

# ESSENTIALS OF COMPLEMENTARY AND ALTERNATIVE MEDICINE

*Edited by*

WAYNE B. JONAS

Department of Family Practice  
Uniformed Services University of the Health  
Sciences  
Bethesda, Maryland

Director (1995–1998)  
Office of Alternative Medicine  
National Institutes of Health  
Bethesda, Maryland

JEFFREY S. LEVIN

Senior Research Fellow  
National Institute for Healthcare Research  
Rockville, Maryland

President (1997–1998)  
International Society for the Study of Subt  
Energies and Energy Medicine (ISSSEEM)  
Golden, Colorado



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# AYURVEDIC MEDICINE

*D. Vasant Lad*

## BACKGROUND INFORMATION

### Definition

Ayurveda is an ancient system of healing that has its roots in the Vedic knowledge of ancient India. It is thought by many scholars to be the oldest healing system in existence. The knowledge contained in Ayurveda deals with the nature, scope, and purpose of life. This system of healing embraces the metaphysical and physical, health and disease, happiness and sorrow, and pain and pleasure. It defines life as the expression of cosmic consciousness (sometimes called God, the Divine, Universal Awareness, or the Creator) manifest as the entire sphere of creation. In Vedic knowledge, the purpose of life is to know or realize the Creator (cosmic consciousness) and to express this divinity in one's daily life.

*Ayur* means life, and *veda* means knowledge. Systematized knowledge becomes a science, and so Ayurveda is considered the science of life. According to this system, individual life is a microcosm of the cosmos—an indivisible, unique phenomenon. Ayurveda evolved from practical, philosophical, and spiritual illumination, rooted in the understanding of creation. The ancient seers, or *rishis*, were highly evolved, spiritual human beings who came to understand creation through deep meditation and other spiritual practices. In their search for an understanding of the creation of all things, Ayurveda was evolved. It helps each person understand one's unique body, mind, and the nature of

daily operating consciousness. According to Ayurveda, this basic knowledge of body, mind, and consciousness is the foundation of health and happiness.

### History and Development

Ayurveda dates back more than 5000 years. Of the seven ancient philosophies that it incorporates, the Sankhya model of creation and evolution is a system for use in daily life. The ancient sages who evolved this philosophy perceived how energy and the laws of nature manifest in all living, nonliving, gross, and subtle things, and they developed these precepts into a system of thought.

There are many ancient texts on Ayurveda, all originally written in Sanskrit. Although these works exist in English translation, their format may not be familiar or easily translatable into Western concepts. These texts are written in the form of *sutras*, which express the essence of the information in poetic form only. In the Ayurvedic tradition, it is essential for each student to have a mentor who can expand the student's understanding of Ayurveda and, in essence, provide the keys that unlock the layers of meaning contained within these ancient writings.

### THREE IMPORTANT AYURVEDIC TEXTS

The *Caraka Samhita*, the *Susruta Samhita*, and the *Astanga Hridayam Samhita* are probably the

most important Ayurvedic texts. The *Caraka Samhita*, which is believed to have been written between 200 BC to 400 BC is the oldest and most important ancient writing on Ayurveda. This work is based on an even older oral tradition. It presents most of the theoretical edifice of Ayurveda and concentrates on the branch of Ayurveda called *kayacikitsa*, or internal medicine. The English translation by P. V. Sharma (Chaukhambha Orientalia: Varanasi, India, 1981) is available in four volumes; two volumes are original text and two are commentary about the original work. Sharma's translation includes numerous appendices and an index. The translation by Bhagwan Dash and Ram Karan Sharma (Chowkhamba Sanskrit Series Office: Varanasi, India, 1992) has commentary incorporated in the original text. Both translations contain the original Sanskrit prose and poetry.

The *Susruta Samhita* presents the field of Ayurvedic surgery called *salakya*, meaning foreign body. This work is also believed to be based on oral material passed down from generation to generation. It is thought to have been written soon after the *Caraka Samhita*. Although the *Susruta Samhita* deals with the practice and theory of surgery, it is also an important source of Ayurvedic aphorisms. For example, the most commonly quoted definition of health is from Susruta. Translated from the Sanskrit, it reads: The person whose *doshas* (physiology) and digestion are balanced, whose tissue formation, elimination, and bodily processes are proper, and who experiences bliss in spirit, sense, and mind is a healthy person. The three-volume translation by K. L. Bhisagratna is the only English version available (Chowkhamba Sanskrit Series Office: Varanasi, India, 1991).

The *Astanga Hridayam Samhita* is the work of a person named Vagbhata and also dates back to 200 BC to 400 BC. Vagbhata's use of the Sanskrit language is poetic and melodious, making it easy for students to commit to memory. This exposition deals primarily with *kayacikitsa* (internal medicine). Emphasis is placed on treating the physiology of the body and on suggestions for therapeutic use of metals and minerals. K. R. Srikantha Murthy has provided an English translation (Krishnadas Academy: Varanasi, India, 1991).

## OTHER IMPORTANT TEXTS

The *Sarngadhara Samhita* is a concise exposition of Ayurvedic principles. This treatise is thought to have originated in the fourteenth century. Its subject matter is *kayacikitsa*. The *Sarngadhara Samhita* is prized for its enumeration and description of numerous pharmacologic formulations and contains perhaps the first textual reference to diagnosis by means of the pulse. The work is available in English translation by K. R. Srikantha Murthy (Chaukhambha Orientalia: Varanasi, India, 1995).

*Madhava Nidanam*, available in English translation by K. R. Srikantha Murthy (Chaukhambha Orientalia: Varanasi, India), deals with the Ayurvedic classification of diseases. This work is dated around 700 AD and covers a wide range of diseases. Although this treatise provides detailed descriptions of disease prodroma and cardinal signs and symptoms, it does not provide etiologies or suggestions for treatment. *Madhava Nidanam* is a book of practical, clinical medicine.

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## PRINCIPAL CONCEPTS

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### Creation of the Universe: Five Elements

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Kapila, the founder of Sankhya philosophy, outlined five elements in the creation of the universe: *Purusha*, *Prakruti*, *Mahad*, *Buddhi*, and *Ahamkar*.

