

Principles and Concepts of Nutrition in Ayurveda

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नाक्षरं मंत्ररहीतं नमूलंनौषधिम् |
अयोग्य पुरुषं नास्ति योजकस्तद्रुर्लभः ||

*There is no letter that is not a mantra, there is no root that is not a food/medicine
There is not a man who is not useful. It is the coordinator of these elements who is a rare breed and who is
limited by his/her wisdom.*

Materia Medica of Ayurveda

Introduction

- The term Ayurveda comprises two words – *ayu* (life) and *veda* (knowledge), thus, deals with various aspects related to health and wellbeing in their diverse aspects, such as happy life, sustainable happiness, and longevity.
- According to Ayurveda, there are three fundamental states of a being such as the physical (including physiological), mental, and the spiritual. Health is a balance of all these three states and their relationship with the outside world .
- The categorization in terms of the five elements, including earth, water, fire, air, and space corresponds to each of the five senses, viz. smell, taste, vision, touch, and sound, respectively. In Ayurveda for ease of understanding of physiological and pathological aspects, the five elements are further grouped into three called the *tridosha-vata* (a combination of space and air), *pitta* (fire), and *kapha* (water and earth).
- Ahara (diet) Nidra (sleep) and Brahmacharya (abstinence) are recognized as the three Upastambhas (sub pillars) essential for the smooth running of life. Ahara is considered as the best sustainer of life (Vrittikaranam Sreshtam).
- A balanced diet in Ayurveda is planned in relation to the known Panchabhautic composition and Tridoshic impacts in the living body. Food (Ahara) and lifestyle (Vihara) significant aspect of one's overall health and the upsurge of metabolic and degenerative diseases are the result of adaptation of modern life style.
- Showing the importance of food Acharya Charaka says that food sustains the life of all living beings and complexion, clarity, good voice, longevity, genius, happiness, satisfaction, nourishment strength and intellect are all conditioned by food. Most of the incurable diseases are produced due to improper food.
- Ayurveda asserts that although the digestive capacity of each person may be different, the quality and appropriate quantity of food are necessary for healthy life.
- The amount of food which without disturbing the equilibrium (of dhatus or doshas of the body) get digested as well as metabolized in proper time is to be regarded as the proper quantity.
- Food is characterized according to their action on the individual and is determined by their unique qualities: ras(taste), virya (active component of potency), vipak (post digestive effect) and prabhava (pharmacological effect).

The Three Doshas: The Key to Our Individual Nature

- The *doshas* are biological energies found throughout the human body and mind. They govern all physical and mental processes and provide every living being with an individual blueprint for health and fulfillment.
- The doshas are derived from the five elements and their related properties. Vata is composed of space and air, pitta of fire and water, kapha of earth and water.
- A person with a predominantly Vata constitution will have physical and mental qualities that reflect the elemental qualities of Space and Air. That is why Vata types are commonly quick thinking, thin, and fast moving. A Pitta type, on the other hand, will have qualities reflective of Fire and Water, such as a fiery personality and oily skin. A Kapha type will typically have a solid bodily frame and calm temperament, reflecting the underlying elements of Earth and Water. While one dosha predominates in most individuals, a second dosha typically has a strong influence. This is referred to as a dual-doshic constitution.
- The doshas are dynamic energies that constantly change in response to our actions, thoughts, emotions, the foods we eat, the seasons, and any other sensory inputs that feed our mind and body. When we live into the fulfillment of our individual natures, we naturally make lifestyle and dietary decisions that foster balance within our doshas. When we live against our intrinsic natures, we support unhealthy patterns that lead to physical and mental imbalances.
- If the proportion of doshas in your current state is close to your birth constitution, then your health will be vibrant. A divergence between these states, however, indicates a state of imbalance. *Vikruti* is the term used to describe this imbalanced deviation away from *prakruti*.
- In total, there are three primary doshic states:

Balanced: All three doshas are present in their natural proportions; also referred to as “equilibrium.”

Increased: A particular dosha is present in a greater-than-normal proportion; also referred to as an “aggravated” or “excess state.”

Decreased: A particular dosha is present in a less-than-normal proportion; also referred to as a “reduced” or “depleted state.”

