedic system, medicines are prepared either from plants or from animals besides the use or certain metals. The Ayurvedic medicines of animal origin are mainly prepared from cow products. The high profile medicine 'Panchgavya' is prepared from five materials received from cows. It includes milk, Dahi (curd), Ghee (butter oil), urine and dung. The ability of indigenous cow urine is tested for its immunomodulatory properties in mice, rat and avian lymphocyte cell culture system for the first time and the results are presented in Table 7.

Table 7. Percent increase in immunity through various parameters in comparison to control

	Parameters	Percent increase in immunity
1.	B-cell blastogenesis	59.5 %
2.	T-cell blastogenesis	64.0 %
3.	Serum IgG level	19.8 %
4.	Serum IgM level	19.0 %
5.	Serum IgA level	0.53 %
6.	Macrophage Functions	104.0 %
7.	DTH reaction	126.0 %
8.	Interleukin 1 level	30.9 %
9.	Interleukin 2 level	11.0 %

The experiments were planned to study the effect of cow urine on B- and T-lymphocytes treated with pesticides and the regents are quite encouraging (Table 8 & 9). Cow urine protected the cells up to 55% from the deleterious effects of the pesticides.

Table 8. The effect of cow urine on B-lymphocytes treated with pesticides

Pesticides	B-lympho- cytes (%)	Treated with cow urine (%)	Protection due to cow urine (%)
Cypermethrin	56	16	40
Allethrin	92	60	32
Captan	87	45	42
Dimethoate	73	18	55
Methyl parathion	87	54	33
Forate	81	58	23
Mancozeb	60	29	31
Propoxur	76	65	11
Thriam	61	39	22
Zineb	83	68	15

Table 9. Effect of cow urine on T-lymphocytes treated with pesticide

Pesticides	T-lymphocytes (%)	Treated with cow urine (%)	Protection due to cow urine (%)
Cypermethrin	56	47	9
Allethrin	92	57	35
Captan	87	51	36
Dimethoate	87	20	67
Methyl parathion	68	55	13
Forate	82	67	15
Mancozeb	55	36	14
Propoxur	71	68	3
Thriam	67	35	32
Zineb	87	71	16

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Strategies to combat with pesticide residues related problems

A. Government level

- 1. The farmers should be advised about the harmful effects of pesticides so that they should minimize the use of pesticides in crops. They should judiciously use the pesticide in terms of their quantity and frequency.
- 2. It should be assured that the pesticides produced in the country should be distributed proportionately so that the indiscriminate and improportionate use can be avoided.
- 3. All emphasis must be laid on the development of Bio-pesticides like viral, bacterial or fungal pesticides or pesticides of botanical origin like Neem or Tulsi or of cow urine based pesticides, which can be used in crops to kill the insect pests without polluting the environment.
- 4. The harmful pesticides like some organochlorines, organophosphates and carbamates must be banned strictly in India, their production, import or use should also be completely banned.
- 5. To reduce the effect of pesticide residues, some herbal preparations should be developed which can overcome the immunopathological, neuropathic or nephropathy effects, there are many herbs mentioned in our Indian ancient literature, which can be scientifically validated to prevent and control the harmful effects of pesticides. This will certainly give a new direction to the world not to depend on synthetic things.

B. House hold level / Individual level

- 1. Avoid the use of chemical pesticides in a house such as mosquito repellents, cockroach killers, sprays, mats, coils, etc. All of them are harmful to the body responsible for making body susceptible to various kinds of ailments.
- 2. Avoid to use synthetic chemicals, dyes, flavouring agents, preservatives, antifungal and antibacterial agents in food items.
- 3. Use fresh foods as far as possible and after proper cleaning. Vegetables should be kept in lukewarm water with 0.89% salt for at least 30 min before use.

- 4. Avoid the shining vegetables fruits such as tomatoes, brinjal, lady's finger, apple, etc.
- 5. Try to have such vegetables/fruits/cereals/pulses which are grown under organic farming.

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SURVIVING AN ILLNESS: MATRIX OF RELIGION AND HEALTH SYSTEM

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Abstract

This paper seeks to explore the matrix of the Hindu ways of life and Ayurveda, a system of holistic medicine and health. The Hindu way of life incorporates an understanding of the individual's physical and moral being, the social and environmental world around the individual, and the supreme powers that remain invisible to the physical eyes. By relating one's Karma to one's health, not only an individual improves his conduct but even others around him do so. It also makes the event of death acceptable without any fear. Ayurveda takes care of all the four parameters given by the WHO to measure health: physical, mental, social and spiritual as it is a system that reflects on the interactions between the mind, the body and the world around while treating a patient. The Hindu ways including Ayurveda may be practiced in isolation without any dependence on any institutional (religious, social and medical) regimentation. A system that is gratifying to all, affordable by all, sustainable and environment friendly should be welcome in this crisis-torn period.

Key Words: Ayurveda, Euthanasia, Hindu, Holistic medicine, *Karma* and *Karmaphal*, *Sattvic*, *Rajasic* and *Tamasic* Food, Scientific Temper, *Yoga*.

INTRODUCTION

One's normative life-style is generally shaped and decided by the religiophilosophical system that one believes in. Most of us inherit our beliefs and beliefsystems from our parents and environs and a large number of people live with them peacefully without ever questioning them. In some cases people are not allowed to

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question their belief-systems; any questioning, aberration, contrary opinion or behaviour is dealt with severely and various sorts of punishments are inflicted by (administrative) machinery controlled by the individuals and the social and religious groups (particularly with a strong soteriological background) under various practices, conventions and rules. Those who acquire their beliefs from secondary sources (say from some books) keep on changing their life-style according to their newly acquired knowledge. In the process a chasm is created between the life styles of those who conform to their inherited beliefs and those who acquire them. Many a times a power struggle between these two groups too starts taking a shape. This is how societies across the world have emerged over a period of time. Medical systems too are the by-products of the behaviour of a societal organization and do not remain untouched by their surroundings. Therefore, for a historian of medical sciences it is imperative to look into various belief-systems. Owing to the limitation of time and space I intend to ruminate on the matrix of Hinduism and health systems in India which is largely organised on the basis of Upanishadic wisdom. During the contingent situation of the pandemic, COVID-19, which has paralysed the entire world, alternatives are being sought everywhere to find counter - strategies to meet the crisis. This paper also is an effort in the same direction. The basic inquiries in a Health System are: a) why does a body suffer from some illness? and b) what can be done to bring an ill body to its normal state?

THE CASE OF EUROPEANIZED INDIA

Indians, on the side of the Arabian Sea, were formally introduced to European medical education at the start of Colégio Médico de Goa (currently Goa Medical College) in 1691 by the Portuguese colonisers. The Introduction on the side of the Bay of Bengal was done at the opening Ecole de Medicine de Pondicherry (currently JIPMER) in 1823 by the French colonisers. To train the native youths in the European system the British East India Company established Medical College Bengal (currently Medical College and Hospital, Kolkata) on 28th January 1835, Madras Medical College, Chennai on 2nd February 1835, The Grant Government Medical College, Mumbai on 1st Nov 1845 and Thomson School (currently S N Medical College) Agra in 1854 for the practice of British military doctors. Later Auxiliary Royapuram Medical School, Chennai (1877), King Edward Medical School, Indore (1878), King George's Medical

College, Lucknow (1911) and Stanley Medical School, Chennai (1917) came into existence. Only one institution in the US and none in Europe was open for females before Madras Medical College started admitting them in 1885. The first dental college of India, Calcutta Dental College (now Dr. R. Ahmed Dental College and Hospital, Kolkata) was started in 1920. Later a few more colleges like Dental and Optical College/ Punjab Dental College, Lahore (1923), American Dental College, Karachi (1926), Andhra Dental College and Hospital, Bezawada (1928) [shifted to Madras in 1933 as American Dental College and Hospital, City Dental College and Hospital, Calcutta (1932), Yamunabai L. Nair Hospital Dental College, Bombay (1933), De Montmorency Dental College and Hospital, Lahore (1933) and many more appeared on the scene. These dates have been indicated to prove that the modern medicine in India is just about 300 year old. This is a very small period in the history of the oldest living civilization. This period is also known as the period European Colonization, large scale introduction of Christianity in India to convert Indians to Christian fold, trivialize Indian wisdom, and introduction of a heavily galvanised licence regime to destroy indigenous knowledge systems to be replaced by those in Europe.²

The matrix of religion and disease/medicine becomes all the more complicated in a country like India as compared to the West which I have discussed elsewhere. It is so because India lives and marches forward with an inheritance of at least 5000 year old civilization. *The Constitution of India* enjoins upon the Indian citizens to have a sense of scientific temper. It is enshrined as a fundamental duty under Article 51 A(h): "It shall be the duty of every citizen of India- To develop scientific temper, humanism and the spirit of inquiry and reform." The duties were not a part of the original form of the *Constitution* and were inserted later vide Forty-second Amendment Act, 1976, which came into force with effect from 3rd January 1977. Despite being very fond of the term 'scientific temper' Jawaharlal Nehru, the first prime minister of India, did not get the term mentioned in the Constitution when it was being drafted. However, the term was inserted at the recommendation of Swaran Singh Committee when the leftists were riding the back of Congress, the ruling party, and the opposition in the country had put behind the bars. The insinuation to the leftists and the liberal thinkers

² See Lala Lajpat Rai's "Europeanization and the Ancient Culture of India", Sunderlal's *Bharat Mein Angrezi Raj*, and Dharampal's *Indian Science and Technology in the Eighteenth Century*.

is very clear here. At the time of independence there were four major religious groups in this country: Hindus, Muslims, Sikhs and Christians. The Hindus and the Sikhs have the same philosophical tenets and the Christians and the Muslims have only minor differences in their religious practices as both of them have same roots. So it is worthwhile to ask as to which group of the population was the target of the amendment by way of insertion in the Constituion. The Hindus call themselves scientific in attitude as they keep on updating themselves and not averse to change (see infra) on the other hand Muslims openly defy any reform as is clear from the following definition³ of a Muslim in the *Constitution of Islamic Republic of Pakistan*:

"260(3)(a): Muslim means a person who believes in the unity and oneness of Almighty Allah, in the absolute and unqualified finality of the Propherhood of Muhammad (peace be upon him). the last of the prophets, and *does not believe in*, or recognize as a prophet or *religious reformer*, any person who claimed or claims to be a prophet, in any sense of the word or of any description whatsoever after Muhammad (peace be upon him);" (emphasis added, p.155)

It may be pertinent to note here that Marxists/Communists are very fond of the term "scientific". Marxism is described as a "scientific philosophy" by the communists. The Marxists pride themselves as practitioners of "scientific socialism" based on dialectical materialism. They approach a society concretely, as a subject for objective research, and analyze human history as one would a colossal laboratory record. Despite this there is no other constitution in the world which mentions the term "scientific temper" as a fundamental duty or as a guiding principle in it. Jawaharlal Nehru was also the President of the Association of Scientific Workers of India (ASWI), which had also been registered as a Trade Union in 1946. Being a scientist and having a scientific temper are two different issues. When an association of Scientific Workers starts working as a trade union of scientists to develop scientific temper one can realise that the tempers are

I have resorted to the *Constitution of Pakistan* because the Indian *Constitution* does not define the term. And Pakistan being a part of India before the partition in 1947 largely echoes the religious sentiments of Indian Muslims as well. A personal interaction with some Indian Muslim friends also indicates that they are inclined to accept this definition.

going to be very high and no wonder that scientific temper is left behind. Because of their misplaced enthusiasm this group has developed a sort of antagonism and paranoia against religious activities. They organise themselves to run various societies all over the world under different names and banners like Society for Promoting Science, Society against Superstition, The Society for Scientific Temper, Society for Reason, Centre for Rational Inquiry, Federation of Indian Rationalist Associations, Maharashtra Andhashraddha Nirmoolan Samiti (MANS, the Committee to Eradicate Superstition in Maharashtra) etc. The issue becomes complicated when foreign players also join hands. For example, the Institute for the Study of Secularism in Society and Culture of the Trinity College patronises associations like Indian Rationalist Association, and Federation of Indian Rationalist Associations. Their main work is to debunk religious activities as superstitions. Surprisingly, only the Hindu community is their target in India and one rarely finds them attacking other communities. In this respect they are politically close to the Indian left groups. No wonder this makes the Hindus more vulnerable and also more apprehensive.

Hindu: Definition and Characteristics

The Indian *Constitution* does not define of the term "Hindu". However, there are five references to indicate the limits of the term "Hindu" regarding the applicability of law. One reference is there in the *Constitution of India* (25.2.b.Explanation II) where it is "construed as including a reference to persons professing the Sikh, Jaina or Buddhist religion". The others is there regarding the applicability of The Hindu Marriage Act, 1955 (Clause 2.1.a, b, c), Hindu Adoption and Maintenance Act, 1956 (Clause 2.1.a, b, c), Hindu Minority and Guardianship Act, 1956 (Clause 3.1.a, b, c) and Hindu Succession Act, 1956 (Clause 2.1.a, b, c) to all Hindus "in any of its forms or developments, including a Virashaiva, a Lingayat or a follower of the Brahmo, Prarthana or Arya Samaj, ... Buddhist, Jaina or Sikh ... any other person domiciled in the territories to which this Act extends who is not a Muslim, Christian, Parsi or Jew by religion...." The Supreme Court of India has repeatedly observed: "When we think of the Hindu religion, we find it difficult, if not impossible, to define Hindu religion or even adequately describe it. ... It may broadly be described as a way of life and nothing more." [1966 AIR 1119, 1976 (Sup) SCR 478, 1995 AIR 2089, 1996 AIR 1113] The

related corollary, therefore, is to identify the parameters to the way of life.

The best description of a Hindu's way of life is: "a constant engagement to shed one's ignorance and pettiness" ("हीनं दुष्यित इति हिन्दू।" अर्थात जो अज्ञानता और हीनता का त्याग करें उसे हिन्दू कहते हैं, Sabdakalpadruma, p. 537). As the word "Hindu" is largely considered to be an exonym and an umbrella term the Hindus prefer the term Sanātana Dharma ("the eternal way") to describe their way of life. It defies all the narrow traditional features of any religion or creed. It has been accepted as the oldest surviving culture in the world, which unlike Abrahmic faith systems, has multiple books, prophets (avatars), gods, prayers and praying rituals, philosophical concepts, paths to liberation (Moksha), images (vigraha) for worshipping and reverence, rites or performances, and the like. The faith has survived, developed and prospered in the Indian subcontinent despite several waves of threats, slaughter, deprivation, insult and pain.

To my mind a person who accepts and believes the following three doctrines (necessary and sufficient conditions) is called a Hindu: the doctrines of i) action (Karma) ii) rebirth (*Punarjanm*) and iii) liberation (*Moksha*). There are three parameters to decide the worthiness of an act (Karma). One has been suggested by Gandhi very succinctly as: "a relentless pursuit after truth" (Gandhi, p.1). Secondly, the Hindus believe that every human being is indebted to the five sources for his/her survival. Therefore, s/he should contribute to one's fulfilling the aspirations expressed in terms of the five ethical and spiritual debts (Shatpath Bahaman 1.7.2.1-6) that a person should strive to repay in one's life-time. So each action of a person should be directed towards an effort to repay at least one of the following five debts: indebtedness to the sages (rishi rin ऋषि ऋण), indebtedness to the ancestors (pitra rin पित ऋण), indebtedness to the deities (deva rin देव ऋण), indebtedness to humanity (manushya rin मनुष्य ऋण) and indebtedness to the objects of nature like plants and animals (bhuta rin भूत ऋण). The third parameter to judge the value and validity of an action is that it should be performed for the fulfilment of at least one of four puruṣārthas (पुरुषार्थ the four proper goals or aims): Dharma (धर्म righteousness, moral values), Artha (अर्थ prosperity, economic values), Kama (काम passion, love, psychological values) and Moksha (मोक्ष happiness or spiritual value). All these four values are independent as well as inter-dependent on each other. Other characteristics like (non)acceptance of all-pervasive Supreme Being who is both

immanent and transcendent, (non)acceptance of the *Vedas* as a *Pramana* (means/valid authority) in religious and philosophic matters, (non)allegiance to a particular tenet or philosophic concept, practice of multifarious religious performances, (non)acceptance of great world rhythm, vast period of creation, maintenance and dissolution follow each other in endless succession are just the examples of different stages of realization by different sages and spiritual leaders in their quest of truth. Even the evolution of the *Chaturashrama* (*Brahmacharya*, *Grihastha*, *Vanaprastha* and *Sannyasa*) and the *Chaturvarna* (Brahmana, Kshatriya, Vaishya and Shudra) is to put the principle of *Karma* in its proper place. Similarly, different kinds of rituals, surrender to God, sticking to *chaturashrama* and *chaturvarna*, *japa* (prayers) to different deities, and having qualities like contentment (*santosh*), tolerance, annihilation of ego, love of life, flexibility, humility, austerity, charity, rationalism etc are just different types of *karma* for different occasions and purposes in consonance with the parameters specified above.

Karmaphal and Sickness:

The Hindus believe that "There is no one who can remain without performing an action (karma) even for a moment. Indeed, all beings are compelled to act by their qualities born of material nature (the three guṇas)." (Bhagavadgita 3:5) The action (karma) includes movement of our (physical) bodies as well as the (mental/metaphysical) movement of our thoughts. The word karma (action) refers to the results of the past actions, the present actions, and the actions that one will perform in the future. The karmas of the past, present and future are called Sanchita (संचित कर्म, the accumulated past actions, genetic coding to use modern terminology), Prarabdha (प्रारब्ध, the effect of a past action in the present time) and Kriyamana (क्रियमाण कर्म, that which is being performed; current action) and Agami (आगामी कर्म, the future actions that result from one's present actions) respectively. Thus, there are four types of actions (karma). The effect of an action is also Karma, because every effect becomes a cause in itself. While Sanchita Karma and Agami Karma are latent (suksma), Prarabdha and Kriymana Karma are gross (sthula).

Ayurveda, the Hindu science of health, says that the health of a body is governed by all these four types of *karma*. For example, having a good diet (*Kriymana Karma*) affects a body positively and a bad diet negatively; a new born baby's weak health

(sanchit karma) because of the poor diet of his/her mother is his/her prarabdha. Similarly if proper medication is done the health of the child may improve (Agami karma). Crawford writes that Charak "allows room for human efforts to curtail the effects of ordinary non-moral actions by the use of intelligence, wisdom, balanced conduct, and recourse to medicine. Only the fruits of immensely good or bad moral actions cannot be averted by these means." (Crawford, p. 111) Therefore, a Hindu is not averse to taking medicines and improving one's life-style though he considers sickness to be a punishment of his karma (karma danda 'कर्म-दंड') which is the net result of his karma (karma phal कर्म-फल) from which there is no escape. Hindus thus believe that a disease is a result of one's own karma, not somebody else's sin. This explains why somebody is affected by a virus and someone else is not. One has developed immunity while others have not because of a combination of various karmas.

As indicated earlier the Hindus do not consider/treat/deal with a body/ disease in isolation. Therefore, a society also spells out the punishment for what it considers to be bad/sin/sinful. Generally this is done in a religious book (not strictly speaking scriptures). For example, Shatatapa Samhita says that the killer of a Brahmin (The person who is engrossed in Brahm) has to suffer from white leprosy (2:1) while a slayer of a cow suffers from leprosy (2:13-14, 2:36). Similarly, in Goswami Tulsidas's Shri Ramcharitmanas, a Hindu religio-literary epic, there is a conversation between Kaag Bhushund and Garuda (*Uttar Kand*, Doha 120 ff). In it people are being advised to shun criticizing and talking ill of others unnecessarily. In the process karma (action/sin) and its Karma Phal (result) are mentioned: "those who criticise their teacher will be reborn as frogs"; "those who criticise saints are reborn as owls"; "foolish people who criticize and talk ill about everyone shall be reborn as bats." It also mentions the causes of various diseases: "The root of all diseases is attachment, infatuation and ignorance"; "The Kama is Vata, greed is immense phlegm and anger is Pitta which is the reason for burning in the chest"; "If these three brothers viz. Vata, Pitta, and Kapha unite, painful diseases can occur". It also suggests a way out to attain samadhi (peace) in this condition: "Adopt a routine, dharma, ethics (best practices), penance, knowledge, sacrifice, chanting, charity and many more; medicines are there but they are not able to cure the diseases. By the grace of Lord Rama, if this coincidence remains, then all these diseases will be destroyed. Believe the words of the Vaidya (doctor) as well as

those of a *Sadguru* (a good/virtuous teacher)." In real life nobody considers Tulsidas to be doctor but metaphorically speaking every saint is a doctor. So is the case with a large number of other Hindu (non-medico) texts that mention *karmas*/sins and their specific consequences in terms of diseases or otherwise in this life or later. One may refer to P V Kane's *History of Dharmashastra*, for details on this issue. A long list of sins and the consequent diseases has also been worked out by Swami Sivananda in his *Karmas and Diseases*. A part of the table (pp. 4-6) prepared by him is being cited here for understanding the issue.

"KARMAS	DISEASES
[One][w]ho insults others, breaks promises, causes	Gets mental agony and pain.
great disappointment to another, deprives one of his	
property, disgraces others in public,	
[One][w]ho plugs up or blocks up the hole of a rat	Gets Asthma, lung diseases,
or a snake, who catches fish and causes them to die	pleurisy, bronchitis (severe),
by suffocation, who stifles the life of any creature,	pneumonia, etc.
[One][w]ho kills or injures another by means of	Suffers from scorpion-sting
poisoned instruments,	and snake bite.
[One][w]ho oppresses others and keeps them in	Gets elephantiasis.
permanent slavery by excessive vanity and pride,	
[One][w]ho is a miser and money-lender, who	Suffers from consumption.
ruins, impoverishes and drives his debtors to starva-	
tion through rack renting and abnormal interest,	
[One][w]ho indulges with prostitutes, commits	Gets leprosy." (p. 4)
adultery, and leads an impure life,	

It may be pointed out that Swami Sivananda was a successful practising doctor before being initiated into the *sannyasa* order. He was a product of Jesuit College, Tiruchirappalli and Tanjore Medical Institute and a member of Royal Asiatic Society (M.R.A.S.), London, Royal Institute of Public Health (M.R.I.P.H.), London and an Associate of Royal Sanitary Institute (R.San.I.), London. He had read all available books in modern medicine before joining a hospital run by a Rubber Estate in British Malaya as a physician. He worked there for about a decade, besides having a roaring

private practice. His interest in medicines continued even after becoming a mendicant. He started a charitable dispensary at Lakshman Jhula which is now a big Sivananda Medical Organisation, with a General Hospital. Therefore, one should not doubt if Swami Sivananda knew about micro-biology, bacteriology and virology or if he knew why cold, cough and other such diseases took place and how they could be cured. It is very easy to criticise the views presented in the table given above and brand the entire Hindu society as foolish/superstitious. This sort of criticism largely comes from those who are not spiritual/ethical adepts and are habituated to see/analyse things only in parts. Avoiding a disease is always better than curing it. As hinted above, a saint has to perform duties of a moral teacher as well. People of different IQ (intelligence quotient), and EQ (emotional quotient) throng to him for advice. Therefore, he has to sermonise in a language that people understand. Hindu epistemology teaches things in a holistic manner and takes care of IQ, EQ, SQ (spiritual quotient) and AQ (adversity quotient) of the teacher as well the student.

Hindus also believe that one can also expiate one's sins and mitigate one's karmaphala by undertaking penance (tapa तप) and atonement (Prāyaścitta प्रायश्चित). Suffering on account of a disease is seen as a process of mitigation of karmaphala of some bad karma. Some persons (particularly Hath Yogis and the Jains) avoid taking medicines so that their suffering, a sort of purifying and cleansing process, becomes intense. They regard the suffering on account of the disease as an opportunity for undertaking prayishchitta and penance. In this way they avoid making their sin and its punishment (karmaphala) a part of the sanchit karma in the lives to come. Some Hindus (bhakti margis) also undertake japa (chanting) as purifying and cleansing measures to overcome their past bad karma (sanchit karma) though in traditional, practical and average Hindu wisdom one is supposed to take medicines: "knowledge is a friend in foreign lands, wife is a friend at home / medicine is a friend to the ill, and dharma is a friend to the deceased person ||" (विद्या मित्रं प्रवासेषु भार्या मित्रं गृहेषु च। व्याधितस्योषधं मित्रं धर्मो मित्रं मृतस्य च। vidya mitram pravaseshu bharya mitram griheshu cha. vyadhitasyaushadham mitram dharmo mitram mrittasya cha" (Chankya Niti 5:15).

The Hindu's Health Science: Ayurveda

Let me now turn my attention to the principles of Ayurveda and try to understand its principles and teachings in the light of Hindu ethos. Hindus consider the human beings to be as (un)important creatures and parts of the entire Consciousness as any other creature is and therefore they do not give him any special place in Hindu Cosmology/ world view. Despite this they developed a science for curing the body of physical and mental diseases and physical deformities by administering medicines and performing operations⁴ because Hindus attach the same value to a living human body as a scientist attaches to his equipments. The study/ science of human body and its relation with entire cosmology is popularly known as Ayurveda⁵. The word Ayurveda consists of two morphemes viz. ayu and veda. According to Charak Samhita the union of body (Shareera), sense organs (Indriya), mind (Satva) and soul (Atma) is called Ayu (आय) (śarīrendriya satvātmā samyogo) and the word 'Veda' (वेद) means knowledge. In his encyclopaedic Charak Samhita Maharishi Charak (ca. 300 BCE) defines Ayurveda as follows: something that bestows the knowledge about ayu is ayurveda (tadaayurveda yateetyaayurvedah, Charaka Samhita, Sutra Sthan 30:23). At another place it is defined as the treatise which describes *Hita ayu* (favourable to life), *Ahit ayu* (adverse

Surgical science, known as *Salya-tantra*, was quite well developed in India. Sushruta is widely regarded as the father of Indian surgery. His work *Sushruta Samhita* is known for all aspects of general medicine, anatomical knowledge and the principles of surgery including fracture management and eye surgery. Sushruta has described surgery under eight heads: *Chedya* (excision), *Lekhya* (scarification), *Vedhya* (puncturing), *Esya* (exploration), *Ahrya* (extraction), *Vsraya* (evacuation), and *Sivya* (suturing). It lists over 300 surgical procedures and 120 surgical instruments in addition to the 1,120 diseases, injuries, conditions, and their treatments. His methods of Rhinoplasty, inoculation against small pox etc were practiced in India even as late as the 18th Century AD, as mentioned by Dharampal in his book entitled *Indian Science and Technology in the Eighteenth Century*. The technique for Rhinoplasty as suggested by Sushruta has recently been used successfully to perform operations (https://www.patrika.com/science-tech-news/delhi-doctors-made-artificial-nose-using-3000-year-old-ayurvedic-sushrut-surgery-technique-1324077/)

⁵ Ayurveda is also regarded as *Panchama Veda* (5th *Veda*) and a sub-veda (or *Upaveda*) of *Atharva Veda*. It deals with the knowledge of the union of body, sense organs, mind and soul. So when an elderly person blesses the younger one with long life using words like *dīrghāyuṣī bhava* ('दीर्घायुषी भव।') he wishes him a long life in union with all the above factors.

to life), Sukh ayu (healthy life) and dukh ayu (diseased state) (Hitahitam sukham dukhamayustasya hithitam. Manam cha tachcha yatraoktamayurvedah sa uchiyate\(\text{Charaka Samhita}, Sutra Sthan 1:41 \) Ayurveda deals with good, bad, blissful and sorrowful life and what is wholesome and unwholesome for it, longevity and about what ayu (life) is in itself. Charak's principles, diagnoses, and cures retain their potency and truth even after a couple of millennia. Charak Samhita contains many remarks in the fields of human anatomy, embryology, physiology, pharmacology, blood circulation and diseases like diabetes, tuberculosis, heart disease, etc which are held in reverence even today. The book also describes medicinal qualities and functions of more than one million herbal plants. He has emphasized the influence of diet and activity on mind and body. Charak has proved the correlation of spirituality and physical health and has contributed greatly to diagnostic and curative sciences.

The Sanskrit word for health, Swastha (स्वस्थ), has two morphemes: (i) swa= mine (my own self/soul/pran/jivatma) and (ii) stha= to be located. Swastha is defined as "staying in one's self (or own natural state) with equanimity" (swaasmin tishthati iti swasthah स्वस्मिन तिष्ठति इति स्वस्थः।). Sushrut Samhita gives a very comprehensive definition of health in keeping with the spirit of the word: one who has the doshas (primary life force) in equilibrium, the agni (digestive fire) in a balanced state, well formed dhatus (tissues), proper elimination of *malas* (waste products) and well-functioning bodily processes, and whose sensory and motor organs, mind, soul and senses have balance to be in a pleasant state is called a healthy person or Swastha. (Samadoşa samāgni ca sama dhātu malakriyah/Prasanna ātma indriya manah svastha iti abhidhīyate, Sushrut Samhita, Sutra Sthan 15: 41) Ayurveda aims at maintaing a healthy person's health (by preventing illness), healing the sick by managing dysfunctions of the body and curing diseases (of mind, body or both) that manifest in a person, protecting health, prolonging and preserving life: svasthasya svāsthya rakṣaṇaṃ, āturasya vikāra praśamanaṃ l स्वस्थस्य स्वास्थ्य रक्षणं, आतुरस्य विकार प्रशमनं।, Charaka Samhita, Sutra Sthan 30: 26). It may be noted here that the word used here is shaman (शमन cure) and not daman (दमन supression). Ayurveda does not act on the principle of killing some bacteria or virus but on the one that eliminates foreign material that gives birth to them or attracts them

to the body by using Shodhanas (detoxification techniques) followed by Panchkarma⁶.

All these goals are aimed at the promotion of health on three levels: Mental, Physical, and Spiritual (Charaka Samhita, Sutra Sthan 1:15). Ayurveda considers human body to be the storehouse of diseases: Shariram Vyadhi Mandiram (शरीरं व्याधि मंदिरम). Remaining healthy is given more importance in Ayurveda while managing diseases is given the second priority. The objective in remaining healthy is to be able to achieve the four major goals (*Dharma*, *Artha*, *Kama*, *Moksha*) in one's life. Health is told to be at the root of all the four: dharma-artha-kāma-moksānām ārogyam mūlam uttamam धर्मार्थकाम-मोक्षणामरोग्यं मूलम्त्तमं। (Charak Samhita, Sutra Sthan 1:15) Ayurveda classifies diseases into three categories on the basis of their source viz. physical, mental and environmental (daihik, daivik and bhautik दैहिक, दैविक, भौतिक तापा). For example, cough is a physical ailment; diseases like Narcissistic personality disorder, claustrophobia and high blood pressure are psychosomatic as have their source in mind; and epidemics like Plague, Yellow fever, Meningitis, or a pandemic like COVID-19 or diseases caused by famine or flood are environmental as they have their genesis in the environment. Accordingly, their treatments have also been suggested. For example, an operation or administering medicines are good for the first type, chanting of certain mantras has been suggested for the second type and general cleanliness and social control have been suggested for the third type.

The modern medical system considers bacteria and virus responsible for most of the diseases and therefore insists on destroying them. On the other hand Ayurveda looks for the source of a disease within a human body. Like the ancient Greeks, Ayurveda considers a balance in three humours (*vata*, *pitta* and *kapha*) responsible for health. So in Ayurveda it is not a constant struggle between good and bad forces (as in Christianity) but all humours have to stay in balance and the *doshas* need to be passified.

⁶ Five basic *Shodhanas* (detoxification techniques) viz. *Vamana* (therapeutic vomiting or emesis), *Virechan* (purgation), *Basti* (enema), *Nasya* (elimination of toxins through the nose) and *Rakta Moksha* (detoxification of the blood) are generally preceded by *Udvartana* (Lymphatic massage), *snehan* (warm oil massage) and *svedana* (Herbal steam therapy for sweating). Oil massage also makes the superficial and deep tissues soft and supple, thus helping to remove stress and nourish the nervous system. *Svedana* is sweating and is given every day immediately following the *snehan*. *Snehan* and *Svedana* help the toxins to move towards the gastrointestinal tract.

The following table briefly summarises the effects of these humours on a human body:

Prin- ciple	Bhoota Composi- tion	Charac- teristic	Responsible for	Example
Vata (Air principle)	Vayu, Akash	Prana	The movement of each and every atom, and also provides space for all movements to occur; mobilizes the function of the nervous system	the act of respiration, peristaltic movements in the intestine, excretion of waste from our body, movement of nerve impulses in the nerves, initiation to do any work, etc
Pitta (Fire princi- ple)	Agni, Jal/ Apas	Tejas	any transformation taking place in our body and also the temperature changes in our body; uses bile to direct diges- tion	digestion, metabolism, breaking of large food particles to smaller ones for absorption in our body, etc
Kapha (Water princi- ple)	Prithvi, Jal/ Apas	Ojas	energy storage, the formation of new structures, protection in our body and bonding between molecules in our body to form larger molecules; relates to mucous, lubrication and the carrier of nutrients into the arterial system	immunity, synovial fluid in joints, mucous lining protecting the digestive tract, adipose tissue storing fat, the stability of our body and mind, etc

In Ayurveda three words viz. *buddhi* (intellect), *ahamkara* (ego), and *manas* (psyche) conceptualize the mind. Each of these works together with separate functions.

