

Maharishi Ayur-Veda: Modern Insights Into Ancient Medicine

AYUR-VEDA is the oldest existing medical system, having its heritage in ancient India. It is recognized by the World Health Organization and is still widely practiced.¹ The All India Ayur-Veda Congress (representing Ayurvedic physicians) has a membership of over 300 000, and 108 Ayurvedic colleges in India grant a degree after a 5-year program. Yet, until recently, Ayur-Veda has been virtually unknown in the West. Current interest in disease prevention and health promotion has led to its investigation by a growing number of Western physicians who are finding it to add valuable knowledge that is complementary to modern allopathic medicine.

The word *Ayur-Veda* comes from two Sanskrit roots: *Ayus*, meaning life or life span, and *Veda*, meaning knowledge or science. *Ayur-Veda* is therefore translated as "the science of life," which emphasizes its orientation toward prevention. The major textbooks of Ayur-Veda, the *Charaka Samhita*² and *Sushruta Samhita*,³ cover the major branches of medicine under much the same headings as allopathy. In addition, there are treatises on medical ethics and the physician-patient relationship. The Ayurvedic pharmacopeia includes thousands of plants and plant products, many of which are known therapeutic agents, such as *rauwolfia* and *digitalis*.⁴

Unfortunately, over centuries of foreign rule in India when Ayurvedic institutions were not officially supported, all were actively suppressed and much important clinical and theoretical knowledge became lost or unavailable. Ayur-Veda's effectiveness has been limited, as practitioners have not used its comprehensive approaches. A modern revival, taking into account all of these approaches in accordance with the classical texts, is known as Maharishi Ayur-Veda. This has taken place under the direction of Maharishi Mahesh Yogi in collaboration with leading Ayurvedic physicians.^{5,6}

The Ayurvedic Framework

The principle of biologic individuality is central to Ayurvedic diagnosis and treatment. Maharishi Ayur-Veda empha-

sizes host factors, particularly imbalance resulting from disruption of homeostatic or immune mechanisms, as the primary factor in the etiology of disease. It also places importance on mental and emotional factors, which it sees as critical to the development of these imbalances.

In examining a patient, the physician trained in Maharishi Ayur-Veda takes into account the particular pathology and also the constellation of unique psychophysiological characteristics that constitute the individual. According to Ayur-Veda, three irreducible physiological principles called *doshas* regulate the different functions of mind and body. In Sanskrit, the three doshas are called *Vata*, *Pitta*, and *Kapha*. Everyone is endowed at birth with some value of all three doshas, but in each person the exact proportions vary. This proportion determines the psychophysiological type. There are 10 classic types, derived from the combinations of the three doshas.

The three doshas are further subdivided into numerous subdoshas with different locations and functions throughout the body. Imbalance in the doshas and subdoshas disrupts normal function and is responsible for various disorders. Since different subtypes of doshas and their combinations affect different organ systems, the physician can correlate the Ayurvedic diagnosis with the disease classification of allopathic medicine.

Vata dosha represents motion and flow. Physiologically, it is at the basis of respiration, circulation, and neuromuscular activity. *Vata* imbalance predisposes to diseases of the nervous system, chronic pain, cardiac arrhythmias, rheumatic disorders, constipation, anxiety, and insomnia. *Pitta* dosha directs all metabolic activities, energy exchange, and digestion. *Pitta* imbalance predisposes to peptic ulcers, hypertension, inflammatory bowel diseases, skin diseases, and allergic reactions. *Pitta* imbalance is also responsible for anger, envy, and jealousy. *Kapha* dosha represents structure and cohesion and fluid balance. *Kapha* imbalance predisposes toward diseases of the respiratory system, sinusitis, diabetes mellitus, obesity, atherosclerosis, and tumors. *Kapha* imbalance is also responsible for feelings of attachment and greed.

Knowing the psychophysiological type can help the allo-

pathic physician diagnose existing disorders and predict risk for future illnesses. The physician correlates both the Ayurvedic and allopathic findings and then develops a treatment or prevention plan integrating both modalities.

