

What is ayurvedic health care and how is it applicable to the Modern Day?

Farah M Shroff*

Department of Family Practice, University of British Columbia, School of Population and Public Health, Vancouver BC, Canada

Abstract

Ayurveda is the world's oldest recorded system of health care and it is still being practiced today. It has influenced many other systems of medicine within and outside India, such as Traditional Chinese Medicine, Siddha, Unani and various types of massage therapy. India, the birthplace of Ayurveda, is experiencing a renaissance of this ancient system of health promotion, disease prevention and treatment, partly as people outside of India show interest in the resurgence of indigenous knowledge that has transformative potential to heal mental and physical ailments. This paper seeks to understand the philosophical worldview of ayurvedic medicine and its relevance to health promotion and disease prevention with an aim to illustrate its depth of understanding of the human mind and body. Ayurveda is a Hindu system of medicine with its roots in India. It is 5000-6000 years old and is thought to have originated by rishis—wise, ancient people. Ayurvedic health care concentrates on the health and well-being of the individual as a whole, and as a member of society. Principles of health promotion and disease prevention are discussed in this paper. Part of the paper focuses on nutrition, a central aspect of Ayurveda. The kitchen is the pharmacy and the pharmacy is the kitchen—is a well-known tenet of Ayurveda and it is explained here. Overall, Ayurveda has great potential to be revived for modern applications all over the world, particularly if more research is done on it.

Ayurveda is a Sanskrit word which literally translates as: ayus or ayur meaning life, and veda meaning science or knowledge, further, uncreated knowledge, knowing, super-sensuous wisdom, and secondarily it refers to the books called the Vedas. Knowledge has a two-fold meaning. "The first is derived from the sense-organs and corroborated by varied evidence based upon the experiences of the sense-organs". From this knowledge comes the physical sciences. The second type of knowledge is "transcendent and is realized through the mental and spiritual discipline of yoga". The latter is the subject of the Vedas. Ayurveda is thus a science of life, a system of health and medicine which aims to assist people in living a healthy life. It provides knowledge of how to live (naturally).

Most distinct about ayurvedic medicine is its roots in peaceful, spiritual concepts which connect it to a larger philosophy and way of life. The history of ayurvedic medicine is quite different from the history of other systems of medicine, which are rooted in early capitalism and war. Ayurveda is considered to be 5000-6000 years old. Archaeological findings at Mohenjadaro in Sindh and at Harappa in Punjab (approximately 3000 years old) reveal a high level of social sanitation, hygiene and various therapeutic ayurvedic substances that were used by people in these areas.

Keywords: Ayurvedic medicine, Holistic medicine, Disease prevention, Yoga, Health promotion.

Accepted on September 31, 2017

Introduction

A brief history of Ayurveda

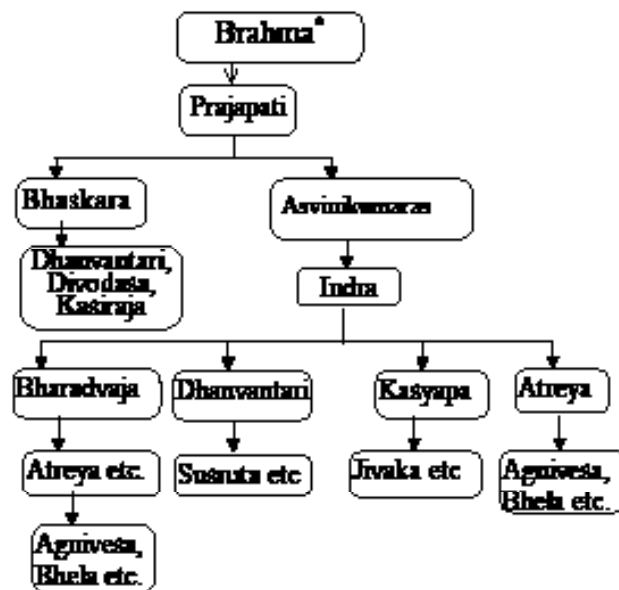
There are two phases of Hindu medicine: the Vedic (1500 B.C.E.) and the post-Vedic (600 B.C.E.). Some scholars consider three phases, including the pre-Vedic, or ancient, period. The pre-Vedic period covers the time before the emergence of the Vedas, including prehistory and protohistory including the Indus valley civilization [1-4]. Figure 1 depicts the Hindu foundations of Ayurveda.

Mogul rule in India did not create negative conditions for the development of ayurvedic medicine [3]. European colonialism and neo-colonialism, however, have had devastating impacts

on ayurvedic research, and there is currently a marked lack of ayurvedic research focused on modern health problems. Ayurvedic practitioners and clients resisted the destruction of ayurvedic medicine, and it continues to be the most widely used system of medicine in India today, particularly amongst rural people.

Literature Review

India is medically a pluralistic society. Homeopathy, siddha, unani, Ayurveda and allopathy co-exist (although with different levels of power) within this nation of over a billion people and non-allopathic systems of health care are making steady inroads [5]. In Bombay, Calcutta, Delhi and Madras,



* Brahma is a "state of mind" that is completely free of limitations such as ego, greed, avice and so forth.

Figure 1. Origins of Ayurvedic knowledge (Shankar in 1995).

the homeopath's office may be adjacent to the allopathic hospital, which may be a few blocks from the nearest vaidya's office. This medical pluralism is one of the biggest lessons the world could learn from India. It is not a structural pluralism-in which power is shared equitably between different systems of medicine-for allopathy is the dominant system of medicine, in terms of the amount of funding it receives. Health policy in India does reflect medical pluralism, however, and even though the policy is largely not implemented (in the sense that economic resources are not distributed equally to all systems of medicine), its existence is a step forward for the recognition of diversity in medical choice.

The majority of the Indian population has employed ayurvedic health care for hundreds of years. Despite several invasions of India, Ayurveda has survived, although in changed form, for a number of reasons. Firstly, it is an effective system of health promotion, disease prevention and treatment. Secondly, most vaidyas are geographically located near the majority of the populace-in villages. Thirdly, practitioners tend to be members of the local community, thus sharing many of the cultural values of the people. It varies from locale to locale, but until recently, most vaidyas were from the elite Brahmin caste, and were usually in highly respected positions. Fourth, it is connected to the cosmology of the Indian people, emanating from the same root. Many people tend to implicitly understand and trust ayurvedic remedies and suggestions [6]. Fifth, ayurvedic consultations traditionally do not cost more than clients can reasonably afford, though there have always been exceptions, especially for virilization therapies. And lastly, ayurvedic treatments, when properly employed, do not usually produce harsh side effects.

This system of medicine has been adapted to many parts of the world, including Tibet, Thailand and other Central Asian nations, Indonesia, Indo-China and Mongolia.

Ayurvedic texts and sources: The insider/outsider dilemma

The main ayurvedic texts are The Caraka Samhita and The Sushruta Samhita. Both samhitas were written on palm leaves. Sushruta was a surgeon and his treatise deals mostly with surgical medicine. Caraka was a general physician and his treatise is about general medicine. These texts are thousands of years old and are still considered the most authoritative original texts. Some critics argue that these texts are not preserved in their original form and have been revised by several others [7]. Like all historical documents, these may be flawed. More important than the original knowledge is the salience of the knowledge and the latter is the subject of this article. A bountiful collection of other writings exists, however, from the perspective of Indians and foreigners. Some foreigners write from their perspective, and in some cases, document ayurvedic concepts incorrectly. They often write for a European/descended audience which knows virtually nothing about Ayurveda. Some of the writings thus try to 'westernize' ayurvedic concepts. On the contrary, most Indian based writers often assume the reader has an understanding of the basic Hindu concepts. Some of these writings include caste, class and sexist interpretations of Ayurveda, which also occurs in the writings by 'outsiders'.