According to ayurvedic theory, mental nature is more subtle than physical nature. Sometimes the body and mind are different types, one compensating for the other, such as a *vata* mind in a *kapha* body. The categories of mental faculties are linked to *triguna* (*sattva*, *rajas* and *tamas*) theory. These *gunas* are responsible for the sensitivity of the mind, its capacity to perceive truth and to act accordingly.

In order to prevent a disease Ayurveda adopts a threefold approach: a) monitor Swasthavrita (स्वस्थव्रत) by following a dinacarya (दिनचर्या daily routine) and Ritucarya (ऋतुचर्या seasonal routine), b) monitor good conduct (Sadvrita सद्व्रत) by following the religious rituals and good social practices, and c) take some herbal concoctions. For curing a disease it recommends, cleansing the body's of toxins (Sanshodhan संशोधन), pacifying the deranged or agitated bodily humours (Sanshaman संशामन), monitoring personal (mental and bodily) acts, and social conduct (sadvrit सद्व्रत), following a regimen of diet (Pathyahara, पथ्याहार), and using medicines (Rasayana रसायन).

Hindu Kitchen and Health:

"You are what you eat" (जैसा खाओ अन्न वैसा होय मन) is an old Indian household saying. Food is considered to be a source of the body's chemistry, which affects one's physical health, consciousness and emotions. Thus, the expression of the soul depends on the body, which depends on the food. A proper diet is considered vital for spiritual development in Hinduism. A Hindu does not live to eat but eats to live. In the Samkhya school of Hindu philosophy the *trigunas of Prakrti* (three attributes of nature), a philosophical and psychological concept, has been detailed. Food has also been discussed with refrence to its nature (*Prakrti*). Using the insights from *trigunas of Prakrti* the food's effect on a body and temperament has also been classified. Accordingly, a Hindu divides food into three categories: *Sattvic, Rajasic* and *Tamasic*:

Sattvic food:

Sattva guna manifests itself as purity, spiritual knowledge, wisdom and harmony. It is the quality of goodness, joy, satisfaction, nobility and contentment. It is free of fear, violence, wrath and malice. Sattvic quality is pure and forgiving. Sattvic food also

facilitates spiritual intelligence as well as good health, strength, happiness and relish. It promotes longevity, elevates the mind, increases intelligence, invigorates serum, increases one's "charm/ magnetism", energizes the body and produces calmness and nobility. It has to be clean, earned through pure, wise, honest and non-violent means. Such foods are pure, natural, vital, nourishing, savoury, juicy, rich, agreeable and pleasing to the palate. It is non-irritating to the stomach and purifying to the mind. The food includes items like cow-milk and milk products, seasonal fruits, nuts, whole grains and vegetables.

Rajasic food:

Rajas represents itself by passion, action, energy and motion. It is characterized by a feeling of self-centeredness, attachment, a longing for satisfaction and desire. Rajas is viewed as being more positive than tamas, and less positive than sattva, except, perhaps, for one who has "transcended the gunas" and achieved equanimity in all fields of relative life. Greed and lust are the by-products of rajas guna. Rajasic food is believed to produce strong emotional qualities, passions and restlessness in the mind. Foods which are extremely acidic, salty, spicy, pungent and bitter bring about distress and misery which leads to sickness and disease. This category includes the non-vegetarian foods like meat, eggs and fish and the vegetarian items like onions, garlic, hot pepper and chillies, pickles and other acidic, excessively bitter, salty, sour, dry, hard, pungent or spicy foods and stimulants like caffeine. These foods cause pain even while being consumed which leads to distress of the body, depression, sickness and misery and decreases longevity of life and increase desires for more and more rajas or passion.

Tamasic food:

Tamas or Tamo Guna is the lowest in trigunas. It is is essentially the "material quality". It is symbolized by a dark colour. Tamas guna is the quality of illusion, ignorance, laziness, greed, imbalance, disorder, chaos, anxiety, impurity, destruction, delusion, negativity, mental dullness or inactivity, inertia or lethargy, cynicism, apathy, violence, viciousness, confusion and attachment. It has the nature of being underactive while rajas guna has the one of being overactive and sattva has one that brings balance.

The *tamasic* foods are forbidden for offering to the Supreme Lord. They include items like meat, fish, fowl, eggs, onions, garlic, mushrooms, overripe and underripe fruits and vegetables, cold, tasteless, fermented foods like vinegar, bread, pastries, cakes, wine, alcohol, canned and frozen foods. In certain conditions, like overeating, reheating, insipid, decomposed, leftovers or contaminated (*jutha* জুৱা) or stale food, what was once *sattvic* food can turn *tamasic*. This type of food is considered to be basically unsuitable as it turns a person self-centred, apprehensive, angry, jealous, greedy, materialistic, lazy, inefficient, apprehensive, revengeful, callous and resistant to change. It lowers the body's ability to fight disease, disrupts the proper functioning of the immune system, leads to distress. In people with *tamasic guna*, happiness is short-lived and usually originates and ends in self-delusion. One positive quality of tamas personality is their willingness to work very hard.

For a Hindu having food-stuffs is not merely a means of satisfying hunger but it is an act of worshipping the Lord. *The Bhagvadgita* (15:14) says: "Lord takes the form of the fire of digestion (*Jatharagni* जठरानि) in the stomachs of all living beings, and combines with the incoming and outgoing breaths, to digest and assimilate the four kinds of foods and He is the digestive force for all of them." The Hindus attach a very high sanctity to everything associated with worship and offerings to God and consider only those things edible as can be offered to the Lord. None of the contaminated items are offered to God. Hence, the Hindus are not supposed to take any of the contaminated items. Food contamination in the West is of the following three types (in all measurable terms): biological (having pathogens), physical (having foreign and unhygenic materials) and chemical (containg preservatives, toxic chemicals like pesticides/herbicides or naturally occurring toxins. However, the Indians consider the following types of food contaminated (largely immeasurable terms):

a) the very nature or the species to which the food belongs (*Jâti-dosha/sthai bhav*) for example, *tamsic* foods like onion and garlic produce restlessness of the mind, or in other words perturb the intellect

⁷ अहं वैश्वानरो भूत्वा प्राणिनां देहमाश्रितः। प्राणापानसमायुक्तः पचाम्यत्रं चतुर्विधम्।। aham vaiśvānaro bhūtvā/ prāṇinām deham āśritaḥ/ prāṇāpāna-samāyuktaḥ pacāmy annam catur-vidham, Bhagavadgita 15:14, Four types of foodstuffs: some are drunk, some are chewed, some are licked up, and some are sucked.

b) the nature of the person from whom the food comes ($\hat{A}shraya$ -dosha). It has the following two types:

i) the source:

- A) the milk of cow is *sattvic* but the milk of a goat *tamsic*.
- B) The food coming from a wicked/dishonest person will generate impure and wicked thoughts, while the food coming from a good man will elevate one's thoughts;
- ii) the company: even if a sattvic food like milk is kept in a butchery it is defiled and
- c) the impurity in food due to such agents in it as dirt and dust, worms or hair (*Nimitta-dosha*).

All these types of defiled food are neither offered to God nor had by an individual. The Hindus believe that those who wish to attain *moksha* should have clean and pure food for it helps in the increase of *sattva* which leads to purification and non-attachment of intellect which leads to liberation (*mukti*): आहार शुद्धौ सत्व-शुद्धौ ध्रुवा स्मृतिः, स्मृतिलम्भे सर्वग्रंथीनां विप्रमोक्षः "Ahara shuddhou satvashuddhih satva-shuddhau dhruva smritih, smrutilambhe sarvagrantheenam vipramokshah. If the mind is pure, one's memory becomes strong and steady. If the memory is good, one becomes free from all bondages. (*Chhandogyopanishad* 7/26/2)

Since all food is considered to have medicinal value in Ayurveda, the Hindus do not make any distinction between food and medicine, kitchen and pharmacy, the cooking and pharmacology. A Hindu kitchen, thus, is a sort of pharmacy. In the traditional Hindu households food habits (aahar) and life-style (vihar) are regulated accordingly. The intake of six different tastes (shadrasa षडरस) viz. sweet, sour, astringent, salty, pungent, and bitter, which are derived from the punchamahabhutas (पंचमहाभूत), needs to be monitored as it enhances or pacifies a dosha. Proper care is therefore taken to make food tasty but easy to digest; it has to be paired in such a combination that their resultant effect should not contradict one another rather it needs to work together and

help each other. A Hindu kitchen also works on the principle of staying in rhythm and harmony with nature. It is written in the "Tasya Shitadiya Ahaarbalam Varnascha Vardhate. Tasyartusatmayam Vaditam Chestaharvyapasrayam," ('the strength and complexion (radiance) of the person knowing the suitable diet and regimen for every season and practicing accordingly are enhanced". (Tasyashitya chapter, Introduction, Charaka Samhita, Sutra Sthan 6:3) According to Sushruta, food is of three types: svastha vrittikara (health giving), vyadhi prashaman (therapeutic), and dosha prashamanam (pacifier of the imbalanced doshas). Skipping food once a week is a part of the Hindu life style. It is one among 10 types of lamghana suggested for keeping healthy. Ayurveda recommends a filling of half the stomach with food, one quarter with water, and keeping the remaining quarter empty for the movement of air. (Charak Samhita, Vimana Sthana 2:3). The issues like what to eat, when to eat, where to eat, how to eat, in which combination to be eat and how much to eat are parts of the Hindu psyche in keeping with the principles of Ayurveda. Ghagh⁸ for example, has given directions in poetic compositions. In oder to keep the sanctity of food Hindus have also evolved codes on cooking place, dining space, dressing of the cook and the eaters, and the code

चैते गृड़ बैसाखे तेल, जेठे पन्थ असाढ़े बेल। सावन साग न भादों दही, क्वार करेला न कातिक मही।। अगहन जीरा पूसे धना, माघे मिश्री फागुन चना। ई बारह जो देय बचाय, वहि घर बैद कबौं न जाय।। चइत सोवै रोगी, बइसाख सोवै जोगी। जेठ सोवै राजा, असाढ़ सोवै अभागा।। प्रात समै खटिया से उठिकै, पीवै ठंडा पानी। ता घर वैद कबौ नहीं आवै, बात घाघ की मानी।। सावन हरैं भादों चीत। क्वार मास गृड खायउ मीत।। कातिक मूली अगहन तेल। पूस में करै दूध से मेल।। माघ मास घिउ खींचरी खाय। फागन उठि के प्रात नहाय।। चैत मास में नीम बेसहनी। बैसाके में खाय जड़हनी।। जेठ मास जो दिन में सोवै।ओकर जर असाढ़ में रोवै।। जाको मारा चाहिए, बिन लाठी बिन घाव। वाको यही बताइए, घुइयाँ प्री खाव।। https://hindi.indiawaterportal.org/content/caita-saovaai-raogai/book/7722

of conduct of the fellow eaters. The place of cooking, storage and having the food should be safe, clean, sacred, sanctified with water and cow-products⁹. For a Hindu the simple formula for healthy eating is: do not eat unless you feel hungry and do not drink unless you feel thirsty; eat simple, pure, healthy food (a *Sattvic* diet) moderately even when not fasting.

Yoga: The Hindu Health Science

Yoga is a holistic science which embraces physical, moral, social, mental and spiritual well-being. The Sanskrit word "Yoga" means to join or to unite; the purpose of yoga is to develop coherence in an individual's body, mind and spirit to achieve a 'union' with the universal spirit. The definition of yoga is: "Yoga is the calming down the fluctuations/patterns of consciousness" (योगश्चित्तवृत्तिनिरोधः yogas chitta vritti nirodhah, Yoga Sutras of Patanjali 1.2) Patanjali has mentioned the following eight parts of Yoga:

Yama (यम moral codes): Yamas are broad based social and universal virtues that require abstinence and forbearance from an individual. The five yamas are: Ahimsa (Non-violence, non-harming other living beings), Satya (truthfulness, non-falsehood), Asteya (non-stealing), Brahmacharya (saving the life-fluid/semen), and Aparigraha (non-avarice, non-possessiveness).

⁹ Manu writes: those who aspire for a long life should have their food facing the East and those who desire for prestige and fame should be having it while facing the South: आयुष्यं प्राग्मुखो भुक्ते यशस्यं दक्षिणामुखः. The code for having food is: wash your hands, feet, face and mouth, sit facing east and keep silent while eating (पंचाद्रौ भोजम कुर्यात प्रन्मुखो मौन्मस्थितः / हस्तौ पादौ तथैवास्य्मेशा पंचाद्रता मता); eat warm and well-cooked food (cereals) with right hand fingers (avoid the use of cutlery) neither too quickly nor too slowly and focussing only on food, serve food on cleansed leaves as those of banana and jerk teak or on brass/silver/ gold metal plates, sit cross-legged on the floor-mat while eating. The Mahabharta instructs: ekvastro na bhunjit: don't have just one piece of cloth while eating. The edibles are to be accepted as God's gift (Bhagavadgita 3:12); the edibles must be sattvic. In a community dinner all should start having meals simultaneously and should also end up simultaneously. In this type of eating a sort of electric cycle is created; cook food in appropriate vessels of made of clay, copper, iron etc and never stuff your stomach with too much food. (For details kindly see Kalyan: Aarogya Ank, Revised edition, Gorakhpur: Gita Press, Samvat 2070, pp 83-84 and Rajendra Kumar Dhavan, Kya karein, kya na karein (Hindi), Gorakhpur: Gita Press, Samvat 2061, pp.41-56.)

Niyama (नियम self-purification and study): The five observances: shauch (purity, cleanliness of mind, speech and body), santosha (contentment, acceptance of others and of one's circumstances), tapas (persistent meditation, perseverance, austerity), svādhyāya (the study of self, self-reflection, the study of the Vedas), and Ishvara-pranidhana (contemplation of God/Supreme Being/True Self).

Asana (সামন posture): Literally means "seat", and in Patanjali's Sutras refers to the seated position used for meditation. Ashtanga Yoga organizes postures (asanas) into the following three groups: i) The primary series (Yoga Chikitsa) aligns and purifies the body, ii) The intermediate series (Nadi Shodhana) purifies the nervous system and iii) The advanced series (Sthira Bhaga) integrates strength with grace of movement.

Pranayama (प्राणायाम breath control) : Prāna = breath, āyāma= to stretch, extend, restrain, stop.

Pratyahara (সন্যোहাर sense control, abstraction): Withdrawal of the sense organs from the external objects.

Dharana (धारणा concentration): Fixing the attention on a single object.

Dhyana (ध्यान meditation): Intense contemplation of the nature of the object of meditation.

Samadhi (समाधि Liberation): merging consciousness with the object of meditation; absorption into the Universal.

The first four limbs viz. yama, niyama, asana and pranayama are considered to be external cleansing practices while the last four viz. pratyahara, dharana, dhyana, and samadhi are considered to be internal cleansing practices. Pranayama forms the foundation for the internal cleansing practices of Ashtanga Yoga. When purification is complete the mind control occurs. By practicing Yoga regularly one may overpower six inner enemies (षड् रिपु) viz. kama (काम lust), krodha (क्रोध anger), mada (मद pride), moha (मोह Attachment, delusion), lobha (लोभ greed) and matsarya (मात्सर्य jealousy, envy) and the Universal Self is revealed.

The regular practice of *yogasanas* (physical discipline through set postures) has been proven to positively affect ill people at a zero cost on medical bills. *Pranayama* (breathing exercises) has assisted people with *vata* disorders. *Dhyana* (meditation) has been shown to stabilize emotional imbalances, prevent the abnormal functioning of vital organs and restrain and control the nervous system. *Yoga* is reported to be successful in the management of psychosomatic diseases. Yogic approaches have been successfully used in the management of bronchial ailments, asthma, hypertension, mucous colitis, diabetes, epilepsy, peptic ulcer, cervical spondylosis, chronic sinusitis, intractable pain, personality disorder, anxiety reaction, anxiety depression, gastritis and rheumatism. Baba Ramdev has been doing immense service by popularising *Yoga* amongst the masses and documenting its benefits in managing diseases.

CONCLUSION:

It is clear from the above discussion that Indian medical knowledge is highly rooted in Indian culture and philosophy and there is enough scope for developing an individual life-style on the basis of experimentation in it. It pays attention to physical, moral, social well-being and spiritual health (irrespective of faith) and thus is holistic approach to health. This approach is not only philosophical but can be practised even by a layman as it is cost-effective and sustainable. It is a welfare programme for all with almost zero-investment. This approach empowers an individual and reduces dependence on the government and other outer agencies. It does not promote regimentation but is eclectic in approach and character. It empowers the individuals by encouraging them to manage their physical, mental and spritiual selves by maintatining a healthy social and environmental relationship. It does not contribute to unnecessary medicalisation, reduces dependence on screening technologies to detect abnormalities and it leaves no scope for a nexus of medical technologists, drug industry and professional organisations. On the debit side its economic principles/outcomes do not contribute significantly to the increase in GDP as a large number of its elements are available in nature at no cost. Naturally, the lobby that measures growth only in terms of consumption, government expenditure, investment and net imports and exports besides explotation of nature do support it. While scientific approach (observation, hypothesis, testing of hypothesis, modification of hypothesis to arrive at a rule) is welcome, fanaticism in the name of science is neither appreciable nor acceptable. Denying and decrying the time-tested

traditional knowledge because it does not suit somebody's agenda is neither logical nor acceptable in a democratic world. Similarly denouncing and belittling of Ayurveda because a suitable technology is not there to measure ceratin claims of Ayurveda is not scienticism but a sort of scientific fanaticism. The fault does not lie with the timetested knowledge but with the negative attitude of certain people in certain quarters which needs to be discouraged and improved to become positive.

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JALAUKAVACHARANA (LEECH THERAPY): A NOBLE GIFT OF AYURVEDA

Amit Vaibhav¹ & Om Prakash Singh²

Abstract:

Rakta mokshana or blood letting is practiced in India since the evolution of mankind. The ancient ayurvedic saints categorised this procedure under the bio-purification which removes impure blood from the body and treats the root cause of the all indicated diseases. Leech therapy is a precious gift of India and Ayurveda to world. Ancient history suggests that Lord Dhanwantary evolved in this world after Samudra manthan with Jalouka (Leech) along with pitcher filled nectar in his hand. This indicates to the immense importance of leeches in theraputics. Blood letting can be done by Shriga, Alabu, Jalouka and Siravedh, out of them Jalaukavacharan (Leech Therapy) is the mildest and safest methods used for blood-letting. For this reason it is called the best method of *Rakta mokshan*. Now a days Jalaukavacharana or leech therapy has gained greater attention world wide, because of its medicinal values. The saliva of leech contains various bioactive substances, which have potent anti-inflammatory, analgesic, anaesthetic properties etc. Recent researches show that Oxidative stress plays a key role in the development of different diseases including Chronic Inflammatory diseases, Neurodegenerative diseases, ischemic cardiovascular disease and cancer. The low level of antioxidants leads to oxidative stress finally it damages or kills the cells of the body resulting in the development of the disease. Miraculously leech therapy also reduces the oxidative stress inside a body by reducing oxidant level (Protein Carbonyl and various peroxidases) and inhancing antioxident level (Glutathione, vitamin C, Superoxide dismutase) Leech therapy has shown drastic result in patients with Eczema, Psoriasis, Osteoarthritis, Rheumatoid arthritis, Cellulites, Sciatica, Inflammatory reactions, Acne vulgaris, Blood purification, Varicose veins, Rheumatic diseases, Diabetic, Wounds, Boils and abscesses, Hypertension, Thrombosis (blood clot), Alopecia, Herpes Zoster etc. With the help of leech therapy we can manage inflammatory condition of the body in a natural way also we can avoid the hazards of prolonged use of analgesic, anti-inflammatory drugs. In the present paper an effort has been made to prove anti-inflammatory, anesthetic, vasodilator and antioxident potential of Leech therapy in different chronic inflammatory diseased conditions.

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Keywords: Jaloukavacharan, Leech therapy, Dushit Rakta, Blood letting, Leech saliva, Antiinflammatory, Antioxident

Introduction:

All the physiological functions of the body are governed by *Doshas*, *Dhatus* and Malas as Susruta said "Dosha Dhatu Mala Mulam Hi Shariram", but out of three Dosha are most important one these are namely, Vata, Pitta, and Kapha. Vitiation of these Doshas leads to manifestation of any disease. Apart from this Acharya Susruta also considered Rakta as integral part of the body. Vitiation of Rakta resulting in manifestation of Different Skin Disorders (Kustha), Joint Disorders (Sandhigata Vyadhi) and Different Ischemic disorders (Infactions). So, removal of vitiated rakta is very necessary for the complete cure of these diseases that is known as Raktavisrjan or Raktamokshan (Blood letting) in Ayurveda. Acharya Susruta describes three important measures for *Rakta mokshana*. These are: by Shringa in case of Vata predominance, by Jalauka (Leech) in Pitta predominance and by Alabu in Kapha predominance. Out of three blood letting by Jalauka is popular as Jalaukavacharan. Jalaukavacharan (Leech Therapy) is a method of Raktamokshan. This is the mildest of all the methods used for blood-letting. For this reason it is called the best (Paramsukumarupaya; Su.S.13/3) method of Raktamokshan. Jalaukavacharana or leech therapy has gained greater attention globally, because of its medicinal values. The saliva of a leech contains numerous biologically active substances, which have anti-inflammatory, analgesic, anaesthetic properties as well as probable antioxidant effect.

In the present era, leeches have become the centre of attraction for the researchers all over the world. Over 100 therapeutic substances are believed to be present in leech saliva of which about 14 anticoagulants have been isolated and studied. Leeches are now-a-days, commonly used in plastic surgery all over the world to aid wound healing after plastic surgery. Leech therapy is particularly appropriate in plastic surgical situations in which there is more arterial repair than venous repair, such as fingers, auricles, and skin flaps. Leeches have also been used after breast surgery to relieve the possible complication of venous congestion at the nipple. An additional use of leeches in plastic surgery is in the treatment of ring avulsion injuries. It is also used to treat post phlebitis syndrome in which venous valves are obliterated by deep vein thrombosis.

Recent studies have shown its dramatic effect in relieving symptoms of osteoarthritis. Besides these, there are various diseases like Eczema, Psoriasis, Rheumatoid arthritis, Cellulites, Sciatica, Inflammatory Reactions, Blood purification, Varicose Veins, Rheumatic Diseases, Diabetic Wounds, Boils and abscesses, Hypertension, Thrombosis (blood clot), Alopecia and Herpes zoster where studies have been done by researchers here and there but the need of more and large level of studies still exists.

Jalauka or Leeches

Leech therapy (*Jalaukavacharana*) takes a pride of place in the list of panchakarma like *shodhana chikitsa* from the sunrise of the medical history. *Acharya Sushruta* has described *jalauka* under the heading of *Anushastra* (Para sharp instrument).

Jalaukavacharana is claimed to be the supreme therapy because of its high effectiveness in the curing blood related disorders. It is much safe and less complicated natural process therefore indicated even for the king, rich, old, fearful, weak, women and the people of tender nature "Param sukumar Upaya" (S. S. 13/3)

Historical review in Vedas and Ayurveda:

- 1. The knowledge of *Jalaukavacharana* is as old as the Ayurveda.
- 2. A reference regarding the eradication of the disease form "*Usniha*" (arteries) is there in *Rigveda*. This process mostly resembles with *Raktamokshana*. (R. V. 10/16, 4,2)
- 3. The method of application of leech for blood-letting is mentioned in *Kaushika Sutra* (4/26/8) which is a *sutragrantha* of the *Atharvaveda*.
- 4. The description of blood-letting by Shrunga in a reference of treatment of Pilinduvaccha, who suffered with parshwavata, is mentioned in *Vinaya Pitaka* (*Vinay* 6/2/5).
- 5. Acharya Charaka has enumerated Raktaja roga and their treatment by Shonitavasechana. (Ch. Su. 24; Ch. Chi. 7/52) and various means of Raktamokshan is also mentioned (Ch. Chi. 28).
- 6. Acharya Sushruta has dealt in detail with Raktamokshan and its types. He described special chapter for Jalaukavacharana (Su. Su.13), the types of Jalauka, their habitat

etc. have been described in detail in this chapter.

7. Many Ayurvedic texts have mentioned *Raktamokshan* and *Jalaukavacharana* with a detailed description. (A.H.Su. 26; A. S. Su. 37; Sa. Sam. Ut. 12).

Nirukti:

Since *jala* (water) is their life, they are called *jalauka* or since they are habituated to water they are called "*Jalauka*". According to Sushruta, the leeches are found in *Yavana* (Turkesthana) *Pandya* (south region country – Deccan), *Sahya* (the tract of land traversed by the Ghant mountains), *Pautana* (modern Mathura), etc. (Su Su.13/13)

Leech locality and ecology:

Leeches can live in a variety of environments, including aquatic and moist terrestrial regions. Some species live in freshwater, estuaries, rivers, ponds, lakes, and sea. Others are adapted with more mucous glands and larger nephridial vesicles (bladder) that retain and store extra water enabling leeches to tolerate the lack of water on damp land. Moreover, leeches have high physiological flexibility, which makes them able to withstand numerous environmental challenges, such as oxygen shortage and temperature fluctuations. Because moisture is a very essential factor affecting the terrestrial leech's distribution and behaviour, they can be found in a large number in the forests and highlands of North America, Europe, and South-East Asia. In permanently humid regions, such as Malaysia, leeches will stay active throughout the year while they go through an active and a dormant phase in territories with wet and dry seasons.

Definition:

- 1. Jalauka: a creature whose life is water (Vachaspatyam IV).
- 2. Shabdakalpadruma has considered Jalauka in feminine gender and defined it as an aquatic creature employed to expel out the vitiated blood.
- 3. Bhagavadgomandal defines Jalauka as creature with distended abdomen living either in water or in mud "Jalamasamayuriti".
- 4. *Jalayukaha*: means a creature having its habitat and life as water is *Jalauka* (Su. Su. 13/9).

Synonyms: Jalayuka, Jalaua, Jaluka, Jalaluka, Jalaluka, Jalaluka, Jalauka, Jalauka, Jalauka, Jalauka, Jalauka, Jalaukas, Jalaukas, Jalaukasu, Jalaukasu, Jalaukasu, Ruktapata, Ruktapa, Raktapayini, Vanini, Vedhini, Venika.

Classification of jalauka:

Acharya Sushruta has classified Jalaukas in to two main categories.

- 1. Savisha (poisonous)
- 2. Nirvisha (Non-poisonous)

Each category again includes six varieties of *Jalauka* (Su. Su. 13/8; A. H. Su. 26/36)

Savisha Jalauka	NirvishaJalauka	
(Poisonous)	(Non poisonous)	
Krishna	Kapila	
Karbura	Pingala	
Algarda	Sankumukh	
Indrayudha	Mushika	
Samudrika	Pundarikamukhi	
Gochandana	Savarika	

(A) Savisha Jalauka:

Jalauka which is born from the urine, excreta and putrified(decayed)dead bodies of poisonous fish, insects, worms and frogs and which lives in dirty water is poisonous. (Su. Su. 13/13)

General Characters of Savisha Jalauka:

- 1. Thick in middle portion, while both ends are thin.
- 2. Slow locomotion
- 3. Fatigues
- 4. Middle part elongated
- 5. Delay in sucking

- 6. Not command able type
- 7. Sucks little quantity of blood.

Individual Features (Savisha-Poisonous) jalauka:

- a) *Krishna*: Thick, resemble in black colours like *Kajjala*, big head.
- **b)** *Karbura*: Resemble the fish of vermin type (*Sarpakara*), ventral surface is convex (*Ayata*) where slight elevation or evation also placed.
- c) *Alagarda*: Thick, hairy with wrinkles, both sided big and rounded, black at the mouth.
- d) *Indrayudh*: Having different colours like rainbow, linings on the body.
- e) Samudrika: Blackish yellow with dotted skin and resembles many flowers.
- **f)** *Gochandana*: Narrow mouth, marked by bifurcating lines. Bottom (end Part) like the scrotal sac of a bull.

Features of Savisha Jalauka bite:

Clinical Burning, Itching, Fever, Swelling, Edema, Delirium, Boil, Unconsciousness. (Su.Su.13/11, A.S.Su.35/3)

Treatment of Savisha Jalauka bite:

The bite of *Indrayudha Jalauka* is *asadhya* (Su.Su.13/11). TheVenomous (*Savish*) *Jalauka* bite was considered as *Mahagada* as *pana*, *lepana*, *nasya* etc. should be performed (Su. Su. 13/11).

(B) Nirvisha Jalauka:

Nirvisha Jalauka originally grow in decomposed vegetable matter, as the purified stems of the several aquatic plants known as Padma, Utpala, Nalina, Kumuda, Pundarika and saival (algae), which live in clear water.

General Characters of Nirvisha Jalauka:

1. Strong and large bodied

- 2. Ready suckers
- 3. Greedy (Mahashana)
- 4. Saivala Shyam (Varna)
- 5. *Vrutta* (round)
- 6. Blue coloured lining in dorsal side of the body, back side in *Kashaya* colour. (A. H. Su. 26/38).

Individual Features (Nirvisha- Non Poisonous) Jalauka:

- a) *Kapila*: Colour like *manahshila* (real gar) at the sides, dorsal surfaces are slimy (*snigdha*) and coloured like Mudga pulse.
- **b)** *Pingala*: Reddish or reddish brown in colour, round in shape, speedy (fast movement)
- c) *Sankumukhi*: Blackish red like that of liver, provided with the greatest swiftness, sucks the blood fast, possesses sharp and long suckers.
- **d)** *Mushika*: Like the common blind moles in colour and shape, emit a fetid smell from the body.
- e) *Pundarikamukhi*: Like *mudga* pulse (greenish black) in colour, resemblance of the mouth of the full blown lotus lilies (Posses broad mouth like a lotus flower)
- **f)** Savarika: Marked with impressions like glossy lotus leaves, measured eighteen fingers in length; directed to apply only in the lower animals.

The leeches are further classified according to sex by Acharya Vagbhata:

(A) Female Jalauka:

Those which are delicate, having thin skin, small sized head, the lower body being large are female *jalauka*. Female *jalaukas* are advised in *alpa dosha* and acute disorders (A. S. Su. 35/4).

(B) Male Jalauka:

Those with opposite characters of female *jalauka* i.e. hard skin, big head along with being semi lunar in look with large front portion are male. The male jalaukas are advised in highly vitiated dosha and chronic diseases.

Length of Jalauka:

The maximum length of jalauka has been reported 18 anguli, big jalauka may be used only for blood letting in animals i.e. horse, elephant, etc. For human being 4, 5 and 6 anguli pramana jalauka should be preferred (A. S. Su. 35/4).

Classification:

Based on their feeding habits, the leeches are divided into two major groups:

- (A) *Predacious leeches*: which are predators of many invertebrates.
- **(B)** Sanguivorous leeches: are ectoparasites that feed on the blood of vertebrates including the human beings.

Leeches, both sanguivorous and predacious, digest their food in their intestine. The sanguivorous species only store blood inside their body for months. Actually, the digestion process of blood in hematophagous leeches undergoes many slow stages allowing leeches to store the ingested blood for up to 18 months. Symbiotic bacteria named Aeromonasspp, located in the leech's gut, secrete enzymes that help not only in breaking down the components of the ingested blood, but also in producing antibiotics to prevent blood putrefaction after a long storage period in leech crop. Furthermore, another presumed role of these enzymes is to prevent B complex deficiency, which often occurs in blood nutrition-depending animals. With the help of suckers and the biting jaws, leeches are able to absorb the blood of the prey.

It is interesting to note that leeches generally suck 2-20 ml of blood within 10-30 min, then drop-off spontaneously after being completely engorged with no immediate desire of more feeding.

Collection and Preservations of Leech:

Acharya Sushruta says that the leeches can be caught with a piece of wet leather,

in tanks, streams and where there are lotuses. There is another method to collect the leeches i.e. the fresh meat of dead animals, fish or milk must be applied on the thigh of an animal or the human being himself, may apply on his thigh and keep the thigh in the water for some time. Jalauka will attract and will catch the place. Then remove them from the skin of the person with the application of *Saindhava* (rock salt) and collect them (Su.Su.13/15-16;A S. Su. 35/4).

Time of collection:

Acharya Dalhana has mentioned that the best time for collecting leeches is Sharad Ritu (autumn).

Preservation of Leeches:

After collecting the leeches, they should be kept in a wide and new earthen pot. The pure water of tank with lotus should be filled into the pot. Feed it with leaf of lotus plants (*Kamala Nala*), Shaivala, the meat of pig and other animals, which are living in watery and marshy areas, and powder of stem of small plants. The grass and leaves of plants must be kept inside water in the pot for the bed. *Sringataka, Kaseruka, Shalaka, Shaivala, Mruhala, Vallura, Mrutsana, Pushkara Beeja Churna*, sweet-cold-clean water etc.should be provided for diet to *Jalauka* (A. S. Su. 35/4). On every third day the water should be changed and feeding should be dropped inside the pot. After seven days the pot should be changed. Vagbhata mentions that the pot should be changed every five days (A. S. Su.35/4). Poisonous leeches must be thrown out.

Jalauka (Su.Su -13/9) is one of the tools for raktamokshana among shringa, jalauka, alaboo and pracchhan. It is described for the treatment of pitta doshaj vyadhi as kustha, vatarakta, vishphota, vidradhi etc.

Symptoms of Samyaka Vishravana (su.su. 14/33)

The feeling of lightness in the body, mitigation of suffering, subsiding severity of the disease and cheerful of mind are the symptoms of proper *vishravan*.

