



Invited Article

Exploring insights towards definition and laws of health in Ayurveda: Global health perspective

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Abstract

The current healthcare system is focused on disease management. Our current approach to treatment begins only after the diagnosis, and then attempts to treat the symptoms and prevent the progression. Despite increased global healthcare spending, there has been an increasing incidence, and severity of diseases pointing to impaired health of the populace. This progressive deterioration in general health has created an unsustainable increase in healthcare costs that has hampered the economy. Much of the rising costs in healthcare are secondary to treating the progression of preventable diseases and focus on creating new treatments. There has been an ongoing discussion of incorporating a “defense” or prevention as part of our health system. However, there are few established guidelines beyond tactical use of vaccination in known infectious diseases and screening for chronic diseases and cancers. Ayurveda has the core competency and strategy for prevention of disease. Sushruta has propounded the laws of health, which are unknown to the current healthcare system. This article describes these laws and strategic combination of Ayurveda (defense) and modern medicine (offense) to create a complete healthcare system. This system is called Symbiohealth and is potentially more effective, less expensive, less toxic and creates a healthier society.

Key words: Allopathy, Ayurveda, disease, health, healthcare, prevention, Symbiohealth

Introduction

Having practiced modern medicine for many years in the field of rheumatology, I have the views and opinions on healthcare similar to those of any experienced physician in my field of practice. But when I had a heart attack a few years back, I found myself in the position of the patient. Since then, an internal dialogue has been going on between the patient and the doctor within me.

A question that my “patient self” asks my “physician self” is, as a modern medicine physician what can you do at the fundamental level to help your patients?

Doctor: We can ask four questions leading to the diagnosis, etiology, pathology, pathophysiology and treatment of the disease afflicting the patient.

Patient: In other words, you find the disease and try to remove it? This seems like an offense strategy. What do you do to prevent disease, or what is your defense strategy?

Doctor: In the case of known infectious diseases, we create vaccines and in certain diseases where the cause is not known, we

identify the factors contribute to disease process and recommend removing them, such as diet and exercise in heart disease.

Patient: So, your defense strategy is only against diseases where the cause is known? That does not seem like a proactive defense strategy, but more like a reactive tactic. In order to have a good defense strategy you have to ask different set of questions, such as why the majority of population does not have a specific disease most of the time? What is health and how it can be protected, enhanced, and rejuvenated?

Doctor: That makes sense!

Patient: Doctor, are there any laws of health?

Doctor: I don't know. I have not read anywhere.

Patient: After all, when Newton discovered the laws of gravity – they have always existed and exhibited a particular pattern. There must be undescribed laws of health, don't you think?

Doctor: Hmmm... And so the dialogue continues.

I started to ask the question, what is health?

Modern medicine healthcare providers understand health as the “absence of disease”. The World Health Organization (WHO) uses a more holistic view of health; “state of complete physical, mental and social well-being

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and not merely absence of disease or infirmity.”^[1] After a “global conversation” and a 2 days meeting in Netherlands in 2009, a group of healthcare academicians, practitioners, and administrators proposed a new definition of health as “ability to adapt and self manage in the face of social, physical, and emotional challenges.” It was also observed that WHO definition has “unintentionally contributed to medicalisation of society, as more and more human characteristics are recruited as risk factors for disease and it minimizes the role of the human capacity to cope autonomously with life’s ever changing physical, emotional, and social challenges and to function with fulfilment and a feeling of well being with a chronic disease and disability.”^[2,3] The definition of health should be specific, clear and should guide the healthcare provider how to achieve it. Between the period of 1200 BC - 600 BC, Sushruta, a great surgeon and teacher of Ayurveda^[4] defined health as “a state of equilibrium of *Tridosha* (fundamental physiological governing principles of the body), *Agni* (metabolic and digestive processes) and *Dhatu* (principles that uphold the formation of body tissues). Waste products are excreted well. The sense organs, mind and the soul are in a state of bliss.”