None of the sources are thus flawless, whether written by outsiders or insiders. I have chosen to focus more on the writings of insiders as I am trying to understand Ayurveda from an Indian view. Heyn [8] notes that there are two types of current ayurvedic literature: that which adheres strictly to the classical concepts, and that which determines the validity of ayurvedic theory under the test of allopathic proof. She makes a case for the former as more authentic and less diluted. Like Heyn, I have chosen to understand Ayurveda more from the perspective of the 'purists' so that the fundamental understandings are 'correct' and I may thus make my own conclusions from this genuine

theoretical view. Some of this theory has been written by non-Indians, such as Birgit Heyn, Robert Svoboda and others.

Aims of Ayurveda

Ayurveda has two basic aims: First, to preserve the health of healthy people and to help them attain the four principle aims of life (virtue, purpose or wealth, pleasure, and release or liberation from cycle of rebirth); second, to treat illness and disease [9]. Thus, the ayurvedic definition of health by Sushruta: One whose doshas are in balance, whose appetite is good, whose dhatus are functioning normally, whose malas^c are in balance, and whose physiology, mind and senses are always full of bliss, is called a healthy person [10].

Health, according to ayurvedic theory, is defined as: uninterrupted physical, mental, spiritual happiness and fulfillment; a true balance of organs/systems, psyche and spirit, and balanced and creative relationships with fellow creatures and nature as a whole, family, friends, work, climate, ideals and customs, truth and ourselves [9], the universe and ourselves; balance and harmony of the three doshas. According to the Caraka samhita, well-being is a "disease free state" to be pursued for the attainment of "virtue, wealth and gratification" [10]. A person whose self, mind, and senses are harmonious and cheerful is healthy. In Sanskrit, *svastha* means healthy; *sva* means self and *stha* means established: established in self. Self has three parts-body, mind and spirit [11]. To be healthy is thus to have mental, spiritual and physical peace, along with social well-being.

On the physical level, health is the "continued maintenance of the best possible working of the human body under normal, and sometimes even abnormal, environmental conditions" [12]. A healthy, peaceful person is totally satisfied with the physical body and experiences no strain or tension; because of this ease, she is partly not aware of the physical body and is able to move/live beyond the body.

Health Promotion

Defining health promotion as lifestyle and behavior which enhance wellness [13], ayurvedic theory is highly sophisticated. Ayurvedic theory shares much with health promotion. The ayurvedic definition of health as embracing mind, body and spirit fits well with the broad definition of health used by health promotion advocates. A focus on wellness is another commonality, although Ayurveda has treatment and cure as an additional part of its medicine. A focus on the environment and its connections to human health is another commonality. Ayurvedic nutritional guidelines would also make sense within the healthy eating focus of health promotion. Yoga, which is already widely practiced in Canada, is also in line with health promotion principles of self-care and self-knowledge of the body and mind. Vaidya Robert Svoboda [11] devotes a chapter of his book to routine, and includes arising, wastes, washing, meditation, massage, exercise, bathing, clothing, employment, spouse, surroundings, and sleep as aspects of healthful practices. Daily health practices-such as tongue scraping and gargling and maintaining the health of the mouth and throat, gazing at a flame to improve eyesight-may be viewed as health promotion activities.

Ayurvedic theory focuses on the individual, not on group or community health. In attempts to define health promotion as the "new public health", with a focus on social determinants of health such as race, class, gender locations [14], ayurvedic theory is virtually non-existent. There is no public health branch of Ayurveda. Ayurvedic theory could thus be made ampler with an understanding of structural determinants of health. There is a long history of public health within Southern Asia, as Mohenjadarro had one of the world's first public sanitation systems. Building on this tradition would greatly enhance ayurvedic approaches to improving health status. Health promotion concepts, on the other hand, may be enriched by an understanding of panchamahabhutas, tridosha theory, ecological health concepts, yoga and nutrition from Ayurveda. While these two schools of thought have not been on common terrain before, each could potentially benefit from a study of the other.

Yoga

Probably the most commonly 'prescribed' form of health promotion by ayurvedic practitioners is yoga. In India, many traditional vaidyas teach yoga as an essential part of their ayurvedic practice. Yoga is a Sanskrit word which comes from *yug*, to join or to unite; yoga thus means 'union', in the spiritual sense of joining the individual spirit with the universal spirit, and joining mind, body and spirit. Swami Yogananda [15] states: "The consciousness of a perfected yogi is effortlessly identified not with a narrow body but with the universal structure". Yoga is a holistic science which embraces physical, moral, social, mental and spiritual well-being.

Most branches of yoga are meditation of various forms. Hatha yoga, and its various offshoots such as Iyengar and 'power' yoga, involve more body movements than other forms; it is the closest to exercise of all the forms of yoga. Most forms of yoga assist in maintaining vigor and rejuvenating the internal organs.

Yogic science is thus based upon empirical considerations of somatic and psychological benefits. Its benefits have been well researched in India [16]. Regular practice of asanas (physical discipline through set postures) has been proven to positively affect ill people. Pranayama (breathing exercises) has assisted people with vata disorders such as bronchial ailments. Dhyana (meditation) has been shown to stabilize emotional imbalances, prevent the abnormal functioning of vital organs and restrain and control the nervous system. People with diabetes and epilepsy have greatly benefited from the practice of yoga [16].

Yogic practice is partly an attempt to cultivate the individual's powers of adaptation and adjustment internally, so as to withstand external changes (disease causing agents and other changes).

Three steps are encouraged in this regard:

- Cultivation of correct psychological attitudes
- Reconditioning of the neuro-muscular and neuro-glandular systems-in fact, the whole body-to enable the individual to withstand greater stress and strain, and at the same time,

- Emphasizing a health-giving diet, and encouraging the natural processes of elimination, whenever it is necessary, by resorting to special lavages and baths [17].

Iyengar [18] contends that the goals of Ayurveda and yoga are the same: to assist people to attain self-realization. The major difference, he asserts, is that yoga trains people to attain mental and physical strength without the assistance of external agents. Ayurvedic theory assumes that some people are not able to be disciplined enough to develop this kind of strength on their own and thus practitioners of Ayurveda provide various remedies and medications for this purpose and for treatment of disease.

Treatment of Disease

In Ayurveda, there are two types of medicines: those which promote resistance of the body and promote vitality and those which cure disease. Preventive measures encompass a broad variety of regimens. Swastavritta is personal hygiene; it consists of dinacaya (daily routine) and includes tooth brushing, mouth wash, tongue scraping, bathing, exercising, eating, and sleeping and so on. Ritucarya are the regimens and diet which are to be followed in the different seasons of the year. Sadvritta is a range of social behavior and conduct of the individual based on religious rituals and practices. Rasayana and vajeekarana are the use of rejuvenating and virilizing agents to prevent aging; they impart longevity, immunity against disease and assist in improving mental faculties [19].

The second aim of Ayurveda is to relieve the misery of suffering patients with the attempt to cure disease.

In this regard, there are eight main branches of Ayurveda (astanga sanigraha) historically:

- Kaaya chikithasa (General Medicine-includes internal purification and curative treatment)
- Baala chikithasa (children's health)
- Shalya chikithasa (surgery)
- Oordhwaanga chikithasa (eyes, and ear nose and throat)
- Graha chikithasa (mental health)
- Damshtara chikithasa (toxicology)
- Jaraa chikithasa (geriatric care-prolonging human life, invigorating memory, fortifying vital organs against disease and decay)
- Vrushaa chikithasa (science of aphrodisiacs/virilification/rejuvenation-increasing the pleasures of sexuality to make people doubly endearing to their intimate partners; assists in improving fertility, including treatments for faulty sperm and reproductive fluid) [14].