Benefits of *Raktamokshan* (su.su. 14/34)

Diseases of the skin, tumors, edema and diseases arising from blood will never occur in person indulging in bloodletting.

Precaution during leech application:

- Bleeding and clotting time of the patient should be normal.
- Gentle handling of leech.
- Cover the leech with wet cotton.

Indications (A. H. 26 / 35)

Vidradhi (Abscess) Gulma (Abdominal swelling)

Arsha (Piles) Kushtha (Skin disease)

Vatarakta (Gout) Krostruka shirsha (Infective arthritis)

Sandhi gata roga (Arthritis) Kantharoga (Goiter)

Netraroga (Eye diseases) Granthi (Nodular swelling)

Arbuda (Cancer) Shlipada (Filaria)

Vidarika (Cracle) Vishadamshtra (Insect bite)

Visharpa (Erysipelas) Siroroga (Diseases of scalp)

Dantaveshta (Pyorrhea)

Contraindications (Su. Su.-14/24)

- Sarvanga shotha (Generalized oedema)
- *Udar roga* (abdominal diseases)
- *Shosa* (Tuberculosis)
- *Ksheena* (Emaciation)
- Garbhini (Pregnancy)
- Pandu (Anemia)

Frequency of Leech Application:

The frequency of leech application will vary according to disease and severity. Generally leech should be applied once in a week up to six sittings. One leech should be reserved for a particular patient to avoid cross infection.

Complications of leech therapy:

Leech therapy rarely ever leads to serious complications. The local pain of treatment and short-term itching are the regular side effects. Prior to treatment, the patient should be advised accordingly and asked to sign a consent form describing the relevant side effects. Some of the possible reported complications are:

- 1. Local Pain
- 2. Local Itching
- 3. Septicemia and Gastroenteritis
- 4. Allergic Reactions
- 5. Blood loss
- 6. Hypotension and Vasovagal Attack
- 7. Scarring
- 8. Transmission of Infectious Diseases

Chemical Constituents of Saliva:

A simple principle lies at the heart of all hirudo-miracles. During the process of feeding, leeches secrete a complex mixture of different biologically and pharmacologically active substances into the wound some of them are following-

Hirudin- Inhibits blood coagulation by binding to thrombin

Calin- Inhibits blood coagulation by blocking the binding of vein Willebrand factor to collagen. Inhibits collagen- mediated platelet aggregation

Destabilase monomerizing activity- Dissolves fibrin. Thrombolytic effects

Hirustasin- Inhibits kallikrein, trypsin, chymotrypsin, neutropholic cathepsin G

Bdellins- Anti-inflammatory. Inhibits trypsin, plasmin, acrosin

Hyaluronidase- Increases interstitial viscosity. Antibiotic

Tryptase inhibitor- Inhibits proteolytic enzymes of host mast cells

Eglins- Anti-inflammatory. Inhibit the activity of alpha-chymotrypsin, chymase, substilisin, elastase, cathepsin G

Factor Xa- Inhibits the activity of coagulation factor xa by forming equimolar complexes.

Complement inhibitors May possibly replace natural complement inhibitors if they are deficient.

Carboxypeptidase- A inhibitors increase the inflow of blood at the bite site. Histaminelike substances Vasodilator. Increases the inflow of blood at the bite site

Acetylcholine- Vasodilator

Anesthetics- subsctance Anesthetic

Actions and medicinal uses

A medicinal leech is a small "factory" for the production of different biologically active substances. The key functions of these substances are following-

- Normalization and improvement of capillary circulation.
- Expressed ant inflammation effect.
- Ant stressful and adaptogene effects.
- Blood purification effect by expel out the vitiated blood.
- Immuno stimulation and immuno modulating effects.
- Improvement of an endocellular exhange.
- Early wound healing effect.
- Reduces the high blood pressure and blood viscosity.

- Positive haemopoetic effect.
- Anaesthesia.
- Anticoagulation.
- Antibacterial effect.

Common Indications:

Venous illness, acute phlebitis, varicose veins (Thrombophlebitis, post thrombotic syndrome, phlebothrombosis), acute gout attack infections, otitis media, mastoiditis, glaucoma, angina pectoris, with thorough bred patient, high blood pressure and "praeapoplex" piles. Leech therapy is mainly practiced in following medical conditions

Acne	Arthritis	Haemophilia
Alcoholism	Blepharospasm	Heartburn
Allergies	Blindness	Hepatitis
Alzheimer Disease	Breast Cancer	HIV
Ankylosing Spondylitis	Bulimia	Huntington Disease
Anorexia Nervosa	Cataracts	Hypertension
Depression	Cerebral Palsy	Impotence
Diabetes	Cervical Cancer	Indigestion
Diarrhoea	Chlamydia	Infertility
Downs Syndrome	Chronic-FatigueSyn-	Influenza
	drome	
Dysphasia	Cirrhosis	Insomnia
Eczema	Cleft Lip	Fibrosis
Motor Neuron Disease	Cold Sores	Lymphoma
Multiple Sclerosis	Constipation	Meningitis
Muscular Dystrophy	Crohns Disease	Migraine
Narcolepsy	COPD	Psoriasis
Osteoporosis	Cystitis	Scabies
Ovarian Cancer	Endometriosis	Sinusitis

Rheumatoid	Epilepsy	Skin Cancer
Asthma	Gallstones	Spina Bifida
Attention Deficit	Gauchers Disease	Stroke
HyperactivityDisorder Autism	Genital Herpes	Dementia
	Genital Warts	Thrush
Back Pain	Glaucoma	Trichomonas
Bedwetting	Gonorrhoea	Tuberculosis

(Dept. of Bio-Science, Columbia University, New York 10027 USA)

Conclusion:

Leech therapy or *Jalaukavacharan* is an ancient ayurvedic blood letting technique which has the immense potential to treat different disease conditions like Eczema, Psoriasis, acne vulgaris, Rheumatoid arthritis, osteoarthritis, Gout, Cellulitis, Sciatica, Ischemic heart disease Varicose Veins, Rheumatic Diseases, Boils and Abscess. The leech saliva contains a number of bioactive constituents which possesses anti-inflammatory, anticoagulant, anesthetic, vasodilator, anesthetic, antibiotic and antioxidant properties acting through multiple mechanisms in different disease conditions. Unfortunately, most of the bioactive ingredients are still unexplored and there is only limited knowledge of mechanisms of action of bioactive compounds present in Leech Saliva. Hence, extensive studies are required to find out the exact mechanisms of action of the various bioactive constituents to re-establish the traditional therapeutic potential on the scientific basis.

ROLE OF AYURVEDA IN SKIN AILMENTS

K.S.Girhepunje¹ & O.P.Singh²

Abstract:

Skin ailments present a major health burden in the rural community. Maintaining a healthy skin is important for a healthy body. The uses of wood being a major fuel for cooking in the villages the rural community is more prone to burn accident. Even due to hot climate they are more susceptible to fungal infections too. The lay people in the rural area depend on the medicinal plant for their primary health care. Herbal medicines are gaining significant popularity because of numerous advantages such as having negligible side-effects, better patient tolerance, easily available in urban and rural places, being relatively affordable and acceptable due to a long history of their use. Besides herbal medicines provide rational means for the treatment of many diseases that are obstinate and incurable in other systems of medicine.

Key Words: Skin, Ayurveda, Health

Introduction:

Anatomy of Human Skin

Human skin, the outer covering of the body, is the largest organ in the body. It also constitutes the first line of defense. Skin contains many specialized cells and structures. It is divided into three main layers viz. epidermis, dermis and hypodermis. Each layer provides a distinct role in the overall function of the skin. Epidermis, the outer most layer of the skin, varies in thickness in different regions of the body. It is the thinnest on the eyelids (0.05 mm) and the thickest on the palms and soles (1.5

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mm). The dermis also varies in thickness depending on the location of the skin. It is 0.3 mm on the eyelid and 3.0 mm on the back of the body. The dermis is attached to an underlying hypodermis or subcutaneous connective tissue. The subcutaneous tissue is a layer of fat and connective tissue that houses larger blood vessels and nerves. This layer is important in the regulation of temperature of the skin itself and the body. The size of this layer varies throughout the body and from person-to-person. Hair follicles, sweat glands and sebaceous glands are the main skin appendages.³

Skin Ailments

Skin illness is a typical ailment and it influences all ages from the neonate to the older and causes hurt in a number of ways. There are in excess of a thousand conditions that may affect the skin yet most skin illnesses are as rashes include acne, dermatitis, eczema, hives, pityriasis rosea, and psoriasis; viral infections include herpes simplex, shingles (herpes zoster) and warts, some systemic viral infections, such as chicken pox and measles, may also affect the skin, viral infections cannot be cured with antibiotics. Bacterial infections impel folliculitis, cellulitis and Lyme disease. Other infections include: fungal infections, parasitic infections, pigmentation disorders, tumours, cancer, trauma and other conditions like wrinkles, rosacea, spider veins and varicose veins.⁴

Functions of Skin

As the skin interfaces with the environment, it plays a key role in protecting (the body) against pathogens and excessive water loss. Its other functions are insulation, temperature regulation, sensation, storage and synthesis of vitamin D by action of ultraviolet (UV) and the protection of vitamin B folates, absorption of oxygen and drugs and water resistance. Severely damaged skin will try to heal by forming scar tissue. This is often discoloured and depigmented.⁵

Role of Ayurvedic Plants in Skin diseases

Tabassum, N., & Hamdani, M. (2014). Plants used to treat skin diseases. *Pharmacognosy reviews*, 8(15), 52–60. doi:10.4103/0973-7847.125531.

⁴ Marks JG, Miller J. 4th ed. Elsevier Inc; Lookingbill and Marks' Principles of Dermatology, 2006. ISBN no. 1416031855.

⁵ Madison KC. Barrier function of the skin: "la raison d'être" of the epidermis. J Invest Dermatol. 2003;121:231–41

Traditional medicinal resources, especially plants have been given more emphasis for dermatological diseases and allergies. Plants play a major source of biomolecules in the therapeutic uses with hundreds of therapeutic activities related to healing many skin problems. The use of plant biomolecules from different plant parts performs a great role particularly in the places where they lack modern health facilities/clinics/ hospitals in the villages. Traditional medicine can be considered as a primary source of medicine where the modern facilities are lacking as 80% of world population depends on traditional medicines. The cause of skin diseases in a community depends on many factors like, genetic, physiological, and environmental with special reference to Sub-Saharan Africa. Only a few people know about the use of traditional medicines for skin, which are of high therapeutic potential.⁶

Role of Ayurveda in Psoriasis

A person with psoriasis could use Ayurvedic preparations on their skin. One of the most common topical preparations in Ayurvedic medicine contains turmeric. Manufacturers produce turmeric from a plant root similar to ginger. Turmeric usually features in cooking. However, people can also mix it into a paste and apply it to the skin.⁷

Meditation

Ayurveda practitioners emphasize a balance of three "elements," which they define as:8

- > a person's universe
- > the body's constitution, or "Prakriti"

⁶ Sadiya Kaso, Ato Geda Kebede, Pagadala Vijaya Kumari (2014), STUDY ON TRADITIONAL MEDICINAL PLANTS USED FOR CURING SKIN DISEASES IN AMBO TOWN OF ETHIO-PIA, Global J Res. Med. Plants & Indigen. Med., Volume 3(4): 134–141.

⁷ Kim J, Lee Is, Park S, Choue R. Effects of *Scutellariae* radix and *Aloe vera* gel extracts on immunoglobulin E and cytokine levels in atopic dermatitis NC/Nga mice. J Ethnopharmacol. 2010;132:529–32. [PubMed] [Google Scholar]

⁸ Syed TA, Ahmad SA, Holt AH, Ahmad SA, Ahmad SH, Afzal M. Management of psoriasis with *Aloe vera* extract in a hydrophilic cream: A placebo-controlled, double-blind study. Trop Med Int Health. 1996;1:505–9. [PubMed] [Google Scholar]

> the body's life forces, or "dosha"

One way a person can keep these in balance is through reducing stress and anxiety. Meditation and the practice of "Pranayama," a method of controlled breathing techniques, may benefit a person in reducing their psoriasis. These mindfulness techniques could benefit an individual's overall well-being. As stress is a potential trigger for psoriasis flares, reducing stress levels through these relaxation techniques could help prevent a flare.

Dietary changes

Ayurvedic practices typically revolve around a vegetarian diet. Also, foods to avoid include high-carbohydrate ingredients and products that contain large amounts of sugar. Also, Ayurvedic practices suggest a person should avoid foods that are "in the extreme," such as tastes that are too salty, too sour, or too acidic. Ayurveda practitioners recommend that a person should "listen" to his/her body. By responding to urges to urinate or defecate, for example, they clear their body of toxins. While dietary changes cannot directly treat psoriasis, the Department of Dermatology at the University of California-San Francisco (UCSF) School of Medicine did a survey of dietary habits among people with psoriasis. The findings suggested that people on specialized diets, such as a vegan, and paleo or high-protein and low-carb diet, saw improvements in symptoms. This conclusion supports Ayurvedic dietary choices as potentially healthful for people with psoriasis.⁹

Topical solutions

Besides turmeric, there are many other Ayurvedic compounds and herbs that can potentially benefit people with psoriasis. The Ayurvedic herbs people have used to treat psoriasis include:

• Aloe vera¹⁰

Kaufman T, Kalderon N, Ullmann Y, Berger J. *Aloe vera* gel hindered wound healing of experimental second-degree burns: A quantitative controlled study. J Burn Care Rehabil. 1988;9:156–9. [PubMed] [Google Scholar]

¹⁰ Miller MB, Koltai PJ. Treatment of experimental frostbite with pentoxifylline and *aloe vera* cream. Arch Otolaryngol Head Neck Surg. 1995;121:678–80. [PubMed] [Google Scholar]

- Black nightshade
- Boswellia, or frankincense
- Garlic
- Guggul
- Jasmine flower paste
- Neem

The National Psoriasis Foundation recommend topical aloe vera for soothing itchy skin. They advise people to choose creams that have 0.5% aloe content. Only anecdotal evidence supports the effectiveness of other treatments. While they may support overall health, no research supports their use as treatments for psoriasis. However, if they provide relief, and people do not experience side effects after using them, they are safe to try. A person with psoriasis can consider using these treatments as complementary alongside scientifically-supported remedies. People should seek their doctor's advice before including Ayurvedic herbs in their regimen.

Baths and moisturizers

Having regular baths helps keep areas of psoriasis lesions clean and soft. Additionally, baths can be soothing and reduce stress, which may offer further benefits in cutting the incidence of psoriasis flares. Applying natural soothing oils, such as coconut or olive oils, may help to soften the skin and relieve the itching and discomfort of psoriasis.

Summary

Ayurveda is an ancient medical practice, but research on its safety and effectiveness is limited. Some herbs and organic products, such as turmeric and aloe vera, are already common in managing psoriasis. The Meditation and Yoga practices that compliment Ayurveda might also help people with psoriasis support their wellness and psychological health. However, scientific evidence for the positive effects of Ayurveda on psoriatic

skin is minimal or too small-scale for wider application. If psoriasis symptoms become moderate-to-severe or do not respond to alternative therapies, people should speak to their doctor about other options.¹¹

ENVIRONMENTALISM AND HUMAN HEALTH

Brahma Dutta Sharma¹

Environmentalism is a philosophy which holds that the physical geography of the globe is perfect and that any attempt to disturb it has an adverse effect not only on the physical conditions of the planet but also on human life. The environmentalists want to keep the mountains, hills, valleys, seas, lakes, and rivers intact. That is why they shun all efforts to make alterations in them and assert that if the alterations are made, the balance in nature will be disturbed and human life too will be adversely affected. The environmentalists hold that if a hill is removed from the place where it is located now, the climate of the surrounding area will not remain unchanged. They say, for example, that the peninsula of India has the climate that it has because it has an ocean at its south end and a tall mountain at its north end and that if either of them is shifted to some other point of the globe, the climate of India will change considerably. According to the environmentalists there are rains in India during the months of June, July, August, and September on account of its location between the Himalayas and the Indian Ocean because in summer winds bring water from the Indian Ocean in the form of clouds and the snow-clad Himalayas obstruct them and make them shower rains in the plains of the Ganga and the Sindh and that if some change is made in the location of the Indian ocean and the Himalayas, the sub-continent will have a different kind of climate, and may become as dry as the Arabian peninsula.

The environmentalists, likewise, try to protect the water bodies of the globe,

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whether they are the seas, or the lakes, or the rivers and if they find governments making changes in them, they resent the moves. For example, when the government of India was trying to build the Tehri dam to store the waters of the river Ganga, Sunderlal Bahuguna, the environmentalist of Uttarakhand undertook a fast unto death to stop it. He said he wanted the Ganga waters to flow uninterrupted from Gangotri to Ganga Sagar. Environmentalists hold that the waters of a river have some speciality of their own and if the flow of the waters is interrupted, their quality will be adversely affected. Environmentalists hold that the waters of a river owe their quality also to the course that they have taken and if the course of a river is altered, the quality of its waters will be affected. We can take the example of the water of the Ganga. The water of the Ganga is medicinal and does not rot even when it is potted for years together. It may lose this quality if the course of the river is changed or disturbed.

Now we come to the environmentalists' views about trees, plants and the green cover of the ground. The environmentalists regard the trees and plants as very valuable property of the globe and they resent the activities of deforestationand all those activities which cause damage to the green cover of the ground. For example, when Sundarlal Bahuguna saw that trees were being cut down on a large scale in the Himalayan part of India, he started the 'Chipko Andolana' to protect the trees from the hatchets of the timber merchants and asked the natives of the region, especially womenfolk, to cling to the trees that the hatchet-bearing cutters tried to cut, and, thereby, protect trees from the hatchets of the tree-cutters. The movement became very popular and the government had to change its policy about cutting trees to make roads and buildings.

The environmentalists' love for trees and plants is grounded on scientific and pragmatic considerations. It is a well-known fact that for much of our food we depend on trees and plants and if the trees and plants are cut on a large scale a day may come when no trees are left on the globe and there will be little food. We get wheat, barley, rice, gram, peas, pulses, beans, potatoes, tomatoes, cucumbers, cabbages, cauliflowers, and lemons from plants. And we get mangoes, guavas, apples, apricots, peaches, pomegranates, coconuts, walnuts, almonds, and cashew nuts from trees. If there are no trees and plants, we shall not be able to get such grains, vegetables, fruits and nuts. And it will become very difficult, if not impossible, for man to survive. But if we have trees and plants in plenty, we shall have edible things in plenty. That is why

if we want human race to survive we have to have trees and plants on the globe. And the more trees and plants we have on the globe, the more food grains, fruits, nuts and vegetables we shall have and, consequently, the better-fed we shall be. Fruits and nuts are rich sources of nutrients: there is iron in apples and pears, mercury in *tulsi* (basil) leaves, potassium in banana and sweet potatoes (*shakarkand*) and vitamin C in lemon and *aanwala* fruits. That is why we need them to nourish ourselves adequately. So the views of the environmentalists about trees and plants deserve to be honoured.

Trees and plants provide us medicines for almost all the diseases. For instance, the herb called *tulsi* (basil) cures cold, cough, fever and influenza, the herb *sincona* gives us quinine which cures malaria, the bark of the tree called *arjuna* cures heart problems, pomegranate is the medicine of about one hundred diseases including dysentery and diarrhoea, guava is the medicine of constipation and dyspepsia, *vaasa* is the medicine of cough, asthma and many other pulmonary diseases, the leaves of *neem* cure many skin diseases, and the herb called *bavachi* cures leprosy, the fruit of *bel* cures diarrhoea, the leaves of *bel* cure diabetes, *giloya* enhances immunity, cures fevers and purifies blood, *chirayata* cures skin diseases, the citric fruits are rich sources of vitamin C and cure acidity, the leaves of *haarsingar* and *nirgundi* cure arthritis and sciatica, aloe vera cures dyspepsia and indigestion, the leaves of *pattharchatta* cure bruises, heal up wounds and burns, and also remove stones from the kidney, the leaves of *peeli chameli* cure diabetes, the skin of the root of *madaar* cures asthma, and the external application of its leaves cures pains, and *ashwagandha* cures Parkinson's disease. Most of these herbs grow in forests and if the forests are preserved, can have them from there.

Man needs trees and plants also for the oxygen that he consumes through breathing. Man needs oxygen in order to get his blood oxygenated. Trees and plants exhale oxygen and consume carbon-di-oxide. Since the oxygen which man consumes is only about 12 to 15 percent in the atmosphere, its regular and continuous supply is needed in order to ensure man's existence on the globe and that supply is possible only so long as there exist trees and plants on the globe in plenty. That makes environmentalists' concern for the preservation of forests relevant. Since trees and plants are the suppliers of oxygen to man the more trees and plants we have on the planet the better it is. That is why it is in our interest to pay due attention to environmentalists' insistence on our reforesting the areas which have been deforested.

The quality of the air man has around him has its effect on his health. Most of us try to feed ourselves well so that we may remain healthy or, at least, disease-free. We do that under the impression that nutritive food keeps the body fit and strong. And we try to choose our food items keeping in mind their nutritive value so that the body gets all the ingredients of balanced diet like carbohydrates, vitamins, minerals and fat. No doubt food is necessary to keep the body fit and strong, but it is not as necessary as water because we can live without food for one to two months, but we cannot live without water even for a week. But even water is not as necessary for life as oxygen because we cannot live without oxygen even for five minutes, though we can live without water from four to six days. It means that oxygen is the consumable that the human body needs more than any other thing. And just as a man cares for the quality of the food items he consumes and for the quality of the water that he drinks he must pay heed to the quality of the air also that he inhales, as the quality of the air he inhales decides to a great extent how healthy his body is going to be. If a man spends most of his time in fresh air his health will be better than his health at a place where the air is not fresh. In other words, the better the quality of the air of a man's dwelling place, the better health he is likely to have. From this point of view the best place for a man to stay at is the place where there are trees and plants to supply to him adequate quantum of oxygen. Hence the need of protecting trees, and plants and the green cover of the ground, and that of reforesting the deforested areas and thereby protecting the environment.

Environmentalists stand for keeping both water and air unpolluted. They resent man's activities that cause air pollution and/or water pollution. We cut down trees so that we may make buildings and roads; we do that also to make aerodromes and lay railway lines. And we call it development. Such activities have caused a large-scale deforestation in most parts of the world including India. The tendency of consumerism has made man greedy to have much more than he needs. We have forgotten the moral that the globe has enough to gratify every man's need, but it does not have enough to gratify even one man's greed. We open our sewage drains into our lakes and rivers from which we get water to drink and to cook food. We dump the industrial wastes into rivers, lakes and seas. Our factories emit carbon into the atmosphere and pollute the air. The sewage drains of all the towns on the banks of the Ganga from Gangotri down to Hawrah carry sewage into the Ganga and pollute its holy waters. The industrial wastes

of Kanpur are dumped into the waters of the Ganga. And this is what we have done to almost all the rivers of the world. If we drink this polluted water, there is no reason why we shall not fall ill. That is why environmentalists have started a campaign that the Ganga waters should be cleaned. Dr. Deena Nath Shukla, an environmentalist of Prayagraj, has come out with the slogan 'Ganga-darshan hi Ganga-snan hai' (= 'Viewing the Ganga is as good as washing your body in its waters') signifying thereby that it is bad to pollute the holy waters of the Ganga by washing one's body in it. The waters of the Ganga will again become medicinal when the river is cleaned and its waters are rendered absolutely pollution-free. If such voices of environmentalists are heeded to, we shall have air and water of better quality and they will definitely improve our health.

Another aspect of environmentalism is giving to non-human animals their rightful place. This applies to not only domestic animals like the cow, the horse and the elephant but also to wild animals including animals like the lion, the tiger, the leopard, and the wolf. Environmentalists regard all animals, reptiles and insects as the integral parts of the universe and advance the theory of co-existence of all the beings, both human and non-human. They want the non-human animals to be regarded as man's fellow inhabitants on this planet deserving preservation, rather than as rivals deserving annihilation. Many men have been treating these non-human animals as food or/and game and have been killing them for either of these reasons. The environmentalists hold that the globe belongs to the non-human animals of the world as much as it belongs to the human beings and that the non-human animals have as many rights to exist and preserve themselves as the human beings have. If this view of the environmentalists is accepted, one will have to accept that it is wrong to kill animals for food or for game. In that case man will have to cease eating flesh and become a vegetarian. This step of man will free him from the diseases which are caused by the practice of eating flesh as it is an established fact that some diseases are caused only by eating flesh. For example, the disease called swine-flu is caused by one's eating pork. It is believed that the disease called Covid-19 was caused initially to some people in China in the city of Wuhan by their eating in some form the flesh of bats. This pandemic started in the month of December 2019 and by the 15th of April its virus had infected a large number of people from 150 countries of the world, Italy, Spain, America, France, and China being the worst affected of them. If environmentalists had had their say every man would have been a

vegetarian and this devastation would not have occurred. In the book Vegetarianism edited by Jill Hamilton includes an article entitled "A Vegetarian Diet Is Key to Good Health" written by Physicians Committee for Responsible Medicine Nutrition Staff. In this article the Committee asserts that vegetarian food is much more healthful than non-vegetarian food. In this article the Committee writes: "A vegetarian menu is a powerful and pleasurable way to achieve good health. ... Vegetarians have much lower cholesterol levels than meat- eaters and heart disease is less common in vegetarians. The reasons are not hard to find. Vegetarian meals are typically low in saturated fat and usually contain little or no cholesterol. Since cholesterol is found only in animal products such as meat dairy and eggs, vegens [sic] consume a cholesterol-free diet."1. That signifies that according to this Committee vegetarians have fewer chances to face the problem of heart- blockage than the non-vegetarians. The Committee adds: "An impressive number of studies, dating back to the early 1920's, show that vegetarians have lower blood pressure than non-vegetarians. In fact some studies have shown that adding meat to a vegetarian diet raises blood pressure levels rapidly and significantly. The effects of a vegetarian diet occur in addition to the benefits of reducing the sodium content of the diet. When patients with high blood pressure begin a vegetarian diet, many are able to eliminate the need for medication." The Committee further adds: "The latest studies on diabetes show that a vegetarian diet high in complex carbohydrates and fiber [sic] (which are found only in plant foods) and low in fat is the best dietary prescription for controlling diabetes. A diet based on vegetables, legumes, fruits and whole grains, which is also low in fat and sugar, can lower blood sugar levels and often reduce or even eliminate the need for medication. Since individuals with diabetes are at high risk for heart disease, avoiding fat and cholesterol is important, and a vegetarian diet is the best way to do that." The Committee also asserts in this article that "A vegetarian diet helps prevent cancer."4 In this way too environmentalism is beneficial to human health.

Notes and References:

- 1. Jill Hamilton (ed.), Vegetarianism, (Farmington Hills: Greenhaven Press, 2009) p. 16.
- 2. Ibid.
- 3. Ibid.
- 4. Ibid.

LEGAL RIGHTS TO KEEP HEALTHY IN INDIA

Parilakshita Sharma¹

Abstract

A healthy body is the very foundation of all human activities. The Constitution of India has laid down various provisions related to right to health. These provisions are impliedly given under the Preamble of the Constitution of India, Articles 38, 39(e), 39(f), 42, 47 and 48A under Part IV and duty is given under Article 51(1)(g) of Part IVA and under Part III of the Constitution. The Right to Health has impliedly been included within the ambit of Article 21 and it has been done so by the Apex Court of India through various verdicts. There are certain dimensions of health and one of the dimensions which is affecting people very badly is the social dimension of health in various aspects like poverty, access to geographical locations etc.

Key Words: Right to Health, Constitution, Verdict

Introduction

"Health is wealth." The Right to health is an issue of utmost importance in the Indian society. On one hand the medical profession has the responsibility to protect, respect and fulfil the right to health and on another hand the same duty lies with the public functionaries, administrators and judges. The Constitution framers have tried to protect the right to health in the Indian Constitution. For example, it is done in the preamble and it is included in the Part- III, Part – IV and Part IV-A. As the Right to Health is not included expressly under Fundamental Rights so the Honourable Apex Court of India has directed the Government to take measures to include the Right to Health under Article 21² of the Constitution and to ensure it to the Indian people.

² Protection of Life and Personal Liberty –" No person shall be deprived of his life and personal liberty except according to procedure established by law"

Human Right of Health

Human rights are those rights which are inherited by all persons or human beings despite of all the technicalities like nationality, place of residence, race, caste, religion, language, sex, or any other ground.³ These human rights are, somewhere expressly and somewhere impliedly, guaranteed by law in form of treaties, conventions, customs, general principle and other sources. There are certain International conventions and treaties which impose obligations on the governments to ensure those rights and one of those rights is Right to health. The Right to health was first articulated in the WHO Constitution 1946 which states that "The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being." Then in 1948 the Universal Declaration of Human Rights included health as a part of the right to an adequate standard of living.⁵ The Right to health was again recognised as a human right in 1966 in the International Covenant on Economic, Social and Cultural Rights.⁶ Since then many international treaties and conventions have been signed by different states to ensure the right to health as a human right. As India was also the signatory to the UDHR, 1948 several measures have been kept in mind by the Constitution framers to ensure Right to Health to the Indian citizens.

The Preamble of the Constitution includes the core values which were kept in mind while framing the Constitution. Although the Preamble is not enforceable in the court of law and is not considered as the part of Constitution, in the case of Kesvananda Bharati⁷ the Honourable Supreme Court of India held that the Preamble constitutes the basic structure of the Constitution which cannot be infringed. The Preamble directs to establish justice, equality, ensure dignity etc. which has a direct effect on a normal prudent person. The Constitution of India does not clearly provide for the Right to Health but the Apex Court from time to time has included it in the purview of Part III of the Constitution i.e. Right to life and personal liberty. Article 21 ensures protection

³ www.ochr.org

⁴ Constitution of World Health Organization

⁵ Article 25 UDHR

⁶ Article 12

⁷ Kesavananda Bharati Sripadagalvaru & Ors V. State of Kerala & Anr., (1973) 4 SSC 225 : AIR 1973 SC 1461.

of life and personal liberty except according to the procedure except by law.8

Apart from Part III that deals with the Fundamental Rights the Constitution framers have tried to include the Right to Health in Part IV of the Constitution by creating obligations on the State to provide for such conditions for keeping good health in Articles 38, 39(e), 39(f), 42, 47 and 48A in the form of Directive Principles For State Policy.

Article 38 of the Constitution directs "the State to try to promote the welfare of the people by securing and protecting as effectively as it may a social order in which justice, social, economic and political shall inform all the institutions of national life." Article 38 needs to be read along with Article 14.10 This Directive reaffirms the basic structure given under the Preamble i.e. to secure the social, economic and political justice. In the case of Consumer Education and Research Centre v. Union of India 11, the Supreme Court of India read Articles 21, 38, 42, 43, 46 and 48A together and held that the Right to Health, Medical aid to provide the health and vigour of a worker while in service or post retirement is a Fundamental Right to make the life of a workman meaningful and purposeful with dignity of person.

Article 39(e) directs the State to make certain policies to secure the health and strength of workers, men and women, and the children of tender age shall not be abused and the citizens are not forced to work in the conditions which are not appropriate according to their age and capacity.¹²

Article 39(f) of the Constitution states that the State shall secure the children by providing opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth are protected against exploitation and against moral maternal abandonment.¹³

⁸ Article 21 Constitution of India

⁹ Article 38 Constitution of India

¹⁰ Equality before law

¹¹ AIR 1995 SC 923: (1995)3 SCC 212

¹² Article 39(e) Constitution of India

¹³ Article 39(f) Constitution of India

In Bandhua Mukti Morcha v. Union of India¹⁴ the Apex Court read Article 21 and Article 39(e) and 39(f) and held that it is expedient to secure the release of bonded labour and free them from exploitation.

Article 42 of the Constitution requires "the State to make provisions for securing just and human conditions of work and for maternity relief." From time to time the Supreme Court has tried to include the Right to Health in the ambit of Article 21 by reading it with several DPSPs such as Article 38, 39(e), (f), 42.

Article 47 obligates the state to regard, as its primary duty, the raising level of the nutrition and the standard of living of its people and the improvement of public health. The Supreme Court has read Articles 47 and 21 together and instructs the State to provide better health services to the poor. ¹⁶ In Paschim Banga's case ¹⁷the Hon'ble Supreme Court of India held that "it is the constitutional obligation of the state to provide adequate medical services to the people. Whatever is necessary for this purpose has to be done."

Article 48A obligates the State to endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country. In Rural Litigation and Entitlement Kendra v. State of Uttar Pradesh¹⁸ the Supreme Court has taken an active interest in the protection of environment. Three principles have been laid down by the Supreme Court viz. "Precautionary Principle", "Polluter Pays Principle" and "Public Trust Principle". It has been repeatedly held by the Supreme Court that natural resources are held by the State as a trustee on behalf of the common prudent person.

Under Part IV-A of the Constitution Article 51 A (g) a duty is imposed on all the individuals to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures.¹⁹

The several statutory provisions given in the Constitution of India and covered

¹⁴ AIR 1984 SC 802: (1984) 3 SCC 161

¹⁵ Article 42 Constitution of India

¹⁶ Kirloskar Brothers Ltd. v. Employess State Insurance Corporation (1996) 2 SCC 682

¹⁷ Paschim Banga Khet Mazdoor Samiti v. State of West Bengal (1996) 4 SCC 37

¹⁸ AIR 1987 SC 359

¹⁹ Artilce 51 A (g) Constitution of India

under several International Organizations like WHO and various conventions and treaties signed by different States ensure the Right to Health. From time to time through different verdicts the Supreme Court of India has tried to implement the Right to Health as a Fundamental Right.