- Of the three states, the increased or aggravated state leads to the greatest number of imbalances. Such imbalances can arise from any number of influences, including following a dosha-aggravating diet or, more generally, carrying too much stress in life. You can initiate a restoration of balance, however, when you begin to understand both your unique constitutional make-up and how to harmonize your internal environment and its needs with the external world.
- We are most susceptible to imbalances related to our predominant dosha. If you’re a Pitta type, for example, you may experience heartburn (a common Pitta disorder) after eating spicy foods. The key to remember is that *like increases like*, while *opposites create balance*. By simply choosing cooling or more alkalizing foods, you can avoid heartburn, while also supporting your underlying make-up.
- Ayurveda offers specifically tailored recommendations for every individual, ranging from general lifestyle changes to the treatment of dis-ease (literally, an imbalance within our natural state of “ease”). For this reason, Ayurveda can truly be called a system of individualized health care, something remarkably different from the Western model’s “one-pill for all” approach.

1. Vata Dosha

- Vata derives from the elements of Space and Air and translates as “wind” or “that which moves things.” It is the energy of movement and the force governing all biological activity. Vata is often called the “King of the Doshas,” since it governs the body’s greater life force and gives motion to Pitta and Kapha
- Vata individual is active, creative, and gifted with a natural ability to express and communicate. When the wind in a Vata type rages like a hurricane, negative qualities quickly overshadow these positive attributes. Common signs of Vata imbalance include anxiety and bodily disorders related to dryness, such as dry skin and constipation.
- The qualities of Vata are dry, rough, light, cold, subtle, and mobile. A Vata individual will display physical and mental characteristics that reflect these qualities in both a balanced and an imbalanced state.
- The main locations of Vata in the body are the colon, thighs, bones, joints, ears, skin, brain, and nerve tissues. Physiologically, Vata governs anything related to movement, such as breathing, talking, nerve impulses, movements in the muscles and tissues, circulation, assimilation of food, elimination,

urination, and menstruation. Psychologically, Vata governs communication, creativity, flexibility, and quickness of thought.

2. Pitta Dosha

- Pitta derives from the elements of Fire and Water and translates as “that which cooks.” It is the energy of digestion and metabolism in the body that functions through carrier substances such as organic acids, hormones, enzymes, and bile. While Pitta is most closely related to the element of Fire, it is the liquid nature of these substances that accounts for the element of Water in Pitta’s make-up.
- The qualities of Pitta are oily, sharp, hot, light, moving, liquid, and acidic. A Pitta individual will display physical and mental characteristics that reflect these qualities in both a balanced and imbalanced state.
- The main locations of Pitta in the body are the small intestine, stomach, liver, spleen, pancreas, blood, eyes, and sweat. Physiologically, Pitta provides the body with heat and energy through the breakdown of complex food molecules. It governs all processes related to conversion and transformation throughout the mind and body. Psychologically, Pitta governs joy, courage, willpower, anger, jealousy, and mental perception. It also provides the radiant light of the intellect.

3. Kapha Dosha

- Kapha derives from the elements of Earth and Water and translates as “that which sticks.” It is the energy of building and lubrication that provides the body with physical form, structure, and the smooth functioning of all its parts. Kapha can be thought of as the essential cement, glue, and lubrication of the body in one.
- The qualities of Kapha are moist, cold, heavy, dull, soft, sticky, and static. A Kapha individual will display physical and mental characteristics that reflect these qualities in both a balanced and imbalanced state.
- The main locations of Kapha in the body are the chest, throat, lungs, head, lymph, fatty tissue, connective tissue, ligaments, and tendons. Physiologically, Kapha moistens food, gives bulk to our tissues, lubricates joints, stores energy, and relates to cool bodily fluids such as water, mucous, and lymph. Psychologically, Kapha governs love, patience, forgiveness, greed, attachment, and mental inertia. With its earthly makeup, Kapha grounds Vata and Pitta and helps offset imbalances related to these doshas.