Sushruta was the first surgeon to deal systematically and in detail with the development and anatomical structure of the eye, and is also the first surgeon credited with developing the operative techniques for rhinoplasty. He is thus considered the pioneer plastic surgeon of the world. In the modern period, ayurvedic surgery is not performed. Historical factors have contributed to this. Firstly, during the Buddhist era (approximately 2500 years

ago), surgery was not allowed as it was seen as similar to killing someone; thus, surgery was practiced covertly for some time but soon disappeared [20]. In the period of British colonialism, allopathic medicine was considered to bear a stigma of pollution, as cutting open the human body was viewed as morally wrong. Also, the British closed down the ayurvedic medical schools at Taxila and Benares. This stopped most research for some hundreds of years. In the current era, there is a paucity of ayurvedic research.

Ayurvedic forms of treatment are plant derived, with some use of mineral based substances. Ayurvedic remedies are generally not made from animal sources. These remedies make use of the powers of nature to restore human beings to a natural state of balance.

Herbs and minerals are used singly or in the form of compounds. Ayurvedic pharmacopoeia incorporates the use of pastes, expressed juice (swarasa), powders (churnas), cold infusions (sheeta kashaya), infusion, decoction (quatha), decoctions in milk (ksheera paka), extracts, pills, boluses, medicated spirited liquids (asavas and arishtas), medicated clarified butter (ghrita) and many others.

The four healing factors include:

Samshamanan: Pacification of the deranged or agitated bodily humors giving rise to disease

Samshodhanam: Cleansing; internally, purgatives or enemas are used; externally, surgery, plasters or cauterization of affected parts are used

Sadvritt: Conduct, mental and bodily acts, speech

Pathyahara: Regimen of diet, using food as medicine.

Punchamahabhutas Ayurvedic Five Element Theory

The basis of holism within Ayurveda is embodied within the concept of punchamahabhutas [21]. Panca in Sanskrit means five. Maha means great. Bhutas means elements or states, in the ancient sense; they are sometimes known as proto-elements. (Bhutas are thus not to be confused with the elements as they appear in modern chemistry, as within modern chemistry they would be considered compounds.) Punchamahabhutas are thus the five great 'elements'. This "Five Element Theory" states that ether, air, fire, water and earth, the punchamahabhutas, are the foundation of existence. They are contained in all animate and inanimate entities. Energy and matter are considered interchangeable. Although the elements themselves and how they combine are different, Chinese Five Element Theory parallels this conceptually in that everything on earth is considered to be dominated by one of these elements, and their constant interplay, combined with those of yin and yang, explain all change and activity in nature [22].

Briefly, the qualities of each bhuta

Ether (akash): Non-resistance, sound/essence

Air (vayu): Expansion, sound+touch

Fire (agni): Heat, luminosity, sound+touch+color

Water (ap): Liquidity, sound+touch+color+taste

Earth (prthvi): Roughness, sound+touch+color+taste+smell

Prthvi helps the other four by being their support. Ap helps the other four by moistening. Tejas assists the others by ripening. Vayu is the drying agent. Akash helps by providing space [23]. In the human body, the hard parts are earth (bones etc.); the liquid parts are water (kidneys etc.); the hot parts are fire (stomach, small intestine etc.); the air/wind parts (respiratory tract) and the vacuous parts are all pervasive.

The human body, food, all plants, animals, and minerals all contain the bhutas. From the bhutas, the dhatus (constructing elements) are formed. They are responsible for form and function within the organism.

The dhatus are derivatives of each other, primarily in the following order

Rasa (organic juice, approximately equivalent to plasma):

Contains nutrients from digested food and nourishes all the tissues, organs and systems [24].

Rakta (red chyle, approximately equivalent to blood):

Governs oxygen in all tissues and vital organs to maintain life.

Mamsa (flesh/muscle): Covers the delicate vital organs, performs the movements of the joints and maintains the physical strength of the body.

Meda (fat): Maintains the lubrication and oiliness of all the tissues.

Asthma (bone): Gives support to the body structure.

Majja (marrow and nerves): Fills up the space within bones and carries motor and sensory impulses.

Shukra and Artava (sperm and reproductive fluid/tissues):

Contain the ingredients of all tissues and are responsible for procreation.

Disorders in the balance of the body directly affect the dhatus. Health may be maintained through nutrition, bodily care, exercise (although excessive sweating and rapid pulse and respiratory rates are not recommended in Ayurveda) and rejuvenation. Disturbed dhatus are directly involved in the disease process.

According to holistic principles, the smallest particle of the universe is the universe in miniature. The interaction between the universe and the individual takes place through intake and output matter. The universe is thus the macrocosm and other entities, including human beings, are the microcosm. The essence of punchamahabhuta principles lies in their import. Holistic principles state that there is a unity and oneness in the universe and all is connected.

Table 1 is an attempt to explain the properties and essence of punchamahabhuta concepts. The 'elements' are connected by prana (life-force) and atman (soul). They are created out of a union of prakrti, the female principle, and purusha, the male principle, according to samkhya philosophy.

The sameness (samanya) of self (purusha) and nature (prakruti) is thus the underlying principle of ayurvedic practices [8]. This ecological principle, which embodies the understanding that the human body/mind/spirit is connected to all other life forms in the universe, is articulated in different forms through health promotion, disease prevention and curative care.

The Kitchen is the Pharmacy and the Pharmacy is the Kitchen: Ayurvedic Nutrition

In concert with yoga, meditation and daily routine, nourishment is central to ayurvedic health promotion concepts. No distinction is made between food and medicine, kitchen and pharmacy, cooking and pharmacology. All food is considered to have medicinal value. A nourishing diet is considered preventive of disease and therefore a 'substitute' for stronger medicine: "by changing dietary habits the human organism may be cured without using any medicine, while with hundreds of good medicines diseases of the human organism cannot be cured if the food is wrong. Right food is the key to good health" [6,25]. The selection and preparation of fresh, chemical-free food is inseparable from the cultivation of vibrant health and treatment of disease. Beneficial food, herbs and condiments promote bodily growth and injurious food produces disease [26]. According to Sushruta, food is of three types: svastha vrittikara (health giving), vyadhi prashaman (therapeutic), and dosha prashamanam (pacifier of imbalanced doshas).

Six different tastes, which are derived from the punchamahabhutas, are conceptualized within Ayurveda: sweet, sour, astringent, salty, pungent, and bitter. Each dosha is enhanced and hindered by intake of certain tastes. Complex nutritional theory within Ayurveda encompasses the several applications of taste for diet and medicinal preparations [8,21].

Daily food ought to contain all six tastes in significant proportions. Sweet foods help body building and energy production; they are found in carbohydrates, fats, and albumen. A certain amount of bitter and sour components in food promotes the secretion of the gastric juices and sharpens the appetite. Many acid substances aid digestion. They contain vitamins, especially vitamin C, and also salts forming the basis of minerals needed to maintain the body's electrolytic balance. Astringents are those foodstuffs containing tannin. They curb over-activity in the small intestine and ensure that the food is digested longer and more thoroughly.

Each dosha has specific dietary recommendations, which may differ or converge with other doshas. In the event that people eat foods which are not recommended for their particular dosha, ayurvedic philosophy is quite forgiving, and it is possible to buffer the negative effects of those foods. For example, people of vata dosha ought to be careful about consuming foods which produce a great deal of wind, as vata may be imbalanced by over-consumption of cabbage, cauliflower, beans which have not been soaked before cooking and so on. By lightly chewing on a raw clove, cardamom pods, or fennel seeds and allowing the juice to slowly pass through the digestive tract, vata people may alleviate some of the stress placed on their system.

In ayurvedic theory there are twelve food groups: cereals, legumes, flesh, vegetables growing under the ground, fruit, nuts, wine, water, milk, sugar, fats and oils, and spices [8].

