CHAPTER 1

Nutraceuticals of Antiquity

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INTRODUCTION

Let food be thy medicine and medicine be thy food!

Hippocrates
The physical body is the product of diet and sensory inputs (i.e., lifestyle). Similarly, all ailments are the product of faulty dietetics and lifestyle. Wholesome and unwholesome diets and lifestyles are fundamentals of health and disease.

The world’s wisdom on health is captured by the above prophetic pronouncement from the father of Western medicine, Hippocrates. This statement on food reflects the critical importance of food and lifestyle on one’s health. The second quotation, extending the concept, has been the basis of health promotion and disease prevention in the oldest and longest continuously practiced medical system \[Caraka Samhita 700 BCE, Chapter 1; Susruta Samhita 600 BCE, Chapters 27–30\] in the world, known as Ayurveda (meaning “science of life”).

However, the progress and phenomenal success in the past 150 years or so in the field of medicine, based on a Cartesian/Newtonian biomedical model in terms of communicable diseases, emergency medicine, and technology-driven surgical and other procedures, has practically obliterated the importance of food and lifestyle on one’s health. Our fast-paced, stressful lives, processed convenience foods, and over-reliance on drugs and the high-tech procedure-driven medical system of “disease care” are simply unable to deal with the chronic disease crisis and ever-increasing healthcare costs [Patel 1998]. The system is crumbling under its own weight. We must look as far back as possible into the world’s deepest knowledge of health to find a solution to the crisis of unaffordable and unsustainable healthcare costs and unmanageable chronic diseases.

Chronic diseases, most notably the umbrella categories of overweight and obesity that guarantee so many cascaded chronic diseases, are becoming a norm in modern life. Closer examination of the epidemic of obesity and overweight in recent decades reveals that the change in our diet, the polluted environment, and lives lacking physical activity, love, and intimacy are the roots of this epidemic and high incidence of heart disease, cancer, and other chronic conditions that are consuming more than 75% of U.S. health dollars. Recent investigations in healthy and long-living (100 years and beyond) societies of the world reveal that they have diet, lifestyle, and environment remaining essentially unchanged for millennia and conducive to good health and lifespan [Cox and Guyer 2004].

Thousands of years ago, a comprehensive understanding of life—one that incorporated all that is good in life and all that is bad, all that is useful and all that is harmful, at the levels of the physical body, senses, and soul—emerged in an ancient, knowledge-based (Vedic) culture. Known as Ayurveda, it remains a perennial source
of wisdom and perspective, coming to the aid of both the theoretical and applied challenges facing modern allopathic medicine.

**WESTERN DISCOVERY OF AN ANCIENT MEDICAL SYSTEM OF INDIA**

The invasion of northern India by Alexander in 325 BCE led him to discover a vibrant university education system at both Taxshila (now in Pakistan) and Nalanda (now in Bihar state of India). Particularly, he noted the highly advanced medical system and training at these institutions. Such institutions were also present in other parts of India, for example, Kashi University in Varanasi (now Uttar Pradesh in India), Ujjain University (now in Madhya Pradesh), and Vallabhi University (now in Gujarat). It is widely known from the historical literature of India that Alexander, before his demise in Alexandria, Egypt, established a scholarly exchange program between India and Greece, particularly in the field of natural sciences, including Ayurveda. These scholars of Ayurvedic medicine made invaluable contributions to the field of medicine of ancient Greece and Western countries.

In its long history, India has suffered many setbacks during many invasions. During the British rule of India, the Ayurvedic system was marginalized and slowly got replaced by the British allopathic system, particularly among the population centers of urban areas and educated sectors of the Indian population. However, the medical system has largely remained intact, often as a family tradition of vaidyas (Ayurvedic physicians) and in some kingly states. In post-independence India, the Ayurvedic system of medicine has come back and gained recognition as the most comprehensive/integrative healthcare system in India, specifically in providing affordable management and prevention of ever-increasing chronic diseases. In fact, today nearly 70% of Indian people get their healthcare through the Ayurvedic medical system [Valiathan 2006].