Legal Protection to Health Care

The Right to Health has been protected firstly by the statutory provisions but sidewise the Apex Court keeps a check on the Executive whether they are working properly or not for keeping people healthy. It has been affirmed by the Supreme Court in various verdicts which are as follows:

In the case of Bandhua Mukti Morcha v. Union of India²⁰ the Court held that the right to live with human dignity is incorporated in Article 21 itself which is derived from DPSP and therefore it also includes protection to health.

In Vincent Panikulangara v. Union of India²¹, the Supreme Court emphasising on right to health observed that the maintenance and improvement of public health must be high in rank as health is the reason behind the existence of humans in the society and betterment of health is the reason behind the construction of a better society about which the Constitution makers also focused and further elaborated that in their opinion public health should be the priority of any welfare government.

A historic judgement has been given by the court in the case of Consumer Education and Resource Centre v. Union of India. ²² The Supreme Court held that Right to Health and Medical Care as a Fundamental Right under Article 21 as it is essential for making the life of a workman purposeful and meaningful with the dignity of the person. The expression "life" does not denote mere animal existence. It has a very wider meaning which includes right to livelihood, better standard of life, and hygienic conditions at workplace. The court further held that whether the State Government or the Union Government or any type of industry in which workers are employed must take all such actions which are necessary for promoting health, strength etc. of the worker during the period of employment and must prepare such schemes that even

²⁰ AIR 1964 SC 802

²¹ AIR 1967 990-995

²² AIR (1995)3 SCC 42

after retirement they can survive their lives with basic essentials to life with health and happiness. The Court also laid down certain guidelines which should be followed by the employers while employing the workers.

In Kirloskar Brothers Pvt. Ltd. v. Employees' State Insurance Corporation²³, the court affirmed the judgement given in the Consumer Education and Research Centre's case that the right to health is a fundamental right of the workers. The Court widened up the ambit by stating that remedies are not only available against the State and its instrumentalities but even the private industries should ensure such facilities and opportunities of health to their workers, as are given in part IV of the Constitution which are the integral part of the right to equality under Article 14 and right to life as envisaged under Article 21.

In the State of Punjab and Others ν . Mohinder Singh Chawala²⁴ it was held that right to health is the indivisible part of the right to life. It is the Constitutional obligation of the Government to provide health related facilities. Several attempts have been made by both the Supreme Court and the High Courts to preclude the Right to Health under Article 21. After inclusion of the Right to Health the problem arose about the adequacy of medical health. It was raised in the case of Paschim Banga Khet Mazdoor Samiti ν . State of West Bengal²⁵ the question before the Court was whether unavailability of health care resources at the government institutions is the violation of Article 21. In this case the court held that the Constitution imposes obligation on the State to safeguard the right to life of every person and to save human life is a matter of utmost importance so if the Government hospitals run by the State fail to provide such treatment to the people who are in need of the treatment then it must be considered as the violation of Article 21. Along with this the Court ordered that Primary Health Care Units must be established to deal with medical emergencies.

In the case of Mahendra Pratap Singh vs. State of Orissa²⁶ the issue was that the government failed to set up a Primary Health Care Centre in a village. Here the

^{23 (1996) 2} SCC 682

^{24 (1997) 2} SC 83

²⁵ Agarwal SC(J), Manawati GT(J), Paschim Banga Khet Mazdoor Samiti and other v. State of West Bengal and Another 1996

²⁶ AIR 1997 Ori 37

Court held that, in a country like ours it is not possible to establish a facilitated hospital but villagers within their limits can aspire to have a Primary Health Centre. From this case it was implied that enforcement of right to health is the duty of the government and this duty also covers providing right to primary health care.

Social Dimensions of Health in India

There are certain dimensions of health like social, economic, physical, mental, spiritual etc but amongst them the dimension which affects the physical health the most is the social dimension as it has many aspects like poverty, connection of class with health, access to health care units, out of pocket health payments which are discussed as follows:

POVERTY- A very large part of population is affected with this factor because due to poverty people are not able to take care of themselves properly whether it is in the form of lack of nutrition or due to lack of education. And owing to these reasons even after badly suffering from any health issue they do not take it seriously which ultimately turns into a very heinous one. And even if they are aware of it then they do not have the resources which are required by them to deal with the disease.

ACCESS TO HEALTH CARE SERVICES - A major problem is of the accessibility to health care services due to tough geographical locations. People are living in different areas of the nation and geographical conditions range from the mountains to deserts. So it is very difficult to get a connection with them. It is difficult for the government to reach the people easily and actively.

OUT OF POCKET HEALTH PAYMENTS – It relates to mainly the people in the lower middle classes and the poor people. Every person wants to live his life in a healthy manner but when some special health issue affects him then he wants to survive somehow. The persons try to get healthy again somehow by spending money that they don't have. They try to connect with the specialist who is unaffordable. Those who have medical insurances are able to bear it but those who do not have enough money are the real victims of the situation. They borrow money and get entrapped in a debt cycle.

In the wake of COVID-19 situation a new problem with respect to the health

issues emerged. The members of a particular a community and their sympathisers had been holding demonstrations in almost all the cities and towns all over the country on the issue of the Citizenship Amendment Act (CAA). At various places skirmishes between the agitators and the police force were also there. It was in such an atmosphere that the cases of COVID-19 started spreading in Italy, France, the UK, Spain and the USA. The World Health Organization started issuing various kinds of advisories and declared the situation a pandemic. The Government of India flung into action and the medical teams were sent to the suspects' house to give proper treatment. However, the members of a particular community resented saying that they did not believe the modern medical system and the treatment being administered. They held that any disease was sent by God and a person could be cured only by God's grace. This behaviour of theirs was in contradiction of what was being said by the WHO to contain the pandemic. The community also argued that the constitution allowed them to follow their religious beliefs. This was a Catch-22 situation for the Government as it is responsible for the welfare of all the religious groups living in the country or in other words the Government being secular and the state being a welfare state all the citizens need care. In the name of religions freedom a group could be allowed to practice their beliefs within their homes but could it be left to itself, making it the cause of spreading COVID-19 while WHO was advising to break the chain somehow? In the legal terms, on one hand was the legal right to adhere to a religious faith on the other were the legal rights to survive and welfare of the other communities. The framers of the Constitution of India had not envisaged such a situation and therefore, no solution to such a conflict has been suggested in the Constitution. The law makers and the Supreme Court of India should take cognizance of this sort of situation *suo-motto* where a conflict between the rights of the group and the duties of another arises and should either frame some laws or lay down some guidelines.

There is another related issue of the right to euthanasia. There are persons who instead of going to a doctor wish to die because of their religious beliefs. Does the State have a right to impose on such persons its concept of welfare, provided their beliefs are harmless to the other groups? By decriminalising an attempt to suicide the Govt. has tried to solve the problem to some extent but an act like that of *Santhara*, a well-thought out action is different from an act out of desperation and stress. The law

makers some day will have to consider this issue as well.

These are the few social factors which affect the health care system in India. They are the major challenges to implement the Right to Health.

Challenges and Problems

The judiciary has taken several steps from time to time for creating just and humane conditions for the betterment of health, but still a lot needs to be done. There are several measures which need to be followed for ensuring the implementation of Right to Health in India which are as follows:

- The Right to Health must be included explicitly as a Fundamental Right in the Constitution of India.
- The major problem which is related to health care in India is that of geographical inaccessibility. On one hand there are hospitals which have enough techniques and facilities to treat people which are largely located in the urban areas and on the other hand there are such hospitals in which even the basic medical equipments are not there. Mostly such hospitals exist in rural areas and the hilly areas. Better ambulance facility and accessibility be provided.
- As the Right to Health is a basic right of every human being it should be given to everyone. No discrimination should be made on the basis of region, religion and economic conditions etc. The person who is suffering from any health problem has the right to live his/her life so if a person is incapable to get himself treated the government should prepare such schemes and establish hospitals that they can be treated well. A scheme like Ayushman Bharat is a right step in the direction.
- At times the patients also suffer owing to the casual approach of the medical staff and dereliction of duty. Such case of dereliction of duty must be dealt with severely.
- People themselves have to be aware about their health. Taking a precaution is much better than going to a doctor. It is not only the duty of Government to take care of the Health of the people but it is also an obligation upon people

themselves to take care of their health.

Conclusion

It can be said that the Right to Life includes the Right to Health and therefore the State and its instrumentalities and even the private firms are bound to provide health care facilities to all the citizens without any discrimination. Through several PILs or in several other cases the Supreme Court and the High Courts have directed the Executives to maintain the Right to Health in India whether in the form of rights of workers, right to adequate drugs and medicines, right to clean environment. But it is high time for every person to get united and to do something which is required to save the environment which is the need of the hour to live healthily.

प्राचीन भारत में चिकित्सा विधियाँ

डॉ. प्रमोद कुमार मिश्र¹

वास्तव में मनुष्य की उत्पत्ति के साथ ही चिकित्सा विज्ञान का आविष्कार हो गया था, किन्तु प्रागैतिहासिक काल की चिकित्सा पद्धित के बारे में पुरालेखीय प्रमाणों के अभाव में हमारा ज्ञान लगभग शून्य ही है। सिन्धु सभ्यता के सम्बंध में भी लगभग यही बात है। इस प्राचीन सभ्यता से पुरालेख प्राप्त तो हुए हैं, किन्तु उन्हें पढ़ न पाने के कारण इस काल की चिकित्सा के सम्बंध में हमारा ज्ञान शून्य से कुछ ही अधिक है, परन्तु इस काल की पुरातात्विक खुदाइयों और उनसे प्राप्त निष्कर्षों से हमें इस प्राचीन सभ्यता में प्रचलित चिकित्सा पद्धित के सम्बंध में थोड़ा-बहुत अनुमान प्राप्त होता है।

सिन्धु घाटी सभ्यता के अवशेषों से यह ज्ञात होता है कि रोगों के निवारण, उपचार आदि के विषय में अनेक विधियाँ प्रचलित थीं। ऐसा माना जाता है कि नगरीय सभ्यता के रूप में विकसित इस महान प्राचीन सभ्यता का विनाश महामारियों से हुआ। वर्तमान में 'कोविड-19' जैसे संकट को देखते हुए यह बात असंभव भी प्रतीत नहीं होती है। सिन्धु घाटी सभ्यता में शल्य चिकित्सा के निश्चित उदाहरण मिले हैं। यहाँ से खोपड़ी की शल्य चिकित्सा के दो उदाहरण प्राप्त हुए हैं: एक कालीबंगा (राजस्थान) से जो कि निश्चित है और दूसरा लोथल से जो कि अनिश्चित-संदिग्ध है। कालीबंगा (राजस्थान) के असंदिग्ध वाले उदाहरण में एक बालक की खोपड़ी की शल्य चिकित्सा हेतु छः छेद किये गये हैं। परीक्षण करने पर यह पाया गया कि ये छेद कुछ भर गये थे। स्पष्ट है कि बालक की खोपड़ी की शल्य चिकित्सा की गयी थी और वह सफल भी रही तथा बालक उसके बाद कम से कम उतने समय तक अवश्य ही जीवित रहा जितना समय उन छेदों

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² के.यू.आर. केनेडी प्रभृत विद्वानों का मानना है कि मलेरिया और ऐसी महामारियों-बीमारियों (Epidemic Diseases) के कारण हड़प्पा सभ्यता का विनाश हुआ। उन्होंने मोहनजोदड़ों के कंकालों का परीक्षण करके यह निष्कर्ष निकाला।

⁻ हड़प्पा सभ्यता एवं संस्कृति, अंशुमान द्विवेदी, अभिव्यक्ति प्रकाशन, इलाहाबाद पुनर्मुद्रण संस्करण 2000 ई., पृ.सं. 92

⁻ सिंधु सभ्यता, डॉ. किरण कुमार थपल्याल : डॉ. संकटा प्रसाद शुक्ल ग्रं. 171 उ.प्र. हिन्दी संस्थान, लखनऊ चतुर्थ संस्करण 2002 पृ.सं. 263

को भरने में लगा होगा। लोथल (गुजरात) से प्राप्त एक अन्य बालक की खोपड़ी पर भी छेद पाया गया है। उस बालक की उम्र लगभग नौ-दस साल के करीब रही होगी। कालीबंगा (राजस्थान) के साक्ष्य के विपरीत इस खोपड़ी में किये गये छेद के भरने के कोई साक्ष्य नहीं दिखे। इससे यह अनुमान लगाया जा सकता है कि या तो शल्य चिकित्सा सफल नहीं हुयी और उसके थोड़े ही समय पश्चात् बालक मर गया या फिर हमें यह मानना पड़ेगा कि छेद मरणोपरांत किया गया था। यद्यपि लोथल (गुजरात) के इस प्रमाण को प्रसिद्ध पुरातत्विवद एस.आर. राव ने खोपड़ी पर शल्य चिकित्सा किये जाने का प्राचीनतम उदाहरण कहा है। किन्तु अधिकांश पुरातत्विवद उनके इस कथन को संदिग्ध ही मानते हैं। 5

उपर्युक्त दोनों उदाहरणों के अतिरिक्त भारत में इस प्रकार की शल्य चिकित्सा के दो अन्य उदाहरण (अ) बुर्जहोम (कश्मीर) (ब) लंघनाज (गुजरात) से मिले हैं। खोपड़ी की शल्य चिकित्सा सिरदर्द और चोट आदि के कारण होने वाली असह्य पीड़ा के इलाज हेतु की गयी होगी। पेरू (मध्य अमेरिका) की जनजातियों में इस तरह की शल्य चिकित्सा आज भी की जाती है। 7

उपर्युक्त विवेचन से स्पष्ट है कि भारत में शल्य चिकित्सा के प्रारम्भ का सबसे प्राचीन प्रमाण सिंधु घाटी सभ्यता से ही प्राप्त होता है, जिसका सर्वांगीण विकास बाद में हमें ऐतिहासिक काल के ग्रन्थों में देखने को मिलता है।

इसके अलावा भारतीय चिकित्सा की एक महत्वपूर्ण पद्धित 'योग' का सर्वप्राचीन उदाहरण सिंधु घाटी की सभ्यता में ही देखने को मिलता है। सिंधु प्रदेश में प्रसिद्ध पुरातत्विवद अर्नेस्ट मैंके को एक मुहर मिली थी, जिसके मध्य में एक त्रिमुखी नग्न पुरुष योग मुद्रा में बैठा है, इसके सिर पर शिरस्त्राण के दोनों ओर दो सिंग हैं। यह शिरस्त्राण त्रिशूल के समान है, इसके आसन के नीचे एक द्विशृंगी हिरन है। मूर्ति के दाहिनी ओर एक हाथी और एक सिंह है, बाँई ओर एक गैंडा तथा एक भैंसा है। मूर्ति के ऊपर कुछ अक्षर उत्कीर्ण हैं। इसकी लिपि को पहचाना नहीं जा सका है। इस मुहर में संपूर्ण दृश्य के आधार पर विद्वानों का अनुमान है कि यह त्रिशूलधारी योगीश्वर शिव की मूर्ति है,8 जो पशुपित के रूप में प्रख्यात हैं। कुछ विद्वानों

³ सिंधु सभ्यता, डॉ. के.के. थपल्याल : डॉ. संकटा प्रसाद शुक्ल, उ.प्र. हिन्दी संस्थान, लखनऊ, चतुर्थ संस्करण 2002, परिशिष्ट-9

⁴ लोथल एंड दि इंडस सिविलाइजेशन, एस.आर. राव, ऑर्कियोलॉजिकल सर्वे ऑफ इंडिया, 1978 ई.

⁵ सिंधु सभ्यता, डॉ. किरण कुमार थपल्याल : डॉ. संकटा प्रसाद शुक्ल, उ.प्र. हिन्दी संस्थान, लखनऊ, चतुर्थ संस्क-रण, परिशिष्ट-9, प्र.सं. 308

⁶ सिंधु सभ्यता, डॉ. किरण कुमार थपल्याल : संकटा प्रसाद शुक्ल, उ.प्र. हिन्दी संस्थान, लखनऊ, चतुर्थ संस्करण, परिशिष्ट-9, पृ.सं. 308

⁷ वही, पृ.सं. 308

भारत का सांस्कृतिक इतिहास, डॉ. राजेन्द्र पाण्डेय, उ.प्र. हिन्दी संस्थान, लखनऊ, हिन्दी ग्रन्थ अकादमी ग्रन्थांक-176
 ई., प्र.सं. 26

का मत है कि इस मुहर में उर्ध्विलंग भी अंकित है। सिंधु सभ्यता की एक अन्य मुहर पर भी एक योगी का योगासन मुद्रा में चित्र है, जिसके दोनों ओर नाग हैं। यह चित्र भी शिव का ही है। योगासन में ध्यानावस्थित देवताओं के अंकन वाली अनेक मुहरों-मूर्तियों से स्पष्ट है कि सिंधु सभ्यता के निवासी योग समाधि एवं प्रणायाम में विश्वास रखते थे। अनेकानेक इस प्रकार की प्राप्त मुहरों-मूर्तियों-चित्रों (मोहनजोदड़ों से मैंके को प्राप्त मुहर, मोजनजोदड़ों से ही प्राप्त योगासन मुद्रा में मिट्टी की मुहर, हड़प्पा, कालीबंगा आदि कई पुरास्थलों से प्राप्त योग मुद्रा वाली मूर्तियाँ) आदि से यह पूर्णतः प्रमाणित हो चुका है कि ऐतिहासिक काल में लिखित रूप में प्राप्त 'योगविद्या' की उत्पत्ति सिंधु सभ्यता में ही हुयी थी। इस प्रकार 'योगासन' सिंधु सभ्यता के निवासियों द्वारा शरीर को स्वस्थ रखने के लिए प्राकृतिक चिकित्सा के रूप में विकसित किया गया था।

प्राचीन काल में सिंधु सभ्यता के निवासी शरीर की शुद्धता पर विशेष ध्यान देते थे। 12 स्नानागारों और कुओं की बहुलता से तथा नगर नियोजन की वैज्ञानिक पद्धित से इस बात का स्पष्ट प्रमाण मिलता है। शुद्ध शरीर ही स्वस्थ रह सकता है और स्वस्थ शरीर में ही शुद्ध आत्मा निवास करती है। शुद्धता-स्वच्छता भी एक प्रकार की चिकित्सा पद्धित है, जिसका प्रयोग सिंधु निवासी अपने शरीर को निरोग रखने के लिए करते थे। सैंधव सभ्यता के निवासी जल की पवित्रता 3 तप एवं योग की परम्परा 4 पद्मासन जैसी यौगिक क्रियाओं 15 को अपने शरीर को शुद्ध एवं स्वस्थ बनाने के लिए करते थे।

इस काल में प्रचलित विभिन्न वृक्षों की पूजा, वनस्पतियों, वृक्षों से अत्यधिक लगाव आदि से अनुमान लगाया जा सकता है कि ये लोग वृक्षों का प्रयोग निश्चित रूप से औषधियों के रूप में करते रहे होंगे, किन्तु निश्चित प्रमाणों के अभाव में कुछ कहा नहीं जा सकता। इसके अलावा भी कुछ अन्य प्रकार की चिकित्सा विधियाँ भी संभव है कि सैंधव सभ्यता में चलन में रही हों जिनका कोई निश्चित प्रमाण उपलब्ध नहीं है।

⁹ वही, पृ.सं. 26

¹⁰ वही, पृ.सं. 28

¹¹ सिन्धु सभ्यता, जयनारायण पाण्डेय, प्रमानिक पब्लिकेशन, इलाहाबाद, द्वितीय आवृत्ति 1990, पृ.सं. 57, 58, 59, 60

¹² भारत का सांस्कृतिक इतिहास, डॉ. राजेन्द्र पाण्डेय, उ.प्र. हिंदी संस्थान, लखनऊ, हिन्दी ग्रन्थ अकादमी ग्रन्थां-क-176, 1976 ई. प्र.सं. 28

¹³ सिन्धु सभ्यता, जयनारायण पाण्डेय, प्रमानिक पब्लिकेशन, इलाहाबाद, द्वितीय आवृत्ति 1990, पृ.सं. 61, 62, 88

¹⁴ वही, पृ.सं. 62

¹⁵ वही, पृ.सं. 88

वैदिक युगीन चिकित्सा प्रणाली

वैदिक साहित्य के अनुशीलन से विदित होता है कि सभी दीर्घायु की कामना करते थे। 16 ऋग्वेद में अश्विनी कुमारों द्वारा नेत्र चिकित्सा तथा हड्डी जोड़ने के साथ ही ऐसे विशाल औषधालय का भी वर्णन है जिसमें सहस्रों वैद्य कार्य करते थे। 17 अश्विनीकुमार, वरुण तथा रुद्र आदि देव वैद्य बताये गये हैं। 18 ऋग्वैदिक काल में जल चिकित्सा, सूर्य चिकित्सा तथा अनेक औषधियों का ज्ञान था। 19 अथववेद तथा उसके उपवेद आयुर्वेद एवं अथवंवेद से संबंधित ब्राह्मण में रोगों के लक्षण निवारण तथा चिकित्सा के विषय में जो उल्लेख है, उनसे स्पष्ट होता है कि इस विषय में वैदिक आयों को काफी जानकारी थी। कुष्ठ रोग के निवारण हेतु रजनी का प्रयोग किया जाता था। 20 चिकित्सक यह भी जानते थे कि सूर्य की किरणों से कृमियों का नाश किया जा सकता है और मानव शरीर के अंग रोग कारक कृमियों के आश्रय स्थान होते हैं। 21 रोहिणी के प्रयोग से अस्थि को जोड़ने की विधि भी ज्ञात थी। 22

भारतीय परंपरा में वेदों को सम्पूर्ण ज्ञान-विज्ञान का मूल स्र्रोत माना गया है-''यदभूतं भव्यं भविष्यच्च सर्व वेदात प्रसिध्यति।''²³

(अर्थात - जो कुछ ज्ञान-विज्ञान इस धरा पर अभिव्यक्त हो चुका है और हो रहा है तथा भविष्य में होगा, वह सब वेद से ही प्रसूत होता है।) इसी प्रकार का मत आधुनिक महर्षियों ने भी दिया है।²⁴ वैदिक ग्रंथों में प्रदूषण रहित आहार विहार को स्वास्थ्य के लिए श्रेयस्कर माना गया है। वेदों ने न केवल ''जीवेम शरदः शतम्''²⁵ का उद्घोष है अपितु ''भूयसीः शरदः शतम्''²⁶ अर्थात् सौ वर्ष से अधिक जीवित रहने की भी प्रेरणा देता है। प्रदूषण रहित आहार-विहार को दीर्घजीवन का साधन बताते हुए वेद कहते हैं-

'यद अश्नासि यत् पिबसि, धान्यं कृष्णा पथः।

¹⁶ यजुर्वेद 36, 24 ईशोपनिषद 2

¹⁷ ऋग्वेद 1/24/9

¹⁸ ऋग्वेद 1/116/16, 1/24/9, 2/33/4-7

¹⁹ ऋग्वेद 1/23/19-21, 1/50/11, 10/17/95

²⁰ अथर्ववेद 1/23/1

²¹ अथर्ववेद 2/32/1, 2/3/6-14

²² अथर्ववेद 4/12/1

²³ मनुस्मृति 12/97

²⁴ सत्यार्थ प्रकाश, महर्षि दयानंद सरस्वती, आर्य प्रतिनिध सभा पंजाब, सप्तम समुल्लास, सृष्टि सम्वत् 1960853107, पृ.सं. 191-92

²⁵ यजुर्वेद 36/24, अथर्ववेद 19/68/2

²⁶ अथर्ववेद, 19/68/8

यद् आद्यं यद् अनाद्यं, सर्वं ते अन्नम् अविषं कृणोमि।।27

(अथर्ववेद के इस मंत्र को प्रदूषण रहित (विषरहित) भोजन करने को लंबी आयु का मूल आधार बताया गया है।) अथर्ववेद में ही वायु विकार को 'शतधारम्' अर्थात् असंख्य धाराओं वाला बताया गया है।²⁸ क्योंकि वात प्रकृति के रोगों को ठीक करना जितना कठिन है उतना ही अन्य प्रकृति वाले रोगों को नहीं। वेदों में शरीर की नसों और नाड़ियों का भी उल्लेख मिलता है तथा उनके विकारों का भी वर्णन है-

''ऐतास् ते असौ धेनवः काम दुधा भवन्तु।

एनीः श्येनीः सरूपा विरूपास् तिलवत्सा उपतिष्ठन्तु त्वात्र।।29

(इस मंत्र में धेनु पद से नाड़ियों का उल्लेख किया गया है। निघंटु के अनुसार धेनु और धमनी दोनों शब्द परस्पर पर्यायवाची हैं। वेदों की मान्यता के अनुसार चार प्रकार की नाड़ियाँ 1- एनी : जिनमें अरुण वर्ण का रक्त प्रवाहित होता है। 2- श्येनी : हिसमें श्वेत वर्ण का रक्त प्रवाहित होता है। 3- सरूपा : जिनमें रक्त वर्ण का रक्त प्रवाहित होता है। 4- विरूपा : जिनमें नील या हरित वर्ण का रक्त प्रवाहित होता है। इनमें से ऐनी, श्येनी और विरूपा क्रमशः वात, कफ और पित्त से प्रभावित मानी जाती है।) अथर्ववेद का एक अन्य मंत्र में कफवाहिनी नाड़ियों को तीव्रा, वातवाहिनी नाड़ियों को अरुणा, रक्तवाहिनी नाड़ियों को लोहिनी तथा नीलवर्ण रक्त को प्रवाहित करने वाली नाड़ियों को धूम्रा या ताम्रधुम्रा कहते हैं। उ० इन नाड़ियों के अलावा अन्य ढेर सारी छोटी-छोटी नाड़ियाँ मानव शरीर में होती हैं, जिनको तूलवत्सा कहा गया है। उ

"तत्रारुणा वातवाहाः पूर्यन्ते वायुना सिरा। पित्तादुष्णाश्च नीलाश्चशीता गौर्याः स्थिराः कपात। असृगवहास्तु रोहष्यः सिरा नात्युष्ण शीतलाः।।³²

अतः इस प्रकार से स्पष्ट है कि ऐतिहासिक युग में भारतीय चिकित्सा पद्धित का प्रारंभ वेदों से और चतुर्वेदों में से भी आयुर्वेद (अथवाँगिरस वेद) से माना जाता है। अथवंवेद का ही उपवेद आयुर्वेद है। (आयुः + वेद = आयुर्वेद) आयुर्वेदयित बोधयित इति आयुर्वेदः (अर्थात जो शास्त्र या विज्ञान आयु-जीवन का ज्ञान कराता है उसे आयुर्वेद कहते हैं) यह विज्ञान, कला और दर्शन तीनों का मिश्रण है। आयुर्वेद शब्द

²⁷ अथर्ववेद, 8/2/19

²⁸ अथर्ववेद, 18/4/29

²⁹ अथर्ववेद, 18/4/33

³⁰ अथर्ववेद, 10/2/11

³¹ अथर्ववेद, 18/4/33

³² स्थ्रुत संहिता, शरीर स्थान 7/18

का अर्थ है- जीवन से सम्बंधित उपचारात्मक ज्ञान, आयु का विज्ञान, लम्बी उम्र का विज्ञान आदि।³³ प्रसिद्ध आयुर्वेदाचार्य चरक ने आयुर्वेद की परिभाषा इस प्रकार दी है-

हिताहितं सुखं दुःखमायुस्तस्य हिताहितम्। मानं च तच्च यत्रोक्तमायुर्वेदा स उच्यते।।³⁴

अथर्ववेद में सात सौ से अधिक ऐसे श्लोक हैं जो आयुर्वेद से संबंधित विषयों के हैं। वेदों द्वारा प्रणीत इस ज्ञान के संबंध में सर विलियम्स जोंस का मत है कि- "वेदों से हम शल्य चिकित्सा, आरोग्य, संगीत, भवन निर्माण की कला सीखते हैं जिसके अधीन याँत्रिक कलाएँ भी आती हैं। वेद जीवन के हर पक्ष, संस्कृति, धर्म, संगीत, नैतिकता, विधि और खगोल विज्ञान के ज्ञान कोश ही हैं।"

अथर्ववेद में चिकित्सा विज्ञान एवं रोगशामक औषधियों का वर्णन इस प्रकार है-

1. रक्त प्रवाह चक्र का वर्णन - अथर्वा और आंगिरस द्वारा रचित अथर्ववेद (अथर्वांगिरस वेद) में शरीर में प्रवाहित होने वाले रक्त परिसंचरण चक्र का वर्णन किया गया है। 35 प्रश्न-उत्तर शैली में मंत्र द्रष्टा ऋषि कहते हैं-

"इस शरीर में उस आपः (रक्त) को किसने बनाया? जो शरीर में ऊपर की ओर तथा नीचे की ओर बहता है और सब ओर से बहकर हृदय में आता है। जो लाल वर्ण (रंग) का है और लौह से युक्त है।"³⁶

इस मंत्र में स्पष्टतः रक्त के परिसंचरण चक्र का वर्णन है। आधुनिक चिकित्सा विज्ञान के इतिहास के अनुसार 17वीं शताब्दी में इंग्लैण्ड के चिकित्सक डॉ. विलियम हार्वे को सबसे पहले रक्त के परिसंचरण तंत्र की खोज का श्रेय दिया जाता है, किन्तु वेदों के अनेक सूक्तों से स्पष्ट होता है कि इसका वर्णन उनमें कमोबेश पहले ही है। जैसा कि इस लेख की संदर्भ संख्या 28, 29, 30, 31 और 35 में उल्लिखित मंत्रों से भली-भाँति स्पष्ट है। इसी प्रकार अन्य मंत्र भी वेदों में प्राप्त होते हैं।

2. जल चिकित्सा का वर्णन - अथर्ववेद में अनेक स्थानों पर जल को एक गुणकारी औषधि के रूप में वर्णित किया गया है और उसे पवित्र तथा अमृत का निवास माना गया है।³⁷ यहाँ पर यह बात स्मरणीय रहे कि महान सिन्धु घाटी सभ्यता के लोग भी जल की पवित्रता में विश्वास करते थे। मोहन जोदड़ों से विशाल स्नानागार का साक्ष्य जल की पवित्रता एवं स्नान ध्यान की परम्परा का द्योतक माना गया है।³⁸ ऐतिहासिक

³³ हिन्दी शब्दकोश, डॉ. हरदेव बाहरी राजपाल एंड संस, दिल्ली, संस्करण 2011, पु.सं. 59

³⁴ चरक संहिता, सू. 140

³⁵ अथर्ववेद, 10/2/11

³⁶ अथर्ववेद, 10/2/11

³⁷ अथर्ववेद 1/4

³⁸ सिंधु सभ्यता, जयनारायण पाण्डेय प्रामानिक पब्लिकेशन, इलाहाबाद, द्वितीय आवृत्ति, पृष्ठ सं. 88

काल में विकसित होने वाली सिरत पूजा में सिन्धु सभ्यता के प्रभाव को देखा जा सकता है। 39 वेदों में जल को चिकित्सकों से भी बड़ा चिकित्सक बताया गया है- "भिषजां सुभिषक्त माः" 40 और साथ ही साथ यह भी कहा गया है कि जल के द्वारा हृदय के रोगों और आँखों के रोगों का निवारण होता है। पंजों के रोगों, पैर के तलवों के रोगों का भी शमन जल चिकित्सा द्वारा किया जाता है। जल में वह सामर्थ्य है कि तलवार, बाण आदि के कट जाने से हुए घावों को भरने की भी शिक्त जल रखता है। 41 जल के द्वारा यक्ष्मा (टी.बी.) की भी चिकित्सा की जा सकती है। 42

3. क्रोमोपैरथी (सूर्य के किरणों के माध्यम से चिकित्सा) का वर्णन

वेदों में सूर्य की किरणों का महत्व और उनके द्वारा प्राप्त चिकित्सीय लाभों का विस्तार पूर्वक वर्णन किया गया है। ऋग्वेद में वर्णित है कि सूर्य की किरणों से सात प्रकार की ऊर्जा प्राप्त होती है।

पिप्युषीमिठाम ऊर्जं सप्तदीमिरीः।

सूर्यस्य सप्तरिम भिः।।43

दीर्घायु प्राप्त करने के लिए सूर्य की किरणों की महत्ता वेदों में प्रतिपादित की गई है- ''सविता नः सुवतु सर्वतातिं सविता नो रासतां दीर्घमायुः।''⁴⁴

वेदों में यहाँ तक कहा गया है कि ''सूर्य की किरणें मनुष्य को मृत्यु से बचाती हैं- ''सूर्यत्वाधिपित मृत्योरुदायच्छतु रिश्मिभः।''⁴⁵ प्राचीन भारतीय ग्रन्थों में सूर्य की किरणों के चिकित्सीय महत्व को देखते हुए कहा गया है कि यदि निरोग रहने की इच्छा है तो भगवान भास्कर (सूर्य) की शरण में जाओ।

"आरोग्यं भास्करादिच्छेत।"⁴⁶

''सूर्यस्ते तन्वे शंतपाति।''47

(सूर्य शरीर को निरोगता प्रदान करते हैं।)

अथर्ववेद में सूर्य की किरणों से चिकित्सा करके (''गो रोहितेन'' - सूर्य की लाल किरणों द्वारा) पीलिया आदि रोगों के निवारण का वर्णन है। वेदों में वर्णित है कि सूर्य की किरणों के सेवन से हृदय के