Table 1. Qualities of the Panchamahabhuta.

Variables	Ether (akash)	Air (vayu)	Fire (tejas)	Water (ap)	Earth (prthvi)
Definition	The space in which events occur; no physical existence; the field from which everything is manifested and into which everything returns	Existence without form	Transformation	Force of cohesion	solidity
Essence	sound/essence	sound +touch	sound+touch+color	sound+touch+color+taste	sound+touch+color+taste+smell
Properties	motivity, inertness, distance, non-resistance, vacuousness	movement, vibration, oscillation, gaseousness, expansion, dynamism	color, heat, radiation, appearance, form without substance, can convert substances solid⇒liquid⇒ gas etc.)	liquid, fluid, moist, force of cohesion, flux, without stability	firm, rough, heavy, offers resistance, solid, stable, odorsome, coarse, rigid
Corresponding Form and Function	vacuous parts hollows/cavities: organs of speech tongue, vocal cords, mouth), perforated masses in body and ears	dry/airy parts touch, respiration, winking of lids, contraction and relaxation of movements, lightness of body, hands, feet	hot parts digestion, pigmentation, sharpness, bravery, sight, heat and temperature of body, anger, luster, feet, appearance, sex	liquid parts reproductive fluid, genitals, urine, blood, marrow, brain	solid parts nails, nose, enamel, bones, flesh, hair, nerves, arteries, anus, lymph
Main sense	hearing	touch	vision	taste	smell
Helps other bhutas by	giving space	drying	ripening	moistening	being their support
Corresponding tridosha	Vata, Pitta and Kapha				

Additionally, there are four categories of prepared food, which should be included in the daily diet of people of all doshas:

- Foods of normal consistency such as rice and bread
- Liquid foods, such as milk, soup, fruit juice etc.
- Tasty foods such as chutneys, sweet and sour sauces, preserves, ketchups and pastes, designed to tickle the palate
- Crisp and chewy foods, such as salads or nuts.

Food intake and digestion are optimally regulated by the agni, or fire, of the body. The digestive system resembles a flame which ought to be strong and able to burn fuel rapidly. Tiny flames must be fed pure and fine fuel very slowly or the flame will flicker and falter. Strong flames may be built up through proper nutrition and may create a strong bonfire which is able to withstand "wet logs" (difficult to digest food) with only a puff of smoke [27]. The goal of healthful eating is to foster digestive vitality.

The result of digestive strength is dietary freedom. That is to get you so healthy that you have complete freedom to live as you want, but to have you aware enough to realize that your health depends on the strength of your digestive system, and to have you motivated enough that you will want to guard this precious resource, and to have you educated enough so that you will know how to look after it [28].

Eating well encourages sensitivity, and listening to the body's messages: "do not eat unless you feel hungry and do not drink unless you feel thirsty" [24]. Listening to the body means that one is clear about which food has beneficial and non-beneficial effects, because the stomach is being 'heard'. Instead of being told by nutritionists and books, the best teacher, the body, provides information directly. Caraka (c.500 B.C.E.), quoted in Morningstar and Desai [29], offers ten principles for a healthy diet and how it ought to be eaten:

- Food needs to be hot (usually cooked).
- Food needs to be tasty and easy to digest.
- Food needs to be eaten in the proper amounts, not too much or too little (two handfuls are recommended, so that the stomach is filled one-third with food, one-third with water, and one-third with air).
- Food needs to be eaten on an empty stomach, after your last meal has been digested, and not before.
- Foods need to work together and not contradict one another in their actions.
- Foods need to be eaten in pleasant surroundings with the proper equipment for their enjoyment.
- Eating should not be rushed.
- Eating should not be an overly drawn out affair either.
- It is best to focus on your food while eating.
- Only eat food which is nourishing to your particular dosha, physically, mentally, and emotionally.

Eating in conjunction with the seasons assists the body in adjusting to seasonal variations. In each season, one or more doshas predominate. Adapting ayurvedic principles to North America, Amadea Morningstar and Urmila Desai [29] make suggestions for healthful eating patterns, each of which are adjusted according to individual dosha. In winter, kapha predominates, which promotes growth and maintenance of tissues, strengthens immunity, and lubricates joints. Kapha also brings an abundance of mucus, which may mean coughs, colds and flus, especially for children. Digestive power and appetite are enhanced during the long nights, so it is possible to handle heavier foods and more of them. It is the time for warm cooked grains, especially rice and oats, soups, heavier protein foods such as beans, hot teas, honey and warm milk.

In the springtime, vata and pitta thrive, with new beginnings, and the accumulated kapha and extra body weight may be released by higher activity levels, by avoiding over-sleeping, and by choosing light, bitter and fresh foods. Spring cleansing with a 'tonic' of dark leafy greens such as nettles or dandelion will assist in detoxifying the body, through the kidneys and liver. Heavy, oily, sweet, and sour foods ought to be avoided, as agni should be increasing at this time of year.

The summertime is predominated by pitta-heat and dryness. The digestive fire, agni, is strong at this time and ought not be 'overworked' with pitta foods of the spicy, hot, pungent, sour, oily and salty variety. Moist, cool, liquid foods pacate pitta, such as milk, fruit, rice, tofu, aloe vera juice. Eating and drinking lightly is the key to thriving in pitta climates, which promote perspiration, decay of food and tissue loss.

In the fall, vata is rising. The seat of vata is the pelvis (first and second chakras) which has implications for survival and security. Vata imbalances such as dry skin or aching joints may become more apparent at this time. Warm, moist, well-lubricated foods are required with an emphasis on sweet, sour and salty tastes. Cardamom is a useful spice and may be cooked in a variety of savory and sweet meals, or placed in hot milk or tea.

At the change of season, it is considered wise to follow guidelines for the approaching season one week before so that the body has adjustment time. Fasting is also recommended, particularly for kapha and pitta doshas, to allow agni to burn away accumulated toxins from the intestine and to purify the system. If the stomach and intestine are treated with care, it is difficult for the rest of the body to be diseased [28], as most diseases are linked to disharmonious eating habits and/or eating antagonistic foods [14,30]. Some holistic practitioners believe that digestive disorders are the most common health problems in North America [27].

Tridosha Theory

Ayurvedic theory is posited on the notion that observing nature is the best way to learn about the human body [31]. From the five bhutas, each of which are found in the human body, arise the tridoshas. From ether and air, the vata dosha is created. From fire and water, the pitta dosha is created and from water and earth, the kapha dosha is created. Doshas are resting states, from which mind/body constitutional types are created. They are dynamic energy forces or inner principles within the living body which govern the entire organism. Ayurvedic theory states that all human bodies are not the same, so there are seven basic doshic prakritis, or constitutions, arising from vata, pitta and kapha and their combinations: vata, pitta, kapha, vata-pitta, vata-kapha, pitta-kapha, and vata-pitta-kapha. It is thus possible to be uni-doshic, bi-doshic, or tri-doshic (fully balanced, which is very rare). The word roots of the tridoshas are as follows [9]: vata, from the Sanskrit roots va which means motion, and ganthana which means sensation; thus, vata originates all movement in the body and governs mainly all nervous functions. Pitta comes from tap, which means heat, thus pitta governs mainly the enzymes and hormones, respiration for digestion, pigmentation, body temperature, thirst, sight, and courage, and secretions and excretions which

are either the means or the ends of tissue combustion. Kapha is derived from the Sanskrit kēna jālana phalatiiti which is the fruit or product of water [32]. Kapha regulates the other two doshas and is responsible for the connection of the joints, the solid nature of the body and its substances, sexual power, strength and patience. Ayurvedic health care rests on determining the dosha of each individual, as from the dosha comes a general guide to most appropriate dietary patterns, activity levels and treatment options.

