



Review Article

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ROLE OF AYURVEDA IN NUTRITIONAL DISORDERS: A REVIEW

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ABSTRACT

Ayurveda is a medical science that prioritizes preventive over curative care. Along with *Nidra* and *Brahmacharya*, *Ahara* is considered one of the most important aspects of existence. Energy and nutrition from *Ahara* aid in *Dhatusamya*. Nutrition has a major impact on how our bodies grow and develop. Unusual dietary intake can lead to health problems related to both excess and inadequate nutrition. The basic principle of *Ayurvedic* nutrition is that a person's characteristics are shaped by the food they consume, including what, when, where, how, and why. A balanced method for preparing, consuming, and breaking down food is provided by *Ayurveda*. Nutritional deficiencies were described as *Aptarpanajanya vyadhis* in *Ayurveda*. The various diseases related to nutritional deficiency includes PEM, Obesity, *Parigarbhika*, *Balashosha* and *Phakka*, etc. *Ayurveda* also described a number of internal medications that may be used to treat specific diseases. Some *Ayurvedic* medications that can be used as nutritional supplements include *Ashwagandha*, *Shatavari*, *Nagarmusta*, *Yashtimadhu*, *Haritaki*, and others. These herbs aid in the treatment and prevention of nutritional disorders.

KEYWORDS: *Ayurveda*, Nutrition, Disorders, *Ahara*, *Aptarpanjanya* etc.

INTRODUCTION

Malnutrition, in every form, presents significant threats to human health. Today the world faces a double burden of malnutrition that includes both undernutrition and overweight, especially in low- and middle-income countries. There are multiple forms of malnutrition, including undernutrition (wasting or stunting), inadequate vitamins or minerals, overweight, obesity, and resulting diet-related noncommunicable diseases.^[1] *Ayurvedic* nutrition is a holistic approach to diet and wellness rooted in ancient Indian traditions. It is based on the principles of Ayurveda, a system of medicine that has been practiced in India for thousands of years. There are three main *Doshas*: *Vata*, *Pitta* and *Kapha*. Each *Dosha* is associated with specific qualities and elements, and individuals are believed to have different *Prakriti* based on these *Doshas* that influences their physical, mental, and emotional characteristics. PEM is a disorder marked by insufficient consumption of protein and/or energy (calories), which can result in a number of nutritional disorders and health problems. In *Ayurvedic* nutrition, foods are classified according to *Rasas* and their effects on the *Doshas*. A balanced diet includes all six *Rasas*, with an emphasis on foods that pacify or balance your dominant *Dosha*. *Ayurvedic* nutrition also emphasizes the importance of mindful eating, eating seasonal foods, and following a daily routine that aligns with the natural rhythms of the body and the environment. It considers factors such as food combinations, cooking methods, and the time of day when food is consumed. In Ayurveda, nutritional disorders are understood in terms of *Doshas* (*Vata*, *Pitta* and *Kapha*) and imbalances in the *Agni*. When these imbalances occur, they can cause various health problems related to nutrition and digestion. Some of the common nutritional disorders in *Ayurveda* includes *Balashosha*, *Parigarbhika*, *Phakka roga*, obesity etc.^[2] Malnutrition occurs when the digestive system is unable to properly absorb nutrients from food. *Ayurveda* cites *Mandagni* or imbalanced *Doshas* as the cause of decreased absorption. In *Balashosha*, there is emaciation of the body due to depletion of subcutaneous fat and tissue. *Parigarbhika* highlight the development of malnutrition during infancy period. *Phakka* is a clinical manifestation (symptom) with continuous deterioration of growth associated with delayed motor developmental milestones. *Ayurveda* sees obesity as an imbalance of *Kapha dosha*, which is associated with

heaviness, excess, and stagnation. To remove this imbalance, herbal remedies are often recommended, as well as changes in diet and lifestyle.

AIMS AND OBJECTIVES

- To study the Nutritional disorders.
- To study the role of *Ayurveda* in the management of nutritional disorders including all the drugs and formulations.