Prakriti - A Guide to Personalize Diets

- An individual’s *prakriti* is another important determinant of the effect of food on the system. *Prakriti* of an individual is characterized by a set of physical, physiological, and psychological attributes. For example, based on taste preference, individuals can be grouped as *vata* (having affinity for sweet, sour, and salty tastes); *pitta* (with liking for sweet, bitter, and astringent taste), and *kapha* (for pungent, bitter, and astringent tastes). Whereas these tastes mitigate any negative effects of the inherited constitution, usage of tastes in the reverse order can cause imbalance in the body. For example, if a *vata* constitution person continuously consumes pungent, bitter, and astringent tasting materials, it could lead to rapid aging and degeneration of the body.
- Ayurnutrigenomics is the integration of ayurgenomics with the traditional concept of *ahara* and *pathya*. It is the systematic integration of nutritional practices according to Ayurveda in relation to the *prakriti* of the individual, which amalgamates information from genomics, proteomics and metabolomics projected to provide a solid evidence based scientific foundation for the advancement of personalised nutrigenomic dietetics.

Ritucharya

According to *Ayurveda*, the year is divided into two periods, each containing three seasons: *Uttarayana*, the cold months, which contains the seasons of *Sharath*, *Hemanta*, and *Shishira*, and *Dakshinayana*, the warm months, which contains the seasons *Vasanta*, *Grishma*, and *Varsha*.



Dosha	Season for accumulation (Sanchaya)	Season for provocation (Prokopa)	Season for soothing (Shaman)
Vata	Grishma (mid-May to mid-July)	Varsha (mid-July to mid-September)	Sharath (mid-September to mid-November)
Pitta	Varsha (mid-July to mid-September)	Sharath (mid-September to mid-November)	Hemanta (mid-November to mid-January)
Kapha	Hemanta (mid-November to mid-January)	Vasanta (mid-March to mid-May)	Grishma (mid-May to mid-July)

1. Sharath ritucharya

- *Sharath Ritu* begins in the middle of September, and lasts until mid-November. As we get one last surge of warmth and dryness after the rainy season, your *agni*, or digestive fire, regains its strength. Water and fire are both prominent energies during this transitional time, which makes it the perfect period to begin to pacify those *Pitta* energies.

What to eat: In order to cleanse yourself and prep your digestive system for the heavier fare of the colder months, eat bitter, light, cold, astringent, and sweet foods that are easy on your stomach, and avoid foods high in fat and salt. The ideal *Sharath* diet includes rice, honey, green leafy veggies, tomatoes, root vegetables, pineapples, berries, plums, *ghee* (clarified butter), and other dairy products.

2. Hemanta ritucharya

- *Hemanta Ritu* blows in during the middle of November, and lasts until the middle of January. During this time, your *agni* is at its strongest. The elemental energies of earth and water are dominant, which means that fiery *Pitta* becomes grounded and pacified.

What to eat: The goal of this season is to keep you warm and nourished. Now's the time to eat sweet, sour, and salty foods, as well as unctuous or oily dishes. Keep that digestive fire burning strong! Eat warming foods and lots of fermented dishes (like kimchi and sauerkraut), and avoid foods that are cold, light, and dry. The ideal *Hemanta* diet includes pumpkin, cabbage, spinach, corn, rice, carrots, potatoes, onions, beets, apples, dates, and dairy products.

3. Shishira ritucharya

- The cold settles in for a few months in *Shishira Ritu*, which lasts from mid-January until mid-March. This wet, cold season brings with it an increase in heavy *Kapha* energies, which means that your *agni* needs to burn even brighter to keep things balanced.

What to eat: The same diet as established during the *Hemanta Ritu*, with lots of sweet, sour, salty, fatty, and fermented foods served with warming spices. Avoid any astringent or cold foods. The ideal *Shishira* diet includes lots of dairy products, root vegetables, apples, grapes, rice, wheat, beans, and sweets (in moderation)

4. Vasanta ritucharya

- As nature begins to stir back into life, we transition into the *Dakshinayana*, or the warmer months. *Vasanta Ritu* lasts from mid-March to mid-May, and earth and air energies combine to make this time a lively transitional period. *Kapha* energies start to disperse, which douses your *agni* and can cause a lot of discomforts.

