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# Miasmatic perspective in nutritional deficiency disorders

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Through centuries, food has been essential for human beings in health and disease. Nutrition is the science of food and its relationship to health. Poor nutrition leads to poor immunity and susceptibility to different types of infectious diseases, metabolic diseases, etc. Significant advancement has been made during the past 50 years in nutrition and causes of deficiency at cellular levels. A deficiency results from either absolute lack of required food nutrients or defect in assimilation at internal milieu, resulting in Malnutrition. The causes of Malnutrition are multifactorial, particularly in Homoeopathy, the causes of disease or deficiency by the fundamental causes, i.e., Miasm. A thorough understanding of miasms makes it easier to treat the innumerable type of chronic diseases, especially Nutritional deficiency disorders. It is necessary to diagnose these deficiency disorders with clinical tools, assess the underlying Miasm, and prescribe the remedy based on the totality of the patient's symptoms.

Keywords: Nutritional deficiency disorders, homoeopathy, miasm

#### Introduction

Food is requisite to stay healthy. The pure ailments of food and drink satisfy our hunger and thirst and support our strength by replacing the parts (tissues) lost in the vital process without disturbing the functions of organs or impairing health.

Nutrition is defined as the science of food and its relationship to health. It is concerned primarily with the part played by nutrients in body growth, development, and maintenance. Nutrient or food factor is used for specific dietary constituents such as proteins, vitamins,

and minerals. Good nutrition means maintaining a nutritional status that enables us to grow well and enjoy good health.

Nutrition disorders occur when a person's dietary intake does not contain the proper nutrients for healthy functioning or cannot correctly absorb food nutrients. An incorrect balance of nutrients, undernutrition and overnutrition may cause various nutrition disorders.

Deficiencies can lead to various health problems, such as digestion problems, skin problems, stunted or defective bone growth, and dementia. However, unless we are seriously deficient for some time, we may notice no symptoms at all, leading us to believe (falsely) that our body is getting all the nutrition we need. However, such deficiencies cause symptoms ranging from minor to severe [1].

The World Health Organization (WHO) accords that Malnutrition refers to deficiencies, excesses, or imbalances in a person's energy and nutrient intake [2].

Malnutrition was one of the leading risk factors for death in younger children below five years of age in India in 2017. This condition's prevalence is 68.2% of the under-five deaths, and 17.3% is responsible for total Disability Adjusted Life Years (DALYs). Among these were the low birth weight 21.4%, child stunting 39.3%, child wasting 15.7%, child underweight 32.7%, anaemia in children 59.7%, and women 54.4% reported in 2017 [3].

The fundamental principle of Homoeopathy, a unique scientific system of medicine discovered by Dr Samuel Hahnemann, is that "Similia Similibus Curentur".

It means "like is cured by like", i.e., a disease may be cured by something that can cause similar symptoms. This system is concerned with treating the whole person rather than disease alone. The remedy selection will depend on all the patient's symptoms, including mental and emotional state physical generals, including the miasmatic background from their family history, past history, and treatment history. Along with indicated remedy or simillimum, the diet and regimen play a pivotal role in treating acute or chronic diseases. Nutritional disorders are caused by an insufficient intake of food or the inability to absorb

certain nutrients and result from a dependent deficiency of one or more essential nutrients and manifested in various forms of physical or mental illness. Homoeopathy promotes that when there is an imbalance in nutritional requirement and its source, the deficient nutrients should be corrected by providing a balanced diet and assimilating and absorbing the same. If the body is too weak to absorb the nutrients or unable to assimilate, consider the miasmatic predominance. Thus, the objective of this article is to give a miasmatic perspective to nutritional disorders.

### **Materials and Methods**

The clinical signs and symptoms of nutritional deficiency disorders are correlated with the existing Homoeopathic literature, particularly for Miasmatic diagnosis and are represented in Table 1. The nutritional conditions clinical assessment is mentioned in Table.2. Commonly indicated, therapeutics are also mentioned in Table.3.

Table 1: Nutritional disorders and miasmatic correlation [4-19]