Punchamahabhuti concepts, combined with notions of microcosm and macrocosm, provide colorful analogies about the tridoshas and how they are metaphors for parts of the natural world: "Human is standing on the earth. And there is the sun, there is the moon, there is the wind. The sun radiates heat and bestows the energy necessary for all physiochemical and biochemical processes. Its representative in human is the force Pitta, which controls all the biochemical processes in the body, all reactions resulting in heat, e.g. the digestion of food and cellular metabolism. Pitta warms, colors red, and produces the 'glow' of energy in us. The moon stands in a relationship of tension to the earth; it acts on biological rhythms, rules the tides, and has an affinity with the element water-which is cooling and gives the cells of the body form and firmness. Its representative in human is the force Kapha, which has a visible effect in altering the equilibrium of fluids in the tissues and organs and also lubricates the joints. Kapha gives the cells, and with them the whole body, form and firmness and has a cooling effect. The wind not only moves, it is the movement of the atmosphere; it blows the clouds along, dries wet places, and sets fires blazing. The motive force in {hu}man is the principle Vata, the principle of movement. It is the complex nervous system with its impulses. Vata is the will to live" [8,11,42].

Within macrocosm/microcosm theory is the notion that there is a continual interaction between the internal and external environment or universes. The macrocosm is governed by cosmic forces and the microcosm is governed by the principles of vata, pitta and kapha: "according to Ayurveda, the first requirement for healing oneself and others is a clear understanding of the three dosha. The concept of vata-pitta-kapha is unique to Ayurveda and it holds the potential for revolutionizing the healing systems of the West. However, the concept of the three principles and the Sanskrit words, vata-pitta-kapha, are very difficult to translate into Western terms" [24,29]. Tridosha theory is not the same as Greek and Roman humoral theory although it is often mistaken as such [33]; some related aspects of these theories exist, but some would posit that it is too facile to assume that Indian concepts have already been conceived by Europeans and terms simply need to be translated into a European language.

The interplay of the three elements gives the body life and movement [7]. The tridoshas are simultaneously the three elements and the three troubles; when balanced they sustain the body, when imbalanced they 'spoil' the body [20]. Dhirendranath Ray, in 1937, believed that most adult Indians have a basic understanding of tridosha theory, as the fundamental concepts were discussed and accepted in their society, and this may still be true for people in rural India [23].

Each dosha has three states: vrddhi (aggravation), ksaya (diminution), and samya (state of equilibrium) [9]. Tridosha theory applies to food, plants and other elements of the environment. For example, vata is found in the lower part of the human torso (below the navel, urinary, bladder, pelvic region, thighs, legs, and bones), pitta in the middle part (between the navel and chest, concentrated in the small intestine, stomach, sweat, lymph, and blood), and kapha in the upper part (thorax, head, neck, joints and fat tissues). Vata predominates in old age, and in the evenings. Pitta predominates in adulthood, and during mid-day. Kapha predominates during youth and in the early morning. Easy-to-follow charts to assist people in determining their doshas exist in several books, including Lad [24] and Morningstar and Desai [29].

Ecological Aspects

According to the principles of punchamahabhuta, all life is connected. Living in harmony with other beings is thus essential. The plant kingdom, for example, provides oxygen, wood (for building, paper and so on), fibers for cloth, green manure to keep the soil fertile and a myriad other beneficial factor. Ayurvedic models, for learning purposes, are built to show the parallel growth patterns of various species, such as a human fetus and a tree seed. The stages of growth are considered the same:

- Expansion
- Unidirectional growth
- Conversion
- Liquefaction
- New growth

Most earth-based peoples hold a deep respect for animals. As mentioned above, by observing animals, yogis and yoginis (practitioners of yoga) developed many yogic asanas (postures). Ayurvedic pharmacology was also enhanced by observing animals who recognized the medicinal qualities of plants, particularly birds, boars, eagles, falcons, goats, oxen, porcupines, serpents and sheep [31,34]. The ecological aspects of Ayurveda, similar to the holistic aspects, are intricately woven into the very definition of this system of health care. It is thus difficult to extract what is not ecological about Ayurveda. The semantic derivatives of ecology, from oikos, meaning home, embraces the ayurvedic concept of connectedness: the earth is the home of all beings. The well-being of the earth is the well-being of all her inhabitants, and the demise of the earth is the demise of her inhabitants. This is similar to the Ojibwe belief that the earth is mother, the sky is father, the moon grandmother and the sun is grandfather to all beings [35]. All ayurvedic medicines are derived directly from the earth, and some are changed chemically.

Weather and climate winds, sunshine, moonshine, darkness, heat, cold, rain, day, night, fortnight, months, seasons and solstices contribute to the accumulation, augmentation, pacification and diminution of bodily humors [35,36].

The ecological aspects of Ayurveda include the connection between seasonal changes and the activities of human beings. When seasons change, earth-based cultures, similar to most

animals, adjust to these changes. Some bears hibernate during winter; squirrels gather and store nuts before winter so that they eat well during the cold months. Some birds migrate to warmer climes for winter months.

In India, the two basic seasons of wet and dry are further subdivided according to temperature and other factors, for a total of six seasons. Dietary and other recommendations are made at each point when the season changes, to protect the body from potential breakdown. Human beings in earth-based cultures, such as the Canadian Inuit, have listened to the rhythms of the land for centuries. Traditionally, Inuit change their activity levels, diet, clothing, and sleep patterns according to the climate. This is in accordance with holistic beliefs which are also espoused within ayurvedic theory.

Ecological concepts, which are embodied in many ancient cultures, have been applied in the harsh arctic ecosystem. The seasons are usually demarcated according to the animal being hunted. During summer, fishing and hunting are busily carried out. The long days and bright sun encourage high activity levels. The long winter is mostly a time for performing indoor tasks and consuming high energy protein and fat foods. Ice fishing and trapping continue, at a relatively slow pace. In the coldest months of winter, the traditional First Nations peoples of the Arctic celebrate, mostly indoors. Jamborees, testing 'bush' skills, and other fun events, continue to be a major source of entertainment during the long cold nights. People tend to sleep more during the winter. The Inuit have the highest birth rate in Canada.

Ayurvedic definitions of health include true balance with society, fellow creatures and nature as a whole. Family, friends, work, ideals and customs, spiritual life, climate and ecology are encompassed in this definition. The health of the individual is dependent on at least eight factors [37]: the ecosystem-natural zone and category of the land, such as jungle, desert, lake-shore and so on; seasons in the ecosystem; available food material; fresh local produce available, like fruits and vegetables; the way of living and habits of the people, such as siestas (napping during the afternoon); availability of medicinal substances; useful animals, particularly for agricultural and transportation purposes.

Mental Health Aspects of Ayurveda

Mind, soul and body-these three are like a tripod; the world is sustained by their combination. They constitute the substratum for everything [38,7-45]

The holistic basis of Ayurveda implicitly incorporates mental health in most aspects of health promotion, disease prevention and treatment. In Indian science, the mind is believed to control all bodily functions. A disciplined, finely tuned and spiritually connected mind is thus able to have a great deal of positive impact on overall health of an individual. One of the original branches of Ayurveda was devoted to mental health, yet there appears to be a paucity of English literature on this subject. What I am able to present here is thus a brief discussion of some ayurvedic mental health constructs. Within ayurvedic cosmology, there are not one but three words and conceptualizations for the

mind: buddhi or intellect, ahamkara or ego, and manas or thought bundles. Each of these works together with separate functions. The acts of manas are governed by the atman or soul, since the latter is conscious [39].