Ayurveda, in its ancient heyday, was not only highly advanced but also had eight clinical specialties that would rival those of modern medicine:

- Internal medicine
- Surgery
- Eye and ears, nose, and throat
- Pediatrics and gynecology
- Toxicology
- Psychiatry
- Sexology and reproductive science
- Rejuvenation and geriatrics

The comprehensive/integrative spirit-mind-body-environment concepts of the Ayurvedic model [Singh 2001, 2005] have been reappearing in many healthcare approaches to the chronic disease crisis the world is experiencing. For instance, in the United States, the emerging integrative model called “functional medicine” is based on physiological system imbalances rather than disease categories, drawing heavily from the concepts of the Ayurvedic healthcare model emphasizing *dosha*

THE WORLD HEALTH ORGANIZATION AND AYURVEDIC MEDICINE

The United Nation’s World Health Organization (WHO) recognizes the inability of the dominant allopathic medical model to deal with ever-increasing healthcare costs and epidemics of many chronic diseases. In its search for affordable and sustainable healthcare for the nations of the world, the WHO surmises that the comprehensive, spirit-mind-body-environment principles of the Ayurvedic medical model [Patwardhan 2005] need to be adopted and incorporated in the emerging healthcare model(s) of the world. The WHO defines health as follows: “Health is the state of physical, mental, social, and spiritual well-being.” This definition is, in fact, adopted from the health definition of Ayurveda:

\[
\text{समदोष: समाभ्रूस्ति समधातुमलक्रियः प्रसत्रात्मेन्द्रियमना: स्वस्थ इत्यभिधीयते.}
\]

Sama doshah samāgniś ca sama dhātu malakriya prassannāthendriya manāh swastha ityabhidhiyate.

Susruta Samhita 15:38

Health is the state of equilibrium of doshas, agnis (transformative physiological system functions), dhatus (tissues and organs), and malas (metabolic byproducts), along with sensorial, mental, and spiritual well-being.

According to the Ayurvedic model, lifestyle and nutrition in a given environmental context is the glue that holds the equilibrium to bring about optimum health.

NUTRACEUTICALS

This ancient understanding is being reintroduced as “nutraceuticals” by present-day healthcare providers. They recognize the fact that our heavily processed food supply, coming from crops grown with chemical fertilizers, pesticides, herbicides, and often genetically modified seeds, lacks sufficient nutrients necessary for optimum health.

The term “nutraceuticals” was coined by Stephen L. DeFelice, MD, in 1989. The word is a portmanteau of “nutrition” and “pharmaceutical” and refers to extracts of foods claimed to have a medicinal effect on human health [DeFelice 2002].
Nutraceuticals are usually contained in a medicinal format such as a capsule, tablet, powder, or liquid in a prescribed dose. The term further implies that the extract or source food is demonstrated to have a physiological benefit or provide protection against a chronic disease. See the sidebar The Astounding Apple.

Since the passage of the U.S. Dietary Supplement Health and Education Act of 1994, there has been an explosion of various kinds of nutraceuticals, in terms of both food supplements and “functional” foods. Nutraceuticals are a multi-billion dollar industry, rivaling the pharmaceutical industry. Many new entrepreneurs and pharmaceutical companies have entered the nutraceuticals field with the intention of improving their bottom line. This enthusiasm is based on epidemiological studies of the prevalence of chronic diseases in different parts of the world and of the beneficial health effects of whole foods, fruits, and vegetables and probable active ingredients of these food stuffs and their predicted influence on biochemical pathways.

Increasing numbers of consumers, concerned about healthcare costs and dissatisfied with pharmaceutical agents in promoting health, are turning to nutraceuticals to improve their health and prevent chronic disease. With few exceptions, the U.S. Food and Drug Administration (FDA) has not approved nutraceuticals for health benefits or disease prevention; nonetheless, the manufacturers of nutraceuticals have been touting them as health-promoting agents. Recent studies have questioned the validity of the use of some nutraceuticals and vitamins in health promotion and disease prevention. However, these supplements may still serve useful purposes, especially in light of our agriculture practices, dwindling food supply, and consumption of highly processed foods that often lack sufficient and appropriate nutrients [Cox and Guyer 2004].