Protein Energy Malnutrition (PEM): The World Health Organization (WHO) defines malnutrition as “the cellular imbalance between the supply of nutrients and energy and the body's demand for them to ensure growth, maintenance, and specific functions.” The term protein-energy malnutrition (PEM) applies to a group of related disorders that include marasmus, kwashiorkor, and intermediate states of marasmus- kwashiorkor.^[3]

IAP classification of malnutrition: This classification is based on weight for age values.^[4]

Grade of malnutrition	Weight-for-age of standard (%)
Normal	> 80
Grade 1	71-80 (mild malnutrition)
Grade 2	61-70 (moderate malnutrition)
Grade 3	51-60 (severe malnutrition)
Grade 4	< 50 (very severe malnutrition)

Moderate to severe malnutrition is associated with one of the classical syndrome, namely, Marasmus and Kwashiorkor.

The spectrum of clinical syndromes produced as a result of PEM includes the following:

Marasmus: Marasmus is starvation in infants occurring due to overall lack of calories.

Kwashiorkor: Kwashiorkor is related to protein deficiency though calorie intake may be sufficient.

The salient features of the two conditions are contrasted in Table:^[5]

Feature	Kwashiorkor	Marasmus
Definition	Protein deficiency with sufficient calorie intake	Starvation in infants with an overall lack of calories
Clinical Features	<ul style="list-style-type: none"> Occurs in children between 6 months and 3 years of age Growth failure Wasting of muscles but preserved adipose tissue Oedema, localised or generalised, present Enlarged fatty liver Serum proteins low Anaemia present 'Flag sign'- Alternate bands of light (depigmented) and dark (pigmented) hair 	<ul style="list-style-type: none"> Common in infants under 1 year of age Growth failure Wasting of all tissues including muscles and adipose tissue Oedema present No hepatic enlargement Serum proteins low Anaemia present Monkey- like face, protuberant abdomen, thin limbs
Morphology	<ul style="list-style-type: none"> Enlarged fatty liver Atrophy of different tissues and organs but subcutaneous fat preserved 	<ul style="list-style-type: none"> No fatty liver Atrophy of different tissues and organs including subcutaneous fat

Obesity: Obesity may result from overindulgence in food and dietary imbalance. A body weight that is 20% over the optimal weight for a person's age, sex, and height is regarded as obese; obesity is described as an excess of adipose tissue that poses a health risk. The body mass index (BMI), which is calculated as weight in kg/height in m², is the most often used metric to measure obesity. Both men and women are classified as obese if their BMI is 30 or higher.

Etiology: Obesity results when caloric intake exceeds utilisation. The imbalance of these two components can occur in the following situations:

1. Inadequate pushing of oneself away from the dining table causing overeating.

2. Insufficient pushing of oneself out of the chair leading to inactivity and sedentary life style.
3. Genetic predisposition to develop obesity.
4. Diets largely derived from carbohydrates and fats than protein- rich diet.
5. Secondary obesity may result following a number of underlying diseases such as hypothyroidism, Cushing's disease, insulinoma and hypothalamic disorders.^[6]

In different *Samhita* of *Ayurveda* following diseases described that is near to malnutrition.

Balashosha: This disease is explained by *Vagbhata*. The cause of *Balashosha* is *Shlaishmika anna sevana* (Excessive energy dense food), *Shitambupana* (drinking cold water) and *Divaswapna* (excessive day sleep), drinking breast milk vitiated by *Shleshma*- by these the channel of *Rasa* (first fluid liquid) gets block by *Kapha*. Clinical features are *Arochaka* (Reduced digestive capacity) *Pratishyaya* (running nose) *Jwara* (fever) and *Kasa* (cough) and *Snigdha shukla mukha Akshi* these condition if not detected early may lead to *Shosha* (emaciation) with its eyes being unctuous (grassy) and white.^[7]

Parigarbhika: Child on feeding breast milk of pregnant mother which has *Alpa Poshakansha* (poor nutrients) leads to *Parigarbhika*. If a breast feeding mother (within one year) becomes pregnant again, it will result in a decreased breast milk secretion as hormones maintaining pregnancy and breast milk secretion are contradictory in action. Hence, there will be stoppage or decrease in adequate breast milk secretion and the first child will be deprived of breast milk in its *Ksheerada Avastha*.^[8]

Phakka Roga: *Phakka- Roga* is an unique and the only nutritional disorder or *Kuposhanjanya Vyadhi* explained by *Kashyapa*. It is a clinical manifestation (symptom) with continuous deterioration of growth associated with delayed motor development milestones. Due to running down condition, child is immunocompromised.