According to Sankhya, *Purusha* is male energy. *Prakruti* is female energy. *Purusha* is formless, colorless, beyond attributes, and it takes no active part in creation. This energy is choiceless, passive awareness. *Prakruti* yields form, color, and attributes in the field of action. It is awareness with choice, Divine Will, the One who desires to become many. The universe is the child born out of the womb of *Prakruti*, the Divine Mother. *Prakruti* creates all forms in the universe, whereas *Purusha* is the witness to this creation. *Purusha* and *Prakruti* merge together to bring cosmic order, or *Mahad* (also called universal intelligence). Within *Mahad*, or universal intelligence, a center arises and from that

center, *Buddhi*, the individual's intellect, is created. Intelligence is a universal phenomenon; intellect is individual. The radius from the *Buddhi* center creates a small enclosure, a circle. The center of that circle is called *Ahamkar*—the ego, the feeling of "I am."

This feeling of "I am" further manifests through three universal qualities that pervade all creation:

1. *Sattva* is the pure essence of light, right action, and spiritual purpose. On the universal level, *sattva* is vast clear space in the universe; on the individual level, *sattva* is the clarity of perception.
2. *Rajas* is the principle of movement. On the universal level, *rajas* is atmosphere; on the individual level, *rajas* is the movement of perception, which becomes attention.
3. *Tamas* is the principle of inertia and darkness. On the universal level, *tamas* is the body of the planet solidity in all of nature; on the individual level, *tamas* is precipitation of perception, which is experience. Without *tamas*, there is no experience.

According to Ayurveda, these three universal qualities influence both our minds and bodies. *Rajas* is the active vital life force in the body that moves both the organic and inorganic universal aspects to *sattva* and *tamas*, respectively. Therefore, *sattva* and *tamas* are inactive potential energies that require the active kinetic force of *rajas*. As a result of the influence of the three universal qualities, the five senses (hearing, touch, vision, taste, and smell), the five motor organs (mouth, hands, feet, reproductive organs, and excretory organs), and the mind are differentiated as parts of the organic universe. The five objects of perception (sound, touch, sight, taste, and smell) and the five basic elements (space, air, fire, water, and earth) are parts of the inorganic universe.

### Inorganic Universe

An Ayurvedic principle states that all organic and inorganic substances are made up of the five basic elements: space, air, fire, water, and earth.

### SPACE

Within the body, each cell occupies space. Through the cellular space, cells communicate with one another. There is a continuous flow of intelligence between every cell. Every cell is a center of awareness; every cell has a mind and has the ability to choose what it ingests and what it expels. Therefore, space, which is the first expression of consciousness, is the basic need of the bodily cells. Even modern physics states that matter is that which occupies space. Thus, the development of matter begins with space.

### AIR

The flow of consciousness, from one cell to another cell in the form of intelligence, is called *prana*, the principle of the air element. *Prana* is a vital life force that is essential for communication on all levels of body, mind, and spirit. The air element is necessary for all subtle and gross movement within the cell, within each organ, and within the physical body as a whole. In other words, sensory stimuli and motor responses are the subtle movements of the air principle. Even the movements of the heart, respiration, peristalsis, and other involuntary movements are governed by *prana*.

### FIRE

The fire element manifests as the metabolic processes regulating the transformation of food into energy. All transformative processes are governed by the fire element. The fire element is responsible for governing body temperature and the processes of digestion, absorption, and assimilation of food. Essential to these transformation processes are gastric action, hydrochloric acid, digestive enzymes, liver enzymes, and the amino acids present in every cell. Even within each of the doors of perception—eyes, ears, nose, tongue, skin—there is a subtle fire component that is necessary for sensory perception and processing these perceptions into knowledge.

### WATER

Water is necessary in the human body for assimilation and for maintaining electrolyte balance.

The blood in our bodies is composed of 90% water, and this water carries nutrients from one part of the body to the other. Oxygen, food particles, and the molecules of minerals are carried from one cell into another cell, from one system to another system, by this continuous river of fluid, the blood plasma. This is the Water of Life.

## EARTH

From Earth, all organic living bodies, including humans, are created. The solid structures of the body—hard, firm, and compact tissues (e.g., bones, cartilage, nails, hair, teeth, and skin)—are derived from the Earth. Earth also contains the inorganic substances that constitute the mineral kingdom.

### Types of Energy: Vata, Pitta, and Kapha

In addition to the five basic elements of the inorganic universe, Ayurveda identifies three basic types of energy, or functional principles, that are present in everybody and everything. There are no single words in English to describe these principles, so we use the original Sanskrit words: *vata*, *pitta*, and *kapha*. These three *doshas*—*vata*, *pitta*, and *kapha*—are the active forms of the five elements. They are forces of energy, patterns, and movements, not substances and structures.

## DEFINITIONS

Energy is required to create movement so that fluids and nutrients get to the cells, enabling the body to function. Energy is also necessary to metabolize the nutrients in the cells and is needed to create and maintain cellular structure. *Vata* is the energy of movement; *pitta* is the energy of digestion or metabolism; and *kapha* is the energy that forms the body's structure and holds the cells together. All people have a unique combination of *vata*, *pitta*, and *kasha*. Some individuals have one *dosha* predominant; others have a predominance of two *doshas*; still others might have the equal involvement of all three. Although each *dosha* is composed of all five basic elements, two of these elements are

predominant. The cause of disease in Ayurveda is viewed as the lack of proper cellular function because of an excess or deficiency of *vata*, *pitta*, or *kapha* and/or the presence of toxins that interfere with *dosha* balance.

## BALANCING THE THREE ENERGIES

According to Ayurveda, at the moment of fertilization, we are endowed with a certain genetic code and unique psychophysiological constitution, which is determined by the proportional combination of *vata*, *pitta*, and *kapha* of our biological parents. This constitution is called an individual's *prakruti*. It governs the individual's responses to events and life circumstances, both mental and physiological. It is believed that if one is aware of one's basic constitution and its concomitant tendencies, one can take actions—including changing diet, behavior patterns, and emotional responses—to maintain equilibrium with one's constitution, thereby living a balanced, happy, and fulfilled life.