³⁹ वही, पृ.सं. 88

⁴⁰ अथर्ववेद 6/24

⁴¹ अथर्ववेद 6/57

⁴² अथर्ववेद 19/25

⁴³ ऋग्वेद 8/72/16

⁴⁴ ऋग्वेद 10/36/14

⁴⁵ अथर्ववेद, 50/30/15

⁴⁶ मत्स्य पुराण, चौखम्भा प्रकाशन, वाराणसी 1988 ई. पृसं. 77

⁴⁷ अथर्ववेद 8/1/5

रोग तथा उनसे जन्य हृदय की पीड़ा भी शान्त हो जाती है। वर्तमान युग के चिकित्साशास्त्र में भी सूर्य के किरणों के सेवन का बहुत अधिक महत्व है। वास्तव में आधुनिक ''क्रोमोपैथी'' के जनक वैदिक मंत्र द्रष्टा ऋषि ही है इसमें कोई संदेह नहीं है।

अन्य चिकित्सा पद्धतियाँ - उपर्युक्त चिकित्सा के तरीकों के अतिरिक्त अथर्ववेद में इलाज की अन्य परम्पराएँ भी मिलती हैं जो कि संक्षेप में इस प्रकार हैं-

- 1. **प्राकृतिक चिकित्सा** वैदिक युग में कई प्रकार की प्राकृतिक चिकित्सा विधियाँ प्रचलित थीं। जैसे- प्राणायाम चिकित्सा सूर्य चिकित्सा, आयु वर्धन हेतु चन्द्र किरण चिकित्सा आदि।
- 2. मानस चिकित्सा इसमें व्यक्ति के मनोबल को बढ़ाने पर विशेष जोर दिया जाता था। जैसा कि कहा भी जाता है कि- ''मन के हारे हार है मन के जीते जीत।''⁴⁸
- 3. शल्य चिकित्सा- शल्य चिकित्सा जिसका सर्वांगीण विकास चरक और सुश्रुत के ग्रन्थों में अपने चरम रूप में मिलता है का प्रादुर्भाव सिंधु सभ्यता में ही हो गया था। 49 अथर्ववेद में इस प्रकार की चिकित्सा का वर्णन है। घाव, हड्डी आदि टूटने की चिकित्सा ''रोहिणी'' नामक औषधि से की जाती थी।
- 4. सर्पविष चिकित्सा अथर्ववेद में 18 प्रकार के सर्पों का उल्लेख है। ''ताबुव'' नामक औषधि से सर्प विष उपशमन किया जाता था।
 - 5. कृमि चिकित्सा अथर्ववेद में कृमि के दो रूपों का वर्णन किया गया है-
 - (1) दृष्ट दिखाई देने वाले कृमि।
 - (2) अदृष्ट न दिखाई देने वाले अदृश्य कृमि।

वेदों में इन दोनों प्रकार के कृमियों का निवास स्थान आंत, सिर, पसली आदि बताया गया है। सूर्य की किरणों को वैदिक साहित्य में सभी प्रत्यक्ष या अप्रत्यक्ष कृमियों को नष्ट करने वाला ''कृमिनाशक'' कहा गया है।

- 6. केशरोग चिकित्सा ''नितत्नी'' नामक औषधि से केश रोगों की चिकित्सा की जाती थी।
- 7. मानसिक रोग चिकित्सा वेदों में मानसिक रोगों और क्रोध आदि की चिकित्सा का विस्तृत वर्णन है। इसकी चिकित्सा हेतु दर्भ और भूरिमल नामक औषधियों का प्रयोग किया जाता था। निघंटु और भाव प्रकाश जैसे ग्रन्थों में कुश को शीतल कहा गया है, जो क्रोध को शान्त करता है।
- 8. कास रोग (खाँसी) की चिकित्सा वेदों में कास रोग (खाँसी) की चिकित्सा का वर्णन है। इसके शमन हेत् औषधि का नियमित सेवन और पहाड़ पर रहना लाभकारी बताया गया है।

49 सिंधु सभ्यता, डॉ. किरण कुमार थपल्याल : डॉ. संकठा प्रसाद शुक्ल, उ०प्र० हिन्दी संस्थान, लखनऊ ग्रन्थांक, 176 चतुर्थ संस्करण परिशिष्ट-9, पृ.सं. 308

⁴⁸ एक अवधी लोकोक्ति

- 9. गंडमाला (रामायणी) की चिकित्सा- वेदों में गंडमाला या रामायणी रोग जिसका स्थान गर्दन के बगल में या स्त्रियों के गुप्त स्थान में रहता था की चिकित्सा का भी वर्णन किया गया है।
 - 10. हृदय रोग चिकित्सा अथर्ववेद में मृग के शृंग को हृदय रोग नाशक बताया गया है।
- 11. ज्वर चिकित्सा अथर्ववेद में 'कूठ' नामक औषधि को सिर के रोगों, प्रतिदिन आने वाले ज्वर, तीसरे दिन आने वाले ज्वर, साल भर तक रहने वाले ज्वर का नाशक बताया गया है।
- 12. अग्निमाद्य (कब्ज) की चिकित्सा ''आपामार्ग'' नामक औषधि द्वारा इस रोग की चिकित्सा का उल्लेख अथर्ववेद में मिलता है।
- 13. गुप्त रोग चिकित्सा पृश्निपणीं औषधि के द्वारा अर्शरोग (बवासीर) तथा स्त्री-पुरुष के गुप्त रोगों आदि की चिकित्सा की जाती थी।
- 14. स्त्री रोग चिकित्सा स्त्रियों के बन्धयात्व जैसे रोगों के निवारण हेतु 'ऋषभक' नामक औषधि का प्रयोग वैदिक काल में किया जाता था।
- 15. **एवेत कुष्ठ रोग चिकित्सा -** इस रोग की चिकित्सा हेतु असिक्री या रामा-कृष्णा नामक औषधि का प्रयोग किया जाता था।
- 16. क्षत-व्रण आदि की चिकित्सा वैदिक युग में तत्काल के चोट के लिए जल चिकित्सा तथा बाण-तलवार आदि से लगी पुरानी चोट हेतु 'रोहिणी' नामक औषधि का प्रयोग किया जाता था।
- 17. वात रोग चिकित्सा वैदिक युग में वात रोग, उन्माद रोग और पक्षाघात रोग आदि निवारणार्थ 'पिप्पली' नामक औषधि का प्रयोग किया जाता था।
- 18. यज्ञ चिकित्सा यज्ञ-हवन आदि कार्यों से वायु की शुद्धता बढ़ाने के साथ अनेक प्रकार के रोग उत्पन्न करने वाले कीटाणु नष्ट हो जाते हैं, जिसका उल्लेख वैदिक ग्रन्थों में प्राप्त होता है।
- 19. संगीत चिकित्सा आधुनिक शोधकर्ताओं का मानना है कि शास्त्रीय संगीत के द्वारा अनेक प्रकार के मानसिक रोगों का उपचार संभव है। वैदिक साहित्य का ग्रन्थ सामवेद संपूर्ण शास्त्रीय संगीत की जननी है। अतः कहा जा सकता है कि संगीत शास्त्र के द्वारा चिकित्सा की आधुनिक विधि का आदि स्रोत वैदिक ग्रन्थ ही है, जो कि बेहद वैज्ञानिक तरीके से त्रिष्टुप, अनुष्टुप गायत्री आदि छन्दों में संगीतमय नाद के साथ रचे गये हैं। 50 इसके अलावा वैदिक कालीन मंत्रद्रष्टा ऋषियों ने अनुवांशिकी रोगों (क्षेत्रीय रोग) नेत्र रोगों, उन्माद रोगों आदि की चिकित्सा का वर्णन वेदों में किया है।

अथर्ववेद में सम्पूर्ण चिकित्सा विधियों को कुल चार भागों में बाँटा गया है-

- 1. मनुष्यज मनुष्यों (वैद्यों) के द्वारा की जाने वाली चिकित्सा।
- 2. दैवी पंच तत्वों (क्षिति, जल, गगन, पावक, समीर) से की जाने वाली चिकित्सा।

⁵⁰ अद्भुत भारत ए.एल. बाशम, शिवालाल-अग्रवाल एंड कंपनी आगरा 1988, पृ.सं. 435

- 3. आंगिरसी चिकित्सा इसके प्रवर्तक अंगिरा ऋषि थे। इसमें मानसिक दृढ़ इच्छा शक्ति को प्रबल करके चिकित्सा की जाती थी।
- 4. अथर्व चिकित्सा अथर्वा का शाब्दिक अर्थ है- योगी। इसके प्रणेता अथर्वा नामक ऋषि थे। चिकित्सा की इस विधि में योग, प्राणायाम, योगाभ्यास, आदि के द्वारा चिकित्सा की जाती थी। इस विधि की चरम परिणति महर्षि पतंजिल के योग दर्शन (योग सूत्र) में हुयी।⁵¹

51-वैदिक ग्रन्थों में उल्लिखित व्याधियाँ

- 1. तक्मन-ज्वर
- 3. शीर्षमय सिरदर्द
- 5. विलहित पीलिया
- 7. शीर्षण्य मस्तिष्क विकार
- 9. कास-खाँसी / यक्ष्मा (टी.बी.)
- 11. सदन्दि प्रतिदिन वाले रोग
- 13. अशरीक हड्डी टूटना आदि
- 15. क्षेत्रिय रोग अनुवांशिक रोग
- 17. ठंड से होने वाली बीमारियाँ
- 19. कफ रोग कफ विकार के रोग
- 21. कास रोग खाँसी
- 23. अस्राव पेचिस
- 25. वातीकार वात रोग
- 27. कुछ रोग कोढ़
- 29. गर्भ दोष गर्भ का दोष
- 31. दुःस्वप्न बुरे सपने
- 33. यक्ष्म टी.बी.
- 35. हुद्रोग हृदय के रोग
- 37. अग्निमाद्य कब्ज
- 39. क्षत. ब्रण घाव/चोट
- 41. नेत्र रोग नेत्रों से संबंधित रोग

- 2. शीर्षक्ति-सिरोवात (सिरदर्द)
- 4. कर्णशूल कान का दर्द
- 6. पांड् रोग पीलिया
- 8. हरिमा पीलिया या जलोदर
- 10. शीर्षलोक सिर सम्बंधी रोग
- 12. हायन साल भर चलने वाले रोग
- 14. श्वेत कुछ कुछ का एक प्रकार
- 16. पीठ दर्द या कमर दर्द
- 18. वात रोग वायु विकार के रोग
- 20. पित्त रोग पित्त के विकार
- 22. बलास खाँसी या क्षय
- 24. विसल्प पीड़ा
- 26. उन्मत्तता क्रोध आदि
- 28. क्लीवत्व
- 30. गंडमाला घेंघा
- 32. मूत्र कृच्छ मूत्रमाला
- 34. रुधिर स्राव रुधिर का बहना
- 36. अर्शोरोग बवासीर
- 38. बन्ध्यात्व बांझपन
- 40. केश रोग बालों से संबंधित रोग
- 42. कृमि रोग कृमियों से संबंधित रोग

⁵¹ भारत का वृहत् इतिहास, रमेश चंद्र मजुमदार, हेमचंद्र राय चौधरी, कालिकिंकर दत्त, मैकमिलन इंडिया लिमिटेड, नई दिल्ली, प्रथम संस्करण, 1954, पृ.सं. 120

वैदिक ग्रन्थों में उल्लिखित प्रमुख औषधियाँ - उनके लाभ

- 1. वरुण औषधि⁵² यक्ष्मा, नींद का न आना, बुरे-बुरे स्वप्न आते रहना आदि के इलाज में यह औषधि प्रयुक्त की जाती थी।
- 2. **पृष्टिनपर्णी औषधि**⁵³ जो रोग शरीर का रक्त पीकर शरीर में दुर्बलता उत्पन्न कर देते हैं। स्त्रियों के गर्भ नहीं बनने देते हैं। ऐसे रोगों के इलाज में इस औषधि का प्रयोग किया जाता था। बवासीर के इलाज के लिए भी प्रयुक्त किया जाता था।
- 3. रोहिणी औषधि⁵⁴ बाण/तलवार आदि से क्षतिग्रस्त हिंडुयों, मांसपेशियों, त्वचा, नस, नाड़ियों आदि को जोड़ने में यह औषधि प्रयोग की जाती थी। यह औषधि बहते हुए रुधिर को बंद करने की चिकित्सा में भी काम आती थी।
- 4. अपामार्ग औषधि⁵⁵ अत्यधिक भूख, प्यास आदि लगने वाले रोगों के निदानार्थ प्रयोग की जाती थी।
 - 5. दर्भ औषधि⁵⁶ क्रोधशील व्यक्ति के क्रोध को शमन करने में सहायक औषधि।
- 6. पुत्रदा औषधि⁵⁷ इसके सेवन से ऐसी स्त्री को पुत्र रत्न की प्राप्ति हो सकती थी जिसे पुत्रियाँ ही होती थीं और पुत्र नहीं होता था। अथर्ववेद में वर्णित है कि शमी (जंड) नामक वृक्ष के ऊपर यदि पीपल वृक्ष उगा हो तो उस पीपल को वैद्य की देख-रेख में औषधि के रूप में खिलाने से उस स्त्री को पुत्र हो सकता है, जिसके केवल पुत्रियाँ ही होती हों।
 - 7. ताबुव औषधि⁵⁸ सर्प विष की चिकित्सा हेतु प्रयुक्त औषधि।
 - 8. नितत्नी औषधि केश रोगों की चिकित्सा हेतु प्रयुक्त।
 - 9. भूमिरल औषधि क्रोध की चिकित्सा हेतु प्रयुक्त।
 - 10. मृगशृंग औषधि हृदय रोगों की चिकित्सा हेतु प्रयुक्त।
- 11. कूठ औषधि सिर के रोगों, प्रतिदिन आने वाले ज्वर, प्रति तीसरे दिन आने वाले ज्वर, साल भर तक रहने वाले ज्वर के निदानार्थ हेतु इस औषधि का प्रयोग किया जाता था।
 - 12. ऋषभक औषधि स्त्रियों में बंध्यापन (बाँझपन) जैसे रोगों की चिकित्सा में प्रयुक्त औषधि।

53 अथर्ववेद 2/25

54 अथर्ववेद 4/12

55 अथर्ववेद 4/17

56 अथर्ववेद 6/47

57 अथर्ववेद 6/11

58 अथर्ववेद 6/11

⁵² अथर्ववेद 10/3

- 13. असिक्की (रामा-कृष्णा) औषधि श्वेत कुछ रोग की चिकित्सा हेतु इस औषधि का प्रयोग किया जाता था।
- 14. पिप्पली औषधि उन्माद रोग, वात रोग, पक्षाघात आदि की चिकित्सा हेतु वैदिक युग में इस औषधि का प्रयोग किया जाता था। इस प्रकार वैदिक ग्रन्थों में हजारों औषधियों एवं उनके लाभों का वर्णन प्राप्त होता है, जिनमें से सभी का वर्णन कर पाना किसी एक शोध आलेख में संभव नहीं है।

महाभारत कालीन चिकित्सा

महाभारत जिसे कई संस्कृत आचार्यों ने 'ज्ञान कोश की संचित राशि' कहा है। ⁵⁹ और जिसकी रचना चारों वेदों (ऋग्वेद, सामवेद, यजुर्वेद, अथर्ववेद) के पश्चात हुयी, इसमें भी चिकित्सा का अच्छा खासा वर्णन प्राप्त होता है। महाभारत के अनुसार मानव शरीर पंच महाभूतों पृथ्वी, जल, वायु, अग्नि और आकाश से बना है। ⁶⁰ त्वचा, मांस, हड्डी, मज्जा और स्नायुतंत्र इनका निर्माण पृथ्वी तत्व से हुआ है। ⁶¹ तेज, क्रोध, आँख, ताप और भूख इनका निर्माण अग्नि तत्व द्वारा हुआ। ⁶² जल नामक महाभूत से कफ, पसीना, पित्त और चर्बी आदि निर्मित हुयी। ⁶³ महाभारत में पाँच वायु का भी वर्णन है ⁶⁴ -

- 1. प्राण वायु यह संपूर्ण शरीर में गतिशील रहती है। उद्गम स्थान हृदय।
- 2. व्यान वायु यह बल स्वरूपा है। खून एवं शरीर को गति प्रदान करती है।
- 3. अपान वायु यह शरीर में नीचे की तरफ सरकती है। प्रमुख कार्य मल स्खलन और मल सृजन।
- 4. समानवायु यह वायु हृदय में रहती है। मूल कार्य भोजन पचाना।
- 5. उदान वायु यह उच्छवासित वायु है जो कि कंठ, तालु और शिरस्थान को भेदकर ध्विन उत्पन्न करती है। आकाश नामक महाभूत के भी पाँच स्थान हैं 65 कान, नाक, मुख, हृदय, कोशिका

महाभारत के अनुसार आकाश का गुण 'शब्द' है यह सात प्रकार का होता है- षड्ज, ऋषभ, गांधार, मध्यम, पंचम, धैवत, निषद⁶⁶

महाभारत में स्पष्ट रूप से चार प्रकार के वैद्यों का वर्णन किया गया है -7 - विष वैद्य, शल्य वैद्य,

⁵⁹ भारतीय काव्यशास्त्र, प्रो. योगेन्द्र प्रताप सिंह, लोकभारती प्रकाश, इलाहाबाद चतुर्थ संस्करण, 2009, पृ.सं. 225

⁶⁰ महाभारत, शांति पर्व 117.19-26

⁶¹ महाभारत, शांति पर्व 117.19-26

⁶² महाभारत, शांति पर्व 117.19-26

⁶³ महाभारत, शांति पर्व 117.19-26

⁶⁴ महाभारत, शांति पर्व 117.19-26

⁶⁵ महाभारत, शांति पर्व 117.19-26

⁶⁶ महाभारत, शांति पर्व 117.19-26

⁶⁷ महाभारत, शांति पर्व 63/57

रोग वैद्य, कृत्याहार वैद्य

महाभारत काल में - धूप, अंजन, नस्यकर्म तथा अन्य औषधियों के द्वारा विक्षिप्तों की चिकित्सा वर्णन स्पष्टतः प्राप्त होता है।⁶⁸ नकुल को मानव घावों की चिकित्सा एवं अश्व चिकित्सा का ज्ञाता कहा गया है।⁶⁹

चरक, सुश्रुत और बौद्ध कालीन चिकित्सा प्रणाली - आयुर्वेद तथा चिकित्सा विज्ञान के क्षेत्र में प्राचीन भारतीय परंपरा की चरम परिणित चरक की चरक संहिता और सुश्रुत संहिता में प्राप्त होती है। चरक संहिता कुल आठ खण्डों में विभक्त है जिसे स्थान कहते हैं। वास्तव में चरक संहिता और सुश्रुत संहिता भारतीय आयुर्वेद का निकष है। सुश्रुत ने अपनी संहिता में चिकित्सक के ज्ञान और कार्य कुशलता को समान रूप से महत्व दिया। प्राचीन भारतीय चिकित्सक पुटपाक, योगचूर्ण, योगवर्तिका, रसामृत चूर्ण, पर्पटीताम्र इत्यादि से परिचित थे। चरक तथा सुश्रुत के ग्रन्थों से पता चलता है कि प्राचीन भारतीय वैद्य धातुओं से रासायनिक क्रियाओं द्वारा चिकित्सा के लिए सम्मिश्रण आदि बनाते थे। धातुओं से सम्बन्धित क्रियाओं पर महर्षि पतंजिल (पुष्यिमत्र शुंग के गुरु) ने बाद में एक पुस्तक लिखी थी, जिसका नाम ''लौह शास्त्र'' था, किन्तु दुर्भाग्यवश यह पुस्तक वर्तमान में प्राप्त नहीं है। ⁷⁰ चरक (प्रथम या द्वितीय शती ई.) और सुश्रुत (चतुर्थ शती ई.) के ग्रन्थ हिप्पोक्रेटस तथा गेलिन⁷¹ के ग्रन्थों से कुछ विषयों में समरूपता रखते हैं और अन्य कुछ विशेषताओं में उनसे अधिक आगे तक बढ़े हुये हैं। ⁷² इस युग में शल्य क्रिया विज्ञान अपनी चरम परिणित तक पहुँचा। सुश्रुत संहिता में शल्य क्रिया करने के अनेक उपकरणों का उल्लेख प्राप्त होता है, जैसे- सिंह मुख, व्याघ्र मुख, वृक मुख आदि 24 प्रकार के उपकरण जिनका उपयोग हड्डी निकालने के लिए किया जाता था। शनिग्रह और अनिग्रह जैसे 28 प्रकार के शलाका उपकरण जिनका प्रयोग चर्म, मांस, शिरा तथा स्नाय निकालने के लिए किया जाता था। शनिग्रह और अनिग्रह जैसे 28 प्रकार के शलाका उपकरण जिनका प्रयोग चर्म, मांस, शिरा तथा स्नाय निकालने के लिए किया जाता था।

प्राचीन भारत में जीव विज्ञान को दो भागों में बाँटा गया था-

1. प्राणि विज्ञान, 2. वनस्पति विज्ञान। प्राणिशास्त्र में मनुष्य के साथ अन्य सभी प्राणियों का अध्ययन किया जाता था और वनस्पति शास्त्र के अंतर्गत वनस्पतियों और उनके औषधीय गुणों का अध्ययन किया जाता था। चरक और सुश्रुत दोनों ने प्राणियों के चार भेद माने हैं- जरायुज, अण्डज, स्वेदज और

⁶⁸ महाभारत, शांति पर्व 14/34

⁶⁹ महाभारत, शांति पर्व 12/22

⁷⁰ डॉ. ईश्वरी प्रसाद, प्राचीन भारतीय संस्कृति, कला, राजनीति, धर्म दर्शन, मीनू पब्लिकेशन, इलाहाबाद 1986, पृ.सं.

⁷¹ प्राचीन पश्चिमी देशों के चिकित्सक

⁷² ए.एल. बाशम, अद्भृत भारत शिवलाल-अग्रवाल एंड संस कंपनी, आगरा, 1988, पृ.सं. 424

⁷³ सुश्रुत संहिता 8/3/9

उद्भिज। एक अन्य प्राचीन भारतीय चिकित्साशास्त्री प्रशस्तपाद ने इन्हें दो भागों में बाँटा है- योनिज और अयोनिज, जिनकी चिकित्सा उनके भेद के आधार पर ही की जाती थी।

प्राचीन भारतीय चिकित्सा पद्धित मानव शरीर के चार मूल दोषों, वात, पित्त, कफ और रक्त दोष (बाद में सम्मिलित दोष) पर आधारित थी। इन दोषों के समुचित सन्तुलन से स्वास्थ्य सुरक्षित रहता है ऐसी भावना प्रबल थी। इन चार दोषों में से प्रारम्भिक तीन दोष (वात, पित्त और कफ) त्रिगुण व्यवस्था से जुड़े हुए थे, जिनका संबंध क्रमशः सदाचार, वासना तथा जाड्य से था। प्राचीन भारतीय चिकित्सा पद्धित में चिकित्सा की व्यवस्था 'पंचवायु'- प्राणवायु, व्यान वायु, अपान वायु, समान वायु और उदान वायु द्वारा की गयी थी। 74

इस प्रकार की व्यवस्था तत्कालीन विश्व के किसी भी अन्य ग्रंथ में नहीं प्राप्त होती। पूर्णतः वैज्ञानिक एवं तार्किक आधार पर सुविचारित ढंग से व्यवस्थित की गयी प्राचीन भारतीय चिकित्सा विधियाँ आज भी परंपरागत रूप से भारतीय आयुर्विज्ञान और कर्मठ वैद्यकों के ज्ञान में जीवित हैं और सम्पूर्ण विश्व उससे लाभान्वित हो रहा है। उपर्युक्त चार दोषों के कारण ही मानव शरीर में विकार उत्पन्न होते हैं, जिनमें प्रारंभिक रूप से तीन दोष त्रिदोषों (वात, पित्त, कफ) की चर्चा आयुर्वेदिक ग्रन्थों में प्राप्त होती है, चतुर्थ दोष 'रक्त दोष' का वर्णन वाग्भट्ट जैसे आयुर्वेदाचार्यों ने किया है। 'पंचवायु का वर्णन' भारतीय वैद्यकों द्वारा विश्व को दी गयी एक अनोखी देन है, जिस पर एक जमाने में अज्ञानवश अनेक प्रकार की फिल्तयाँ कही गयीं, किन्तु आज तक दुनिया का कोई चिकित्सक इसे गलत नहीं साबित कर सका है। प्राचीन भारतीय चिकित्सकों को विश्वास था कि समान वायु द्वारा पचाया गया अन्न, रस का रूप ग्रहण करके पहले हृदय तक जाता है उसके बाद वहाँ से वह यकृत में पहुँचकर सार पदार्थ रक्त का निर्माण करता है। यही रक्त माँस में परिवर्तित होता है और यह प्रक्रिया वसा, अस्ति मज्जा और वीर्य की क्रम शृंखलाओं द्वारा निरंतर चलती रहती है। विश्वास किया जाता है कि यदि वीर्य का स्खलन न किया जाये तो ओज की सृष्टि होती है जो कि हृदय में प्रत्यावर्तित होकर सारे शरीर में वितरित हो जाती है। भोजन से रक्त, वीर्य आदि बनने की यह प्रक्रिया तीस दिनों में पूर्ण होती है, ऐसी मान्यता थी। निरं

प्राचीन भारतीय चिकित्सा विज्ञानी मेरुदण्ड की महत्ता से परिचित थे और शिरा संस्थान की स्थिति को जानते थे। उन्हें स्वच्छ वायु तथा प्रकाश की महत्ता भी पता थी। उनका भेषज संस्कार शास्त्र अति विशाल था और उसमें पशु, पक्षी, वनस्पति एवं खनिज उत्पादन आदि सभी सम्मिलित थे। अनेक उपयोगी जड़ी, बूटियों का अनुप्रयोग भारतीय प्राचीन चिकित्सकों को ज्ञात था। कुष्ठ रोग की एक विशेष परम्परागत औषधि 'छौलमुग्र का तेल' इस संबंध में विशेष रूप से उल्लेखनीय है और यह दवा आज वर्तमान समय में भी इस

⁷⁴ महाभारत, शांति पर्व 117.19-26

⁷⁵ ए.एल. बाशम, अद्भुत भारत शिवलाल-अग्रवाल एंड संस कंपनी आगरा 1988, पृ.सं. 424

रोग की आधुनिक चिकित्सा की आधार स्तंभ बनी हुई है।76

प्राचीन भारतीय आयुर्वेद चिकित्सा विज्ञानियों ने स्वच्छ पर्यावरण, जल और औषधीय वनस्पतियों को बहुत अधिक महत्व दिया। भूमि को औषधियों की माता कहा गया-

'अरण्यं ते पृथिवी स्योन मस्तु

मातरम् औषधीनाम्

मा ते मर्म विभुग्वरि

मा ते हृदयमर्थिमम् ।।77

(पृथ्वी के वन औषिधयों की माता है। हे भूमि! तेरे वन हमारे लिए सुखदायी हों, तेरे वृक्षों को मैं इस तरह काटूँ कि वे पुनः उग जायें (शीघ्र ही), संपूर्ण रूप से काटकर मैं तेरे मर्मस्थल पर प्रहार न करूँ।) वेदों में वनौषिध तथा जंगल के वृक्ष के, जो अधिष्ठाता स्वामी हैं उनकी प्रार्थना की गई है-

'वनानां पतये नमः, वृक्षाणां पतये नमः

औषधीनां पतये नमः, अरण्यानां पतये नमः।'78

स्वच्छ वायु की उपादेयता और उसके महत्व को बहुत पहले ही भारतीयों ने समझ लिया था तथा वायु के औषधीय महत्व को रेखांकित करते हुए कहा गया कि-

"वात आ वातु भेषजं भयोभु नो हदे

यददो वात ते गृहे अमृतस्य निधिर्हितः।79

अर्थात हे वायु! हमें ऐसी औषधि दो जो शांति और अरोग्यता प्रदान करे। इसमें निहित अमृत रूपी निधि हमारी आयु को बढ़ाकर हमें दीर्घजीवी बनाये।

औषधीय फलदायक वृक्षों के महत्व को प्रतिपादित करते हुए कहा गया कि-

''पंचाम्रवाती नरकं न याति''⁸⁰

(अर्थात् आम के पाँच पौधे लगाने वाला कभी नरकगामी नहीं होता।)

कुरुक्षेत्र की युद्ध भूमि में पीपल के वृक्ष का महत्व प्रतिपादित करते हुए भगवान श्रीकृष्ण कहते हैं- "अश्वत्यः सर्ववृक्षाणां"⁸¹ (अर्थात् - मैं सब वृक्षें में पीपल वृक्ष हूँ।) वेदों, उपनिषदों, महाभारत, बौद्ध साहित्य, जैन साहित्य, चरक संहिता, सुश्रुत संहिता आदि अनेकानेक ग्रंथों में अनेक स्थलों पर पेड़-पौधों

⁷⁶ ए.एल. बाशम, अद्भुत भारत शिवलाल-अग्रवाल एंड संस कंपनी आगरा 1988, पृ.सं. 424

⁷⁷ अथर्ववेद, भूमि सूक्त

⁷⁸ यजुर्वेद का महत्व, डॉ. बी.एल. मौर्य, सांस्कृतिक सृजन, इलाहाबाद, पृ.सं. 18

⁷⁹ ऋग्वेद, 10.34.18

⁸⁰ वाराह पुराण, गीता प्रेस, गोरखपुर 11, पुर्नमुद्रण, संवत 2062, पृ.सं. 44

⁸¹ श्रीमद्भगवद्गीता, गीता प्रेस, गोरखपुर, 34वां पुर्नमुद्रण अध्याय 10, श्लोक संख्या 26, संवत 2072, पृ.सं. 155

के जीवधारी होने की बात कही गयी है। इस विषय पर बहुत सी सामग्री दी गयी है और कहा गया है कि वे भी सुख-दुःख आदि का अनुभव करते हैं। महर्षि पतंजिल के महाभाष्य और अमर सिंह के अमरकोश में भी इस पर बहुत सी सामग्री दी गयी है। वराहिमहिर ने वृहत्संहिता में वृक्षों के चिकित्सीय महत्व पर विस्तृत प्रकाश डाला गया है। 82

आधुनिक युग में वनस्पितयों में जीवन के अस्तित्व को डॉ. जगदीश चन्द्र बसु जैसे विज्ञानियों ने सिद्ध किया, उनके द्वारा अनुभव किये जाने वाले सुख-दुःख आदि का जो वैज्ञानिक प्रमाण दिया गया, वह प्राचीन भारतीय ग्रंथों में सर्वत्र उपलब्ध है और विशदता के साथ उसका वर्णन भी प्राप्त है। वास्तव में सम्पूर्ण भारतीय आयुर्वेद का मूल ढाँचा इन्हीं वनस्पितयों, पेड़-पौधों से प्राप्त औषिधयों के ज्ञान पर ही खड़ा है। शायद ही कोई ऐसी वनस्पित हो जिसमें कोई औषधीय गुण न पाया जाता हो। इस धरा पर कुछ भी निरर्थक नहीं है।

महान चिकित्साशास्त्री चरक (प्रथम या द्वितीय शती ई.) और सुश्रुत (चतुर्थ शती ई. शल्य चिकित्सा के जनक) के ठीक बाद महान लेखक, अद्वितीय चिकित्साशास्त्री वाग्भट्ट का नाम आता है। इस काल की दो प्रसिद्ध कृतियाँ अष्टांग संग्रह और अष्टांग हृदय संहिता है, जो कि एक ही (वाग्भट्ट) नाम के दो विभिन्न लेखकों के द्वारा रचित हैं। 83 ये दोनों ही ग्रन्थ अपने आप में अद्भृत हैं, इनमें हृदय चिकित्सा के अन्य विषयों पर भी प्रकाश डाला गया है। 84 गुप्त कालीन भारतीय वैज्ञानिक वाराहमिहिर ने उल्लेख किया है कि भारतीय वैज्ञानिक-चिकित्साशास्त्री कई प्रकार के लेप और चूर्ण बनाते थे। 85 चीनी बौद्ध यात्री ह्वेनसांग ने सोमनाथ के निकट रहने वाले नागार्जुन को रस विद्या या कीमियागीरी का प्रसिद्ध विद्वान बताया है। वह (नागार्जुन) ऐसी औषि जानता था कि जिसके प्रयोग से मस्तिष्क में एक सौ वर्ष तक कोई विकार नहीं आ सकता था। 86 इसी समय रस सिद्धों के एक ऐसे वर्ग का उदय हुआ जिसने इस आश्चर्यजनक 'द्रवधातु' पर प्रयोग किये और इस निष्कर्ष पर पहुँचे कि यह सभी रोगों के लिए एक अमोघ औषि, युवावस्था को स्थायी बनाने का अजसस्रोत और युक्ति का भी निश्चय आधार था। 87 चिकित्सा विज्ञान के संबंध में भारतीयों ने अनेक विचार अरब वासियों को दिये जो उनसे मध्य यूरोप तक पहुँचे। 88

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⁸² डॉ. ईश्वरी प्रसाद, प्राचीन भारतीय संस्कृति, कला, राजनीति, धर्म-दर्शन, मीन् पब्लिकेशन, इलाहाबाद 1986, प्र.सं. 538