Pulse Diagnosis

Through palpation of the radial pulse, skilled Ayurvedic practitioners are able to diagnose diseases not limited to the cardiovascular system, such as diabetes, neoplastic disease, musculoskeletal diseases, and asthma. Moreover, these practitioners can detect imbalances at early stages, when there may be no other clinical signs and when mild forms of intervention may suffice.⁷

In Ayurvedic pulse diagnosis, the combinations of the doshas and subdoshas responsible for the patient's clinical status are felt as patterns of vibration in the radial artery. *Vata*, *Pitta*, and *Kapha* have different tactile vibratory qualities—as do their subdoshas. The presence and locations of these vibratory qualities in the pulse alert the practitioner to specific patterns of balance and imbalance that underlie and are responsible for the patient's condition. Just below the radial styloid, the index finger is placed over the *Vata* pulse, the middle finger is placed over the *Pitta* pulse, and the ring finger is placed over the *Kapha* pulse. The skill of pulse reading depends on the training, practice, and alertness of the diagnostician. During training the physician first takes his or her own pulse many times a day, becoming intimately familiar with how it changes under different circumstances, before proceeding to the next stage—doing numerous examinations on patients.

Therapeutics

The main emphasis of Ayurvedic therapeutics is to restore physiological balance, which equates with restoring balance to the doshas. In Ayurvedic terms, balance is defined as the condition that maximally enhances homeostatic and self-repair mechanisms. These strategies are divided into the following four main areas: mind, body, behavior, and environment. Every patient receives recommendations in all four areas.⁸

Mind.—In the Ayurvedic framework, the body is viewed not merely as a sophisticated machine, but as a physical expression of the self-interacting dynamics of an underlying abstract field of intelligence. Ayurvedic practitioners identify this underlying field as consciousness and locate consciousness at the basis of the physiology rather than as an epiphenomenon of the nervous system. Therefore, Ayurvedic practitioners use mental techniques for the treatment of diseases, reducing stress, and developing mental potential.

Chief among these techniques is Transcendental Meditation, which has been the subject of over 500 studies during the past 20 years. During the process of Transcendental Meditation, there are metabolic changes indicative of a state of restful alertness.⁹ Published studies on this technique have reported associations between the use of Transcendental Meditation and reduced health care use; increased longevity and quality of life; and reduced anxiety, hypertension, cholesterol level, and substance abuse.^{9,10}

Body.—These approaches include the use of diet, exercise, herbs, sensory modalities, and *panchakarma* (purification procedures that consist of medicated oil massages, herbalized heat treatments, and elimination therapies).¹¹ These ap-

proaches are prescribed for balancing *Vata*, *Pitta*, and *Kapha*.

Therapeutic actions are maximally effective only if appropriate dietary measures are instituted to support the restoration of physiological balance. Ayur-Veda classifies all foods according to their effects on *Vata*, *Pitta*, and *Kapha*. With this knowledge the physician can individually tailor a diet appropriate to the patient's type and imbalances. Recommendations are also based on other factors including seasonal influences and digestive capacity.

The Ayurvedic physician also prescribes herbal food supplements. Ayur-Veda's description of medicinal plants includes knowledge of action, timeliness of plant collection, storage, and steps of manufacture. One principle is paramount—the appropriate portion of the plant should be used in its entirety, not just the active ingredient. This is believed to produce a synergistic effect and prevent toxic side effects.

A select group of Ayurvedic herbal compounds called *rasayanas* are described as having the effect of increasing resistance to disease and promoting longevity. Although further investigation is clearly needed, recent studies indicate their potential applications. At the Ohio State University (Columbus), Indiana University (Indianapolis), University of Kansas (Kansas City), South Dakota College of Pharmacy (Brookings), the University of Colorado (Denver), and other institutions, two *rasayana* compounds, known as Maharishi Amrit Kalash-4 and -5 (M-4, M-5), have been investigated. Both M-4 and M-5 have been found to reduce the incidence of chemically induced mammary carcinoma in up to 88% of experimental animals and caused up to 60% of fully formed tumors in control animals to regress when the animals were subsequently given the compounds.^{12,13} The M-4 compound also has been found to prevent experimental lung cancer metastases in up to 65% of animals tested.¹⁴ This antitumor activity was unaccompanied by toxic effects.¹² Maharishi Amrit Kalash-5 has been found to induce morphological differentiation in 75% of neuroblastoma cells in culture. Furthermore, continued presence of M-5 in the culture prevented rapid degeneration of the differentiated cells.¹⁴ In addition, M-5 has been shown to enhance lymphoproliferative response in antigen-stimulated animals as compared with control animals,¹⁵ and to reduce platelet aggregation induced by adenosine diphosphate, arachidonic acid, collagen, and epinephrine.¹⁶ The chemical analysis of both M-4 and M-5 indicates that they contain a mixture of antioxidants.¹² Both compounds have been found to decrease free radicals and reactive oxygen species, including superoxide, hydrogen peroxide, and hydroxyl radicals generated both in cellular (neutrophil) and noncellular (xanthine-xanthine oxidase) systems.¹² This may indicate potential applications in the growing number of diseases and toxicities linked to free radical-induced damage.¹⁶