In Ayurveda, body, mind, and consciousness work together in maintaining balance. They are simply viewed as different facets of one's being. To learn how to balance the body, mind, and consciousness requires an understanding of how *vata*, *pitta*, and *kapha* work together. According to Ayurvedic philosophy, the entire cosmos is an interplay of the energies of the five basic elements—space, air, fire, water, and earth. *Vata*, *pitta*, and *kapha* are combinations of these five elements that manifest as patterns in all creation.

According to Ayurveda, there are seven body types. There are monotypes in which one *dosha* is predominant, either *vata*, *pitta*, or *kapha*. There are dual types in which two *doshas* are equally dominant, either *vata-pitta*, *pitta-kapha*, or *kapha-vata*. And, very rarely, there are equal types, in which all three *doshas* are present in equal proportions. Every individual has a unique combination of these three *doshas*.

## Vata

In the body, *vata*, which is principally composed of space and air, is the subtle energy associated with movement. It governs breathing, blinking, muscle and tissue movement, heartbeat, and all movement in the cytoplasm and cell mem-



branes. In balance, *vata* promotes creativity and flexibility in a person; out of balance, *vata* produces fear and anxiety. In the external world, *vata* types tend to earn and spend money quickly. They are not good planners and, consequently, may suffer economic hardship. On the physical level, *vata* people are more susceptible to diseases involving the air principle, such as emphysema, pneumonia, and arthritis. Other common disorders caused by imbalanced *vata* include flatulence, tics, twitches, aching joints, dry skin and hair, nervous system disorders, constipation, and mental confusion. The energy of *vata* tends to increase with age, regardless of the individual's basic constitution.

*Pitta*

*Pitta*, principally made up of fire and water, is expressed as the body's metabolic system. *Pitta* governs digestion, absorption, assimilation, nutrition, metabolism, and body temperature. In balance, *pitta* promotes understanding and intelligence in a person; out of balance, *pitta* arouses anger, hatred, and jealousy. In the external world, *pitta* people like to be leaders and planners and seek material prosperity. *Pitta* people tend to have diseases involving the imbalanced fire principle, such as fevers, inflammatory diseases, and jaundice. Common symptoms include skin rashes, burning sensations, ulcers, fever, and inflammations or irritations (e.g., conjunctivitis, colitis, sore throats). *Pitta* is predominant during adulthood.

*Kapha*

*Kapha*, principally comprised of earth and water, is the energy that forms the body's structure—bones, muscles, tendons—and holds the cells together. *Kapha* supplies the water for all body parts and systems. It lubricates joints, moisturizes the skin, and maintains immunity. In balance, *kapha* is expressed as the action of love, calmness, and forgiveness. Out of balance, it leads to attachment (e.g., to family, job, lifestyle, possessions), greed, and possessiveness. In the external world, *kapha* tendencies toward groundedness, stability, and attachment help *kapha* people earn and hold onto money. They tend to have diseases connected to the water principle, such as influenza, sinus congestion,

and other mucus-involving diseases. Sluggishness, excess weight, diabetes, water retention, and headaches are also common. *Kapha* is predominant during the years of rapid development, from infancy through late childhood.

PROVIDER–PATIENT/CLIENT INTERACTIONS

Patient Assessment Procedures

There are eight classical clinical modalities that Ayurveda uses for examination. These clinical barometers are the pulse, urine, feces, tongue, speech and voice, examination by touch, examination of the eyes, and general physical examination (Table 11.1).

These eight important limbs are based on *darshanam* (observation), *sparshanam* (examination by tactile experience), and *prashnam* (inquiry or questioning). Every patient is like a living book: to read that book, a physician must develop the ability to use these clinical barometers to properly perceive the diagnosis.

The Ayurvedic physician should have a basic understanding of how the inner organizations of *vata*, *pitta*, and *kapha* are acting in and reacting to the patient's lifestyle, diet, emotions, job, and stress. According to Ayurveda, each constitutional type has an inclination toward certain disorders. For example, *vata* individuals or those with *vata* imbalance have a tendency toward constipation, bloating, arthritic changes, sciatica, insomnia, and degenerative arthritis. *Pitta* individuals, when out of balance, may have conditions such as hyperacidity, peptic ulcer

Table 11.1. Physical Examination

<i>Nadi</i> : examination of the pulse
<i>Mutra</i> : examination of the urine
<i>Mala</i> : examination of feces
<i>Jihva</i> : observation of the tongue
<i>Shabda</i> : observation of the person's speech and voice
<i>Sparsha</i> : tactile examination by palpation
<i>Druga</i> : examination of eyes
<i>Akruti</i> : the general physical examination of the entire body

disease, ulcerative colitis, or other inflammatory and infectious diseases. Metabolic disorders, such as slow metabolism, underactive thyroid, obesity, diabetes, hypertension, and high cholesterol, are associated with *kapha* imbalance. A physician should know the signs and symptoms of the aggravation of *vata*, *pitta*, and *kapha*. Then, when a clinical assessment is made, the examiner asks questions to confirm which *dosha* is out of balance. These observations are also confirmed by examination of pulse, tongue, and general physical examination.

The constitutional imbalances and their causes are understood on clinical grounds, identified through the eight classical modalities discussed previously in this chapter. Ayurveda is not only a metaphysical science, it is also a practical clinical science. The Ayurvedic understanding of health, imbalance, and disease is based on an understanding of the unique constitution of the individual, the aggravating or debilitating causes, the present imbalance if any, and the resulting pathogenesis.

### Etiology

The Ayurvedic physician understands the pathogenesis and etiologic factors of the individual's problem by asking the patient about his/her diet, lifestyle, and relationships. The causative factors of the same disease may vary according to what aspect of the individual is imbalanced. Every disease has its origin. For example, all *vata* disorders have their root in the colon. *Pitta* disorders begin in the small intestine. *Kapha* diseases have their foundation in the stomach and gastric mucosal secretions. The condition of these organs is checked.