⁸³ डॉ. ईश्वरी प्रसाद, प्राचीन भारतीय संस्कृति, कला, राजनीति, धर्म-दर्शन, मीनू पब्लिकेशन, इलाहाबाद, 1986, पृ. सं. 538

⁸⁴ वही, पृ.सं. 538

⁸⁵ वही, पृ.सं. 535

⁸⁶ वही, पृ.सं. 535

⁸⁷ अद्भृत भारत, ए.एल. बाशम, शिवाला-अग्रवाल एंड संस कंपनी आगरा 1988, प्र.सं. 424

⁸⁸ वही, पृ.सं. 424

प्राचीन काल में बौद्ध धर्मानुयायी भिक्षु प्रायः साधारण ग्रामीण-जन जिनसे वह उदरपूर्ति हेतु भिक्षा ग्रहण करता था, उनके लिए चिकित्सक के रूप में भी कार्य करता था। इसके अतिरिक्त उसे अपने सहयोगी अन्य भिक्षुओं-भिक्षुणियों के स्वास्थ्य की देखरेख करने के लिए भी प्रोत्साहित किया जाता था। अनेक बौद्ध-जैन भिक्षुओं जैसे नागार्जुन आदि ने भारतीय चिकित्सा के विकास में अपना अहम योगदान दिया। बौद्ध युगीन चिकित्सक जीवक जो कि बिम्बसार (हर्यक वंश 645-493 ई.पू.) का राजवैद्य था अनेक प्रकार की चिकित्सा विद्याओं का ज्ञाता और विभिन्न रोगों का आयुर्वेदिक इलाज करने में प्रवीण था। यह आयुर्वेद की कौमारभृत्य शाखा का विशेषज्ञ था। ⁸⁹ राजवैद्य जीवक पांडु रोग (पीलिया) का विशेष ज्ञाता था। इसी रोग की चिकित्सा हेतु बिम्बसार ने इसे चंडप्रद्योत के यहाँ भेजा था। इसने बृद्ध की भी चिकित्सा की थी। ⁹⁰

प्राचीन भारत में पशु चिकित्सा - प्राचीन भारतीय चिकित्सा शास्त्रियों ने मनुष्यों की चिकित्सा के अतिरिक्त पशुओं की चिकित्सा पर भी विशेष ध्यान दिया था। उपयोगी पशुओं जैसे कि अश्व, गोवंश तथा भैंस आदि की चिकित्सा पर विशेष ध्यान दिया गया था। अश्व विद्या पर प्राचीनतम् ग्रंथ 'शालिहोत्र संहिता' है, जिसमें सोलह हजार श्लोक थे। अग्निपुराण तथा गरुण पुराण में भी इस पशु (अश्व) की पहचान, दोष और रोगों के निदान का वर्णन है। महाभारत काल में नकुल को अश्व चिकित्सा का ज्ञाता कहा गया है। शालिहोत्र संहिता के अतिरिक्त इस विषय पर जयदत्त की 'अश्वचिकित्सा' अश्वजतंत्रगण का 'अश्वायुर्वेद', 'अश्वलक्षण', 'हयलीलावती' आदि उल्लेखनीय ग्रन्थ हैं। हाथियों के ऊपर पालकाप्य ऋषि का हस्तायुर्वेद, गज चिकित्सा, गज दर्पण, गजपरीक्षा तथा गजलक्षण आदि प्रसिद्ध ग्रंथ है। श्व अग्निपुराण और गरुण पुराण में भी इस पर विस्तृत प्रकाश डाला गया है। इसके अतिरिक्त गाय, बैल, भैंस जैसे अन्य उपयोगी पशुओं पर भी भारतीय मनीषियों ने विशेष अध्ययन किया था। हाल ही में प्राप्त पंडित हंसदेव का 'मृगपिक्ष-शास्त्र' प्राणि शास्त्र का अत्यंत उत्कृष्ट प्राचीन ग्रंथ है। श्व इसमें सिंह, भालू, गैंडे, हाथी, बकरी, गीदड़, हंस, बाज, सारस, उल्लू, तोता आदि अनेक पशु-पिक्षयों की किस्में, वर्ण, युवाकाल, संभोगकाल, गर्भकाल, उनकी प्रवृत्त, जाति, आयु, भोजन तथा निवास इत्यादि विषयों पर विस्तृत प्रकाश डाला गया है।

प्राचीन भारतीय चिकित्सा विज्ञानियों ने आयुर्वेद और पशु चिकित्सा का न केवल अध्ययन किया वरन् उससे सामान्य जनता को लाभान्वित करने के लिए अनेक चिकित्सालयों का भी निर्माण किया। यूरोप

⁸⁹ प्राचीन भारत का राजनीतिक तथा सांस्कृतिक इतिहास, डॉ. विमलचंद्र पाण्डेय, सेन्ट्रल पब्लिशिंग हाउस, इलाहाबाद, तृतीय संशोधित संस्करण 1990, प्र.सं. 323

⁹⁰ वही, पृ.सं. 324

⁹¹ महाभारत, विराट पर्व, 18, 23

⁹² प्राचीन भारतीय संस्कृति, कला, राजनीति दर्शन, डॉ. ईश्वरी प्रसाद, मीनू पब्लिकेशन, इलाहाबाद, 1986, पृ.सं. 539

⁹³ वही, पृ.सं. 539

में प्रथम चिकित्सालय-औषधालय 10वीं शती ई. में बना, परन्तु भारत में फाह्यान (गुप्त काल) तथा ह्वेनसांग (हर्ष युग) ने भी भारत में औषधालयों और पुष्यशालाओं को देखा था, जिसका उन्होंने विवरण दिया है। 94 मौर्य काल (323-184 ई.पू.) में भी सम्राटों के द्वारा अनेक चिकित्सालय खोले जाने का विवरण प्राप्त होता है। 95 भारत के आयुर्वेदिक ज्ञान का पश्चिमी एशिया और यूरोप पर काफी प्रभाव पड़ा। अरब के मुस्लिम शासकों ने हिन्दुओं के आयुर्वेद सम्बन्धी ग्रन्थों का अरबी भाषा में अनुवाद कराया। वहाँ से यह ज्ञान योरप (यूरोप) पहुँचा, इसीलिए प्रो. साचू, डॉ. सील तथा बेवर आदि ने न केवल प्राचीन भारतीयों के विज्ञान वरन् यूरोपीय चिकित्साशास्त्र पर भारत का प्रभाव स्वीकार किया है। 96

प्राचीन भारत में चिकित्सक का स्थान

प्राचीन भारतीय समाज में चिकित्सक का स्थान अत्यंत ही उच्च था। वह समाज का सबसे सम्मानित व्यक्ति था। भारतीय जन मानस उसका आदर करता था। चिकित्सकों ने भी चिकित्सा के संबंध में, सामाजिक व्यवहार, व्यवसायिक व्यवहार के परिप्रेक्ष्य में उच्च मापदंड स्थापित कर रखे थे। यहाँ पर महान भारतीय आयुर्वेदाचार्य चरक द्वारा एक वैद्य को दिये उस आदेश का एक अंश देना समीचीन होगा जो वैद्य अपने शिष्यों को उनके शिक्षण-प्रशिक्षण की समाप्ति के पश्चात् एक पवित्र धार्मिक समारोह में देता था।

"पूर्वगर्वर्थोपहरणे यथाशक्ति प्रयतितव्यं कर्म सिद्धिमर्थ सिद्धि यशोलाभंच प्रत्ये च स्वर्गमिच्छता भिषजा। गो-ब्राह्मणमादौ कृत्वा सर्वप्राणभूतां शर्माशसितव्यं। अहरहरुतिष्ठवाचोपविशता च सर्वात्मना चातुराणामारोग्ये प्रयतितव्यम्। जीवितहेतोरिप चातुरा च द्रोग्धव्याः। अशौण्डेनापाय सहायेन श्लक्ष्मशुल्कधर्म्य शर्म्यधन्यसत्याहितमितवचसा। देशकालविचारिणा स्मृतिमता ज्ञानोत्थानोपकरण संवत्स् नित्यं यत्नवता....

अशोक का द्वितीय गिरनार शिलालेख, चौथी, पाँचवीं छठीं और सातवीं पंक्ति।

चौथी पंक्ति - राजनों सर्वत्र देवनांप्रियस प्रियदसिनों राञों द्वे चिकीहता

पाँचवी पंक्ति - मनुसचिकीछा च पसुचिकीछा च (1) ओसुढ़ानि च योनि मनुसोपगानि च (2) छठवीं पंक्ति - मूलानि च फलानि च यत यज्ञ नास्ति सर्वत्र हरापितानि रोपापितानि च (3) अर्थात- राजा है- सर्वत्र दवनांप्रिय प्रियदर्शी राजा की दो प्रकार की चिकित्साएँ व्यवस्थित हैं। मनुष्य चिकित्सा तथा पशु चिकित्सा। औषधियाँ जो मनुष्योपयोगी और पशुपयोगी भी जहाँ-जहाँ नहीं हैं- सर्वत्र वे लायी गयीं और रोपी गयी हैं।

भारतीय पुरालिपि अभिलेख व मुद्राएँ डाॅ० शोभा सत्यदेव, भवदीय प्रकाशन, अयोध्या संस्करण 2000, पृ.सं. 54-55 96 प्राचीन भारतीय संस्कृति कला राजनीति दर्शन, डाॅ. ईश्वरी प्रसाद, मीनू पब्लिकेशन, इलाहाबाद, पृ.सं. 540

⁹⁴ ए.एल. बाशम, अद्भुत भारत शिवलाल-अग्रवाल एंड संस कंपनी आगरा 1988, पृ.सं. 427

⁹⁵ अर्थशास्त्र, पृ.सं. 407

अन्यत्रात्रोपकखरार्थादात्रग अन्येष् भावेष् न। चात्रकुल - प्रवृत्तयो बहिर्निश्चरियत्व्याः।''97

अर्थात् 'यदि तुम्हें अपने चिकित्सा कार्य में सफलता, धन और यश तथा मृत्योपरांत स्वर्ग प्राप्त करना है तो तुम्हें प्रातः उठने और रात्रि में सोने से पूर्व समस्त प्राणिवर्ग और विशेषकर गौ एवं ब्राह्मणों के मंगल के लिए प्रार्थना करनी चाहिए और तुम्हें अपने तन, मन और धन से रोगी के स्वास्थ्य के लिए प्रयत्न करना चाहिए। अपने स्वयं के जीवन के मूल्य पर भी तुम्हें अपने रोगी को धोखा नहीं देना चाहिए.... तुम्हें मद्यपान का अभ्यस्त नहीं होना चाहिए, पापकर्म नहीं करना चाहिये और न ही तुम्हारे साथी बुरे होने चाहिए.... तुम्हें मधुर भाषी ... विचार पूर्ण होना चाहिए तथा सर्वदा अपने ज्ञान की संवृद्धि में तत्पर रहना चाहिए।

जब तुम्हें किसी रोगी के घर जाना हो तो तुम्हें अपने शब्द, मन, बुद्धि और इन्द्रियों को अपने रोगी तथा उसकी चिकित्सा के अतिरिक्त अन्यत्र कहीं नहीं लगाना चाहिए... रोगी के घर में जो भी होता हो उसकी चर्चा बाहर नहीं करनी चाहिए और न रोगी की अवस्था के बारे में कोई भी परिचय उस व्यक्ति को देना चाहिए जो उस ज्ञान के आधार पर रोगी अथवा किसी अन्य की हानि कर सके।"98

अतः उपर्युक्त विवेचन के आधार पर स्पष्ट है कि चिकित्सक (वैद्य) को समाज अत्यंत ही सम्मान की दृष्टि से देखता था और वैद्यक भी अपने कर्तव्यों का पालन यथोचित ढंग से करते थे एवं उसकी शपथ लेते थे। प्राचीन काल में वैद्यकों ने अपनी आचार संहिता बना रखी थी जिसकी वे शपथ लेते थे।

उपसंहार - संपूर्ण शोध आलेख के आधार पर यह स्पष्ट है कि प्राचीन भारत में युगानुसार भारतीय चिकित्सा विज्ञान (आयुर्वेद) का उत्तरोत्तर विकास हुआ। इस विकास यात्रा में अनेक पड़ाव आए, अनेक वाह्य आक्रांताओं ने भारत पर आक्रमण किया। ज्ञान-विज्ञान के केन्द्र विश्वविद्यालयों-पुस्तकालयों पर आक्रमण करके उन्हें नष्ट कर दिया गया, जिसके कारण कुछ समय के लिए यह यात्रा धीमी पड़ी थी किन्तु रुकी नहीं, सम्पूर्ण मध्य युग भारतीय आयुर्वेद के इतिहास में एक प्रकार से अंधकार काल था। सुश्रुत के पश्चात् भारतीय औषधशास्त्र के विकास की प्रक्रिया धीमी हो जाने का यह एक बड़ा कारण था। आक्रान्ताओं द्वारा लाखों पुस्तकें जला दी गईं। कहा जाता है कि नालंदा विश्वविद्यालय का पुस्तकालय महीनों तक जलता रहा था। फिर भी भारतीय आयुर्वेदिक चिकित्सा पद्धित अपनी मूल अवस्थाओं में यथावत बनी रही, उत्तरोत्तर प्रगित करती रही। इस विकास यात्रा में अनेकानेक भारतीय विज्ञानियों-आयुर्वेदाचार्यों ने अपना अमूल्य योगदान दिया। इनमें से अनेकों नाम हमें ज्ञात नहीं हैं। किन्तु जिन आयुर्वेदाचार्यों के नाम हमें ज्ञात हैं उनके ग्रन्थों के सम्यक् अनुशीलन से यह पता चलता है कि भारतीय चिकित्साशास्त्र उस काल में कितना आगे तक बढ़ा हुआ था जब कि दुनिया के अन्य देश कबीलाई युग में जीवन-यापन कर रहे थे।

⁹⁷ अद्भुत भारत (The Wonder that was India) ए.एल. बाशम, शिवलाल अग्रवाल एंड कम्पनी, आगरा, 1998, पृ.सं. 426

⁹⁸ वही, हिन्दी अनुवाद - वेंकटेश चन्द्र पाण्डेय, पृ.सं. 426

आयु, आयुर्वेद एवं दैवव्यपाश्रय चिकित्सा

डॉ. ओ.पी. सिंह¹, डॉ. शिव चौहान², डॉ. गौरी चौहान³

सारांश

आयुर्वेद अथर्ववेद का उपवेद है। इसमें आयु, शरीर, इंद्रिय, सत्व, आत्मा, दोष, धातु एवं मलों का तथा व्यक्ति को स्वस्थ रहने और रोगी के रोग के निवारण के उपायों का विस्तृत विवेचन है। मुख्यतया तीन प्रकार की चिकित्सा होती है। दैवव्यपाश्रय चिकित्सा, युक्तिव्यपाश्रय चिकित्सा एवं सत्वावजय चिकित्सा। किसी भी रोग के संपूर्ण निवारण के लिए तीनों अत्यावश्यक हैं। इस शोध पत्र में आयुर्वेद के सामान्य ज्ञान तथा विभिन्न रोगों में देवव्यपाश्रय चिकित्सा के बारे में संकलन किया गया है, जिसमें रोगानुसार विभिन्न मंत्रों, औषधियों, मणियों के धारण करने, मंगल कार्य, देवता आदि के लिए बलि, हवन करना आदि प्रमुख है। आधुनिक काल में चिकित्सा के इस विधा को समावेशित कर वैज्ञानिक तथ्यों के द्वारा सिद्ध करने की भी आवश्यकता है। मुख्यतया दैवव्यापाश्रय चिकित्सा का वर्णन ज्वर, राजयक्ष्मा, कुछ, उन्माद, अपस्मार, बालगृह, विषचिकित्सा, रोमांतिका, व्रण चिकित्सा आदि रोगों में है।

प्रस्तावना

सृष्टि के आदि में ब्रह्मा द्वारा आयुर्वेद का स्मरण किया गया। आयुर्वेद का ज्ञान सर्वप्रथम ब्रह्मा जी ने दक्ष प्रजापित को दिया था। अयुर्वेद का प्रयोजन स्वस्थ व्यक्ति के स्वास्थ्य की रक्षा, तथा रोगी के रोग की चिकित्सा है। 5

¹ कायचिकित्सा विभाग, आयुर्वेद संकाय, चिकित्सा विज्ञान संस्थान, काशी हिन्दू विश्वविद्यालय, वाराणसी, उ.प्र

² आयुर्वेद एवं योग फिजिशियन, 16 अशोक रोड, नई दिल्ली

³ प्रोफेसर एवं विभागाध्यक्ष, कायचिकित्सा विभाग, जी.एस. आयुर्वेद मेडिकल कॉलेज, हापुड़, उ.प्र.

⁴ ब्रह्मा समृत्वाऽऽयुषो वेदं प्रजापतिमजिग्रहत्। अ.ह. 1/3, भै.र. 1/8

⁵ प्रयोजनं चास्य- स्वस्थस्य स्वास्थ्य रक्षणं, आतुरस्य विकार प्रशमनं च।। चरक संहित सूत्र 30/26

आयुर्वेद में आयु का वर्णन

जितने काल तक शरीर, इन्द्रियाँ सत्व (मन) एवं आत्मा का संयोग बना रहता है उस कालाविध को आयु कहते हैं। द्यानुसार आयु को वर्षों में बाँटा गया है तथा कलयुग में आयु 100 वर्ष मानी गई है। इन 100 वर्षों को चार आश्रमों में विभाजित किया गया है, जिसमें विशिष्ट धर्म (कर्त्तव्य) निर्दिष्ट हैं।

- 1. ब्रह्मचर्य आश्रम जन्म से पचीस वर्ष
- 2. गृहस्थ आश्रम पचीस से पचास वर्ष
- 3. वानप्रस्थ आश्रम पचास से पचहत्तर वर्ष
- 4. संन्यास आश्रम पचहत्तर से सौ वर्ष

आयु को 3 अवस्थाओं (शरीर की) में भी विभाजित किया है।

- 1. बाल्यावस्था जन्म से सोलह वर्ष दुग्ध पायी, दुग्ध+अन्न, अन्न सेवी
- मध्यावस्था सत्रह से सत्तर वर्ष वृद्धि- 17-20 वर्ष,
 यौवन- 21-30 वर्ष, सम्पूर्ण 31-70
- 3. वृद्धावस्था इकहत्तर से सौ वर्ष

संपत्ति (साद्गुण्य) या विपत्ति (वैगुण्य) के अनुसार आयु के अनेक भेद होते हैं, किंतु संक्षेप में प्रभावभेद से इसे चार प्रकार का माना गया है⁷ :

- (1) **सुखायु**: किसी प्रकार के शारीरिक या मानसिक विकार से रहित होते हुए, ज्ञान, विज्ञान, बल, पौरुष, धन-धान्य, यश, परिजन आदि साधनों से समृद्ध व्यक्ति को "सुखायु" कहते हैं।
- (2) **दुखायु**: इसके विपरीत समस्त साधनों से युक्त होते हुए भी, शारीरिक या मानसिक रोग से पीड़ित अथवा निरोग होते हुए भी साधनहीन या स्वास्थ्य और साधन दोनों से हीन व्यक्ति को "दु:खायु" कहते हैं।
- (3) **हितायु**: स्वास्थ्य और साधनों से संपन्न होते हुए या उनमें कुछ कमी होने पर भी जो व्यक्ति विवेक, सदाचार, सुशीलता, उदारता, सत्य, अहिंसा, शांति, परोपकार आदि-आदि गुणों से युक्त होते हैं और समाज तथा लोक के कल्याण में निरत रहते हैं, उन्हें हितायु कहते हैं।
- (4) **अहितायु :** इसके विपरीत जो व्यक्ति अविवेक, दुराचार, क्रूरता, स्वार्थ, दंभ, अत्याचार आदि दुर्गुणों से युक्त और समाज तथा लोक के लिए अभिशाप होते हैं, उन्हें अहितायु कहते हैं।

इस प्रकार हित, अहित, सुख और दुःख, आयु के ये चार भेद हैं। इसी प्रकार कालप्रमाण के अनुसार भी दीर्घायु, मध्यायु और अल्पायु, संक्षेप में ये तीन भेद होते हैं। वैसे इन तीनों में भी अनेक भेदों की कल्पना की जा सकती है।

⁶ शरीरेन्द्रियसत्त्वात्मसंयोगोधारि जीवितम्। च.सू. 1/42

⁷ हिताहितं सुखं दुःखम् आयुस्तस्य हिताहितम्। मानं च तच्च यत्रोक्त आयुर्वेदः स उच्चते।। च.सू. 1/41

शरीर - पंचमहाभूत के विकार से बना चेतना का अधिष्ठान भूत समयोगवाही शरीर कहलाता है। है समस्त चेष्टाओं, इंद्रियों, मन और आत्मा के आधारभूत पंचभौतिक पिंड को 'शरीर' कहते हैं। मंचमहाभृत -

इस संसार में सभी द्रव्य पंच भौतिक यानी पंच महाभूत से बने हुए हैं।° ये पंच महाभूत हैं।

- आकाश space
 वाय air
- 3. अग्नि fire
- 5. पृथ्वी land

शरीर में पंचमहाभूतों के विकार- त्रिदोष, सप्तधातु तथा मल के रूप में मिलते हैं। ये दोष, धातु और मल ही शरीर के मूल माने गये हैं। 10

दोष - दूषणात् दोषः, अर्थात् जो दूषित करे वह दोष है। दोष शरीर और मन में रहते हैं। वात पित्त कफ ये शरीर के दोष हैं और रज एवं तम ये मानसिक दोष हैं। शारीरिक रोग या दोष दैवव्यपाश्रय एवं युक्तिव्यपाश्रय चिकित्सा से ठीक होते हैं, जबिक मानसिक रोग या दोष सत्वावजय चिकित्सा से ठीक होते हैं।

धातु- ''धारणात् धातवः'' जो धारण करे वो धातु है। यह सात होती है।

- 1. रस 2. रक्त
- 3. माँस
- 4. मेद

- 5. अस्थि
- 6. मज्जा
- 7. श्क

मल - शरीर में मल तीन होते हैं-

- 1. पुरीष
- 2. मूत्र
- 3. स्वेद

इन्हीं तीनों मलों को शरीर में बनाने एवं निष्कासन की क्रिया को मलक्रिया कहते हैं तथा पुरीष का निर्माण बृहद आँत में होता है, मूत्र का निर्माण वृक्कों से तथा स्वेद का निर्माण त्वचा में होता है।

इन्द्रियाँ - इन्द्रियाँ दस होती हैं।

पाँच ज्ञानेन्द्रियाँ (Sensory organs) और पाँच कर्मेन्द्रियाँ (Motor organs) पाँच ज्ञानेंद्रियाँ हैं-

⁸ तत्र शरीरं नाम चेतनाधिष्ठानभूतं पन्चमहाभूतविकार समुदायात्मक समयोगवाहि। च. शारीर स्थान 6/4

⁹ सर्व द्रव्यं पाञ्चभौतिकम् अस्मिन् अर्थे।। अध्ययन २६ श्लोक 10

¹⁰ दोषधातुमलमूलं हि. शरीरम्। च.सू., 26/10

¹¹ वायुः पित्तं कफश्चोक्तः शारीरोदोष संग्रहः। चरक संहिता सूत्र स्थान 1/36

अधिष्ठान	विषय	इंद्रियाँ	महाभूत	बुद्धि
कर्ण	शब्दों को सुनाता है	कर्णेन्द्रिय	आकाश	श्रोत
त्वक्	स्पर्श को जानता है	स्पर्शेंद्रिय	वायु	स्पर्श
नेत्र	रूप को देखता है	चक्षुरेंद्रिय	अग्नि	चक्षु
जिह्ना	रस को देखता है	रसेंद्रिय	जल	रसन
नसिका	गंध को सूंघता है	घ्राणेंद्रिय	पृथ्वी	घ्राण

पाँच कर्मेन्द्रिया -

- 1. हस्त हाथ
- 2. पाद पैर
- 3. गुदा मलमार्ग
- 4. उपस्थ लिंग, योनि
- 5. वाक् मुख

सत्व - (मन) मननात् मनः। जो मनन करे वो मन है। मन एक उभयेंद्रिय है अर्थात् कर्मेंद्रिय भी है और ज्ञानेंद्रिय भी है। आयुर्वेद का स्पष्ट सिद्धांत है कि जैसा मन होगा वैसा ही शरीर निर्मित होता है। ¹² आत्मा - आत्मा विकार रहित है तथा मन, पंचमहाभूत, उनके गुणों तथा दश इंद्रियों से युक्त होता है। वह चैतन्य का कारण और नित्य है। सभी चराचर जगत का दर्शक है और क्रियाओं को देखता है। ¹³ रोग का आश्रय - शरीर और मन ये दोनों ही रोगों के आश्रय हैं तथा सुख के आश्रय भी ये मन एवं शरीर ही हैं। ¹⁴

आरोग्य या स्वस्थ के लक्षण - जिस शरीर में दोष सम हों, अग्नि सम हो, धातुएँ सम हों, मलक्रिया सम हो तथा जिसकी आत्मा, इंद्रियाँ एवं मन प्रसन्न है वही स्वस्थ है। 15

¹² शरीरं ह्यपि सत्वमनुविधीयते सत्त्वं च शरीरम्। च.शा. 4/36

¹³ निर्विकारः परस्त्वात्मा सत्त्वभूतगुणेन्द्रियैः। चैतन्य कारणं नित्यो द्रष्टा पश्यति हि क्रियाः।। चरक संहिता सूत्र स्थान 1/56

¹⁴ शरीरं सत्वसंज्ञं च व्याधीनामाश्रयो मतः। तथा सुखानां योगस्तु सुखानां कारणं समः।। च.सू. 1/55

¹⁵ समदोषः समाग्निश्च समधातु मलःक्रियाः।
प्रसन्नात्मेन्द्रियमनः स्वस्थ इति अभिश्धीयते।। सुश्रुत संहिता सूत्रस्थान 15/10

अग्नि के तीन प्रकार

- 1. जठराग्नि इसका प्रमुख कार्य जठर में उपस्थित पंचभौतिक आहार का पाचन करना है।
- 2. भूताग्नि यह अग्नि जठराग्नि द्वारा पचित आहार के पृथक-पृथक महाभूत को शरीर की कोशिकाओं तक ले जाती है, इसकी संख्या पांच बताई गयी है।
- 3. धात्वाग्नि धात्वाग्नि का प्रमुख कार्य महाभूतों के पृथक-पृथक घटक से नए तत्वों का निर्माण कर धात को पोषण देना है।

आयुर्वेद द्वारा आयु का संरक्षण एवं रोग की चिकित्सा होती है। पुरुषार्थ चतुष्टय धर्म, अर्थ, काम एवं मोक्ष की सिद्धि के लिए स्वस्थ रहना अत्यावश्यक है। 16 रोग होने पर पुरुषार्थ की सिद्धि संभव नहीं है। रोग शरीर को या मन को या शरीर और मन दोनों को आक्रांत करते हैं।

चरक संहिता में रोग की चिकित्सा के लिए तीन प्रकार वर्णित हैं¹⁷ - 1. दैवव्यपाश्रय, 2. युक्ति-व्यपाश्रय और 3. सत्वावजय

जब व्याधि शरीर में होती है तो उसकी चिकित्सा दैवव्यपाश्रय एवं युक्तिव्यपाश्रय द्वारा होती है तथा जब व्याधि मनको आक्रांत करती है तो उसकी चिकित्सा सत्वावजय से होती है।¹⁸

शरीर और मन को आक्रांत करने वाली व्याधि का कारण जन्म-जन्मान्तर में किए पाप होते हैं, जिसे दैव कहते हैं, जिसकी चिकित्सा औषधि, दान, जप, होम, देवता की आराधना पूजा से होती है।²²

शरीर में होने वाले रोगों के भी दो कारण होते हैं-

¹⁶ धर्मार्थ काम मोक्षाणां आरोग्यं मूलमुतमम्। चरक सूत्रस्थान 1/15

¹⁷ त्रिविधमौषर्धामेतिदैवव्यपाश्रयं, युक्तिव्यपाश्रयं, सत्त्वावजयश्च। च.स्. 11/54

¹⁸ प्रशम्यत्यौषधैः पूर्वा देवयुक्तिव्यपाश्रयैः। मानसो ज्ञानविज्ञानधैर्यस्मृतिसमाधिभिः।। च.सू. 1/58

¹⁹ तत्र दैवव्यपाश्रयं- मन्त्रौषधिमणिमङ्गलबल्युपहारहोमनियमप्रायश्चित्तोपवासस्वस्त्ययनप्रणिपातगमनादि, - च.स्. 11/54

²⁰ युक्तिव्यपाश्रयं-पुनराहारौषधद्रव्याणां, योजना च.सू. 11/54

²¹ सत्त्वावजयःपुनरहितेभ्योऽर्थेभ्योमनोनिग्रहः, च.सू. 11/54

²² जन्मान्तरकृतं पापं व्याधिरूपेण बाधते। तच्छान्तिरौषधैर्दानैर्जपहोमस्रार्चनै:।। यो.र. 1/8

- 1. कर्मज (पूर्व जन्मकृत रोग)
- 2. पापज (इह जन्मकृत रोग)

कर्मज व्याधि उसे कहते हैं जब शास्त्रानुसार जो निर्णय किया हुआ है और उस निर्णय के अनुसार व्याधि की चिकित्सा भी की जाती है फिर भी जो व्याधि शांत नहीं होती है उसे बुद्धिमान कर्मज कहते हैं।²³ कर्मज व्याधि की चिकित्सा दैवव्यपाश्रय द्वारा ही होती है।

आयुर्वेद में विभिन्न रोगों के लिए दैवव्यपाश्रय की विभिन्न विधाएं और अंग का महत्व है। दैवव्य-पाश्रय के भिन्न-भिन्न अंग हैं-

- 1. मंत्र चिकित्सा
- 2. औषधि धारण करना
- 3. मणियों को धारण करना
- 4. मंगल कर्म
- 5. बलि
- 6. हवन करना
- 7. शौच, संतोष, तप, स्वाध्याय, ईश्वरभजन, नियम
- 8. प्रायश्चित
- 9. उपवास
- 10. स्वस्त्ययनपाठ
- 11. देवी-देवताओं को प्रणाम करना
- 12. धर्म-स्थान गमन

मंत्र चिकित्सा : वेदों में विविध प्रकार के मंत्रों का वर्णन है यथा-गायत्री मंत्र, महामृत्युंजय मंत्र आदि। औषधि धारण : यथा तुलसी, रुद्राक्ष आदि धारण करना।

मणि धारण : नव ग्रह की चिकित्सा में मणियों का प्रयोग होता है यथा-

ग्रह	मणि
सूर्य	मणिक्य
चन्द्र	मुक्ता
मंगल	मूंगा
बुध	पन्ना

²³ यथाशास्त्रं तु निर्णीतो यथाव्याधि चिकित्सितः।

न शमं याति यो व्याधिः से ज्ञेयः कर्मजोबुधः।। यो.र. दूत परीक्षा 14

बृहस्पति	पुखराज
शुक्र	हीरा
शनि	नीलम
राहु	गोमेद
केतु	लहसुनिया

स्वास्थ्यवृत्त में स्वस्थ व्यक्ति को भी रत्न धारण करने को बताया गया है। रत्न और आभूषण धारण करना संपत्ति, मंगल और आयु को बढ़ाता है, धनवानों के दोष को दूर करता है तथा आनंद काम्यता और ओज को बढ़ाता है।²⁴

शौच- शरीर की स्वच्छता के नियम इस प्रकार हैं²⁵ शरीर को टेढ़ा करके छींकना, सोना, खाना उचित नहीं है। मालादि के वेग को रोक कर कोई कार्य न करें। वायु, अग्नि, जल, द्विज और गुरु इनके सामने थूक, अपान वायु का त्याग, मल-मूत्र त्याग न करें। मार्ग में मूत्र का त्याग न करें। भोजन के समय, जप, यज्ञ, अध्ययन, बलि व मंगल कार्य के समय नाक के मैल को न त्यागें।

तप- श्रेष्ठ गुरुजनों की निंदा न करें। अपवित्र अवस्था में अभिचार कर्म, चैत्य पूजा, पूज्यजनों की पुजा, अध्ययन आदि न करें।²⁶

स्वाध्याय- निम्न अवस्थाओं में अध्ययन और पठन-पाठन नहीं करना चाहिए- ऋतु के बिना बिजली चमकने पर, दिशाओं के जलने पर, ग्राम-नगर आदि में आग लगने पर, भूकंप आने पर, विवाहादि बड़े उत्सवों में, विजयादशमी, दीपावली, होली आदि में, उल्कापात, कृष्णपक्ष की चतुर्दशी, सूर्यग्रहण आदि में, चंद्रग्रहण होने पर अमावश्या और प्रतिपदा को जिन तिथियों में चन्द्रमा नहीं दिखाई देता, संध्या काल में, गुरु के मुख से बिना पढ़े, अक्षर को छोड़ते हुए, अधिक मात्रा में रूखे स्वरों से, स्वर के बिना, बहुत नीचे स्वरों से अध्ययन न करें। 27

होम- शुद्ध और पवित्र होकर घी, चावल, तिल, कुशा सरसों इनको अग्नि में हवन करें और प्रार्थना

²⁴ धन्यं मंगल्यमायुष्यं श्रीमद्वयसनसूदनम्। हर्षणं काम्यमोजस्यं रत्नाभरणधारणं।। च.स्. 5/97