THE ASTOUNDING APPLE

That most American of all-natural foods, the lowly apple, is a phytounutritional bonanza, brimming with health-promoting goodness. A brief sample of the more than 10,000 phytonutrients in an apple includes such exotic chemistry as follows:

- Ethyl-methylbutyrate
- d-Galacturonic-acid 13-54
- Trans-N-hex-2-en-1-ol
- Protocatechuic-acid
- Cyanidin-3-galactoside

It is not worth publishing the entire list. It is longer than War and Peace. The point is that an apple a day can keep the doctor away and might even be suggested by the doctor should he or she show up, in lieu of medicines. The complexity of the apple’s chemical cornucopia finds its focal point in fiber, fructose, and flavonoids.

FIBER

Apples are great sources of both soluble and insoluble fiber, the latter being a powerful antidote to cholesterol. According to the February 23, 2004 issue of the Archives of Internal Medicine, each 10 g of insoluble fiber consumed daily may cut your risks of heart disease by 14% and your risk of dying of heart disease by 27%. A medium-sized apple provides 5 g of insoluble fiber.

FRUCTOSE

The slow metabolism of this natural sweetener in apples, particularly when paired with the apple’s fiber, keeps blood sugars more level. This is technically referred to as the glycemic index of the apple. A rose (and the apple is part of the rose family) by any other name would keep your blood sugar in the zone just as effectively.

FLAVONOIDS

The September 2006 issue of American Journal of Clinical Nutrition reports that a study in Finland covering 10,054 Finnish men and women from 1966 onward showed reductions in heart disease, cancer, stroke, type 2 diabetes, and asthma in those who ate the most apples. The study attributes the reductions to the flavonoids in the apples.
This concept of promoting health and preventing disease through nutrition and special nutritional preparations has been used for millennia in Ayurveda. The concept is known as rasayana or rejuvenation therapy, and it is part of one of the eight clinical specialties of Ayurveda, diet therapy, or rasayanatantra. The Sanskrit roots of rasayana (rasa + ayana) essentially refer to the acquisition, movement, or circulation of nutrition as described in the Ashtanga Hridaya (300 AD, Chapter 29; Sharangdhar Samhita 1300 AD; Singh 2003, 2007; Singh, Mamgain, Narsimhamurthy, et al. 2006; Singh, Narsimhamurthy, and Singh 2008). The concept of promotion of health through rasayanas is based on Ayurvedic pathophysiology and its understanding of health and disease development (see Figure 1.1). The philosophy of the Ayurvedic integrative, spiritual-body-environment system of medicine (rasayanatantra) is much more comprehensive than the emerging field of nutraceuticals. On a fundamental level, rasayanatantra is based on the Ayurvedic cosmology, which proposes that consciousness is the basis of matter, energy, chemico-physical, bio-psychological, and spiritual evolution (see Figure 1.2). This means that every thought becomes a molecule and that our food, sensory inputs, and belief systems are interconnected and govern our gene expressions and thus our healthfulness. Because our genes have not changed much in thousands of years, our food and way of living in a given environmental context play crucial roles in promotion of health and disease prevention. In fact, the emergence of the high-profile fields of epigenetics (how environment influences gene expression) and nutrigenomics (how nutrition affects gene expression) provides new opportunities to address both the evidence for the importance of dynamic interactions among our genetic factors and the emerging human dimension in our understanding of our healthfulness. However, the basis of the science of rasayana (rasayanatantra) is much more comprehensive than the emerging field of nutraceuticals. That means that the optimum health of an individual can be achieved only when all dimensions are integrated. That means that the optimum health of an individual can be achieved only when all dimensions are integrated. The concept of promotion of health through rasayanas is based on Ayurvedic pathophysiology and its understanding of health and physiological system imbalance.
Figure 1.1  Ayurvedic pathophysiology relating diet to disease.