A careful look at the Ayurvedic definition reveals that this definition not only defines health but also includes a path to achieve it.

I call these five laws of health, and have enumerated them below:

First law

Connection to the source (consciousness), *Indriya* or sensory faculties (vision, hearing, smell, taste and touch) and psyche should be working well in coordination with body and the person is in a state of bliss. This is achieved by meditation, *Pranayama* (disciplined breathing) and Yoga exercise.

Meditation

According to National Institute of Health meditation may reduce activity in the sympathetic nervous system (fight-or-flight response) and increase activity in the parasympathetic nervous system (heart rate, breathing and digestion), resulting in a variety of medical benefits.^[5]

Pranayama

Breath regulates systems of the body and slow deep breathing cleans out the system and prolongs life.^[6] The practice of *Pranayama* has been shown to reduce the frequency of asthma attacks,^[7] increase vital capacity of lungs, reduce cholesterol, lower blood pressure, slow down heart rate and regulate adrenal cortical functions.^[8] All of this increases immune system function.

Yogic Asanas or exercise

The amount of exercise needed by an individual depends upon the psycho-physiological constitution or *Prakriti* of a person and season of the year. Many scientific studies support the health benefits of regular moderate exercise or Yoga.^[9]

Second law

Equilibrium of the three *Doshas* is the second requirement of health. The *Doshas* are fundamental physiological governing principles of the body and are described in further detail later.

The equilibrium is achieved by daily and seasonal purification of excessive *Dosha*.

Third law

Equilibrium of *Agni* (responsible for digestion, metabolism and transformation) is third requirement of health. Most of the disease states are from decreased *Agni* (*Mandagni*). *Agni* is stimulated by:

Discipline in eating guided by state of physiology and disorders in system or *Prakriti* (body type). By eating warm, light and fresh food when hungry. Stimulation of *Agni* by herbs like ginger and *Panchkola*. Ayurveda describes diet and nutrition covering the taste, quality of food, time of the day and season and state of body physiology.

Digestive stimulants help in digestion of food and *Ama* (partially digested food and toxins).

Fourth law

All seven *Dhatus* or principles that uphold the formation of body tissues with their subtypes (*Upadhatus*) need to be in balanced state. *Dhatu* potentiation and quality improvement is done by *Rasayana* (rejuvenation) treatments, which are:

- Conscious eating (*Ahar Vidhi Visheshayatana*)
- Behavioral (*Achar Rasayana*)
- Anti aging and immune enhancing preparations (*Oushadh Rasayana*)
- Purification therapies (*Panchkarma*).

Fifth law

Waste products of digestion and metabolism at various levels be well excreted.

- Avoid suppression of natural urges
- Evacuate and clean body cavities regularly.

The above five methods not only help in their specific category but also reinforce all others. For example, Meditation, *Pranayama* and Yoga, helps in balancing the *Doshas*, *Agni*, *Dhatus* and excretion of waste products.

Establishing a state of equilibrium in the body, as described by the laws of health, and in the universe is a key element in achieving perfect health.

As a matter of fact, Ayurveda begins the study of health with consciousness and takes the knowledge-seeker through the aforementioned Laws of Health, while also describing a comprehensive lifestyle to follow these laws. Ayurveda, therefore, provides an excellent defense strategy. On the other hand, modern medicine starts from conception of fetus and addresses symptoms of disease. It has a comprehensive method of identifying and treating a disease, but not preventing it.

During this period, I also started to identify various phenomena in life where there is duality, for example duality in thinking is reflected in right or left-brain persona. Left brain thinking is linear with narrow focus of attention, articulate, good in arguments, attention to detail, narrow cause and effect relationship, quick results in the fast pace life of today. On the other hand, right brain thinkers possess broad and sustained attention, are alert and connected, are emotional, use metaphors (and artistic expressions), and are generally not

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argumentative.^[10] Most of us have become left brain thinkers since the time of Isaac Newton. Duality is also observed in vision (central and peripheral vision), physics (Newtonian vs. Quantum) and personal relationship (man and woman).