To help understand the causes of disease, that is, those factors which have weakened the system's ability to defend itself, Ayurveda has classified causes into groups:

- Acute versus chronic
- Genetic or hereditary
- Traumatic
- Habitual
- Dietary, including food poisoning and wrong food combining
- Seasonal

- Climate
- Lifestyle
- Age
- Metabolic condition
- Emotional and psychological makeup
- Supernatural and planetary disposition
- Acts of God

Certainly bacteria and viruses cause disease, but the physician also asks what affects the patient's ability to defend himself against them. Ayurveda is about physiology, not pathogens. The question asked is whether the body is protected by its balanced physiology or is in a state of imbalance and therefore open to disease. The body has its own protective mechanism, the *doshas*. The *doshas* respond to these causes in an attempt to fight off disease.

### Stages of Disease

According to Ayurveda, there are six progressive stages of disease resulting from uncontrolled aggravating causes: accumulation, provocation, spread, deposition, manifestation, and differentiation.

#### ACCUMULATION

During the first stage, the aggravated *dosha* begins to accumulate in its respective location: *kapha* in the stomach, *pitta* in the small intestine, and *vata* in the colon. The *dosha* that accumulates is the result of one or more of the various causes previously listed. This beginning stage is the ideal time to begin therapy; the *dosha* is more easily removed before the condition spreads beyond its primary location. For this reason, Ayurveda strongly advises seasonal purification at the juncture of the seasons to eliminate the accumulation of *doshas* that tend to occur during the season.

#### PROVOCATION

During the second stage, *vata*, *pitta*, or *kapha* continue to accumulate in their respective locations and begin to affect the function of these and surrounding organs. This stage is also relatively easy to treat, although attention must be taken to strengthen the organs under pressure

after the increased *doshas* are removed from the body. Excess *dosha* is removed by the traditional Ayurvedic cleansing therapy called *pancha-karma*. The organ systems are strengthened through herbal supplements and modification of diet and lifestyle.

### SPREAD

The third stage is spread. At this stage, the aggravated *dosha* moves from its primary location and begins to circulate in the body. The *doshas* may move in any direction. If *vata* moves upward, it can cause nausea, vomiting, or a feeling of light-headedness. If it moves downward too rapidly, diarrhea may result.

The tissues and organs of the body are divided into three *margas*, or pathways, through which the *doshas* flow. When a *dosha* enters this third stage of spread, it begins to travel along one of these pathways. These *margas* are as follows:

1. The internal, or gastrointestinal, pathway, which includes the entire alimentary canal.
2. The intermediate pathway, which includes *rasa* (plasma) and *rakta dhatus* (blood tissues).
3. The deep, or vital, pathway, which includes all the other *dhatus* (*mamsa*, muscle tissue; *meda*, fat tissue; *asthi*, bone tissue; *majja*, nerve tissue; and *shukra/artava*, reproductive tissue). This pathway also encompasses the essential organs and major vessels and nerves.

### DEPOSITION

During the fourth stage, deposition, the aggravated *dosha* settles in a weak area in the bodily tissues and begins to accumulate. It is during this stage that the disease's prodromal symptoms begin. The physician must recognize these symptoms so that treatment can be initiated. By stopping the disease process at this stage, the body can heal itself more rapidly with less danger of lasting effects.

### MANIFESTATION AND DIFFERENTIATION

In the fifth stage of manifestation, the diagnosis of the disease and the cardinal signs and symptoms are readily apparent. In Sanskrit, the sixth stage of disease is called *bheda*, which means

destruction or differentiation (i.e., tissue damage). When the disease process reaches the sixth stage, it is fully manifest with structural changes and complications involving other tissues and systems. The disease is also more difficult to treat at this stage.

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## THERAPY AND OUTCOMES

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### Treatment Options

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Ayurveda has eight traditional specialties, or branches: surgery, internal medicine, gynecology, pediatrics, ear-nose-throat, psychiatry, toxicology, and geriatrics. Ayurveda uses surgery if there is a need. Ayurveda uses gemstones, crystals, metals, even *mantra* and sound for the purpose of healing. *Marma* therapy, pressing points to send energy to the organs and connective tissue, is also used. Ayurveda has a wide scope of practice, including related disciplines such as *jjyotisha* (Vedic astrology), meditation, *yoga asanas* (yoga), and *pranayama* (cleansing).

According to Ayurveda, treatment is an action that creates balance among the components of constitution—*dosha*, *dhatu* (tissues), and *mala* (excretas: urine, feces, sweat). Ayurveda starts this action through prevention, which involves attention to maintaining the balance of the constitution. Living a proper, preventive lifestyle involves knowledge of one's unique constitution (*prakruti*) and of how to maintain its balance in the face of all outer and inner challenges and stresses. Strengthening the organs and tissues and eliminating toxins from the body before they reach the stage of producing symptoms of disease are equally important. The first line of treatment is to remove the cause of the disease. If this is not possible, a basic guideline is to control the *doshas* at the stage of accumulation by following an anti-*doshic* regimen.

All Ayurvedic treatment attempts to reestablish the person's unique constitutional balance. As discussed, disease develops when the person's immune function is low and the aggravated *doshas* settle in a weak area and begin to affect the functions of that system. Treatment of symptoms often makes the patient feel better; however, this does not address the fundamental



cause of the illness, and the problem will likely reappear in the same or another form.

Treatments may be applied to the physical, emotional, and spiritual levels. Looking at the emotional level, most people learn in childhood not to express negative emotions (e.g., anger, fear, anxiety, nervousness, jealousy, possessiveness, and greed). As a result, these emotions become repressed and unprocessed. Ayurveda proposes that if these negative emotions remain repressed and are not dealt with, emotional toxins and unhealthy behavioral patterns will accumulate in the system. Ayurveda teaches a technique of dealing with negativity by observation and release. Recognize the emotion as it arises, observe it without judgment, and then release it. This technique helps to transform the unprocessed emotions into processed form. Negative emotions can be dealt with in this way through this awareness of emotion and release of it. Fear, anxiety, and apprehension are associated with *vata*; anger, hate, and jealousy with *pitta*; and greed, attachment, and possessiveness with *kapha*. Each of these three aspects of the body can influence and affect the others. For example, if a person represses fear, the kidneys tend to be disturbed; anger affects the liver; greed and possessiveness settle in the heart and spleen. Therefore, the emotional makeup of the patient is assessed and taken seriously.