What to eat: This is one of the more sensitive times for our body, so focus on eating easily-digestible bitter and astringent foods, and avoid cold, viscous, heavy, sour, and sweet dishes. The ideal *Vasanta ritu* diet includes gut-healthy foods like barley and honey, and gently stimulating spices like coriander, cumin, turmeric, and fennel.

5. Grishma ritucharya

- *Grishma Ritu* lasts from Mid-May to Mid-July. Fire and air energies dominate this season, drying things out and increasing both the *Pitta* and *Vata* energies within the body. Your *agni* is at an all-time low, so keeping things light is a must.

What to eat: This is the time of year for sweet, light, cold, mineral-rich food. Eat lots of herbs and drink lots of fruit juices, and avoid sour, pungent, or warm foods. Keep hydrated with lots of water, and seek out antioxidants. The ideal *Grishma* diet includes lots of fresh fruit, and veggies like asparagus, cucumber, celery, and leafy greens.

6. Varsha ritucharya

- *Varsha Ritu* takes place from mid-July to mid-September. This is typically a wet, rainy season, with earth and fire energies rising to the forefront. Your *agni* is heavily dampened during this season, so it's time to get that fire roaring again.

What to eat: Salty, sour, and oily foods are the star of this season. Although you want your digestive fire to begin to pick up, avoid heavy foods at first and transition slowly through the season. The ideal *Varsha* diet avoids uncooked foods and favors warm, freshly-cooked meals. Help your digestion out with ginger and lemon, and eat a lot of thin soups.

Concept of Pathya Apathya

- The root term for pathya is 'patha' means various channels in body and 'anapetam' means not causing any harm to human body. The aahar-vihar which is nutritional to the body and also gives happiness to the mind is known as pathya and opposite to that is known as pathya.
- Most of the health problems develop due to the faulty eating habits and regimen.
- The planning of diet mentioned in our classical literature is very rational and based on the certain principles. Lot of importance is given to the diet with regard to its processing, quality, quantity and so on. Due consideration is given to the atmosphere, psychological condition, status of health, digestion etc. of the person while dealing with the issue. The diet should also be planned according to the age, habitat, season and preference of the person.

Virudhahar Niyam (Incompatible Foods)

- An another distinctive feature of Ayurveda is its understanding of incompatibilities of food materials and processing.
- There are 18 forms of incompatibilities according to Ayurveda. Incompatibilities are explained based on the potency of materials, processing, quantity/dose, process of intake, time/season; combining materials, such as sour fruits and milk or honey and ghee (clarified butter) in equal quantities; milk along with horse gram, jack fruit, or fish; or even heating honey. Whereas we may not have a contemporary scientific explanation for these, this can be explained in Ayurvedic terms as incompatibility in the nature of the materials.
- Certain diet and its combinations, which interrupts the metabolism of tissue, which inhibits the process of formation of tissue and which have the opposite property to the tissue are called as *Viruddha Anna* or incompatible diet.

Examples of incompatibility/antagonistic (*Viruddha-Aahara*)

- *Veerya Viruddha* (potency incompatibility) — fish + milk.
- *Sanskar Viruddha* (processing incompatibility) — heated honey.
- *Matra Viruddha* (dose incompatibility) — honey + cow's ghee mixed in equal proportion.
- *Krama Viruddha* — hot water after taking honey.
- *Kala Viruddha* — (time incompatibility) pungent substance in summer and cold substances in winter.
- *Krama Viruddha* (order incompatibility) — consuming curd at night. Taking *Madhura Rasa* food or *Dravya* at the end of meals and *Tikta* and *Katu Rasa Dravyas* (food substances) at the starting of meals.
- *Samyoga Viruddha* (combination incompatibility) — fruit salad or milk + banana.
- *Parihar Viruddha* (contraindication incompatibility) — consuming cold water immediately after having hot tea or coffee.

Influence of Food over Mind and Emotions

- Ayurveda asserts that the mind is directly influenced by the quality of food eaten, food preparation, appearance, aroma and freshness of the food. These factors influence all the five senses and regulate proper digestion. Based on above basic principles, Ayurveda promotes selection of fresh food, preparation of food by combining compatible foods and use of herbs and spices to enhance flavor and taste of the food. It advocates that the quality of the food also regulates emotion, mental agility and mental vigor. Ayurveda has classified the food category in three basic groups:

1. **Satva or Light food:** such as fresh vegetables, rice, milk, butter, honey, fruits, nuts when eaten in right quantity will balance all three doshas, bring mental harmony and evoke conscious awareness.