Figure 1.2  Rasayana therapy helps the development of integration of spiritual, mental, and physical fields.
Rasayantantram nāma vayathāpanāyurmedhābalakaram rogāpaharanas-amartham ca.

Susruta Samhita 1:7

Rasayana deals with the methods to maintain youthfulness, to increase longevity, intellectual capacity, and physical strength as well as to enable the person to be free from disease.

Rasayanam ca tajjneyam yajjaravyādhināśanam.

Susruta Samhita Part 1, 4:13

The therapy that helps to retard aging and disease is called rasayana.

Rasayanatantra deals with the methods to maintain youthfulness, to increase longevity, intellectual capacity, and physical strength as well as to enable the person to be free from disease.

Rasayanatantra consists of an amplification and synergy of the natural nutraceutical potential of certain plants and food products and related measures that are supposed to retard aging and to impart longevity, improve immunity and body resistance against disease, improve mental faculties, and add vitality and luster to the body. These rasayanas are individualized and are age, tissue, and organ specific. The rasayana therapies are aimed at bringing a state of equilibrium of doshas, agnis, dhatus, malas, and sensory and physiological system functioning, along with spiritual and mental well-being. In other words, they are designed to bring about balanced functioning of spirit, mind, and body in the context of given environment. Besides promotion of mental and physical health and rejuvenation potential, rasayana therapy affords a preventive role against the entire range of diseases through improved immunity and other physiological system functions. Thus, rasayana is the central consideration in Ayurvedic geriatrics.

MODE OF ACTION

All rasayana measures and remedies produce their effect in the spirit-mind-body system through one or some combination of the following three modes:

- At the level of rasa, by acting directly as a nutrient for the plasma. * Examples include a range of nutrient rasayanas, such as shatavari, sarkara, ghrita, pravala, and mukta.

* Ayurveda posits that the body’s tissues develop in a sequence from liquid to solid as food is digested. When the food is exposed to the initial enzymatic transformation stage, i.e., the first agni, it becomes rasa and a corresponding healthy mala. From there, the sequence unfolds linearly, governed by other agnis and producing other corresponding malas: rakta (whole blood), mamsa (muscle), medha (fat), asthi (bone), majja (bone marrow and nervous tissue), and shukra (reproductive tissue). Between each level of transformation and at the end of the process, another substance emerges, ojas. Ojas represents biological intelligence and acts as a master coordinator between consciousness and matter.
• At the level of agni, by promoting the enzymatic systems of the body with positive digestive and metabolic functions. Examples include pippali, shunthi, and chitraka.

• At the level of shrotas, i.e., microcirculatory and macrocirculatory channels, by inducing a shrotaprasadana effect, i.e., improving the competence of the inner transport system, microcirculation, and tissue perfusion. Rasayanas for this purpose include guggulu.

By acting through the above modes, rasayanas establish a positive nutritional status in the body and help in healthier tissue formation, stronger immune status, improved mental power, and long life.

CLASSIFICATION

As comprehensively envisaged in Ayurveda, rasayana is not a mere remedy or a recipe. It is a rejuvenative regimen and an approach to positive health. It encompasses elements of positive living and conduct, healthy dietetics, and rejuvenative herbs and minerals. Rasayanatantra is practiced as a routine way of life or as an intensive indoor regimen, depending on the need and the feasibility for a client. The rasayana therapy can be categorized in the following manner:

• Per method of use
  • vatapatika rasayana, or outdoor practice
  • kutipraveshika rasayana, or intensive indoor regimen (including the seasonal physiological purification known as panchakarma) using a specially designed trigarbha rasayana kuti or therapy chamber

• Per scope of application
  • kamya rasayana, for promotion of health of the healthy, further subcategorized as
    • shri kamya, to promote luster and beauty
    • prana kamya, to promote longevity
    • medha kamya, to promote mental competence
  • naimittika rasayana, to impart biological strength in a person with disease