## PALLIATION

A basic Ayurvedic principle states that *jathar agni*, the gastric fire, and *dhatu agni*, the metabolic and regulatory component of each tissue, must be in harmony. If *agni* is low, food is not properly digested; undigested food becomes nonhomogenous, toxic, and morbid, and produces *ama* (or toxins) in the system. *Ama* is the root cause of disease. This *ama* must be eliminated, and *panchakarma* (Ayurvedic cleansing therapy) is the best treatment for this process. However, *panchakarma* should only be done with a person who has sufficient energy and strength. If a person is debilitated, tired, or weak, he or she cannot bear *panchakarma* and it could further complicate his or her condition. For these people, palliation is a better choice. Palliation involves the use of herbs, such

as ginger, black pepper, Piper longum, or *chitrak*, in addition to a specific diet appropriate for the person's constitution and condition.

Palliation helps not only to kindle digestive fire, but also to burn the *ama*. A person should drink no more than seven or eight cups of water daily because it will only slow down digestion, add to the *ama*, and create more congestion. Instead of cold water, a person should drink ginger tea, cinnamon tea, or certain herbal teas (e.g., mint tea or cumin-coriander-fennel tea). These teas kindle fire, detoxify *ama*, and cleanse the *srotas*, the subtle channels of the body. After this treatment, mild laxatives, such as *triphala*, are given to remove toxins from the colon.

The process of palliation still involves the removal of toxins from the system. However, the approach is more gentle and involves several aspects: herbal medication to digest accumulated toxins (*ama*) and to strengthen the digestive fire (*agni*); fasting from food and/or liquids; and sunbathing or windbathing. As this treatment continues, proper lifestyle, diet, and exercise must also be employed to sustain the benefits of treatment. With many conditions, treatment by palliation is used first and then, when the patient is stronger and the toxins have been moved from the tissues to the hollow organs, purification is appropriate to finish the removal of the toxins from the body.

## PANCHAKARMA

To remove aggravated *doshas* and *ama* (toxins), Ayurveda suggests *panchakarma*. *Pancha* means five, and *karma* means action. The five actions associated with *panchakarma* are therapeutic vomiting, purgatives or laxatives, medicated enemas, nasal administration of medication, and purification of the blood. *Panchakarma* is indicated as a therapy *only* in cases in which the patient has sufficient strength and health to tolerate the removal of excess *doshas* and toxins. Even then, it should only be administered by trained personnel under the supervision of a qualified Ayurvedic physician.

Before the actual operation of purification begins, the body must be prepared to release the toxins. The two preparatory procedures are *snehana* (oil massage) and *swedana* (sweat ther-

apy). With *snehana*, oil is applied to the entire body with a particular type of massage. This procedure helps the toxins to move from the deep tissues to the gastrointestinal tract. Oil massage also makes the superficial and deep tissues soft and supple, thus helping to remove stress and to nourish the nervous system. *Snehana* is given daily for three to seven days. *Swedana*, sweating, is given every day immediately following the *snehana*. An herbal concoction may be added to the steam to further loosen the toxins. After three to seven days of *snehana* and *swedana*, the *doshas* become well ripened. A particular *panchakarma* method is then given according to the individual's constitution and disorder.

#### *Vamana: Therapeutic Vomiting*

Therapeutic vomiting (*vamana*) is used to treat excess accumulations of *kapha* in the stomach. After three or four glasses of special herbs or salt water administered in the early morning, the tongue is rubbed to induce vomiting. The release of mucus through this therapy can bring immediate relief to congestion, wheezing, bronchitis, or breathlessness, and the sinuses will clear. Therapeutic vomiting is also indicated for skin diseases, chronic asthma, diabetes, chronic cold, lymphatic obstruction, chronic indigestion, edema, chronic sinus problems, and repeated attacks of tonsillitis. All of these conditions are associated with an imbalance of *kapha*.

#### *Virechana: Purgatives and Laxatives*

The use of purgatives (*virechana*) is helpful in treating *pitta* imbalance, which involves inflammation or irritation. Excess secretion of bile accumulated in the gallbladder, liver, or small intestine may cause allergic rash or skin inflammation (e.g., acne, dermatitis) as well as chronic fever or jaundice. A number of substances can be used for this treatment, including triphala, senna, psyllium, castor oil, or even cow's milk with *ghee* (clarified butter). Purgatives should not be given to persons with acute fever, diarrhea, severe constipation, or bleeding from the rectum or lungs. Other contraindications include patients with emaciation, weakness, or prolapsed rectum.

#### *Basti: Therapeutic Enema*

The third action is treatment with therapeutic enema (*basti*), which involves introducing medicinal oils or herbal decoctions into the rectum. Medicated enema is the action of choice for *vata* disorders. This treatment alleviates constipation, distention, chronic fever, sexual disorders, kidney stones, heart pain, vomiting, backache, and neck pain. Other *vata* disorders, including sciatica, arthritis and gout, also respond well to this therapy. Unlike colonics, which are popular with many therapies today, the principle reason for use of the enema in Ayurveda is for absorption of medicated oils and herbs through the colon wall. Of course, cleansing does take place when the enema is expelled. Oil or decoction enemas should be retained for a minimum of ten minutes, longer if possible.

#### *Nasya: Nasal Administration of Medication*

The fourth action, nasal administration of medicated oils and powders, is called *nasya*. The nose is a doorway to the brain and to consciousness, and life energy (*prana*) enters the body through breath taken in through the nose. Nasal medication helps to correct the disorders of *prana*, which affect the higher cerebral, sensory, and motor functions. This treatment is also used for dryness of the nose, sinus congestion, hoarseness, migraine headache, and certain eye and ear problems. Nasal medication is contraindicated following a bath, ingestion of food, sex, or alcohol consumption.