Duality is also present in medicine. I view this duality as the offense (treatment) and defense (or preventative) approaches to health. The current system of medicine takes a predominantly offensive approach to healthcare.

Over the last 50 years, there has been an increasing incidence, frequency and severity of chronic diseases pointing to impaired health of the populace.^[11] This progressive deterioration in general health has created unsustainable increase in healthcare costs that has hampered the economy. There has also been impaired health of the planet with environmental degradation. In the recent years, there have been efforts to improve the environment or the health of the planet. It has faced opposition because of prohibitive cost, myopic thinking and the inability to comprehend the problem. Human beings are a microcosm of the planet^[12] and exhibit holographic phenomenon.^[13] Improvement in our health is crucial to the improvement of the planet's health [Figure 1].

According to Ayurveda, the evolution starts with consciousness creating five elements; space, air, fire, water, and earth. These five elements in different combinations create the three *Doshas*. These *Doshas* are fundamental physiological governing principle of the body. Each person is born with unique combination of these three *Doshas* called *Garbhaj Prakriti*, which remains fixed for life. This is compared to modern science where each person is born with unique set of genetic polymorphisms. The effect of environment, food, and lifestyle alteration and stress can lead to disequilibrium of *Dosha* (*Jataj Prakriti*). When there is too much alteration of *Dosha*, pathology or *Vikruti* occur causing diseases, if not checked. Parallels to this concept are being studied in basic science laboratories Epigenetic alterations can turn on or off certain genes, in response to the environment, diet, and lifestyle-with consequences of aging and diseases.^[14] If good genes are suppressed and bad genes are activated, disease occurs. However if good genes are activated and bad genes are suppressed, health occurs [Figure 2]. This process has been described in cancer^[15] and various other autoimmune diseases^[16] and aging.^[17]

It seems both systems (Ayurveda and modern medicine) address the same issue, but at two different levels of physiology-while Ayurveda describes a disease at the phenotypic level, modern medicine explains it at the genetic level. Ayurvedic scholars, thousands of years ago, lacked current technology and microscopy to identify genes. They bypassed that handicap by using phenotype to provide personalized care to all patients. Let us see some of the phenomenon where this overlapping of thinking between Ayurveda and modern science is seen:

- Ayurveda heralded the concept of personalized medicine in its identification of unique body type or *Prakriti* of a person. *Prakriti* is phenotype of unique genetic sequence. On identification of *Prakriti* and its alteration (*Vikriti*) physician knows what disease a person is predisposed to and is able to diagnose the disease in early stages before the disease manifestations begin and can provide Ayurvedic treatments, diet, exercise and other lifestyle measures

Today modern medicine is just beginning to explore how to administer treatments and drugs that are highly tailored to an individual's genetic and chemical makeup and lifestyle

There is research supporting the role of *Dosha* or *Prakriti* in relation to disease. Recent studies have shown that different teams of Ayurvedic practitioners can consistently identify a combination of *Dosha* in a person. In addition, surveys created by an Ayurvedic team could predict patient's illnesses by identifying imbalances in *Doshas*^[18]

- Ayurveda described the concept of genetics thousands of years ago. The great Ayurvedic practitioner Charaka referred in 1000 BC to "*Bijabhagavayava*" as the combination of the *Bija* (what we know today as the male sperm and female ovum), *Bhaga* (what we today call the mitochondria) and *Avayava* is the DNA.^[19] He wrote of the imbalances that result when the parents have *Dosha* imbalances and pass along diseases to their children
- Ayurveda identified the interconnectedness between the mind and the body and their reciprocal effect on health when the two are not in balance

A key factor of Ayurveda is the idea that the mind and the body are not separate; what happens to one influences