Vaidya Vasant Lad [19,24] notes that the concept of normalcy, in the dominant European framework, depends on the common behavior of the majority of people, while in Ayurveda, each individual is evaluated carefully to ascertain individual temperament and functioning. He states that in the East, acceptance, observation, and experience are valued and that Eastern science teaches students to move beyond dualistic abstractions of subjectivity and objectivity. (Even in 'Western' thought, however, there is widespread acceptance that it is difficult to consider mental health apart from physical health as psychological and somatic factors interact to produce health [40]. The World Health Organization's definition of health, enshrined in its constitution-health is a state of complete physical, mental and social well-being and is not merely the absence of disease or infirmity-also underscores the international recognition of these concepts).

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 divided into three types, linked to triguna theory. Triguna theory conceptualizes three mental states: sattva, from sat, truth or reality, thus sattva is clarity, divine nature, unification of the head and heart, the basic clear quality of the mind. Sattva balances the other gunas. Rajas is agitation, stain, or smoke; it is the mind anxious with desire, willfulness, anger, manipulateness and ego; rajasic behavior is linked with seeking power, stimulation and entertainment. Rajas also produces energy, vitality and motion. The social world today is largely dominated by rajasic forces. Tamas is heaviness, inertia or lethargy, sleep and inattention, lack of mental activity, insensitivity; tamas also provides stability and allows fixed forms to take shape in the physical body. Tamas can also be active; reactionary forces and bigotry may be tamasic because they refuse to change [41].

David Frawley, from whose writings much of the above was gleaned, writes, "these qualities reflect the level of development of the soul. They are not simply intellectual proclivities or emotional types. They show the sensitivity of the mind, its capacity to perceive truth and to act according to it" [28,48].

Dash and Junius provide an overview of fifteen mental categories, described in classical ayurvedic texts, which are divided into the three gunas: sattvika, rajasika, and tamasika [6,36]. A few of these descriptions are reproduced below. The sattvika types include Brahma, Mahendra, Varuna, Kaubera, Gandharva, Yama, and Asra. The traits of Mahendra, for example, are cited as: having great fame or courage, obedience, and constant devotion to scriptural studies. In the rajasika types, Asura, Sarpa, Sakuna, Raksasa, Paisaca, and Praita are listed. The qualities of Sarpa (sharing the traits of a snake) are sharpness, deceptiveness, cowardice, cruelty and intelligence. The tamasika types are mentioned as Pasava, Matsya, and Vanaspatya. The traits of Matsya, for illustrative purposes,

are cited as: instability, lack of wisdom, cowardice, desire for water. These categories may assist people in self-understanding, and ought to be applied only as general principles, within which specific individual traits must be taken into account.

Frawley [48] describes the mental traits according to tridosha theory. The traits of each dosha have been reproduced in Table 2.

Maya Tiwari devotes a chapter of her book on Ayurveda to the psychospiritual nature of the body types.

She describes vata people as

Swift as a deer, cold as ice. The coolness of the harsh winds against the variegated sands of the desert nights...Vata, the mobile force of the universe, is influenced by the air and space elements [43,44].

Tiwari notes that Vata types tend to worry and be fearful, so she recommends that Vata people take a few hours every day to nurture themselves by soaking in a hot tub or succumbing to an oil massage.

Pitta people are described by the author as

The brilliance of the raging fire dragon in the city of sparkling gems. Pitta is influenced by the fire element, which is the dynamic dream force of the universe. Pitta permeates the mental body...Pitta is blessed with a powerful solar energy that is reflected in its lofty intellect and noble presence [45-48].

Energy, ambition and aggression are the primary qualities of Pitta, states Tiwari. She advises that Pitta people should try to tone their arrogance and self-centeredness in order to realize their potential.

Tiwari describes Kapha people as

Solid as a rock, cool as a glimmering stream in the white moonlight...Kapha is influenced by the water and earth elements, which are the energies of attraction and fascination in the universe...The Kapha person is the classic synthesis of stoical grace, calm, and sensuality.

She suggests that Kaphas maintain regular, strict schedules, as they have tendencies toward laziness. She also recommends that they keep abreast of inner conflicts as they cannot afford to store antagonism and unrest within their absorbent boundaries.

Vasant Lad [34] describes the deleterious effects of repressed emotions. He states that toxins are created by emotional factors. He cites the example of repressed anger which changes the flora of the gallbladder, bile duct and small intestine and aggravates pitta, which causes inflamed patches on the mucus membranes of the stomach and small intestine. He also describes the problems created by fear and anxiety, by altering the flora of the large intestine which creates bloating of the large intestine, causing pain. He asserts that this pain is often confused with heart or liver dysfunction. He concludes, "because of the ill-effects of repression, it is recommended that neither the emotions nor any bodily urge, such as coughing, sneezing and passing gas, should be repressed...Ayurveda recommends that emotions be observed with detachment and then allowed to dissipate. When emotions are repressed, that repression will cause disturbances in the mind and eventually in the functioning of the body" [34,41].

Table 2. Mental traits of the Tridoshas (adapted from Frawley 1989).

Vata	Pitta	Kapha	
Good at grasping and forgetting	Hot physical nature	Mentally steady with good forethought	
Mind and senses are sensitive but unsteady tendencies towards fear and anxiety	Make good leaders	Watery emotions: love, sentimentality	
Good but erratic mental powers	Irritability and anger	Kind, considerate, loyal	
Solitary nature: don't have a lot of friends	Logical, critical, perceptive,	Slow to respond	
Quick at attachment and detachment	Intelligent	Shy, conservative, obedient	
Fast at getting emotional, expressing emotions, and forgetting them	Possess strong will	Display affections easily	
Not materialistic: spend money quickly and easily	Helpful and kind to friends and followers but cruel and unforgiving to opponents	Find it difficult to be detached	
Mentally changeable, excitable, indecisive	More concerned with gaining power than money but will gather material resources to gain ends	Easily get attached	
Don't make good leaders and are not good followers	Memories are sharp but not sentimental	Need time to properly consider things	
	Bold, adventurous, daring, reckless, inventive, ingenious	Many friends	
	Often possess good mechanical skills	Close to family, community, culture, religion and country	
		Close-minded outside their sphere of habitual activity	
		Travel less	
		Happier at home	
	Slow to express emotions, especially anger		

Heyn [11] adds that envy, jealousy and hatred are symptoms of disease requiring treatment, and that peoples' total mental and physical condition and how it relates to the environment are more important than identifying a specific disease. Frawley affirms that, "Generally, all diseases make us afraid. They bring up the basic fear of death, thereby tending to aggravate Vata (air) or create anxiety in the mind" [11,39]. A healthy nervous system thus assists in maintaining a healthy mind. Nitya [50] asserts that mental depression is caused by stagnation or lack of flow of prana, which then create the build-up of toxins. To uplift a depressed person, prana must freely flow in the system. Eradicating toxic build-up may be done through physical means such as surgery, poultices or other medical techniques, or through yogic techniques such as pranayama. Encouragement and caring also assist people who are healing from emotional imbalances [50]. Additionally, metabolic processes, when fully functioning and in equilibrium, assist one in feeling well mentally as well as allowing the sense and motor organs to fare normally.

Given that expression of emotions is discouraged in many cultures and therefore many people repress their emotions, Ayurveda offers both mental and physical solutions to mental health imbalances. The mental healing options primarily include the use of mantras, which are "special seed syllables

like om which reflect the cosmic creative vibration". Lad and Frawley [51] explain how the physical and mental levels of healing are always related, as plants also have effects on the mind, and mantras also change physiology; both of these levels work with the prana, from different places, within and without. They continue:

The essence of the human being is speech, the essence of which is the mantra. In harmony with the plant as the word of nature is the mantra, the word of the spirit. Between these stands the human being. The mind is refined through plants. In the mantra it is perfected. Hence, the right use of herbs and a vegetarian diet serve as catalysts for the mantic development of consciousness. Mantra means the right energization of the mind, and the giving of right attention through which the healing process becomes a conscious act. Mantra is not merely a matter of mechanically repeating various powerful sounds. Mantra also implied meditation. Meditation (Dhyana), means receptivity, passive awareness, in which there is the unity of the seer and the seen. It means understanding, the attitude of openness in which there is space for the inner truth to manifest itself. This inner truth that comes from all things in mediation is itself the mantra. All of nature is the creative meditation of the cosmic spirit. The basic silence and peace of nature is meditation [51].