#### *Rakta Moksha: Purification of the Blood*

The fifth action of *panchakarma* is purification of the blood (*rakta moksha*). Literally, *rakta moksha* means liberation of blood, or bloodletting; a more liberal interpretation is the cleansing or purification of the blood. In Ayurveda, both historically and in modern times, bloodletting is used in certain cases, either directly or by the application of leeches. *Rakta moksha* is to remove toxins from the blood in conditions such as skin disorders, enlarged liver and spleen, and gout. However, in most Western countries, bloodletting is either illegal or considered to

be quackery. Hence various other procedures, usually herbal, are used to cleanse the blood. For blood-carried disorders, such as allergy, rash, or acne, the patient could take burdock root tea as a blood purifier.

Ayurveda believes that toxins absorbed into the bloodstream through the gastrointestinal tract create toxemia, the cause of many disorders, such as eczema, rheumatoid arthritis, and even the common cold. These toxins circulate throughout the body and may manifest under the skin or in the joint spaces, creating disease. Skin disorders, such as urticaria, rash, eczema, acne, scabies, leucoderma, and hives also respond well to blood cleansing, as do cases of gout and enlarged liver and spleen. Excess *pitta* circulating as a waste product in the blood creates these disorders. Therefore, for many *pitta* ailments, using herbal blood cleaners or extracting a small amount of blood from the vein relieves the tension created by the toxins in the blood. This type of treatment is contraindicated in cases of anemia, edema, and weakness, and is not recommended for young children or the elderly. Although the above treatment should only be administered by a physician with Ayurvedic training, in some cases the symptoms of excess *pitta* are relieved by the donation of blood at a blood bank.

### ROUTINE, REJUVENATION, AND VIRILIZATION

After the cleansing process occurs, a program of rejuvenation is recommended with specific herbs appropriate to the *dosha* imbalance. For *vata*, *guggulu* is used. If the person is *pitta*, *shatavari* or *guduchi* are used. For *kapha*, *punar-nava*, *gokshura*, or *shilajit* are appropriate. In this approach, treatment is determined by looking at the entire process—what the person's strength is, which *dosha* is out of balance, and which *dhatu* (tissue) is affected.

According to Ayurveda, all substances have medicinal properties. Ayurveda's knowledge and usage of herbs and other substances were gained from long experience and observation and date from early times. In addition to most substances, there are hundreds of herbs commonly used in Ayurvedic preparations, in addition to those commonly used for food, such as

cinnamon and turmeric. Many different modes of preparation are required and each substance, according to its properties, is appropriate for treatment of different imbalances. For example, the common cold has the properties of *kapha*—mucus, congestion, thick, and lethargic. The antidote is herbs with opposite qualities, such as hot ginger tea.

Once the body, mind, and spirit are essentially free from disease and back in balance, maintaining the vitality of the body and its systems through *rasayana*, rejuvenation therapy, and *vajikarana*, virilization therapy, is essential for health and longevity. *Ojas*, *tejas*, and *prana* are protected by virilization therapy. *Ojas*, the superfine essence of *kapha*, is a necessary factor for maintaining immunity. *Tejas*, the superfine essence of *pitta*, maintains cellular metabolism. *Prana*, the superfine essence of *vata*, is responsible for maintaining the continuous flow of information, intelligence, and communication of cells and is necessary for maintaining the life force. Specific routines and herbal products are available to assist in maintaining the vital function of these three life-giving forces. Ayurveda contains a science of longevity.

### CHROMOTHERAPY

Ayurveda includes chromotherapy as a mode of treatment. Chromotherapy involves the use of specific colored light beamed directly on various parts of the body, water placed in the sunlight with specific colored cellophane attached to the jar, or wearing specific colors of clothing. Colors have psychological and physiological effects. Red, orange, and yellow are connected with *pitta*. Red improves circulation; orange acts as an antiseptic and antibacterial agent; yellow acts as a decongestant. These three colors are *pitta*-promoting and pacify *vata* and *kapha*. Ayurveda also uses the other colors of the rainbow, which are present in sunlight. Green is grounding and nourishing, so it is associated with *kapha*. Blue is cooling. In India, if a child is jaundiced, the child is put under blue light. The liver heals faster and the jaundice is relieved. Blue pacifies *pitta* and promotes liver function. Purple and indigo are cosmic colors associated with the higher spectrum and they relate to *vata dosha*.

## **Treatment Evaluation**

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Ayurveda addresses the causes of disease and the individual's personal response to these causes. Because each patient is evaluated according to his or her unique constitution, any aggravating causes, the present state of imbalance, and the stage of the disease process, there is less emphasis on standard treatments or remedies according to presenting symptoms. In Ayurveda, there is less emphasis on treating someone according to the name of the disease and more emphasis on treating the subject's imbalance and aggravating causes. Ayurveda goes deeply to the root cause of disease, and the treatment protocol for any given disease may vary from person to person and according to the stage and specifics of the disease process. Because of this approach, Ayurvedic treatments are generally not standardized. Individuals with similar Western diagnoses may often receive different Ayurvedic treatments.

There is a 5000-year tradition of the success and usefulness of Ayurveda, and there are many articles and studies reported. Ayurveda has developed and is used as an integrated system of medicine in which a unified theory guides the assessment and treatment of the patient. Its theory of health and disease, disease classifications, language and, in some cases, outcomes are different from those in the West and therefore are difficult (but not impossible) to investigate using modern Western approaches. At this point, however, there is no organization of the available literature, and finding studies on a specific area is difficult. There is an interest in testing Ayurveda as a medical system, using accepted Western medical style protocols. These studies are in the beginning stages at several university medical centers in the United States. For thousands of years, thousands of physicians and millions of patients have believed in and practiced Ayurveda. The question is, can this efficacy be proven by Western medicine?