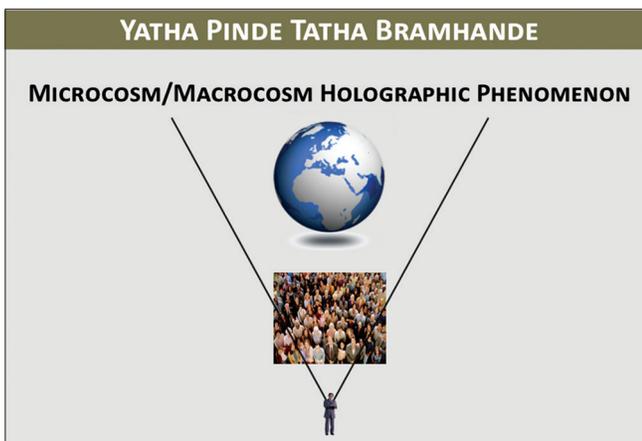


Figure 1: Microcosm / Macrocosm holographic phenomenon

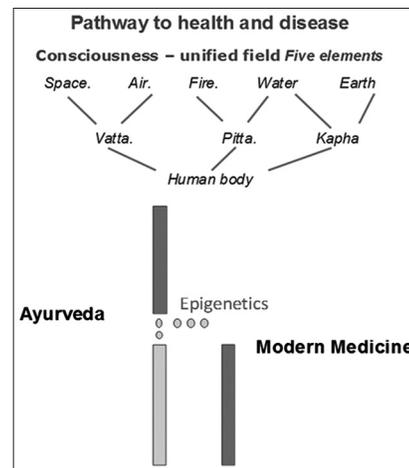


Figure 2: Pathway to health and disease

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the other. There can be no mental health without physical health and vice versa, and one's entire life and lifestyle must be in harmony before one can truly be called healthy

Recent medical studies are finally connecting the impact of psychological states such as anxiety and depression on physical diseases. There is also comprehensive evidence that personality traits – such as resiliency or optimism – can have profound impacts on longevity and immunity^[20]

- Charaka,^[21] in context of *Krimi* (parasites), discussed about the concept of macro and micro-organisms divided into two categories viz. pathogenic and nonpathogenic.^[22,23] These two categories of parasites seems to simulate with “friendly” and “unfriendly” bacteria. Evidence is emerging that bacterial flora is linked to increased incidence of chronic and autoimmune disease.^[24] Furthermore, overuse of antibiotics can alter the gut flora, causing irregularities in gut function, including diarrhea and constipation
- The emerging field of epigenetic, or the study of why certain genes “turn on” or “turn off,” is beginning to look at what Ayurveda described thousands of years ago. In other words, genes do not necessarily dictate our destinies. Lifestyle changes including diet and removing stressors can help patients fight back against genetic disorders. Epigenetics can control the expression of genes. It is like a charioteer controls the horses of a chariot or like software of a computer

It is thought that lifestyle, psychological states, and one's physical environment alter or maintain gene expression levels and patterns

An unhealthy lifestyle “turns on” the bad genes through an epigenetic process, which in turn stimulates the excessive formation of pro-inflammatory cytokines or other disease-producing proteins. We have medicines that block the effect of these cytokines, but we don't know how to stop their formation. And medicines often have toxic effects

But if we can figure out what factors can “turn on” the good genes and “turn off” the bad genes, then we can prevent disease. Recent studies suggest a link between Ayurvedic *Tridosha* principles and phenotypes^[25]

- Ayurveda can also better inform us about what causes diseases, even before patients become symptomatic

In Ayurveda, there are six stages of disease: *Sanchaya* (accumulation), *Prakopa* (aggravation), *Prasara* (dissemination), *Sthana Samshraya* (localization), *Vyakti* (disruption), and *Bheda* (manifestation). There are no symptoms or vague complaints during the first four stages. If a patient comes to a doctor during the first four stages, the patient is often labelled a hypochondriac, as modern medicine frequently does not have screening techniques to identify early stages of disease.