Phakka is divided into three types:

(1) *Ksheeraja*

(2) *Garbhaja*

(3) *Vyadhija*

Ksheeraja Phakka: Milk vitiated by *Kapha dosha* is called as *Phakka Dugdha*. Consumption of such milk causes obstruction of *Rasavaha srotas* and this causes impaired digestion and cellular metabolism. When this condition persists for a long time then the child's general health falls with emaciation.

Garbhaja Phakka: This type of *Phakka* occurs due to poor spacing of the child. Early weaning from the breast of the mother when she becomes pregnant again, causes physical, psychological, social, emotional disturbances along with gradual decline in the general health condition of the first baby. When fetus is growing inside the mother's uterus, psychological set-up of the mother is focused on the growing fetus which results in less emotional bonding with the first child, as she is not able to take care of the both. These factors leads to emotional disturbances in the first child. Meantime, a chance of child neglect and abuse is also more common. Lack of mother care leads to disturbed psycho-somatic constitution of the first baby. Early weaning compels the parents to introduce artificial milk mostly by bottle feeding. Along with other limitations and disadvantages of artificial milk the risk of contamination is more. Repeated attacks of diarrhoea, URTI etc., makes the child more emaciated. Love, affection, sympathy, care, security, concern, encouragement, opportunity are some of the basic requirements that a growing child requires to have a timely attainment of the developmental milestones. First child will be deprived of all, due to less parental care, which may lead to *Phakkatwa*.

Vyadhija Phakka: *Vyadhija Phakka* is malnutrition condition resultant of chronic disease. On the whole *Vyadhija Phakka* refers to severe forms of malnutrition, child suffers from fever, endogenous and exogenous disease, his flesh, strength and luster decrease, *Shuska Sphik* and *Shushka Bahu* (wasting of buttocks and wasting of upper limb), *Shushka uru* (Wasting of thigh), *Mahodara* (abdomen becomes protuberant), *Mahoshiromukhah* (comparatively skull, the face becomes more dominant), due to relatively wasting in body parts, yellow eye, horripilation in body part, appears just like a skeleton, *Nishcheshta Adho Kaya* (lower body part is emaciated, weak), lower body becomes inactive or crawls with hand and knee, due to weakness has less activity and due to less activity micro and macro-

organisms like *Makshika*, *Krimi*, *Keeta* may act as vectors to spread many infectious conditions.^[9]

Ayurveda Drugs for Nutritional Disorders^[10]

Ayurvedic medicine identified a number of herbs or compound compositions that have a therapeutic and preventive impact in nutritional diseases. These medications function because of certain characteristics and ingredients found in various plant parts.

The role of some drugs described as follows.

Shatavari: *Shatavari* is a powerful rejuvenator; it gives women's hormones and is used to help them feel better. It boosts the functioning of several organs and aids in immunity maintenance.

Yashtimadhu: It provides the minerals needed to keep the gastrointestinal tract healthy, soothes moderate laxative pain, relaxes tense muscles, and boosts immunity with its antioxidant activity.

Pippali: Thus, *Pippali's* digestive system stimulant fights against nutritional deficiencies brought on by compromised digestion. It aids in restoring hormonal equilibrium and releasing metabolic energy.

Haritaki: Because it is a tonic, *Haritaki* helps with the physical debility brought on by starvation. Like *Pippali*, *Haritaki* transforms *Ahara* into nutritious *Rasa* in order to improve digestion and preserve nutritional supplies. *Haritaki* is a strong source of vitamin C and supports overall health.

Ashwagandha: *Ashwagandha* is a revitalizing herb that feeds the body's physical and mental well-being. It has tonic properties and aids in the treatment of general malnutrition-related debility.

Nagarmusta: Sesquiterpenes, flavonoids, terpenoids, and essential oils are among the main chemical components of plants. Plant extracts have been shown to have antioxidant properties and are abundant in flavonoids, polyphenols, ascorbic acid, and other nutrients. It aids in preventing free radical-induced oxidative damage.