• Adjunct rasayana, which is non-recipe rejuvenative regimen to be practiced alone or as an adjunct for all forms of rasayana therapy, remedies, and recipes, as follows
  • achara rasayana: healthy, rejuvenative lifestyle and conduct
  • ajashrika rasayana: daily dietary rasayana approach, consuming sattvic, nourishing elements of diet, such as ghi, milk, milk products, fruits, and vegetables

Rasayanas can be operationally defined as nutritives that initiate the maximum outpouring of ojas throughout the entire body-mind. Ojas is an invigorating spiritual essence and is the subtle foundation of immunity, and Ayurveda holds that creating and maintaining ojas is of central importance to health and wholeness.

When digestive processes break down, dhatus and malas are not formed correctly, and another entity, ama associated with all manner of ill health, invades the body-mind. In a sense, the polar opposite of ojas, ama, damages the system and lessens the integrated coordination of spirit, mind, and body.

Rasayanas are intended to convert directly to rasa, bypassing ordinary digestive steps. In so doing, they do not produce ama and start the unfolding of dhatus in the best possible manner so that as much ojas as possible can emerge. If rasa is the base of the Ayurvedic nutrition pyramid, ojas could be the pinnacle. Rasayanas ensure a royal path from rasa to ojas.

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AGE-SPECIFIC RASAYANA

Aging is the *shwabhawa* or the nature of a living being. The physical body-mind system has been designed to stay for a time-bound tenure of approximately 120 years. During the lifespan, the body undergoes progressive involution and decay, leading ultimately to decadence and death. Ayurveda deliberates on the process of aging and sequential senile changes in different ways in different contexts. Examples include *balyawastha* (childhood), *madhya awastha* (adulthood), and *briddhawastha* (geriatric age), hallmarked by activities of the above-mentioned doshas: *kapha* (structure and fluid balance), *pitta* (heat, digestion, and energy processes), and *vata* (movement and change). Vata is the drying and decaying force and is the master dosha in the aging process.

Two foundational texts of Ayurveda, *Vagbhatta* and *Sarangdhara*, describe a unique scheme of biological aging in a 10-decade frame, speculating the specific sequential loss of certain bio-values relevant to respective decades of life. This information opens the possibility of developing targeted rasayanas to restore the likely losses of the particular decade, ensuring that inevitable change is intelligently and benignly directed at each stage of life to maintain the highest possible level of function and health. Thus, rasayana therapy planned in relation to age creates a possibility of retarding the aging process. Table 1.1 describes the pattern of age-related biological system losses and proposes certain rasayanas for the purpose.

TISSUE- AND ORGAN-SPECIFIC RASAYANA

Although rasayana in general is a holistic restorative and rejuvenative modality, one can visualize some rasayana remedies and recipes for promotion and protection of specific tissues and organs. Such rasayanas can be prescribed in a need-based manner for supportive or even curative purposes for organ protection. Some examples are proposed in Table 1.2.

| Table 1.1 The Pattern of Age-Related Biological System Losses |
|-----------------|-----------------|-----------------|
| Decades of Life | Natural Bio-Losses | Suggested Rasayana for Restoration |
| 0–10            | *Balya*, corpulence | Gambhari, kshira, ghrita |
| 11–20           | *Vriddhi*, growth  | Bala, amalaki    |
| 21–30           | *Chhabi*, luster   | Amalaki, haridra |
| 31–40           | *Medha*, intellect | Brahmi, shankhapushpi |
| 41–50           | *Tawaka*, skin quality | Bhringaraja, haridra |
| 51–60           | *Dristi*, vision   | Triphala, jyotishmati |
| 61–70           | *Shukra*, virility | Ashwagandha, kapikacchu, shatavari, pippali |
| 71–80           | *Vikrama*, physical strength | Amalaki, bala |
| 81–90           | *Buddhi*, thinking | Brahmi, shankhapushpi |
| 91–100          | *Karmendriya*, locomotion | Bala, sahachara |

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ACHARA AND AJASHRIKA RASAYANA

Achara rasayana is a unique concept in Ayurveda that implies moral, ethical, and benevolent conduct: truth, nonviolence, personal and public cleanliness, mental and personal hygiene, devotion, compassion, and a yogic life. These behaviors bring about rejuvenation in the body-mind system. One who adopts such conduct gains all benefits of rasayana therapy without physically consuming any material rasayana remedy or recipe, although it can be practiced alone or in a combination with material substance rasayana therapy.