One problem with proving efficacy according to Western protocols is the issue of double-blind trials and the placebo effect. The healing effects caused by the spiritual strength of the physician and placebos are acknowledged by Ayurveda and considered significant in many

Eastern health care systems. However, these elements are generally difficult to quantify and may not be reproducible by every practitioner. In clinical studies to date, it seems that either the Western clinical protocols are compromised to allow for the satisfaction of the alternative/complementary side or the alternative/complementary side is unhappy with the changes necessary to satisfy Western clinical trial protocols. Many Western clinical trial studies are based on drugs and medicines formulated from a synthetically produced compound that can be quantified and standardized. Many of the Eastern approaches to health care, like Ayurveda, have a substantial pharmacopeia that uses only whole herbs. These herbs may be processed into tinctures, powders, or combinations, but active ingredients are not separated from the whole; the entire herb is used and is therefore difficult to standardize. Despite these difficulties, the benefits of a number of Ayurvedic products and practices have been studied and are summarized in the next section.

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## **USE OF THE SYSTEM FOR TREATMENT**

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### **Ayurveda in the West**

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Currently in the West, there is no unification and standardization of Ayurvedic medicine, and there is only a small number of traditionally trained Ayurvedic physicians. Although Ayurveda as a medical system is uniquely applicable in almost all medical conditions, the lack of access to fully trained practitioners limits its use for primary care. The laws regulating the practice of medicine of course prevent any Ayurvedic physician, no matter how qualified, from practicing medicine in the United States without an acceptable license. In addition, the practice of Ayurveda in the United States is limited even for licensed practitioners because of restrictions placed on many of its therapies, such as bloodletting and compounds containing specially prepared metals considered toxic in the West (e.g., arsenic or mercury). For this reason, many problems are not treated with Ayurvedic medicine in the United States as they are in India.

## Major Indications

### CHRONIC CONDITIONS

Allopathic medicine uses powerful medications and has the technology to deal with acute emergencies. However, in chronic conditions, such as rheumatoid arthritis, stroke paralysis, or multiple sclerosis, allopathic medicine has less success. Ayurveda believes it can effectively treat these conditions with diet and lifestyle recommendations, cleansing programs, Ayurvedic massage, and rejuvenation. Ayurvedic treatment for any condition requires a commitment from the patient, and the patient needs to be questioned about his or her willingness to follow through with diet and lifestyle changes. A significant component of the treatment process is the patient's personal responsibility as well as a genuine desire on the part of the patient to heal.

There has been no study that we know of using the Western clinical trial method on Ayurveda as an entire *system* of medicine. There are a number of studies on specific treatments and considerable literature on the pharmacological action of Ayurvedic herbs and their active ingredients. An example is guggulipid, a traditional Ayurvedic herb demonstrated to lower serum cholesterol in clinical studies (1). By consulting with experienced Ayurvedic practitioners, conventional researchers in India have discovered a number of useful herbs and have done so more rapidly and economically than those that have been discovered using the usual drug-screening and development strategies (2, 3). Laboratory and human experimental studies have indicated benefits of Ayurvedic products in conditions such as Alzheimer's disease (4), Parkinson's disease (5), and rheumatoid arthritis (6). These studies have also helped to identify potentially toxic substances (7) and drug-herb interactions (8), requiring knowledge and careful use of Ayurvedic products.

Transcendental meditation (TM) is a specialized meditation technique adapted from Ayurvedic traditions and is widely taught in Western countries. It has been shown to produce beneficial effects on a number of conditions, including reduction of blood pressure (9, 10); posttraumatic stress syndrome (11); anxiety

(12); alcohol, nicotine, and drug abuse (13); and for general improvement in psychological health (14). Physiological effects of TM were reported three decades ago (15), and long-term practice may include electroencephalogram changes that persist during sleep (16). Meditation techniques derived from Ayurveda, with their emphasis on changing consciousness, may produce greater health benefits than those that simply teach relaxation (17). For example, a carefully controlled trial of TM demonstrated reductions in blood pressure in hypertensive, elderly African Americans who practiced the technique (9, 10).

Recently, data collected on the costs and health outcomes of individuals who regularly engage in the lifestyle and preventive practices of Ayurveda have shown considerably cost reductions because of less use of conventional health care services (18). When people take responsibility for their health and consciously engage in health-promoting behaviors, chronic disease is often mitigated or eased.

### PERSONAL RESPONSIBILITY

Identifying the cause of one's disorder is the beginning of the process of returning to balance. An important step is the client taking responsibility for dealing with the issues that are causing the undesirable effects and eventually doing something about these issues. Although classical Ayurveda has powerful techniques and an extensive pharmacopoeia, its more limited contemporary practice in the West is generally more effective when there is time for recovery (e.g., when the disease is in the early stage or is not life-threatening). If a patient persists in habits and behaviors identified as causative for his or her health problems, the Ayurvedic approach will only be partially effective. Ayurveda is most effective when the individual faces the cause of his or her condition and applies remedies according to his or her own constitution.

Ayurveda is a philosophy and system that encompasses the body, mind, emotions, and spirit. Many medical systems are held within this philosophy—from herbology and diet to surgery and drugs. What medicines to use, when to use them, and in what combination and for



whom is the strength and great contribution of Ayurveda.

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### Preventive Value

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Modern medicine is just beginning to address the importance of preventive measures. Because of Ayurveda's emphases on the balance of body, mind, and consciousness and on the importance of appropriate diet, lifestyle, and exercise for one's constitution, it is called the Science of Life. Following this approach, it seeks to bring one to a state of perfect health and to enhance longevity.

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## ORGANIZATION

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### Training

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In ancient times, the Vedic tradition in India passed this knowledge from *guru* to disciple, teacher to student, and continued for many thousands of years as an oral tradition. Approximately 2000 years ago, much of this knowledge was recorded in print, Ayurvedic medical colleges were established, and training became more formalized. This ancient Vedic tradition can still be sought out.