²⁵ नानृजुः क्षुयात्राद्यात्र शयीत, न वेगितोऽन्यकार्यः स्यात्, न वाय्वप्रिसलिलसोमार्कद्विजगुरुप्रतिमुखंनिष्ठीविकावर्ची-मूत्राण्युत्सृजेत् (वात), न पन्थानमवमूत्रयेत्र जनवित नात्रकाले, न जपहोमाध्ययनबलिमङ्गलिक्रयासुलेष्मसिङ्घाणकं मुञ्चेत् ।। च.स्. 8/21

²⁶ नसतोनगुरूंपरिवदेत्। नाश्चिरभिचारकर्मचैत्यपूज्यपूजाध्ययनमभिनिर्वर्तयेत।। च.सू. 8/23

²⁷ न विद्युत्स्वनार्तवीषु नाभ्युदितासु दिक्षु नाग्निसंप्लवे न भूमिकंपे न महोत्सवे नोल्कापाते न महाग्रहोपगमने न नष्टचन्द्रायां तिथौ न सन्ध्ययोर्नामुखाद्वुरोर्नावपतितं नातिमात्रं न तान्तं न विस्वरं नानवस्थितपदं नातिद्रुतं नातिक्लीवं नात्युच्चैर्नातिनीचैः स्वरैरध्ययनमभ्यस्येत।। च. सू. 8/24

करें कि अग्नि हमारे शरीर से बाहर न जाये, वायु हमारे प्राणों की रक्षा करे, विष्णु हमारे शरीर में बल दें, इंद्र हमारे वीर्य को बढ़ाएं, शुभ कारक जल हमारे शरीर में प्रवेश करे। 'आपो हिष्ठा मयोभुवः' मन्त्र से जल का स्पर्श कर आचमन एवं प्रोक्षण स्नान करना चाहिए। जल से शरीर हृदय और मस्तक का प्रोक्षण करना चाहिए। ब्रह्मचर्य, तप, ज्ञान, मैत्री और आनंद की इच्छा करते हुए शांत चित्त रहें। 28

सद्वृत पालन में नित्य ही निम्न कर्म करना चाहिए:

नित्य ही देव, गौ, ब्राह्मण, गुरु, वृद्ध, सिद्ध, आचार्य और अग्नि की अर्चना करनी चाहिए, दोषों को नष्ट करने वाली औषधियां धारण करनी चाहिए तथा बिना हाथ में रत्न पहने, बिना स्नान, फटे वस्र पहने, गायत्री आदि मंत्र जपे बिना, बिना होम, बिना देवता को अर्पण किए, बिना माता-पिता को भोजन कराए, बिना अतिथि और आश्रितों को भोजन कराए, बिना सुगंधित इत्र और माला धारण किए, बिना हाथ पैर धोए भोजन नहीं करना चाहिए।²⁹

औषिध के संग्रह करने से पूर्व निम्न क्रिया आवश्यक है³⁰- प्रार्थना करते हुए, कल्याण की भावना से श्वेत वस्त्र धारण कर पवित्र अश्विनकुमार गौ और द्विज की प्रार्थना करते हुए पूर्वाभिमुख या उत्तराभिमुख होकर औषिध ग्रहण करना चाहिए।

पंचकर्म में भी, जिसमें विशेषतः शोधन प्रक्रिया का प्रयोग होता है, प्रारम्भ में दैवव्यपाश्रय का प्रयोग करते हैं। वमन कर्म करने से पहले वमन कराने वाले रोगी से निम्न प्रक्रिया कराई जाती है- देवता, अग्नि, ब्राह्मण, गुरु, वैद्य की विधिवत पूजा कर चुके रोगी का अच्छे नक्षत्र, तिथि, करण, मुहूर्त में ब्राह्मणों द्वारा स्वस्ति वाचन कराकर मन्त्रों से अभिमंत्रित मधु, मुलेठी, सेंधा नमक, राब युक्त मदनफल कषाय की मात्रा पिलायी जाती है। निम्न मंत्र से अभिमंत्रित किया जाता है³¹-

ॐ ब्रह्मदक्षािष्वनीरुदेन्द्रभूचन्द्राकिनलािनलाः। ऋषयः सौषधिग्रामा भूतसघाष्च पान्तु ते।। रसायनिमवर्षीणां देवतानाममृतं यथा, सुधेवोत्तमनागानां भैषज्यिमदमस्तु ते।। सु.सू. 43/5 अर्थात् ब्रह्मा, दक्ष, अश्विनीकुमार, रुद्र, पृथ्वी, चन्द्र, सूर्य, अग्नि, वायु, ऋषि, औषधियों के समूह

²⁸ नाशुचिरुत्तमाज्याक्षततिलकुशसर्षपैरग्निंजुहुयज्ञत् आत्मानमशीर्भिराशासानः अग्निमेनापगच्छेच्छरीरात् वायुर्मेप्राणानादधातु विष्णुर्मेबलमादधातु इन्द्रोमेवीर्यंशिवामां प्रविशंस्त्वाप आपोहिष्ठेतयपः स्पृशेत्। ... च.सू. 8/29

²⁹ देवगोब्राह्मणगुरुवृद्धसिद्धाचार्यानर्चयेतु, अग्निमुपचरेत, औषधिः प्रशस्ता धारयेत् - चरक संहिता सूत्र, 8/19 नारत्नपाणीर्नास्नातो नोपहतवासा नाजपित्वा नाहुत्वा देवताभ्यो नानिरुप्य पितृभ्यो नादत्वा गुरुभ्यो नातिथिभ्यो नोपाश्रितेभ्यो नाप्ण्यगन्धो नामाली नाप्रक्षालितपाणीपादवदनो - चरक संहिता सूत्र, 8/22

³⁰ मङ्गलाचरः कल्याणवृत्तः शुचिः शुक्लवासाः संपूज्य देवताअश्विनौगोब्राह्मणांश्च कृतोपवासः प्राङ्मुख उदन्मुख वा गृहीयात् ।। चरक संहिता, कल्प स्थान, 1/10

³¹ देवताग्निद्विजगुरुवृद्ववैद्यानर्चितवन्तमिष्टे नक्षत्र तिथिकरण मुहूर्ते कारयित्वा ब्राह्मणान् स्वस्तिवाचनं प्रयुक्ताभिराशीर्भिरभिमंत्रितां मधुमधुकसैन्धवफाणितोपहितां मदनफलकषायमात्रां पाययेत्।। च.सू. 15/9

तथा भूत (प्राणि) समूह तेरी रक्षा करें। जिस तरह ऋषियों के लिए रसायन औषिथाँ, देवताओं के लिए अमृत एवं उत्तम नागों के लिए सुधा है उसी तरह तेरे लिए यह औषिध फलदायी हो।

आयुर्वेद के आठ अंग हैं जिसमें भूतिवद्या का भी एक स्थान है। भूतिवद्या में देव, दैत्य, गंधर्व, यक्ष, राक्षस, पितर, पिशाच, नाग आदि यहों से पीड़ित चितवाले रोगियों की शांति के लिए शांतिपाठ, बलिप्रदान, हवन आदि यह दोषात्मक क्रियाओं का वर्णन है।³²

केवल आमलक रसायन सेवन में गायत्री एवं ॐ मंत्र जपना चाहिए। आचार रसायन सेवन में नित्य ही सत्य, अहिंसा, जप, तप, देव, गो, ब्राह्मण, आचार्य, गुरु अर्चना करनी चाहिए।³³ रसायन सेवित पुरुषों द्वारा अरिष्ट उत्पन्न होने पर भी मरण से मुक्ति संभव है।

आयुर्वेद की कुछ व्याधियों में दैवव्यपाश्रय चिकित्सा का वर्णन है-

- 1. ज्वर
- 2. राजयक्ष्मा
- 3. কুন্ড
- 4. उन्माद
- 5. अपस्मार
- 6. बालग्रह
- 7. विषचिकित्सा
- 8. रोमांतिका
- 9. व्रण चिकित्सा
- 10. अरिष्ट लक्षण आदि

दैवव्यपाश्रय चिकित्सा आयुर्वेद का महत्वपूर्ण अंग है। प्राचीनकाल से अनेक रोगों की चिकित्सा में इसका उपयोग किया जाता रहा है। वर्तमान समय में दैवव्यपाश्रय चिकित्सा को लेकर अनेक प्रकार की भ्रान्तियाँ उत्पन्न हो गई हैं, जबकि यह चिकित्सा पद्धति आयुर्वेद की एक सर्वमान्य चिकित्सा पद्धति है।

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³² भूतविद्या नाम देवासुरगन्धर्वयक्षरक्षः पितृपिशाचनागग्रहाद्युपसृष्टचेतसां शान्तिकर्मबलिहरणादिग्रहोपशमनार्थम् । सु.सू. 1/12

³³ चरक चि. 1/4, 30-34

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गावः सर्व सुखप्रदा

प्रो. दीनबंधु पाण्डेय¹

भारतीय संस्कृति के अनेकानेक पक्ष हैं जिसमें पर्यावरण सम्बन्धी चिन्तन का भी एक पक्ष है। इस सन्दर्भ में ज्ञात विशाल सामग्री स्रोत-रूप में प्राप्त हैं जिस पर मनन, विमर्श एवं अनुशीलन की आवश्यकता है। वैदिक प्रतीक के रूप में 'गौं' के पर्यावरणीय सन्दर्भों का विमर्श नये आयाम प्रस्तुत करता है।

वेदों में 'गौ' के अनेकशः सन्दर्भ हैं। 'गौ' को 'धेनु' से भी अभिहित किया गया है। कोषों में गौ एवं धेनु के बहुविध पर्याय अथवा समानार्थी शब्द प्राप्त होते हैं-

> माहेयी सौरभेयी गौरुस्ना माता च शृङ्गिणी। अर्जुन्यघ्न्या रोहिणी स्यादुत्तमा गोषु नौचुकी।।²

इन पर्याय शब्दों में 'अघ्न्या' शब्द विशेष रूप से आकर्षण का केन्द्र है। 'अघ्न्या' यद्यपि गौ का अभिधान है, किन्तु इस बात का विशेष महत्व है कि 'अघ्न्या' गौ का एक विशेषण है।

यह अकेला ऐसा पशु-जीव है जो अपनी विशेषताओं के कारण 'न मारा जाने वाला' कहा गया। विश्व के प्राचीनतम ग्रन्थ ऋग्वेद से ही यह विशेषण नाम के रूप में गौ को प्राप्त हुआ- वसुओं और ऐश्वर्यों को धारण एवं उनका पोषण करने वाली धेनु रँभाती हुई तथा मन से अपने बछड़े को प्यार करती हुई आई है। यह न मारे जाने योग्य गाय अश्वि देवों के लिए दूध दुहे तथा महान् सौभाग्य के लिए वह बढ़े। जो अवध्य गौ का दूध लेता है, हे अग्नि! तू ऐसे उन राक्षसों के मस्तकों को अपने तेजस्वी शस्त्र से काट डाल। व

'अघ्न्या', गौ का यह विशेषण स्पष्ट-ही यूँ-ही नहीं मिला होगा। इसके भरपूर कारण रहे होंगे और ऐसे कारण निस्सन्देह धुर स्वार्थ परक नहीं रहे होंगे कि गौ अर्थात् गाय से विशिष्ट प्रकार का भोजन 'दूध' के

¹ सदस्य, भारतीय समाज विज्ञान अनुसन्धान परिषद् एवं पूर्व विभागाध्यक्ष, कला इतिहास एवं पर्यटन प्रबंधन, काशी हिन्दू विश्वविद्यालय

² अमरकोष, 2/9/66

उ हिङ्कृण्वती वसुपत्नी वसूनां वत्सिमच्छन्ती मनसाभ्यागात्। दुहामश्विभ्यां पयो अघ्नेयं सा वर्धतां महते सौभागाय।। ऋग्वेद, 1/164/27

⁴ यो अघ्न्याया भरति क्षीरमग्ने तेषां शीर्षाणि हरसापि वृश्च। वही, 10/87/16

रूप में प्राप्त होता है, क्योंकि भोज्य पदार्थ के रूप में तो अनेक वस्तुएँ प्राप्त थीं। केवल भोजन के रूप में भी गाय का दूध एक ऐसा आहार है जो मानव सन्तित के लिए सम्पूर्ण आहार है। वैदिक मन्त्रों में 'आहार' के रूप में 'गौ-दुग्ध' की चर्चा अभूतपूर्व रूप में की गयी है। इस सन्दर्भ में जो बात ध्यान देने की है वह यह कि अथर्ववेद के दसवें काण्ड के नवें और दसवें सूक्त में 'गौ' के दो स्वरूपों का विवरण प्राप्त होता है। वशा गौ और शतौदना गौ।

प्रथमतः 'वशा गौ' के सन्दर्भ में अथर्ववेद में कहा गया है, जिसने द्युलोक, पृथिवी और सब जलों की सुरक्षा की है, उस हजारों अमृतधारा देने वाली वशा गौ को ज्ञान द्वारा उत्तम रीति से प्रदर्शित करते हैं, उसकी प्रशंसा करते हैं। उसे 'जल' और 'उपजाऊ भूमि' के समान धान्य देने वाली अर्थात् अन्न और क्षीर देने वाली कहा गया है। हे वशा गौ! तू सबसे प्रथम जल को (दुहती) देती है, पश्चात् उपजाऊ भूमि के समान धान्य देती है। तीसरा राष्ट्रीय शक्ति देती है, तू अन्न और क्षीर-दूध देती है। कि ऋषि ने कई मन्त्रों के माध्यम में गौ की महिमा और उसे संसार में प्राप्त सम्मान का वर्णन किया है। गौ को बल और बुद्धि का प्रतीक कहा है- क्षित्रयों की माता गौ है, हे अन्न तेरी भी माता गौ ही है। गौ से शस्त्र उत्पन्न हुआ है। उससे चित्त धन अर्थात् गौ से बल और बुद्धि दोनों उत्पन्न होती है। ब्रह्मा के उच्च भाग से एक बूँद ऊपर चल पड़ा, हे गौ! उससे तू उत्पन्न हुई है और उससे ही पश्चात् होता व हवनकर्ता उत्पन्न हुआ। अर्थात् गौ में महाशित अधिक है, क्योंकि वह पहले हुई है। वेदों में गौ को 'अमृतदात्री' बताया है।

देव गौ को अमृत कहते हैं, गौ को मृत्यु समझकर उपासना करते हैं। गौ ही यह सब हुई है, अर्थात् देव, मनुष्य, असुर, पितर और ऋषि यह वशा के ही रूप हैं। यह गौ 'वशा गौ' कही गई है जो देवों और मनुष्यों के जीवन का आधार है- देवता वशा गौ पर उपजीवन करते हैं और मनुष्य भी वशा गौ पर ही जीवित रहते हैं। वशा गौ ही एक सब हो गयी है जहाँ तक सूर्य का प्रकाश पहुँचता है। 9

- यथा द्यौर्यया पृथिवी ययापो गुपिता इमाः।
 वशां सहस्रधारां ब्रह्मणाच्छावदामिस।। अथर्ववेद, 10/10/4
- अपस्त्वं धुक्षे प्रथमा उर्वरा अपरा वशे।
 तृतीयं राष्ट्रं धुक्षेऽन्नं क्षीरं वशे त्वम।। अथर्ववेद, 10/10/8
- वशा माता राजन्यस्य वशा माता स्वधे तव। वशायायज्ञ आयुधं ततिश्चत्तमजायत।। ऊर्घ्वो बिन्दुरुदचरद्ब्रह्मणः ककुदादिध। ततस्त्वं जिञ्जे वशे ततो होताऽजायत।। वही, 10/10/18-19
- वशामेवामृतमाहुर्वशां मृत्युप्रुपासते।
 वशोदं सर्वमभवदेवा मनुष्याः असुराः पितर ऋषयः।। वही, 10/10/26
- वशां देवा उप जीवन्ति वशां मनुष्या उत।
 वशेदं सर्वमभवद्यावत्सूर्यो विपश्यन्ति।। अथर्ववेद, 10/10/34

अथर्ववेद के मन्त्रों से स्पष्ट ही गौ के सम्पूर्ण रूप से सृष्टि के लिए उपयोगी होने की पुष्टि होती है, जो पृथ्वी से लेकर आकाश तक सबके लिए कल्याणकारी है।

विश्वविश्रुत विद्वान् श्याम नारायण पाण्डेय ने ब्रांशविग (जर्मनी) में आयोजित 1982 ई. के अन्तर्राष्ट्र भौगोलिक विद्वत् सम्मेलन में प्रस्तुत अपने शोध-पत्र में अन्तर्ग्रहीय बन्धुत्व की कड़ी रूप में 'गौ' को प्रतिष्ठित किया है जो अथर्ववेद के उपरोल्लिखित मन्त्र 'वशा द्यौर्वशा पृथिवी वशा विष्णुः प्रजापितः' (10/10/30) के विवरण का आधार लिये हुए है। (Sh. N. Pande, 'Teaching Interplenatary Briderhood', Geographische Erziehung in internationalen Blickfeld, Ed. Dr. Hartwig Haubrich, Braunschweig, 1582, pp. 117-119.)

यजुर्वेद के अनुसार ब्रह्म, सूर्य, समुद्र, इन्द्र, पृथिवी आदि की उपमा हो सकती है किन्तु गौ की कोई उपमा नहीं। भगवद्गीता में विष्णु स्वरूप श्रीकृष्ण स्वयं को धेनुओं में कामधेनु कहते हैं। इस प्रकार गौ वैदिक संस्कृति का एक ऐसा प्रतीक रूप है जिसमें पर्यावरणीय चेतना का स्पष्ट स्वरूप दिखाई देता है।

शतौदना गौ, यह सन्दर्भ इसिलए विशेष महत्व रखता है कि अथर्ववेद के 10वें काण्ड का नवाँ सूक्त, जिसके मन्त्र द्रष्टा ऋषि अथर्वण हैं, उसका देवता स्वरूप कहा है। ऋग्वेद (8/69/2 उपिरसन्दर्भित) के अनुगमन जैसा ही अथर्ववेद के प्रस्तुत सन्दर्भ में भी 'शतौदना गौ' का सम्बन्ध इन्द्र से जोड़ते हुए कहा है कि वह इन्द्र से प्राप्त हुई है। पापी लोगों के मुख बन्द कर शत्रुओं पर यह वज्र फेंक कर, इन्द्र द्वारा दी हुई पहली सैकड़ों भोजन देने वाली शत्रु का नाश करने वाली, यजमान का मार्ग दर्शानेवाली गौ ही है। 12

पर्यावरणीय चेतना के प्रतीक के रूप में वशा एवं शतौदना गौ का स्वरूप मनुष्य एवं विश्व के कल्याण के लिए उभर कर आता है, और ऐसा कल्याण करने वाले पशु को अघ्न्या कहने का तात्पर्य उसके माध्यम से सम्पूर्ण पर्यावरण की सुरक्षा का है, तभी तो मनुष्य, देव, पृथ्वी और जल एवं आकाश संरक्षित हो सकेंगे।

भारतीय परम्परा में गौ के अङ्ग-प्रत्यङ्ग से मानव कल्याण हेतु प्राप्तियों से कृतज्ञ जन-समुदाय ने गौ के समस्त अङ्गों में देवताओं का वास माना है। लोक में यह कथा प्रसिद्ध है-

सर्वे देवाः स्थिता देहे सर्वदेवमयी हि गौ।

'देवमयी गौ' के अङ्गों में देवताओं के स्थान एवं उनके नामों में अन्तर प्राप्त होता है। ऐसा कोई पौराणिक विवरण नहीं मिलता जिसमें 'गौ' के प्रत्येक अङ्ग और उससे सम्बन्धित देवों का क्रमवार विवरण

¹⁰ ब्रह्म सूर्यसमं ज्योतिः द्यौः समुद्रसमं सरः। इन्द्रः पृथिव्यौ वर्षीयान् गोस्तु मात्रा न विद्यते।। यजुर्वेद, 23/48

¹¹ धेनूनामस्मि कामधुक। श्रीमद्भगवद्गीता 10/28

¹² अघायतामिप नह्या सुखानि सपत्नेषु वज्रमर्पयैतम्। इन्द्रेण दत्ता प्रथमा शतौदना भ्रातृव्यघ्री यजमानस्य गातुः।। अथर्ववेद, 10/9/1

हो, विभिन्न विवरणों में अलग-अलग ढंग से अङ्गों एवं देवों का सम्बन्ध किया गया है, जैसे महाभारत में विवरण है कि लक्ष्मी ने निवेदन करके गौ के गोबर और मृत्र में निवास का स्थान प्राप्त किया।

'गौ' अपने अनेक रूपों में भारतीय संस्कृति की धुरी के रूप में अवस्थित है। हजारों-लाखों की संख्या में ब्रह्मवेत्ताओं को दान दिये जाने, दिलीप जैसे राजा को वरदान देने वाली, व्रज में कृष्ण के साथ गो-वृन्द का वनचारण, ऋषि वसिष्ठ की निन्दिनी जिसने राजा विश्वामित्र को भी परास्त किया, नचिकेता के पिता वाजस्रवा द्वारा अशक्य गौवों का दान, राम द्वारा त्रित को गौवों का दान आदि अनेक ऐसे प्रसङ्ग हैं जो हमारी संस्कृति को जीवन्त रखे हैं। गौ कृषि, अर्थव्यवस्था और चिकित्सा सभी प्रकार से प्राचीन भारतीय समाज में महत्वपूर्ण रही है।

दूध, दही, घी, गो-मूत्र एवं गोबर के आनुपातिक मिश्रण के पञ्चगव्य से मानव का कल्याण तो होता ही है, गाय के गोबर एवं गोमूत्र से बनी खाद खेत को उर्वर करती थी, जिससे होने वाला अन्नोत्पादन मनुष्य की समृद्धि का आधार था।

गौ और कृषि का अन्योन्याश्रित सम्बन्ध ऋग्वेद-काल से ही चला आ रहा है। 13 मृत गाय के सींग का एक उपयोग सन्दर्भित करना समीचीन होगा। एक नवरात्र के निश्चित तिथि को सींग में गौ का गोबर भर कर पृथ्वी में गाड़ दें और दूसरे नवरात्र के उसी तिथि को निकाल कर खाद के रूप में उसका प्रयोग अपार अन्न उपजाता है। ढेरों मात्रा में रासायनिक खाद की अपेक्षा गो-शृङ्गी खाद की मात्रा अति-अल्प ही बहुत अधिक गुणकारी होती है। गो-मूत्र कीटनाशी औषि एवं बीजोपचार में रूप में भी अति उपयोगी है। गौ के घी और गोबर के उपले से किए गए अग्निहोत्र से पर्यावरण की शुद्धि तथा प्राप्त भस्म से अन्न-भण्डारण के अप्रतिम परिणाम के वैज्ञानिक प्रयोग सिद्ध हुए हैं। 14 दूध और उससे निष्पादित दही एवं घी-बल, आयु तथा बुद्धिवर्धक एवं अन्नोत्पादन आदि गौ से प्राप्त आजीविका के साधन थे। शास्त्रों में इसे ही 'वृत्ति' शब्द से उल्लिखित किया गया है। 15 गौ पृष्टि कारक है तथ लक्ष्मी (धन) का मूल है 16 और अन्न प्राप्ति में कारण है, वह हविष्य देती है। 7

¹³ अक्षेर्मा दीव्यः कृषिमित्वकृषस्य वित्ते रमस्वबहुमन्यमावः तत्र गावः कृतव तत्र जाया तन्मे वि चष्टेसवितायमार्यः।। ऋग्वेद, 10/34/13

¹⁴ दृष्टव्य, जागो किसान जागो, वीरेन्द्र कुमार दूबे, वाराणसी, 2009, पृ. 12-18, 20-23, 25, 27, 35, 42,52

¹⁵ सुवर्णवर्णाः किपलाः प्रजानां वृत्ति धेनवः। वृत्यर्थं सर्वभूतानां तस्माता मातरः स्मृताः।।

^{...}लोकज्येष्ठा लोकवृत्त्यां प्रवृत्ता। महाभारत, अनुशासनपर्व, 77/11, 12, 14, 18 अध्याय 145, पृ. 645

^{16 -} गावः पृष्टिसनातनी। गावो लक्ष्म्यास्तथा मूलम् ... महाभारत, अनुशासनपर्व, 78/6

¹⁷ अन्नं हि परमं गावो देवानां परमं हविः - वही, 78/7

गौ के गोबर एवं मूत्र में लक्ष्मी ने स्वयं तपस्यापूर्वक वर प्राप्ति करके स्थान लिया, ऐसी कथा के लिए महाभारत में पूरा एक सर्ग ही दिया गया है। 18 गौ के दूध-घी से प्रजापालन होता है और उसका पुत्र वृषभ खेती का काम करके धान्य बीज उत्पन्न करता है व बोझा ढोने का कार्य सम्पन्न करता है। 19 गौ का गोबर 'सोने की खान' माना जाता है।

ऐतरेय ब्राह्मण²⁰ में रिहायशी घर (शाला) को अन्यान्य विशेषताओं से युक्त होने के साथ गोमती, घृतवती एवं पयस्वती होने की कामना की गयी है। भागवत पुराण में गो-रक्षा से कृषि और जीवन की रक्षा तथा लोक में सुख-प्राप्ति कही गई है।²¹

गौ अनेक औषधियों की जनक थी। वैदिक परम्परा में जीवन के लिए गो-दुग्ध को सर्वश्रेष्ठ रसायन माना गया है।

प्रवरंजीवनीयं क्षीरयुक्तं रसायनम्।

आज भी गो-दुग्ध एवं गो-घृत के साथ अनेक औषधियाँ प्रयोग में लायी जाती हैं। आयुर्वैदिक औषधियाँ तथा कीटनाशक हमारे काम आते हैं।

औषिध के सन्दर्भ में हम अति आकर्षक दो प्राचीन उदाहरण भागवत पुराण से उद्धृत करना चाहेंगे। पूतना-वध के उपरान्त कृष्ण पर विष के प्रभाव की आशंका से गौ-शाला में उनका प्रथमोपचार किया गया। किसी भी प्रकार की बाधा से रिक्षत होने का स्थान परम्परया गौ-शाला माना जाता था जैसा कि यजुर्वेद के मन्त्रों²² में भी इंङ्गित है 'वज्रं गच्छ गोष्ठानं' (तू गवालों की गोशाला में जा)। विष के प्रभाव को दूर करने के लिए शरीर के चारों ओर गो-पुच्छ घुमाया फिर गो-मूत्र से स्नान कराया और अंगों में गो-रज लगाया तथा रक्षा देवों का नाम लेते हुए बारहों अङ्गों में गोबर लगाया।²³ स्पष्ट ही विष के प्रभाव को समाप्त करने के ये

¹⁸ महाभारत, अनुशासनपर्व, 82

धारयन्ति प्रजाश्चौव पयसा हिवषा तथा। एतासां तनयाश्चापि वृहृषियोगमुपासते।। जनयन्ति च धान्यानि बीजानि विविधानि च। वहन्ति विविधान् भारान् क्षुतृष्णा परिपीडिताः।। वही, अनुशासनपर्व, 83/18-20

²⁰ ऐतरेय ब्राह्मण - 2/3/6

वार्त्तायांसंश्रितस्तातलोकोहि सुखमेधते।। भागवत पुराण, 4/100/48

²² यजुर्वेद-1/25 एवं 26

यशोदा रोहिणीभ्यान्ताः समं बालस्य सर्वतः।
रक्षां विदिधिरे सम्यग्गोपुच्छ भ्रमणादिभिः।।
गोमूत्रेण स्नापियत्वा पुनर्गोरजसार्भकम्।
रक्षां चक्रुश्च शकृता द्वादशाङ्गेषु नामभिः।। भागवत पुराण, दशम स्कन्ध, 6/19-20

उपधान रहे।

गोबर लगा कर स्नान करने का विधान महाभारत में भी दिया है- गोमयेन सदा स्नायात् करीषेचापि संविषेत्।²⁴ ऐसे अन्य उद्धरण भी प्राप्त हैं।

कीट-दंश एवं विष के प्रभाव से बचने के लिए कश्मीर के प्रसिद्ध इतिहासकार कल्हण ने अपनी राजतरङ्गिणी²⁵ में सन्दर्भित किया है कि राजा रणादित्य अपने पूर्व जन्म में गौ के गोबर (अथवा मिट्टी एवं गौ के गोबर का मिश्रण) का शरीर पर लेप लगाने से भौरों के डंक से बचा था।

दूसरे उदाहरण में राम के वन-चारण अविध में भरत को निन्दग्राम में 14 वर्ष की पूरी अविध गो-मूत्र में जौ का दिलया पका कर जीवन निर्वाह का तपपूर्ण दिनचर्या करने वाला कहा गया है- गोमूत्र यावकं श्रुत्वा भ्रातरं वल्कलाम्बरम् (नवम स्कन्ध, 10/34)। इसे सादे भोज्य पदार्थ से भरत को अप्रत्याशित ऊर्जा मिलती रही होगी जिससे तपःपूर्ण जीवन व्यतीत करते हुए उन्होंने बल और शान्ति के साथ प्रतीक्षा की अविध बिताई। महाभारत में तपोमय जीवन के लिए 'ताजा गोमूत्र', 'धारोष्ण दुग्ध', 'सु-उष्ण गोघृत', 'गौ के गोबर से निकले हुए जौ की लप्सी का भक्षण नियत अविध तक व्यवहार में लाने का विधान किया गया है।²⁶

मन और इन्द्रिय के संयम के साथ युधिष्ठिर ने भी गोबर के साथ जौ के कणों का आहार करके समय बिताया था। 27

आयुर्वेद के विभिन्न ग्रन्थों में गौ से प्राप्त दूध, दूध से बना दिध, घृत तथा गो-मूत्र और गोमय वा गोबर के प्रयोग के बहुतेरे सन्दर्भ प्राप्य हैं। ये सभी अपने आप में औषिध होते हुए अनेक औषिधयों के अनुपान रूप में औषिध-प्रयोग को प्रभावी करते हैं।

नव प्रसूता गाय के प्राथमिक दूध का रोग निरोधी गुण सभी स्वीकार करते हैं। रक्ताभ दूध को जमा कर खाया जाता है, जिसे स्थानीय भाषा में इन्नर कहते हैं, उसमें कोलस्ट्राल बहुमात्रा में होता है। ऐसी गाय के दूध के फेनुस को आँखों में लगाने से मोतियाबिन्द कट जाता है और विटामिन 'ए' की मात्रा अधिक होने के कारण दृष्टि तेज हो जाती है।

25 राजतरङ्गिणी 3/396-397

पूयन्ते शकृतां यासां पूतं िकमिधकं ततः।
त्र्यहमुष्णं पिबेन्सूत्रं त्र्यहमुष्णं पिबेत् पयः।।
ग्वामुष्णं पयः पीत्वा त्र्यहमुष्णं घृतं पिबेत्।
त्र्यहमुष्णं घृतं पीत्वा वायुभक्षो भवेत त्र्यहम्।।
निर्हृतैश्च यवैर्गोभिर्मासं प्रश्रितयावकः। अनुशासन पर्व, 69/11, 81/35-36, 39

27 इति नृप सततं गवां प्रदाने यवशकलान् सह गोमयैः पिबानः। अनुशासन पर्व 76/30

²⁴ अनुशासनपर्व, 78/19

पञ्चगव्य दूध, दिध, घृत, गो-मूत्र और गोमय का सानुपातिक मिश्रित रूप है। शब्दचन्द्रिका इसे साधारण रूप से परिभाषित करती है कि- पञ्चगव्यं दिधक्षीरघृतगोमूत्रगोमयैः। किन्तु इसकी रचना के विशिष्ट आनुपातिक परिणाम बताए गए हैं। भारतीय नस्ल की गायों का गोमूत्र प्रतिरोधक क्षमता को 104 प्रतिशत तक अभिवर्धित करता है।

गाय को कष्ट पहुँचाने पर गाय द्वारा कहर ढाने के सन्दर्भ में आईने अकबरी में उल्लिखित अकबर की अनुभव की हुई घटना कि 'पीरपंजाल में यदि वहाँ की पहाड़ी पर किसी घोड़े या गाय को मारा जाता है तो भयंकर तूफान आता है।²⁸ अकबर ने ऐसे तीन बार के अपने अनुभव का जिक्र किया है।

गौ से जुड़े किसी विवेचन की परिणित कृष्ण के नन्दगाँव और व्रज के गो-चारण के सन्दर्भ के बिना अधूरी ही होगी। श्रीमद्भागवत पुराण के दशम स्कन्ध में यह मधुमय सन्दर्भ बहुविध वर्णित है जो परवर्ती विशाल काव्य-साहित्य एवं कला-चित्रण का उपजीव्य है।

भारत की सांस्कृतिक परम्परा के आरम्भिक काल से ही गौ के दैवीय गुणों की पहचान कर ली गई थी। गौ के कायस्थ अङ्ग-प्रत्यङ्ग की भौतिकता से कहीं बहुत ऊपर उठ कर गौ को 'अष्ट्या' करार देते हुए देवताओं से सम्बन्धित किया जाने लगा। कृषि एवं आर्थिक व्यवस्था की धुरी के रूप में उसे इन्द्र तथा विष्णु से सम्बन्धित किया गया। द्यौः, जल, पृथिवी आदि को संरक्षण एवं दूध और उर्वरा प्रदान करनेवाली माना गया। गौ में समस्त देवताओं का वास माना गया-