Dual Healthcare Strategy

A common question asked is “Are you talking about alternative or complementary medicine?” The answer is no. Currently modern medicine, or offensive strategy, providers are looking

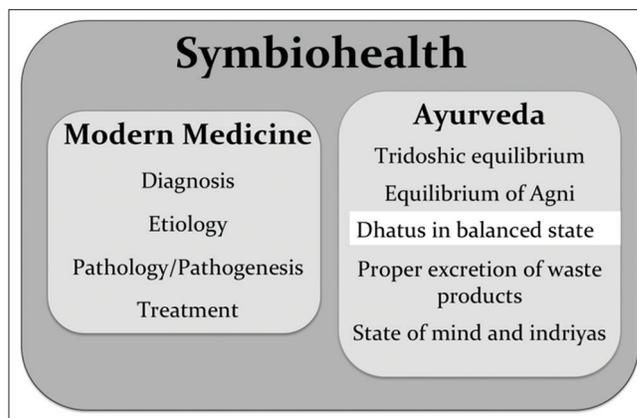


Figure 3: Symbiohealth

for treatments that are less toxic and/or more effective for conditions where there is no current treatment available. This article seeks to provide an answer to their search. The proposal is a healthcare system where offense and defense strategy are used based upon the need of the individual. A person without disease does not need any treatment but should prepare himself to protect his body from disease. However, if disease occurs, an offense strategy will be utilized to treat the disease symptoms and eradicate the cause of the disease. In addition, an ongoing defense strategy will lessen the morbidity and mortality secondary to the disease. While there is dialogue about a defensive approach within the modern medicine community, there are very few guidelines and research available to both doctors and patients. However, in Ayurveda there is comprehensive defense strategy.

Sushruta described the traits of health between the period of 1200 BC - 600 BC^[4] and Ayurveda provides ways to achieve that. These laws should be debated and tested with the same rigor applied to modern science. A physician should be able to identify any disequilibrium in the patient's physiology, guide the patient to re-establish equilibrium and simultaneously identify and treat disease. This combination of defense and offense strategy can provide the best and most cost-effective outcome. This system is called Symbiohealth [Figure 3]. As discussed earlier modern medicine physician tries to answer four questions leading to diagnosis, etiology, pathology and pathophysiology and treatment to help patients with disease. Symbiohealth practicing physicians tries to answer the four questions for treatment of disease and five more questions for prevention of disease.

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हिन्दी सारांश

विश्व स्वास्थ्य दृष्टिकोन से आयुर्वेद के स्वास्थ्य सिद्धान्तों और परिभाषा का अवलोकन

गोपाल बसिष्ट

आजकल की चिकित्सा पद्धति रोग निवारण की ओर केन्द्रित है। हमारा ध्येय रोग की परीक्षा और उसकी चिकित्सा बन कर रह गया है। विश्व की एक बड़ी पूँजी चिकित्सा हेतु व्यय की जा रही है, इसके बावजूद नये रोगों के उत्पन्न होने और उनकी चिकित्सा पर काबू नहीं पाया जा रहा है। गिरते हुए स्वास्थ्य को देखते हुए बहुतसी धनराशी खर्च की जा रही है जो कि विश्व की अर्थव्यवस्था को खराब कर रही है। व्याधी रोकथाम पद्धतियों का चिकित्सा में शामिल करना आज कल चर्चा का विषय है। आयुर्वेद में व्याधि को रोकना एक मूल उद्देश्य है। सुश्रुत ने जिन चिकित्सा सिद्धान्तों का वर्णन किया है वो आधुनिक चिकित्सा पद्धति में अनभिन्न है। इस शोध पत्र में आयुर्वेद और आधुनिक चिकित्सा पद्धति के सामंजस्य से सम्पूर्ण चिकित्सा प्रणाली के रूप में बताया गया है। इस पद्धति को "सिंबायो हेल्थ" का नाम दिया गया है जो कि काफी उपयोगी, किफायती है और एक स्वस्थ समाज को बनाने में सहायक है।