2. **Rajas or Rich food:** such as garlic, coffee, and wine, fried food, too spicy or too hot will stimulate fantasy, jealousy, and ego. Although these emotions may appear as negative aspects, some of these emotions are needed to lead a normal life. Rajasic food should be included in the diet with modesty.
3. **Tamas or Dull and sluggish:** food list contain frozen food, certain root vegetables, peanut, left- and meats that may need more energy to digest. Such food may enhance emotions like ignorance, greed and laziness. This food category must be included in the diet with caution.

Hunger and Nutrition

- Modern science supports Ayurvedic principles that there is a close connection between food and mind as hunger (feeding) and satiety both are regulated by the hypothalamus in the brain. Stimulation of the lateral part of the hypothalamus excites the emotional drive to seek out food. Over stimulation may cause hyperphagia (excessive eating). Similarly, the satiety center of the brain located in the ventro-medial nuclei of the hypothalamus may cause aphagia (refusal to eat) upon stimulation. Control of the appetite is governed by amygdala of the brain and is closely connected with the sense of smell and the limbic system.
- According to Ayurvedic principles there is a close connection between smell and hunger. Taste, salivation, chewing, and swallowing all influence hunger and satiety and aid in digestion. Activities of the feeding center are regulated by nutritional need such as low blood glucose level. However, feeling of hunger when the stomach is empty is due to the stimulation of the Vagus nerve, which causes stomach to contract, referred to as hunger "pains", is regulated by the blood glucose level, amino acids, and fatty acid metabolism. Bypassing any of these regulations may lead to digestive problems.
- Ayurveda recommends eating only when one is hungry and only one-third capacity of ones stomach, so that body is at optimal condition for proper digestion. As body temperature, feeding and emotions are regulated by the limbic system, there is a close relationship amongst these physiological functions. When the food intake increases, the metabolic rate becomes faster and the production of heat is intensified.
- In order to maintain a physiological balance, Ayurveda asserts not to consume too hot or too cold food and to restrict other activities during food intake, including too much talking. Additionally, since emotions are processed by the limbic system, Ayurveda recommends maintaining a state of calm while eating to maximize the digestive process and recommends to avoid eating when emotions such as anger, anxiety, worry or grief sets in.

Thirst and Water Intake

- Water intake is regulated by the neurons in the hypothalamus in the thirst center. Ayurveda describes eight groups of water depending on its source and views it as a necessary part of nutrition for life. As water is considered to be essential for sustaining life, water is never prohibited under any circumstances.
- Warm water is light, digestive, stimulating and alleviates all doshas. It is good for kapha dosha, asthma, kasa (Bronchitis), Jvara (fever). Water taken before eating induces kapha dosha and suppresses the power of digestion.
- Cold water takes more time to be digested and is recommended only during murcha (fainting) vitiation of Pitta, usma (excessive heat), madatyaya (alcohol consumption), bramara (giddiness), physical fatigue and vomiting. Cold water should not be used in pratisyaya (cold), flatulence, aruchi (anorexia), hiccups and immediately after oleation therapy.
- During the process of eating, water taken in small quantity stimulates digestion, and when taken after meal causes sthaulya (obesity).
- Water taken in excess fetters digestion and dilutes nutrients. Therefore frequent intake of water in small quantities is recommended. During meals only one-third capacity of stomach should be filled with water.
- The consumed food is digested by "jathar agni" (gastric fire). The nutrients ingested from the food undergo the process of absorption, assimilation and then are finally transformed into energy or consciousness. According to Ayurveda, agni, the fire principle of the body governs this process. The vital breath (Prana), positive immune system (Ojus) and the cellular intelligence (Tejas) are all expressions of nutrition via the means of Agni.
- The end product of food, after digestion, runs through the circulatory system and bathes (irrigates) the tissues in the form of ultimate nutrients. Water plays a critical role in the trafficking of nutrient.

These nutrients are selected and transported to the tissues and other specific places in the body, which are then transformed into energy.

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