सर्वे देवाः स्थिता देहे सर्वदेवमयी हि गौ।

गावः प्रतिष्ठां भूतानाम्।29

उसे 'मातरः सर्वभूतानां गावः सर्वसुखप्रदाः'³⁰ एवं 'गावो विश्वस्य मातरः' जैसी अभिव्यक्तियों से समन्वित किया गया। भागवत पुराण³¹ में वह 'लोकमाता' कही गई- शृणु नामानि लोकानां मातृणां शंकराणि च। ... मुनिः क्रोधशा ताम्रा सुरभिः सरमा तिमिः। प्रजा का संरक्षण करने वाली और समस्त लोक को सर्वभयमुक्त करने वाली गौ का विशिष्ट विवरण गोदान के सन्दर्भ में विष्णुधर्म पुराण में प्राप्त होता है।³²

अकबर के समय में भी यह मान्यता थी कि गो-मांस कठिनाई से पचता है और उसे खाने से अनेक

²⁸ एस. जैरेट, भाग 2, कलकत्ता, 1891, पृ. 348, टिप्पणी 1 भी द्रष्टव्य

²⁹ महाभारत, अनुशासन पर्व, 81/12

³⁰ महाभारत, अनुशासन पर्व, 69/7

³¹ भागवत पुराण 6/6/24, 26

³² लोकांस्तु सृजता पूर्वं गावः सृष्टाः स्वयंभुवा। प्रीत्यर्थं सर्वभूतानां तत्मात्ता मातरः स्मृताः।।

मातरः सर्वभूतानांप्रजासंरक्षणे स्मृताः।

ब्रह्मणा लोकसारेण गावः सर्वभयापहाः।। विष्णुधर्म पुराण 59/1 एवं 40

तरह का रोग होता है³³ यहाँ ध्यान देने की बात यह है कि परवर्ती इस्लामी परम्परा में ऐसी बातें स्पष्ट ही 'गौ' के सन्दर्भ में कही गई हैं। 1058-1111 ई. के ईरान के इमाम अल-गजाली ने इह्या-उलूम-उल-दीन (भाग 2, पृ. 23, पंक्ति 17-19) में गो-मांस को 'मर्ज' (रोग) कहते हुए 'दूध' को (सफा यानी 'निरोग') एवं 'घी' को 'दवा' (औषिध) माना है।³⁴

ईसाइयों की परम्परा में डन काउ अपरिमित दूध देने वाली गौ है। हाथी के दाँत जैसे उसके सींग आज भी वारविक केसिल में रखे हैं। अजगव धनुष की रचना के लिए ऐसी बड़ी गो-शृङ्गो का प्रयोग होता रहा होगा। हड़प्पा संस्कृति के वृषभों की विशाल सींगों एवं कुल्ली में अंकित गौ की सींगों से इसका प्रामाण्य भी होता दिखता है। दुरहम वैहृथेडूल की उत्तरी दीवाल पर 18वीं शती का उत्कीर्णित उदाहरण आकर्षक है।

तेहरान में बनी 1969 की दिरउश मेहजुई के निर्देशन की ईरानी फिल्म 'दि काउ' (गाव) मश्त हसन नामक एक प्रामीण की कहानी है जो अपने गौ को जी-जान से मानता और पालता था। गाँव की उस अकेली गौ के कारण उसकी पहचान थी। गाय के प्रति समर्पित भाव का यह एक नए युग का अप्रतिम उदाहरण है।

पौराणिक कथाओं में धेनु पृथ्वी-स्वरूपा है। अधर्म की बाढ़ से त्रस्त होने पर पृथ्वी धेनु-रूप में ही मानव-कल्याण हेतु विष्णु से निवेदनार्थ जाती है। वह निष्काम प्रजनन ऋत् (सत्य) एवं यज्ञ (त्याग) की प्रतीक मातृदेवी है। दिलीप की सेव्य नन्दिनी धरणिस्वरूपा थी।³⁵

राम के राज्य-शासन में भी पृथिवी को गौ रूप में सब-कुछ प्रदान करने वाली वर्णित किया गया है।³⁶ पृथु की कथा के सन्दर्भ में भागवत पुराण पृथिवी को गौ रूप में वर्णित करता है।³⁷

मानव-कल्याण का प्रत्यक्ष रूप गौ का दूध ही है। अन्य समस्त उपादान उसके प्रच्छन्न हैं, जिनसे धन-धान्य और ऐश्वर्य तथा पर्यावरण शुद्ध और शान्त होता है। गो-वंश की जितनी ही संख्यात्मक अभिवृद्धि उतनी ही सम्पन्नता का मानदण्ड। महाभारत में यौधेयों के बहुधान्यक की राजधानी रोहितक 'ततो बहुधनं रम्यं गवाढ्यं धनधान्यवत'³⁸ एवं मत्स्यों के सुसमृद्धस्य सुसंहृतः मत्स्य देश की राजधानी विराट के सन्दर्भ में

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³³ आईने अकबरी, एच. बलॉकमन, भाग 1, पृ. 183

³⁴ द्रष्टव्य, जवाहरलाल नेहरू विश्वविद्यालय के पर्शियन एवं सेंट्रल एशियन स्टडीज विभाग के हाफीज पाशा का लेख, डेकन हेराल्ड, 1 अगस्त 2011

तिवर्त्यराजादियतांदयालुस्तांसौरभेयींसुरिभर्यशोभिः।पयोधरीभूतचतुःसमुद्रांजुगोपगोरूपधरामिवोर्वीम् ।। रघुवंश, 2/3

³⁶ तस्मिन प्रशासित तदा सर्वकामदुघा मही। वाल्मीकीय रामायण, 7/84/7

³⁷ प्रवेपमानाधरणीनिशाम्योदायुधंचतम। भागवत पुराण, 4/17/17

³⁸ महाभारत सभापर्व, 32/3

गोधनं ... गवांशतसहस्राणि³⁹ के उल्लेख ध्यान देने योग्य हैं। मत्स्यदेश का गो-धन एक लाख छाछठ हजार (षष्टिं गवां सहस्राणि) कहा गया है।⁴⁰

गुप्तवंश के महाप्रतापी सम्राट् समुद्रगुप्त (अ)नेक-गो-शतसहस्र-प्रदायिनः (प्रयाग-कौशाम्बी अभिलेख, पंक्ति 25) एवं अनेक गौ हिरण्य कोटि प्रदस्य (नालन्द ताम्राभिलेख, पंक्ति 2 एवं गया ताम्राभिलेख पंक्ति 3)। भारत में गौ की प्रभूत संख्या के स्पष्ट संकेत हैं।

बौद्ध-परम्परा में भी जनपदों की सम्पन्नता के प्रतिमानों में 'गौ' का उल्लेख है- इक्षु-शालि-गौ-मिहषी-सम्पन्नो⁴¹ मथुरा के 'गोवर्द्धन' से हम सभी पिरचित हैं जिसका सम्बन्ध नन्दगाँव और व्रज की सम्पन्नता से जुड़ता ही जुड़ता है। हम यहाँ पूर्वमध्यकालीन इतिहास के एक ऐश्वर्यशाली नगर कान्यकुब्ज का उल्लेख करना चाहेंगे जहाँ गोवर्द्धिनी देवी का मन्दिर था, जिसका उल्लेख पद्म पुराण में आया है,⁴² जो एक प्रसिद्ध गौ-क्षेत्र था जहाँ बड़ी संख्या में गाएँ इकट्ठा होती थीं जनता द्वारा पूजी जाती थीं।⁴³

समुद्रगुप्त के पुत्र चन्द्रगुप्त द्वितीय के समकालीन महाकिव कालिदास ने राजा रघु को घड़े जैसे बड़े-बड़े थनों वाली करोड़ों गायों की सामर्थ्य वाला बताया है।⁴⁴

रघु, नन्दिनी की रक्षा के लिए नियुक्त थे। ब्राह्मण और वेद के साथ गौ की रक्षा राजा का प्रमुख कर्तव्य होता था। शास्त्रों एवं अभिलेखों में ऐसे सन्दर्भ भरे पड़े हैं।

हमारे देश की क्षीर-समुद्र की कल्पना अद्भुत कही जाएगी। सुरभि-निन्दिनी के चार थनों से चार समुद्र क्षीर से भर गए- पयोधरीभूतचत्रूसमुद्राम्। 45 विष्णु का क्रीड़ा-स्थल क्षीर-समुद्र ही है। 46

समस्त प्रजा के पालक वही विष्णु हैं। दूध से जुड़ी ऐसी उदात्त कल्पनाएँ और गो-धन से आप्लावित देश कब और कैसे हीनत्व को प्राप्त हो गया कि हमारी समस्त प्रभूत धन-धान्य की परम्परा काल-कवलित हो गई, इसका भान ही नहीं हुआ।

अभिलेखों के पुरातात्विक प्रमाण मौर्य सम्राट अशोक की धर्म-लिपियाँ, उसी स्थिति का निदर्शन

गोलोके सुप्रसिद्धश्च स च क्षीरसरोवरः।।

गोपिकानाञ्च राधायाः क्रीडावापी बभूव सा। ब्रह्मवैवर्त पुराण, 47/9-11

³⁹ महाभारत विराटपर्व, 30/22, 31/4 एवं 8

⁴⁰ महाभारत, विराटपर्व, 35/5

⁴¹ विनयपिटक, आनन्द स्वरूप मिश्र द्वारा उद्भृत, कन्नौज का इतिहास, लखनऊ, 1990, पृ. 31

⁴² पद्म प्राण, कुमारी खण्ड, कन्यकुब्ज माहात्म्य, 11/15

⁴³ द्रष्टव्य, आनन्द स्वरूप मिश्र, कन्नौज का इतिहास, लखनऊ, 1990, पृ. 59-60 एवं 71

⁴⁴ शक्योऽस्य मन्युर्भवता विनेतुं गाः कोटिशः स्पर्शयता घटोघ्नीः। रघुवंश, 2/49

⁴⁵ कालिदास, रघ्वंश, 2/3

⁴⁶ दैर्घे च विस्तृते चैव परितः शतयोजनम्।

हैं। अशोक के स्तम्भ-लेख पाँचवें में अवध्य जीवों में सभी चतुष्पदों का उल्लेख किया है, जिसमें गौ स्वतः सिम्मिलित है- (ये श्मानि पि जातानि अवध्यानि कटानि ... सवे चतुपदे ये पिटयोगं नो एति न च खादियित, (संस्कृत छाया - मया इमानि अपि जातानि अवध्यानि कृतानि ... सर्वः चतुष्पदः ये प्रतिभोगं न एति न च खाद्यते।)⁴⁷। गौवों को चिह्नित (लाञ्छित) करने के लिए भी विशिष्ट तिथियों पर निषेध जारी किये (गोने नो निलखतिवये ... गोनस लखने नो कटवियं (संस्कृत छाया - गौ न निर्लक्षायितव्यः ... गोः लक्षणं न कर्तव्यम्।)⁴⁸ 19वीं शती में अकबर ने भी गो-वध पर रोक लगाई थी।⁴⁹

कामधेनु, किपला, सुरभी मन्दिरों की मूर्ति बन गई, जीवन्त गौ-दान की परम्परा गुड़, तिल, घृत, जल, क्षीर, दिध, मधु, रस, शर्करा, लवण एवं स्वर्ण की गौ में बदल कर रोली-चन्दन-पृष्प-धूप-दीप एवं यहाँ तक नाट्य रूपित हो गया जिसमें गौ-पुच्छ की दिक्षणा दे कर रस्म पूर्ति रह गई। ग्रन्थों में तत्सम्बन्धी विधि-विधान विस्तारशः दिए गए (दृष्टव्य Sanjay Agarwal, Daan and other Giving Traditions in India: The Forgotten Pot of Gold, Delhi, 2010)। गौ-संवर्धन तो बहुत पीछे छूट गया।

आधुनिक काल में महर्षि दयानन्द सरस्वती ने बीड़ा उठाया। उन्होंने 1880 ई. में गोकरुणानिधि की रचना की, जिसका प्रथम प्रकाशन 1881 ई. (विक्रमी संवत् 1937 चैत्र) में वाराणसी से हुआ। उन्होंने 'गोकृष्यादिरक्षिणीसभा' बनाई। गाय के अर्थशास्त्र का उन्होंने विवेचन समीक्षा-प्रकरण में किया।

गो-रक्षा पर लिखते हुए महात्मा गांधी ने 1921 में लिखा कि गौ-रक्षा मुझे मनुष्य के सारे विकास क्रम में सबसे अलौकिक वस्तु मालूम हुई है। ... गाय को ही यह देवभाव क्यों प्रदान किया गया होगा। हिन्दुस्तान में गाय ही सबसे सच्चा साथी और सबसे बड़ा आधार थी। ⁵⁰ यही हिन्दुस्तान की एक कामधेनु थी। वह सिर्फ दूध ही नहीं देती थी, बल्कि सारी खेती का आधार स्तम्भ थी। ... यह लाखों करोड़ों हिन्दुस्तानियों को पालने वाली माता है। इस गाय की रक्षा करना सारी सृष्टि की रक्षा करना है। ... गो-रक्षा हिन्दू धर्म की दुनिया को दी हुई एक कीमती भेंट है। ⁵¹ काशी हिन्दू विश्वविद्यालय की 1916 ई. में स्थापना के 15 वर्ष बाद कृषि सम्बन्धी शोध कार्यों के लिए रॉयल कमीशन ऑन एग्रीकल्चर की संस्तुति के साथ इंस्टिीच्यूट ऑफ एग्रीकल्चरल रिसर्च की स्थापना 1931 ई. में हुई, जिसके अन्तर्गत 1940 ई. में महामना पं. मदन मोहन मालवीय जी ने सनातनधर्म के नियमों के अनुसार गौ-सेवा के आदर्श के साथ 'बिना लाभ कमाई' के आधार पर 'गो-शाला' स्थापित किया।

गौ माता के प्रति महामना मालवीय की अगाध श्रद्धा थी, उन्होंने अपनी 'आत्मकथा' में लिखा है

⁴⁷ रामपुरवा अभिलेख, पंक्ति 1 एवं 4

⁴⁸ वही, पंक्ति 8-11

⁴⁹ आइने-अकबरी, भाग 2, एस.एच. जैरेट, कलकत्ता, 1891, पृ. 388

⁵⁰ यंग इण्डिया, 6/10/1921, मेरे सपनों का भारत, अहमदाबाद, 1960, पृ. 32

⁵¹ हरिजन सेवक, 21/9/1940, मेरे सपनों के भारत, अहमदाबाद, 1960, पृ. 38

कि उनका 'मामूली' सा घर था। घर में गाय थी, माँ अपने हाथ से उसको सानी चलाती और उसका गोबर उठाती थी।' मालवीय जी का यह कथन 1880 ई. में बी.ए. पास करने के पूर्व का है।⁵²

स्वतन्त्रता प्राप्ति के समय सन् 1947 में गांधी जी ने लिखा था कि हमारे देश में प्रति गौ 2 पौण्ड दूध होता है, उस समय हालैण्ड देश का दुग्ध उत्पादन प्रति गौ 20 पौण्ड सर्वाधिक था।⁵³

हमारे देश में हरियाणा की गौवें अधिक दूध के लिए प्रसिद्ध रही हैं। हिसार के लाला लाजपतराय पशु चिकित्सा एवं पशु विज्ञान विश्वविद्यालय में पिछले 45 वर्षों के अथक प्रयास के परिणामस्वरूप कामधेनु के तर्ज पर 'हरधेनु' नामक गौ की नई नस्ल तैयार की गई है, जो प्रतिदिन 50 से 55 लीटर तक दूध देती है।

कर्नाल डेयरी रिसर्च इंस्टीच्यूट ने एक कदम आगे बढ़ कर 55.9 लीटर प्रतिदिन दूध देने वाली गौ की नस्ल की खोज की है। अभी भी हमारे देश में पौराणिक सुरभी या कामधेनु एवं वैदिक वशा या शतौदना खोजी जानी है। विश्व की सर्वाधिक प्रतिदिन 100 लीटर दूध देने वाली गौ इजराइल देश की अल् अईन डेयरी की पुरस्कृत सर्वोत्तम गौ संख्या- 4307 है।

भारत की 55 से 60 लीटर तक एवं इजराइल की 100 लीटर दूध देने वाली गौवों से इतना तो स्पष्ट है कि वैदिक शतौदना कोई काल्पनिक गौ नहीं थी, बल्कि तत्युगीन एक विशिष्ट गौ रही होगी। सम्पूर्ण सृष्टि का कल्याण करने वाली दैवीय गुणों से सम्पन्न उस गौ के समस्त उत्पाद सम्पूर्ण पर्यावरणिक संचेतना का प्रतिनिधित्व करते हैं।

वैदिक कालीन वशा गौ का विशिष्ट विकसित रूप थी शतौदना गौ, जो सौ व्यक्तियों के लिए भोजन देने में समर्थ थी। बीसवीं शती के प्रथम चरण तक प्रभूत दूध देने वाली भारतीय गाय सन्दर्भ में नहीं है। इस शताब्दी के मध्य एवं उत्तर चरण तक देश में शिशुओं के पोषण के लिए भी जन-सामान्य में दूध की किल्लत थी। शासन की ओर से गो-धन के विकास का प्रयास, बँगलूरु के इम्पीरियल डेयरी इंस्टीच्यूट की स्थापना में दिखता है। भारतीय गौ की पुरा-आनुवंशीय गुणात्मक तत्वों की खोज एवं उसके संवर्धन की आवश्यकता है। भारत की स्वतंत्रता के बाद पशु-वैज्ञानिकों ने प्रयास आरम्भ भी किए, किन्तु अन्तर-जातीय-प्रजनन की प्रक्रिया के माध्यम से संकर जाति केवल एक जीवनकाल तक क्षमता रखती है। अतः आवश्यकता इस बात की है कि वैज्ञानिक मूल भारतीय अनुवंश की खोज करके अनुवंशीय तात्विक गुणों को विकसित करें और वैदिक 'शतौदना' गौ का उपहार राष्ट्र को दे सकें।

⁵² मालवीय जी की आत्मकथा का एक पृष्ठ, सम्मेलन पत्रिका, ... भाग 48, संख्या 2, 34, पृ. 82, श्रद्धांजिल विशेषांक, अंक 25, 1884

⁵³ हरिजन सेवक, 3/8/1947, मेरे सपनों का भारत, अहमदाबाद, 1960, पृ. 39

पर्यावरण संरक्षण : एक दृष्टि

ओमप्रकाश मिश्र1

'पर्यावरण' शब्द पिछले कुछ वर्षों से अत्यन्त महत्वपूर्ण एवं चर्चित हुआ है। हमारी संस्कृति में क्षिति, जल, पावक, गगन, समीर के प्रति अत्यन्त जागरूक भाव आदि काल से रहा है। वैसे आधुनिक विश्व में संयुक्त राष्ट्र संघ द्वारा वर्ष 1972 में विश्व पर्यावरण सम्मेलन आयोजित हुआ था। सामान्यतः 'पर्यावरण' शब्द का अर्थ उनसे होता है जो महत्वपूर्ण तत्व समस्त विश्व को आवरण की भाँति घेरे हुये हैं।

मानव जाति ही पर्यावरण का सबसे अधिक शोषण करने के लिए उत्तरदायी रही है। जैसे-जैसे तथाकथित विकास हुआ, कृषि-क्रांति व औद्योगिक क्रांति आयी, प्रकृति व पर्यावरण का असीमित दायित्व विहीन तरीके से भयंकर शोषण बढ़ता गया।

हजारों वर्षों पूर्व से हमारे वेदों, उपनिषदों, पुराणों और अन्य ग्रन्थों के माध्यम से प्रत्यक्षतः व परोक्षतः ऐसे उद्धरण मिलते हैं जिनसे यह स्पष्ट होता है कि भारतीय संस्कृति, पर्यावरण के प्रति बहुत सचेत थी।

भारतीय संस्कृति की इसी दृष्टि के कारण भारतभूमि के निवासियों में ऐसे संस्कार प्रस्फुटित हो गये जिन्होंने हमारे जीवन-मूल्य पर्यावरण-मित्र की भाँति बनाये। धरती हमारी माता है, गऊ हमारी माता है, तुलसी माता की भाँति पूजनीय है, गंगा हमारी माता है, सारे पर्वत हमारे देवता हैं, सभी पशु पक्षी हमारे किसी देवता के प्रतिनिधि/सहयोगी या स्वयं प्रतीक हैं। हमारी भारतीय संस्कृति में ऐसा माना गया कि मनुष्य का प्रकृति व पर्यावरण के साथ अविभाज्य सम्बन्ध है।

चूँकि हमारी मान्यता रही है कि पृथ्वी, जल, अग्नि, वायु और आकाश पंचतत्वों से सृष्टि का निर्माण हुआ है, इसीलिए हमारी प्राचीन मान्यता है कि पर्यावरण-संतुलन ही समस्त जगत को नियमित रूप से स्वस्थ व विकासमान कर सकता है।

ऋषियों मुनियों ने पर्यावरण संरक्षण की आवश्यकता पर बल दिया था। वेदो में इसके संदर्भ में

पूर्व रेल अधिकारी व पूर्व प्रवक्ता, अर्थशास्त्र विभाग, इलाहाबाद विश्वविद्यालय, प्रयागराज
 66, इरवो संगमवाटिका, देवप्रयागम, झलवा, प्रयागराज उत्तर प्रदेश - पिन - 211015

प्रसंग अनेक स्थलों पर उपलब्ध हैं। ऋग्वेद में यदि अग्नि के रूप व गुणों की व्याख्या है तो यजुर्वेद में वायु के विभिन्न रूपों व कार्यों का वर्णन है। सामवेद का मुख्य तत्व जल है, अथर्ववेद में पृथ्वी तत्व का विशेष वर्णन है। आकाश तत्व का वर्णन तो सभी वेदों में हुआ है।

भारतीय संस्कृति में वेदों का वही महत्व है, जो किसी भवन के निर्माण में भूमि का होता है। वेद, मात्र ग्रन्थ नहीं हैं, वरन् ये जीवन व जीवन से जुड़े लगभग सभी पहलुओं पर मार्ग निर्देशन करते हैं। वेदों के अध्ययन से इतना तो निश्चित स्पष्टता से विदित होता है कि भारतीय संस्कृति के मूल में पर्यावरण कितना महत्वपूर्ण रहा है। इस सन्दर्भ में यजुर्वेद में महत्वपूर्ण सन्दर्भ प्राप्त होता है।

इसमें यह कहा गया है कि द्युलोक में शांति हो, अंतिरक्ष में शांति हो, पृथ्वी पर शांति हो, जल में शांति हो, औषध में शांति हो, वनस्पतियों में शांति हो, विश्व में शांति हो, सभी देवतागणों में शांति हो, ब्रह्म में शांति हो, सब में शांति हो, चारों ओर शांति हो।² द्युलोक से लेकर पृथ्वी के सभी जैविक व अजैविक घटक संतुलन की स्थिति में रहें तभी व्यक्ति शांत एवं संतुलित रह सकता है।

ऋग्वेद में कहा गया है कि जल के किनारे के वृक्ष नहीं काटने चाहिए। ऋग्वेद में ही कहा गया है कि वर्षा से प्राप्त जल उत्तम होता है, क्योंकि वह दिव्य व शुद्ध होता है।

अथर्ववेद के अनुसार, यह विश्व परिधि के सहारे टिका हुआ है, यह परिधि छंदस भी कहलाती है। तीन वस्तुएँ जो इस विश्व को आवृत्त करती हैं- वे हैं आपः यानी जल, वातः अर्थात् वायु और औषधयः यानी पौधे यह जीवन के लिए ऊर्जा देते हैं और इसकी रक्षा करते हैं। वस्तव में ये तीनों मानव के अस्तित्व के लिए आवश्यक है। शास्त्रों में वृक्षों को लगाने और उनके सींचने को एक पुण्य कार्य माना गया है। इसी प्रकार उन्हें काटना पाप कहा गया है। वृक्ष मानव मात्र के लिए प्राणदायक वायु का संचार करते हैं।

उपनिषदों में जल, वायु, पृथ्वी और अंतिरक्ष का वर्णन आया है। छांदोग्य उपनिषद में प्रकृति, पृथ्वी और प्राणि मात्र के अन्तर्सम्बन्धों का वर्णन किया गया है।

चराचर जीवों का सार पृथ्वी है, पृथ्वी का सार जल है, जल का सार वनस्पति है, वनस्पतियों का सार पुरुष है, पुरुष का सार वाक् (शब्द) है। वाक् का सार ऋग्वेद है, ऋग्वेद का सार सामवेद है और सामवेद का सार उद्गीथ जो (पवित्र) ओम है।

² ॐ द्यौः शान्तिरन्तिरक्षं शान्तिःपृथिवी शान्तिरापः शान्तिरोषधयः शान्तिः वनस्पतयः शान्तिर्विश्वेदेवाः शान्तिर्ब्रह्म शान्तिः सर्वं शान्तिः, शान्तिरेवशान्तिः सा मा शान्तिरेधि।। शुक्ल यजुर्वेद 36/17

³ यदर्णसं मोक्षाथा वृक्षः - ऋग्वेद 5/54/6

⁴ अस्माकं वृष्टिर्दिव्या सुपारा - ऋग्वेद 1/152/7

⁵ त्रीणि छन्दासि कवयो वि येतिरे पुरुरूपं दर्शतं विश्वचक्षणम्। आपो वाता ओषधम, स्तान्ये कास्मिन् भुवन आर्पितानि।। अथर्ववेद 18/1/17

⁶ एषां भूतानां पृथिवी रसः पृथिव्या अपो रसः।

"वाल्मीकि रामायण में राम वनगमन के समय, प्राकृतिक दृश्य घने जंगलों, जलाशयों आदि का मनोहारी चित्रण मिलता है। राम चिरतमानस के लगभग सभी कांडों में प्रकृति का चित्रण मिलता है। वन, बाग, उपवन, वाटिका, हिरत भूमि आदि प्राकृतिक सौन्दर्य का श्रेष्ठ चित्रण मिलता है। वस्तुतः भारतीय जीवन-दृष्टि में खंड-खंड करके नहीं वरन् अखिल विश्व को एकात्म विश्व-दृष्टि की मान्यता प्रदान की गयी है। हमने प्रकृति की गोद को मातृत्व व देवत्व से जोड़ा है। हम प्रकृति के प्रत्येक रूप को पूजते हैं। हम प्रकृति को मित्र मानते हैं, शत्रुवत् नहीं समझते। हमारी प्रौद्योगिकी, प्रकृति का नाश व शोषण नहीं करती है वरन उसका संरक्षण करती है। परन्तु हमारी प्राचीन जीवन शैली, पाश्चात्य जगत के प्रभाव के कारण, धीरे-धीरे विकृत होती गयी। संयम के साथ जीवन की परम्परा के स्थान पर, भोगवादी संस्कृति अपनायी गयी। अनावश्यक ऊर्जा का उपयोग, नकली व दिखावटी जीवन-शैली ने प्राकृतिक संसाधनों के दोहन के स्थान पर, उनके शोषण की ओर उन्मुख किया।

प्रकृति के अन्धाधुन्ध शोषण के दुष्परिणाम हमारे सामने हैं। विश्व स्वास्थ्य संगठन की इन्टरनेशनल एजेन्सी के आँकड़ों के अनुसार भारत विश्व के सर्वाधिक दस वायु-प्रदूषित देशों में से एक है एवं विश्व के सर्वाधिक प्रदूषित 10 शहरों में से 6 शहर भारत में हैं। इसमें भारत के ग्वालियर, प्रयागराज, रायपुर, दिल्ली, लुधियाना और खन्ना शहर हैं।

अन्तर्राष्ट्रीय शोध संस्थान, ग्लोबल फुटप्रिन्ट नेटवर्क ने संसाधनों के अपरिमित शोषण का अध्ययन एवं विश्लेषण करके यह पाया कि 2018 में पृथ्वी द्वारा उत्पादित जिन संसाधनों का हमें 365 दिनों में उपभोग करना था, उन्हें हमने 212 दिन अर्थात 1 अगस्त 2018 को ही खत्म कर दिया। अतः अब बचे 153 दिन हम संसाधनों का अति दोहन हुआ।

ये अध्ययन व आँकड़े चिन्ताजनक स्थिति की तरफ इंगित करते हैं। समस्त विश्व में प्रकृति के साथ भयावह छेड़छाड़, असीमित शोषण एवं ''यूज एवं थ्रो'' की संस्कृति इसमें और भयंकरता प्रस्तुत करती है।

जल के संसाधनों पर किसी वैज्ञानिक दृष्टि का अभाव, जनसंख्या वृद्धि की समस्या, (जो अब भारत में जनसंख्या विस्फोट के रूप में हमारे समक्ष है), जंगलों में आग रोकने की कोई उचित व्यवस्था का न होना, अनावश्यक उपभोग, प्लास्टिक का उपयोग, प्रदर्शन प्रभाव (डिमान्सट्रेशन इफेक्ट) आदि कारणों से हमारे समक्ष गम्भीर संकट उत्पन्न हो गया है। जैव विविधता को भी खतरा है, जो प्रकृति का एक स्वाभाविक चक्र था, उसे नष्ट किया जा रहा है। रेटिंग एजेन्सी - मूडीज का कहना है कि ग्लोबल वार्मिंग को लेकर

अपामोषधयो रस ओषधीनां पुरुषो रसः

पुरुषस्य वाग्रसो वाच ऋग्रस ऋचः साम रसः

साम्र उद्गीथो रसः।। छन्दोग्य उपनिषद् 1/1/2

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चिन्ता भी बढ़ गयी है। सबसे चिन्ता जनक बात यह है कि मेढ़कों, कीट-पतंगों, सरीसृपों, स्तनधारी जीवों के अस्तित्व पर खतरा मंडराने लगा है। वन्य जीवों की इन दुर्लभ प्रजातियों के साथ पेड़-पौधों व वनस्पतियों की अनेक प्रजातियों के नष्ट होने का अनुमान है।

उत्पादन की तकनीक भी पर्यावरण के लिए अत्यन्त महत्वपूर्ण होती है। पूँजी प्रधान तकनीक से एक तरफ बेरोजगारी तो बढ़ती है, दूसरी तरफ प्राकृतिक संसाधनों का अत्यधिक शोषण भी करती है। तथाकथित औद्योगिक-क्रान्ति के कारण औद्योगिक कचरा बहुत मात्रा में निकल रहा है, जिससे वातावरण प्रदूषित हो रहा है।

किसी भी देश की अर्थव्यवस्था में उत्पादन तथा उपभोग अत्यन्त महत्वपूर्ण होते हैं। आवश्यकता इस बात की है कि हम अपनी भारतीय परम्पराओं के अनुरूप, संयमित उपभोग करें तथा उत्पादन की वंशज तकनीक (जो श्रम प्रधान तकनीक है) का अधिकाधिक प्रयोग करें।

हम ऋषि-मुनियों, त्यागी पुरुषों की सन्तानें हैं। लुटेरों, शोषकों से हमारा मेल नहीं। आचार-विचार में हमें सन्तोष का ध्यान रखना चाहिए। पूँजीवादी उत्पादन प्रणाली से बचना चाहिए। भारतीय मनीषियों, दीनदयाल उपाध्याय और महात्मा गांधी की विचारधारा हमारे लिए उपभोग व उत्पादन के साथ पर्यावरण को संरक्षित करने में सहायक होगी। The Journal of Indian Thought and Policy Research is an official organ of Arundhati Vashistha Anusandhan Peeth, Prayagraj (Bharat). It is dedicated to encourage the studies rooted in Bharatiya cultural ethos that may enable the fostering of Integral, Holistic and Indigenous values in our thought and policies. The Journal also welcomes critical thoughts and approaches from the West but discourages an unwise aping of the West at the cost of the better indigenous approaches in our ancient thoughts. The Journal has been motivated by zeal to have the best of our social, cultural, and political heritage as the bedrock of modern social, political, religious and cultural life of an Indian. It publishes both the invited and submitted papers in Hindi and English. The papers in the Journal may belong to almost every discipline that touches on human life and is a matter of policy for the Government of India. The prospective contributors are requested to select such subjects/topics for their research papers as have a direct relation with the Indian Thought and Policy in keeping with the aims and objectives of the Journal.

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विदेशी चिंतन हमारी चिकित्सा, शिक्षा एवं कृषि पद्धित सब पर प्रभावी है। स्वदेशी एक दूर की गुहार बन कर रह गई है। प्राचीन काल से हमारे मनीषियों को चिकित्सा शास्त्र के क्षेत्र में अद्वितीय ज्ञान रहा है, किन्तु पाश्चात्य चिकित्सा के प्रवाह में हम अपनी श्रेष्ठ स्वदेशी चिकित्सा पद्धित को दुर्लक्ष्य कर दिए। गौ का हमारे चिकित्सा शास्त्र, कृषि एवं अर्थव्यवस्था में अद्भुत योगदान रहा है, किन्तु दुर्भाग्य है कि आज उनकी लाखों की संख्या में हत्या हो रही है। पंचगव्य के महान् गुण जो भारतीय गाय में हमें प्राप्त हैं, उनसे हम अनिभन्न हैं। पिश्चम से आयातित कृषि नीति हमारी भूमि को बंजर बना रही है। संकर बीज हमारी फसलों को प्रभावित कर रहे हैं। आज इन सभी विषयों पर हमें गंभीर विचार एवं कार्य करने की आवश्यकता है।

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