Other types of healing on the mental level include discussion with caring and compassionate people (trained in specific techniques, or intimate friends/relatives), and/or meditation, which assists in calming and focusing the mind. Physical solutions include medications, principally based on herbs, and/or yogic practices. Ayurvedic theory reflects the Hindu tenet, "Be good, do good" [46], as a way of allowing people to maintain mental peace as part of their purpose in life.

Ayurveda in North America

The most prominent figure in Ayurveda in North America is Deepak Chopra, M.D., who has successfully spread Ayurveda to a significant portion of the North American population, judging by the popularity of his books and the high demand for him as a speaker in many circles. His principle techniques involve the display of his allopathic knowledge and qualifications, so that people here are convinced that he is a "real doctor", and his presentation of quantum mechanics theory as a partial way of explaining ayurvedic concepts. He thus starts from a likely common knowledge base, and does not stress the Hindu religious aspects of Ayurveda, although he does not conceal these aspects either. His large number of books, including *Quantum Healing* [58], *Perfect Health* [59] and a recent novel, have been best sellers, and translated into more twenty-five languages. He has a large following, particularly amongst the relatively formally educated middle classes of European descent of this continent. He also trains a large number of allopaths and others in ayurvedic techniques and markets a brand of medicines.

Chopra's beginnings in Ayurveda stem from his studies in transcendental meditation, from its North American teacher, Mahesh Yogi. He found that transcendental meditation helped him a great deal. After five years, Mahesh Yogi called upon Chopra to spread Ayurveda in "the West". Chopra thus received a great deal of backing and support from the Transcendental Meditation organization. His first books are dedicated to Mahesh Yogi.

Chopra was in Toronto and I arranged to interview him. Although I was unable to conduct the interview, I formulated questions and my substitute's notes provided me with some information about this modern messenger of Ayurveda. Chopra noted that Ayurveda is applicable in any country, as it makes use of locally available herbs, plants and ecology. It is being practiced in England, Australia, New Zealand, South Africa, Russia, Hungary, Japan, Thailand, India, Hong Kong and elsewhere.

Deepak Chopra (and company) has done more to market Ayurveda in North America than virtually anyone in the modern era. The handful of dedicated and devoted vaidyas who practice in this continent have not been able to create the upsurge of interest that Chopra has created. While Chopra has done a great deal to popularize Ayurveda in North America, critics note that he is not necessarily an altruistic holistic health advocate. On a visit to a small-town Ontario ayurvedic center, colleagues and I witnessed the adulteration of Ayurveda. Billed as an authentic ayurvedic healing centre, this is a beautifully located lakefront property which has mostly been used by practitioners of a for profit meditation school. Week-long ayurvedic retreats

are offered, with punchakarma treatments. (Punchakarma is essentially a series of five different techniques for cleansing and detoxifying the body.) Vaidyas from India are occasionally on site and but no trained vaidya is on site constantly. The retreats are very costly. It is clearly only affordable to the affluent. The peaceful, uniting concepts embedded within punchamahabhuta philosophy do not support such commodification and elitism.

One vaidya (of whom I am aware) who has tried to bring Ayurveda to North America, beyond his own practice, and has done so with humility and authenticity, is Vaidya Vasant Lad. He has published a few books, amongst them are *Ayurveda-The Science of Self-Healing* [34], *The Yoga of Herbs* [51] (with David Frawley) and a recent cook book. He writes out of a compassion for people and a desire to make Ayurveda accessible. Classically trained as a vaidya in India, Lad has tried to make ayurvedic concepts translatable here. His books recommend the use of North American plants in place of the Indian ones, and his suggestions for daily health practices are do-able in a North American context, not overly laden with religious terminology, but not dismissive of the spiritual aspects of this ancient healing art.

Another such example is the late Vaidya Surendra Sukumaran, who practiced in Burnaby B.C.; Vaidya Sukumaran was also classically trained in India, and worked three to four days a week in order to save time for his own yoga and meditation practice. He was a very compassionate healer who has genuinely integrated mind, body and spirit into the way he works with people. His death from ALS (Amyotrophic Lateral Sclerosis) was an example to all who are keen to die a dignified, graceful death. He accepted his condition and remained positive throughout the tremendous suffering. With the efforts of more people like Vasant Lad and Surendra Sukumaran, Ayurveda's future in North America is quite promising.

Because there is a paucity of such vaidyas, the most applicable aspects of Ayurveda to Canadian health practices are the health promoting aspects such as nutrition, yoga and nutrition. These self-care practices may be taken up without the guidance of a trained vaidya. The concepts of health and the sophisticated way in which Ayurveda views mind, body, and spirit may also be taken up by health policy analysts who are keen to understand holism. If and when Ayurveda is regulated by the state, more qualified vaidyas will probably come to Canada and allow for Ayurveda to flourish in Canada as a fully-fledged health care choice. Until then, it is up to individuals to educate themselves about the benefits of this ancient system of knowledge.

Discussion

This paper has served as an exploration of one system of holistic medicine, to further develop and concretize a broader discussion of holism and holistic medical practices. Ayurvedic health care concentrates on the health and well-being of the individual as a whole, and as a member of society. Most medicines and remedies are relatively low priced and affordable for working class people. There are up to eight thousand recipes for preparation of different medicines. The pharmacological aspects of Ayurveda are well developed. Generally, no unpleasant side effects are experienced when a trained vaidya is recommending treatment.

Ayurvedic methods of diagnosis are simple and non-invasive. The understanding of disease reflects the interactions between mind and body. Emphasis is placed on positive health and prevention of disease. A wholesome diet and recommended daily regimen assist in health promotion. Ayurveda is close to nature in the sense that it is an ecological system of health. It goes hand in hand with yoga, as Ayurveda was designed to develop the body and yoga was designed to develop the spirit.

Ayurveda places importance upon the constitution/resting state of the individual. Choice and dosage of medication are dependent upon dosha and environmental conditions, and treatment paths are individualized to people's unique needs. Most ayurvedic practitioners and clients maintain an open attitude to other systems of medicine.

Conclusion

Dietary habits, remedies and health promoting daily routines may vary from place to place, but their principles remain the same: observe harmonious relationships. Ayurveda may be practiced in a self-sufficient manner in any climate and may serve to decrease dependence on experts and drug companies.

- Dhatus are the seven basic and vital tissues/constructing elements.
- Malas are waste products.
- Ether may be difficult to understand for those not trained in Indian science. Ether is space, emptiness, vacuousness, distance. In the subatomic sense, it is the 'nothingness' in which the electron rotates around the atom. In modern chemistry it is widely accepted that matter is mostly composed of nothing. This is the ancient Indian concept of akash: that nothingness which is a part of all matter. Akash is not endowed with action. It is of the largest dimension possible and the common receptacle of all conjunct things in the universe. It is shapeless. Within quantum mechanics, akash is equivalent to the "field and drug companies."