In hepatitis B carriers, Blumberg and colleagues, collaborating with researchers at the University of Madras, India,¹⁷ conducted a randomized controlled study of the effects of the plant *Phyllanthus amarus*, which they state was "described in the Ayurvedic literature more than 2000 years ago." Fifty-nine percent of plant-treated subjects lost surface antigen, compared with 4% of placebo-treated controls. Some of the subjects were monitored for up to 9 months and in no case did the surface antigen reappear.

The application of Maharishi Ayur-Veda programs, includ-

(Continued on p 2637.)

(Continued from p 2634.)

ing herbal compounds, in the treatment of 10 chronic diseases was analyzed in a nonrandomized and uncontrolled pilot study conducted in the Netherlands on 126 patients.²⁰ Improvements were seen in patients with rheumatoid arthritis, bronchial asthma, eczema, chronic constipation, headache, chronic sinusitis, and hypertension after 3 months of treatment. The treatment protocol included different Maharishi Ayur-Veda herbal compounds, (ie, MA-130 and MA-299 for rheumatoid arthritis); dietary programs specific for each disease according to imbalance in the doshas; rules of Ayurvedic daily and seasonal routines; and other programs such as *panchakarma*, Maharishi Ayur-Veda neuromuscular integration techniques, and the Transcendental Meditation technique. There was no change in 14% of these patients and in 7% the clinical condition continued to progress unrelated to Ayurvedic therapy. There were no deaths.

Behavior.—The Ayurvedic texts predated contemporary knowledge of circadian and circannual cycles. According to psychophysiological type, each patient is instructed in daily and seasonal health routines to maintain the integrity of key biologic rhythms. These include simple instructions for rising and retiring early, moving the bowels on awakening, eating the main meal at lunchtime, and exercising properly.

Environment.—Ayurvedic texts emphasize the importance of collective health and the interrelationship between the health of the individual and that of society. Therefore, collective and environmental health measures to maintain the health of society and to construct a healthful environment for living and working play an important role. These measures include the collective practice of the Transcendental Meditation and the Transcendental Meditation–Sidhi programs, pollution control, proper living conditions, and hygienic measures.²¹ Analysis of psychophysiological type is important in many of these prescriptions, as individuals differ in their responses to environment and types of occupations.

Applying Ayur-Veda to Allopathic Medicine

Ayur-Veda adds several new elements to medical practice. Its system of patient typology provides useful information for predicting risk factors and tendencies toward specific diseases. Its emphasis on psychophysiological balance as the key to enhancing the body's own healing mechanisms and its therapeutic methods to modify psychophysiological, dietary, behavioral, and environmental determinants of disease can add new depth to the physician's approach to a wide variety of disorders.

Therapy in Ayur-Veda is prescribed on the basis of imbalance in the doshas and psychophysiological type rather than by disease entity as in allopathic medicine. For this reason, two patients with hypertension may receive different treatments owing to their biologic individuality and different causes of the disease as determined by the Ayurvedic diagnostic process.⁴

Physicians in North and South America, Europe, and Japan have taken Ayurvedic training and include its methods in patient care. The governments and/or medical associations of Brazil, Poland, Czechoslovakia, and Hungary have sponsored Ayurvedic conferences and training courses for physicians. In the Soviet Union, an Institute of Maharishi Ayur-Veda has been established under the auspices of the Research Centre

for Preventive Medicine of the Ministry of Public Health and more than 1000 Soviet physicians have taken Ayurvedic training. Training in the United States is available through the American Association of Ayurvedic Medicine, Lancaster, Mass.

With rigorous scientific investigation, Maharishi Ayur-Veda may provide useful new insights and approaches to the prevention and treatment of disease. Maharishi Ayur-Veda's perspective may help to explain phenomena that are not clearly understood by allopathic medicine, and may give access to therapeutic and preventive modalities that have been previously ignored or considered unscientific. If such strategies exist, it is important that they not be overlooked.