Formulations for Balashosha^[11]

- *Madhu- Yashti Sadhita Ghrita*
- *Ati Pushti Kara Yoga*
- *Vidari Kandadi Churna*
- *Ashwagandha Ghrita*
- *Shatpala Ghrita*
- *Kumar Kalyana Ghrita*

Treatment of Phakka Roga : Treatment of *Vyadhija phakka* includes *Vatahara kriya*, *Agnideepka*, *Brihana* and *Aashvasana chikitsa*. Next line of treatment is *Shodhana* in which first *Snehana* should be done for 7 days by using either *Klayanaka*, *Shatpala* or *Amrita Ghrita*. This will be followed by *Trivrit Ksheera Virechana*. After that, *Shodhana karma* will be done by using *Yavagu*, *Yusha* and other protective and *Agni Vardhaka* diet.^[12]

Drugs for Obesity^[13]

- *Haritaki (Terminalia chebula –fruits)*
- *Bibhitaki (Terminalia bellerica- fruits)*
- *Amalaki (Phyllanthus emblica- fruits)*
- *Varuna (Crataeva nurvala- bark)*
- *Gokshura (Tribulus terrestris- fruits)*
- *Aardraka (Zingiber officinale- roots)*

CONCLUSION

Nutrition is a critical part of health and development. Better nutrition is related to improved infant, child and maternal health, stronger immune systems, safer pregnancy and childbirth, lower risk of non-communicable diseases (such as diabetes and cardiovascular disease), and longevity. PEM is a serious worldwide health issue, especially for communities experiencing poverty, food instability, and restricted access to nutrient-dense diets as well as those living in emerging nations. According to *Ayurveda*, the nutrition disorders are *Balashosha*, *Parigarbhika*, *Phakka roga*, Obesity have been aggravated due to the *Mandagni*. *Ama* is the primary cause of *Mandagni*. *Shunthi*, *Ajwain* and *Jeera* are the *Agnideepaka dravyas* who treat *Ama*. This is how *Rasavaha srotodushti* is being treated. The root cause of all these nutritional

diseases is *Rasavaha* srotodushti. The most effective *Aushadha yogas* for nutritional diseases are those *Dravyas* that act on *Rasavaha* srotodushti.

REFERENCES

1. World Health Organization- <https://www.who.int>
2. Acharya's Textbook of Kaumarbhritya Vol. II; Edited by Shrinidhi. K.; Acharya; Chaukhamba Orientalia Varanasi; Reprint 2017; Chapter 62.
3. Harsh Mohan Textbook of Pathology; The Health Sciences Publishers; Seventh Edition; Reprint 2013; Pg. 240.
4. Ref- <https://www.slideshare.net/drbabulmeena/pem-36897896>
5. Harsh Mohan Textbook of Pathology; The Health Sciences Publishers; Seventh Edition; Reprint 2013; Pg. 240.
6. Harsh Mohan Textbook of Pathology; The Health Sciences Publishers; Seventh Edition; Reprint 2013; Pg. 238- 239.
7. Acharya's Textbook of Kaumarbhritya Vol. II; Edited by Dr. Shrinidhi. K. Acharya; Chaukhamba Orientalia Varanasi; Pg. 982- 984.
8. Acharya's Textbook of Kaumarbhritya Vol. II; Edited by Dr. Shrinidhi. K. Acharya; Chaukhamba Orientalia Varanasi; Pg. 987.
9. Acharya's Textbook of Kaumarbhritya Vol. II; Edited by Dr. Shrinidhi. K. Acharya; Chaukhamba Orientalia Varanasi; Pg. 990- 996.
10. Review Article; World Journal of Pharmaceutical and Medical Research; ISSN- 2455-3301.
11. Acharya's Textbook of Kaumarbhritya Vol. II; Edited by Dr. Shrinidhi. K. Acharya; Chaukhamba Orientalia Varanasi; Pg. 985- 987.
12. Acharya's Textbook of Kaumarbhritya Vol. II; Edited by Dr. Shrinidhi. K. Acharya; Chaukhamba Orientalia Varanasi; Pg. 1001.
13. Review Article; Indian Traditional Ayurvedic System of Medicine and Nutritional Supplementation.