References

1. Narayanaswamy V. Origin and development of Ayurveda. *Anc Sci Life* 1981;1(1):1-7.
2. Bala P. Imperialism and medicine in Bengal: A sociohistorical perspective. Sage, USA. 1991; 37(2):215-16.
3. Shankar D. Indigenous Health Services-The state of the art. In: Voluntary health association of India. State of India's health. New Delhi: Tong Swasthya Bhawan. 1992.
4. Sharma PV. History of medicine in India: From antiquity to 1000 AD. New Delhi: Indian National Science Academy. 1992;21:527.
5. Shankar D. Descent of Ayurveda-hand drawn chart sent to the author, upon request. Foundation for the revitalization of local health traditions, 4 Saras Baug, Deonar, Bombay 400 088, India. 1995.
6. Dash B, Junius M. A handbook of Ayurveda, New Delhi: Concept Publishing Co. India. 1983.
7. Desai PN. Health and medicine in the Hindu tradition: Continuity and cohesion. USA: Crossroad. 1989.
8. Patterson TJS. The relationship of Indian and European practitioners of medicine from the 16th century. In: Singhal GD, Patterson TJS. Synopsis of Ayurveda: Based on Susruta Samhita. USA: Oxford University Press, UK. 1993.
9. Arnold D. Colonizing the body-state medicine and epidemic disease in nineteenth century India. California: University of California Press, USA. 1993.
10. Gupta B. Indigenous medicine in nineteenth and twentieth century Bengal. In: Leslie C (ed). Asian medical systems. USA: University of California Press. 1976.
11. Heyn B. Ayurvedic medicine-the gentle strength of Indian healing. New Delhi: Indus (An Imprint of HarperCollins). 1987.
12. Sharma R, Bhagwan V. Caraka Samhita. Chowkhamba Sanskrit Series Office, India. 2008;7.
13. Nikilananda S. The Upanishads. Abridged edition. UK: George Allen & Unwin Ltd. 1963.
14. Filliozat J. The classical doctrine of Indian medicine: its origins and its Greek parallels. New Delhi: Munshiram Manoharila Oriental Booksellers and Publishers, India. 1964.
15. Vivekananda S. Karma yoga: The yoga of action. Calcutta: Dvaita Ashram Publication Department, India. 1991.
16. Sivananda SS. Easy steps to yoga. The Divine Life Society, India. 1949.
17. Svoboda R. Prakruti: Your ayurvedic constitution. USA: GEOCOM. 1989.
18. Iyengar BKS. The tree of yoga. Boston: Shambala. 1989.
19. Naidoo T. Health and health care: A Hindu perspective. *Med Law*. 1989;7:643-47.
20. Svoboda R. Personal Communications. c/o The Ayurvedic Institute, 11311 Menaul NE, Albuquerque, New Mexico 87112, USA: 1995.
21. Zimmer H. Philosophies of India. USA: Pantheon. 1951.
22. Lalonde M. A New perspective on the health of Canadians: A working document. Ottawa: Queens Printer. 1974.
23. Grant-Cummings J. Personal Communications. Executive Director, Women's Health in Women's Hands Community Health Centre, Toronto, Canada. 1994.
24. Yogananda S. Autobiography of a Yogi. USA: Self-Realization Fellowship Publishers. 1968.
25. Yesudian, S. Self-reliance through yoga-words of wisdom and inspiration. UK: Allen and Unwin. 1975.
26. Abadhuta, Padananda SSN. The philosophy of union with the supreme. India: Mahanirvan Math. 1963.
27. Kuvalayananda V. Yoga. In: Levy M, et al. Life and health: targeting wellness. USA: McGraw-Hill Inc. 1992.
28. Kunjalal K. An English translation of the Sushruta Samhita. Varanasi, India: Chowkhamba Sanskrit Series Office. 1963.

29. Devaraj TL. Ayurveda for healthy living. New Delhi: UBS Publishers' Distributors Ltd. 1992.
30. Udupa KN. Origin and development of Ayurveda. *Ann Nat Acad of Ind Med.* 1990;2-5(1).
31. Karunakaran N. Personal Communications. Ayurvedic Practitioner, Hindu Colony, Dadar, Bombay, India. 1993.
32. Vogel HG. Similarities between various systems of traditional medicine. Considerations for the future of ethnopharmacology. *J Ethnopharm* 1991;35:179-90.
33. Ray D. The principle of Tridosha in Ayurveda. Calcutta, India: SC Banerjee. 1937.
34. Lad V. Ayurveda, the science of self-healing: A practical guide. USA: Lotus Press. 1984.
35. Vivekananda S. Jnana yoga-the yoga of knowledge. Calcutta, India: Advaita Ashrama. 1946.
36. George D. My spirit soars. British Columbia: Hancock House Publishers Ltd. 1989.
37. Krishnamurthi J. On freedom. USA: Harper San Francisco. 1991.
38. Sathaye BV. Personal Communications. Dean, Podar Ayurvedic Medical College, Wurlli, Bombay, India, 1993.
39. Sukumaran S. Personal Communications. Ayurvedic Physician, 4428 SE Marine Drive, Burnaby, British Columbia. 1995.
40. Nadkarni KM. Dr. KM Nadkarni's Indian materia medica: With ayurvedic, unani-tibba, siddha, allopathic, homeopathic, naturopathic and home remedies, appendices and indexes. (3rd ed). Bombay, India: Popular Prakashan. 1976.
41. Morningstar A, Desai U. The ayurvedic cookbook. USA: Lotus Press. 1990.
42. Karambelkar VW. The Atharvaveda and the Ayurveda. India: Karambelkar U, Nagpur-2. India. 1961.
43. Mishkogabwe PB. Personal Communications. Guest Lecture in Public Health at the Ontario College of Naturopathic Medicine. Professor of Native Studies, Trent University, Peterborough, Ontario, Canada. 1992.
44. Datye MP. A glance at ayurved the Indian medical science. Mysore, India: PM Datye. 1971.
45. Caraka (c 500 BCE). Agnivesa's caraka samhita. Translated and Discussed by Sharma, Ram K and Dash, Bhagwan. Varanasi-1, India: Chowkhamba Sanskrit Series Office. 1976.
46. Comba A. Caraka samhita, sarirasthana I and vaisesika philosophy. In: Muelenbeld, GJ (eds). Studies in Indian medical history. The Netherlands: Egbert Forsten. 1987.
47. Albino J. Health psychology and primary prevention: natural allies. In: Felner, et al, (eds). Preventive Psychology. USA: Pergamon. 1983.
48. Frawley D. Ayurvedic healing: A comprehensive guide. USA: Passage Press. 1989.
49. Tiwari, M. Ayurveda: A life of balance. USA: Healing Arts Press. 1995.
50. Nitya. Personal Communications. Yoga teacher, Swami Vishnu Yoga Center, 464 Dupont Street, Toronto, Ontario, March 3, 1995.
51. Lad V, Frawley D. The yoga of herbs-an ayurvedic guide to herbal medicine. USA: Lotus Press. 1986.
52. Mehta Y. Personal communications. Dadar Medical Clinic, Bombay, India, December 24. 1993.
53. Johari H. The healing cuisine: India's art of ayurvedic cooking. USA: Healing Arts Press. 1994.
54. Tripathi S. Ayurvedic nutrition from the academy of ayurveda (mimeograph). Obtainable from 2258 Danforth Avenue, Toronto Ontario M4C 1L3. c1992.
55. Matsen J. Eating alive: Prevention thru good digestion. Vancouver: Crompton Books. 1987.
56. Kozak L. Allergies and food, your health. The British Columbia Naturopathic Association. Summer. 1995;1(1).
57. Gandhi MK. The story of my experiments with truth: An autobiography. Ahmedabad, India: Navajivan Publishing House. 1927.
58. Chopra D. Quantum healing: Exploring the frontiers of mind/body medicine. USA: Bantam Books. 1989.
59. Chopra D. Perfect health: The complete mind/body guide. USA: Harmony Books. 1991.

***Correspondence to:**

Farah M Shroff
 Department of Family Practice
 University of British Columbia
 Vancouver BC
 Canada
 Tel: 604-682-3269
 E-mail: farah.shroff@ubc.ca