Ajashrika rasayana comprises daily rejuvenating dietetics, with adequate quantities of nourishing sattvic elements of diet, such as ghi, milk, fruits, and vegetables. Ajashrika rasayana is used alone or with material rasayana remedies. Studies conducted in recent years on stress management related to yoga and other nonpharmacological techniques clearly indicate beneficial effects in control and prevention of chronic conditions, such as heart disease, cancer, diabetes, and immune disorders [Innes and Vincent 2007; Innes, Vincent, and Taylor 2007; Masley, Weaver, Peri, et al. 2008].

SAMSHODHANA (PRE-DETOXIFICATION) FOR RASAYANA THERAPY

Besides achara and ajashrika, another important requirement for use of material rasayana therapy is pre-detoxification through appropriate panchakarma procedures. Ayurveda emphasizes that a rasayana remedy yields its full effect only when the body has been therapeutically purified by Ayurvedic cleansing processes (langhana, dipana, pachana, snehana, swedana, vanama, virechana, basti, shirovirechana, and so on). If the shrotas are clean and competent with their physiological integrity at the time of administration of the rasayana remedy, such remedy is used by the system fully, and its bioavailability is ensured. Hence, pre-detoxification processes should be planned accordingly. The most appropriate choice of age for use of rasayana therapy is adulthood to 75 years or so, with the therapy not recommended for old age, when irreversible senile changes might already have occurred.

Table 1.2 Rasayanas

<table>
<thead>
<tr>
<th>Rasayana Quality</th>
<th>Purpose</th>
<th>Suggested Remedies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medhya rasayana</td>
<td>Promotion of brain and cognitive</td>
<td>Brahmi, shankhapushpi</td>
</tr>
<tr>
<td></td>
<td>functions</td>
<td></td>
</tr>
<tr>
<td>Hridya rasayana</td>
<td>Cardio-protective</td>
<td>Arjuna, pushkarmula</td>
</tr>
<tr>
<td>Mutra janana</td>
<td>Nephro-protective</td>
<td>Punarnava, gokshuru</td>
</tr>
<tr>
<td>Twachya rasayana</td>
<td>Skin health</td>
<td>Haridra, somaraji</td>
</tr>
<tr>
<td>Chakshushya rasayana</td>
<td>Eye health</td>
<td>Triphala, jyotishmati</td>
</tr>
<tr>
<td>Kannthya rasayana</td>
<td>Throat and speech</td>
<td>Vacha, yashtimadhu</td>
</tr>
<tr>
<td>Vrishaya rasayana</td>
<td>Virility</td>
<td>Ashwagandha, kapikacchu</td>
</tr>
<tr>
<td>Sthanya rasayana</td>
<td>Promotes lactation</td>
<td>Shatavari</td>
</tr>
<tr>
<td>Shrotoprasadana</td>
<td>Promotes inner transport</td>
<td>Guggulu</td>
</tr>
<tr>
<td>Nasya rasayana</td>
<td>Nose and sinuses</td>
<td>Katphala, apamarga</td>
</tr>
</tbody>
</table>
SUGGESTED RASAYANAS FOR DIFFERENT BODY AND MIND TYPES, SEASONS, AND DIGESTIVE STRENGTH

Please refer to the following for suggestions on rasayanas:

- Vata type: ashwagandha, bala, gambhari, rasona, amrita, shankhapushpi, chya-vanaprasha, brahma rasayana
- Pitta type: amalaki, chandana, brahmi, mukta, pravalapishti, amalaka
- Kapha type: pippali, ardraka, shilajatu, bibhitaka, bhallataka
- Dynamic (rajasic) mental type: brahmi, mandukaparni, shankhapushpi, mukta
- Nonspiritual (tamasic) mental type: pippali, amalaki, chitraka, bhallataka
- Lengthening days season: ashwagandha, amalaki, brahmi, chandana, khasa
- Shortening days season: pippali, shilajatu, bhallataka, kasturi, shringa
- Variable digestion: pippali, shunthi, ghrita, chitraka, lavana
- Sharp digestion: apamarga, shankha, pravala, kumari, brahmi
- Weakened digestion: pippali, shunthi, ghrita, chitraka, lavana

A physician should select a suitable rasayana in consideration of different individual and environmental factors, taking into account the principles of samanya and vishesa (homology versus heterology).

SINGLE, GROUP, AND COMPOUND RASAYANAS

A range of single, group, and compound rasayanas has been described in Ayurvedic classics in different contexts. Some are listed below:

- Popular single rasayanas: amalaki (*Phyllanthus emblica*), haritaki (*Terminalia chebula*), pippali (*Piper longum*), ashwagandha (*Withania somnifera*), brahmi (*Bacopa monniera*), shankhapushpi (*Convolvulus pluricaulis*), guduchi (*Tinospora cordifolia*), madhuapta (*Glycyrrhiza glabra*), madukparni (*Centella asiatica*), bala (*Sida coridfolia*), shatavari (*Asparagus recemosus*), guduchi (*Tinospora cordifolia*), punarnava (*Boerhavia diffusa*), lauha (iron), swarna (gold), shilajatu (asphaltum)
- Popular compound rasayanas: chyavanaprasha, brahma rasayana, amalaka rasayana, amrita bhallataka, bhallataka kshirapaka, haridra khanda, bala rasayana, amrita rasayana, punarnava rasayana, louhadi rasayana, aindra rasayana, triphala rasayana, shilajatu rasayana, ritu haritaki kalpa, pippali vardhamana kalpa, bhallataka kalpa, panchamrita parpati kalpa

CONCLUSION

The context of rasayana therapy and its ajashrika and achara are largely unexplored parts of ancient wisdom. Searches for drug development based on described properties of Ayurvedic plants have yielded useful drugs that confirm their medicinal usage and the Ayurvedic descriptions [Kapoor 1999]. Experimental and some clinical studies on some rasayanas also validate their expected use [Patel 1998; Nagarathna, Nagendra, and Telles 1999; Douillard 2000; Sing 2003; Ornish 2007;
Sharma, Chandola, Singh, et al. 2007; Sharma, Puri, Agrawal, et al. 2009; Singh, Narasimhamurthy, and Singh 2008]. In addition, yoga techniques for balancing stress responses also confirm the expected outcome [Nagarathna et al. 1999; Innes and Vincent 2007; Innes, Vincent, and Taylor 2007]. The above observations strengthen trust in the power of the time-tested, comprehensive integrative healthcare system of Ayurveda, based on lifestyle and dietary habits that the disease-care model does not adequately address. The prevalent rasayana procedures and recipes may be of great value in promotive, preventive, and therapeutic aspects of geriatric healthcare.

In a larger sense, our health and behavior are expressions of our genes, designed to work in harmony with the natural environment. Rasayanas have their origin in plants and minerals and have played import roles in health promotion and maintenance in Ayurveda. As an ancient Indian Vedic text [Gabhirananda 1983] surmises:

Esam bhutanam prithavi rasa, prithavya apo rasso-pam osadhayo rasa, osadhinam purusho rasa

Chandogya Upanisad 1.1.2

The essence of all beings is earth. The essence of earth is water. The essence of water is plants. The essence of plants is human beings.

This suggested to us that plants are at the evolutionary center of our being, and, therefore, preservation of our earth, water, air, and plants amounts to preservation of the human race and its health.

REFERENCES