Today there are approximately 200 Ayurvedic colleges and schools in India connected to universities in every state. An Ayurvedic specialist in India has an educational and internship requirement similar to physicians (MDs) in the United States. The title is Master of Ayurvedic Science (MASc). The course of study for the bachelors degree (Bachelor of Ayurvedic Medicine and Surgery; BAMS) is five years, plus a two-year internship. The curriculum is established according to the basic principles of Ayurveda. In the second year, the students begin clinical work in a hospital under experienced Ayurvedic physicians. After finishing the requirements for the BAMS, a student may elect graduate study. During the intern years, the student's guidance counselor helps the student decide a research topic, which culminates in a thesis. After the thesis is accepted, there is a series of examinations, both oral and written.

If the student passes, he or she is declared an Ayurvedic specialist and is granted the MASc degree. It typically takes nine to ten years to obtain an MASc. In recent years the MASc degree has been changed to Doctor of Medicine in Ayurveda (MD in Ayurveda).

There is wide variance in how Ayurveda is practiced in the West. Because it is not yet recognized as a legitimate health care practice in the United States, there are only a handful of fully trained Ayurvedic physicians here. Although there are a growing number of schools in the West that teach Ayurvedic principles, the curriculum is limited and there is no consensus as to curriculum or requirements for graduation. These schools vary from small private schools, solely dedicated to Ayurveda, to a number of universities now beginning to develop programs of study. Ayurvedic physicians from India are sometimes brought to lecture for these new programs. However, a fully developed curriculum similar to those in India is not yet available in the West. Similarly, there is no licensing of Ayurvedic physicians, even for fully qualified Ayurvedic physicians trained in India. In the United States, licensed health care professionals, such as physicians, nurses, acupuncturists, and chiropractors, can incorporate Ayurvedic principles into their practice to the extent of their training and understanding. However, this practice becomes problematic in the West when a health care professional attends only a weekend seminar or other short course of study in Ayurvedic medicine, begins an Ayurvedic practice, and then has no further Ayurvedic medical training. An understanding of Ayurveda takes time and, although basic principles can be incorporated after some serious study, a thorough understanding of its proper application requires extensive study and commitment.

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### Quality Assurance

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In most Western countries, health care is regulated by the government. The laws govern not only what a practitioner can call oneself or claim to be, but also whether one can practice at all. The language of modern health care law is based

on scope of practice. When a practitioner wishes to diagnose and recommend specific treatment, it is considered to be the practice of medicine and hence requires a license that allows for that—MD, DO, ND, DC, and so on. Also, in most Western countries, the educational institution and the awarded degree are separate from the licensing and governing body that regulates the profession. Rather than endorse certain professions and practitioners, these licensing boards effectively control which health care options are available to people.

This regulation of health care in many Western countries affects Ayurveda in a dramatic manner. Even well-qualified and respected Ayurvedic physicians, those with a BAMS or MASc, who are approved to practice medicine in India are unable to practice in most Western countries. It is almost impossible for a person seeking professional Ayurvedic health care in most Western countries to obtain it. For an Ayurvedic physician to be able to practice medicine in most Western countries, he or she would literally need to go back to an approved medical school and obtain a degree in one of the licensable professions; all of this could take four to six years. This situation forces people who want Ayurvedic care to seek care from practitioners who are less knowledgeable in the Ayurvedic practice.

Currently, people in Western countries who want Ayurvedic care have two options: to choose a qualified and licensed medical doctor who has some training and understanding of Ayurveda, or to choose a unlicensed person with probably little or no formal medical education. The first choice will undoubtedly provide the patient with good medical care, but not necessarily expert Ayurvedic care. The second choice, although well intentioned, may not be able to provide the patient with good medical care.

There is a potential third option: a clinic with a licensed medical doctor, in the role of coordinating physician, who supervises the health care program of the patient and uses another person in the office who can provide expert Ayurvedic assessment and recommendations for treatment. However, there are few doctors or clinics currently providing this type of practice.

## Reimbursement

For the patient who wants or needs insurance reimbursement, the best choice is to choose a doctor who is incorporating Ayurveda into his or her practice and whose services are covered by insurance. There are one or two new, smaller insurance companies that will provide coverage for alternative health care. The question for the consumer is how to find these companies and how to judge their stability. The costs of modern health care and health insurance make these decisions a difficult task.

## Relations with Conventional Medicine

Modern allopathic medicine uses powerful and effective drugs, such as antibiotics, steroids, tranquilizers, and muscle relaxants. These drugs may have significant side effects. Knowledge of Ayurvedic principles can help an individual deal with some of these side effects. Ayurveda can complement conventional medicine by bringing insights to treatment of the patient, so that a drug can be selected for the person's *prakruti* (i.e., unique constitution).

For example, some people may be sensitive to penicillin. Because, according to Ayurvedic principles, penicillin is *hot*, *sharp*, and *penetrating*, it is *pitta*-provoking. Knowing this, a physician would carefully consider whether to prescribe penicillin to a *pitta* person. The same approach applies to aspirin. A *pitta* person is sensitive to aspirin. In that case, the doctor can suggest that aspirin be taken with bicarbonate of soda or *shanka bhasma*, an Ayurvedic preparation. With this combination, the aspirin will still work but will not burn the wall of the stomach.

Steroids should not be given to a *kapha* person because steroids have a *kapha*-type of action. They slow down metabolism and can create steroid toxicity, resulting in a moon-face and water retention. Therefore, steroids should be given only in emergency and for a short period of time to a *kapha* person.

In addition, Ayurveda can alleviate some of the side effects of modern pharmaceuticals. For example, when a cancer patient on chemother-

apy loses his or her hair, which is a *pitta* symptom, the patient can apply Bhringraj Oil to the scalp and take *shatavari* and *guduchi*. These herbs help prevent hair loss and *pitta* provocation, and the person can more easily bear chemotherapy with reduced side effects.

### PROSPECTS FOR THE FUTURE

Ayurveda has great prospects in the West, and the future of this system is bright. The medicine of the twenty-first century will incorporate the best of East and West, and the time-proven truths of Ayurveda will be a gift for all generations to come. Studying Ayurveda will give modern physicians additional tools for their practice, and the incorporation of Ayurvedic principles will bring improved health—to the body, mind, and consciousness.

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