Hari M. Sharma, MD, FRCP
The Ohio State University College of Medicine
Columbus

Brihaspati Dev Triguna, Ayur-Veda Martand
All India Ayur-Veda Congress
New Delhi, India

Deepak Chopra, MD
American Association of Ayurvedic Medicine
Lancaster, Mass

1. Zaman H. The South-East Asia region. In: Bannerman RH, ed. *Traditional Medicine*. Geneva, Switzerland: World Health Organization; 1974:231-239.
2. *Charaka Samhita*. Sharma RK, Dash B, trans. Varanasi, India: Chowkhamba Sanskrit Series Office; 1977.
3. *Sushruta Samhita*. Ghisagrante KL, trans. Varanasi, India: Chowkhamba Sanskrit Series Office; 1963.
4. Chopra RN, Chopra IC, Handa KL, Kapur LD. *Indigenous Drugs of India*. Calcutta, India: Academic Publishers; 1962.
5. Chopra D. *Perfect Health*. New York, NY: Harmony Books; 1980.
6. Chopra D. *Quantum Healing: Exploring the Frontiers of Mind-Body Medicine*. New York, NY: Bantam Books Inc; 1989.
7. Vasihta SD. *The Essence of Pulse Diagnosis*. 3rd ed. Bahalgarah, India: Ram Lal Kapur Trust; 1963.
8. Wallace RK. Physiological effects of transcendental meditation. *Science*. 1970;167:1751-1754.
9. Orme-Johnson D. Medical care utilization and the transcendental meditation program. *Psychosom Med*. 1987;49:493-507.
10. Alexander CN, Langer EJ, Davies JL, Chandler HM, Newman RI. Transcendental meditation, mindfulness, and longevity: an experimental study with the elderly. *J Pers Soc Psychol*. 1989;57:950-964.
11. Schneider RH, Cavanaugh KL, Kasture HS, et al. Health promotion with a traditional system of natural health care: Maharishi Ayur-Veda. *J Soc Behav Pers*. 1990;5:1-27.
12. Sharma HM, Dwivedi C, Satter BC, et al. Antineoplastic properties of Maharishi-4 against DMBA-induced mammary tumors in rats. *Pharmacol Biochem Behav*. 1990;35:767-773.
13. Sharma HM, Krieger J, Dwivedi C. Antineoplastic properties of dietary Maharishi-4 and Maharishi Amrit Kalash Ayurvedic food supplements. *Eur J Pharmacol*. 1990;183:193.
14. Patel V, Wong J, Shen RW, Brahm J, Sharma H. Reduction of mouse Lewis lung carcinoma (LLC) by M-4 rasayana. *FASEB J*. 1990;4:A637. Abstract.
15. Prasad KN, Edwards-Prasad J, Kentroti S, Brodie C, Vernadakis A. Extract of Maharishi Amrit Kalash-5, an Ayurvedic herbal preparation, induces differentiation in neuroblastoma cells in culture. Presented at Eighth Biennial Meeting, International Society of Developmental Neuroscience; June 16, 1990; Bar Harbour, Fla.
16. Dileepan KN, Patel V, Sharma HM, Stechachulte DJ. Priming of splenic lymphocytes after ingestion of an Ayurvedic herbal food supplement: evidence for an immunomodulatory effect. *Biochem Arch*. 1990;6:267-274.
17. Sharma HM, Feng Y, Pangamala RV. Maharishi Amrit Kalash (MAK) prevents human platelet aggregation. *Clin Ter Cardiovasc*. 1989;3:227-230.
18. Niwa Y. Effect of Maharishi-4 and Maharishi-5 on inflammatory mediators with special reference to their free radical scavenging effect. *Indian J Clin Pract*. 1991;1:23-27.
19. Thyagarajan SP, Subramanian S, Thirunallandari T, Venkateswaran PS, Blumberg BS. Effect of *Phyllanthus amarus* on chronic carriers of hepatitis B virus. *Lancet*. 1988;2:764-766.
20. Janasen GWHM. The application of Maharishi Ayur-Veda in the treatment of ten chronic diseases: a pilot study. *Ned Tijdschr Geneesk*. 1989;5:596-594.
21. Orme-Johnson DW, Alexander CN, Davies JL, Chandler HM, Larrimore WE. International peace project in the Middle East: the effects of the Maharishi technology of the Unified Field. *J Conflict Resolution*. 1988;32:776-812.