S.no	Deficiency	Signs and symptoms	Miasm
		Night blindness	Psora +Syphilitic
		Conjunctival xerosis- "Emerging like sandbanks at receding tide".	Psora
	T7	Corneal ulceration, vision lost	Syphilitic
1.	Vitamin-A	Bitot's spots	Not mentioned
		Follicular hyperkeratosis	Psora
		Anorexia and Growth retardation	Psora
	Vitamin-D	Rickets, soft and curved bones	Tubercular
		Pigeon chest	Tubercular
2.		Irregular depression in the chest cavity	Syphilitic
		Curves and lines in the chest wall are imperfect, and certain areas may be sunken and depression	Tubercular
		Osteomalacia	Syphilitic
3	Vitamin- E	Ataxia, dysarthria, male infertility, nerve damage.	Tubercular
4	Vitamin-K	Bleeding disorders	Tubercular
		Beriberi (Dry and Wet)	Psora+Sycotic
5	Vitamin-B1	Wernick's Encephalopathy- ophthalmoplegia, polyneuritis, ataxia, and mental deterioration.	Tubercular
		angular stomatitis,	Psora
6	Vitamin- B2	cheilosis, glossitis,	Tubercular
	, mannin 192	poor wound healing	Tubercular
		Diarrhoea	Psora
7	Vitamin- B3	Dermatitis Dermatitis	Psora
,	vitallilli- D3	Dementia Dementia	Tubercular
8	Vitamin- B6	Peripheral neuritis	Tubercular
0	vitallill- bo		
	Folate  Vitamin- B12	Megaloblastic anemia,	Sycosis
9		Glossitis, cheilosis.	Tubercular
		Gastrointestinal disturbances like flatulence and diarrhoea.	Psora
		and Severe folate deficiency may lead to infertility or sterility	Psora+Sycotic
10		Megaloblastic anemia (Pernicious anemia),	Psora+ Sycotic
		a demyelinating neurological lesion in the spinal cord	Tubercular
11	Vitamin- C	Scurvy, anaemia, and weakness. Bleeding into the joints	Tubercular
		Oral symptoms associated with gum bleeding	Tubercular
12	Calcium	Teeth decay, brittle teeth, cataract, osteomalacia, rickets, and osteoporosis.	Tubercular
13	Phosphorus	bones and teeth disorders	Tubercular
14	Sodium	Leg cramps	Tubercular
15	Potassium	Hypertension	Psora + Sycotic
16	Magnesium	Irritability, tetany, hyperreflexia.	Tubercular
17	Iron	Anaemia- RBC is destroyed through imperfect oxidation of food. This can lead to the anaemic condition, which may be evidenced by a lack of stamina in the muscles and a pallor, drowsy, puffy appearance	Sycotic
18	Iodine	Glandular disorders, nervous system, endocrine system,	Psora.
19	Fluorine	Dental caries and Fluorosis	Tubercular or Syphilitic
20	Zinc	Skin and Nervous system	Tubercular
21	Copper	Anaemia and Nervous disorders	Psora+ Sycosis+ Syphilitic
22	Cobalt	Cardiomyopathy, congestive cardiac failure, pericardial effusion, polycythemia, and thyromegaly.	Psora + Sycotic
23	Chromium	Hyperinsulinemia, increase in haematological parameters and total protein concentrations	Psora
24	Manganese	Bleeding disorders, Anorexia, Impotence, cramps in the legs, speech difficulties, encephalitis like	Tubercular or

		syndrome, and parkinsonian syndrome. Psychosis, Apathy	Syphilis.
25	Selenium	Infertility in men and women, muscle weakness, growth retardation, fatigue in both physical and mental, hair loss, weakened immune system, depressed mood, anxiety, and confusion.	Psora + Sycosis
26	Molybdenum	Brain abnormalities, like atrophy, may cause severe developmental delay and may lead to difficulty learning to sit or speak.	Tubercularr+ Syphilitic.
27.	Protein-Energy malnutrition.	Marasmus or Kwashiorkor	Tubercular or Sycotic.

#### Discussion

Hahnemann has given instructions in § 4 and § 5 that the physician is a preserver of health, and he must know the cause of the disease, and the cure will be obtained only after removing the cause. This statement is very similar to what Thomas Edison was concerned about in 1903, his time's healthcare and stated: "The doctor of the future will give no medicine but will interest his patient in the care of the human frame, diet and the cause and prevention of disease" [20]

### **Nutrition and susceptibility**

Dr Stuart Close defines susceptibility as the general quality or capability of the living organism of receiving impression: the power to react to stimuli. It is primarily the reaction of the organism to external and internal influences [21]. Dr H.A. Roberts explained that the Importance of nutrition and relation to susceptibility proves that the power of assimilation and nutrition is one of the phases of susceptibility [6]. Furthermore, Dr Dhawle M.L. mentioned in his Principles and Practice of Homoeopathy under chapter Susceptibility that "normal susceptibility leads to a state of good health characterized by good nutrition and a healthy outlook on life. On the other hand, abnormal susceptibility affects them in the first instance and interferes with adaption, thereby leading to the disease's development [22]. Poor nutrition leads to infectious diseases, immunological dysfunction and metabolic disorders. The experimental studies proved the relationship between diet and different types of infections scientifically [23, 24].

#### Causation of the nutrition deficiency disorders

Dr Hahnemann has divided the disease based on the causation of the diseases. These causes are the exciting cause, maintaining and fundamental. Indeed, the

fundamental cause or cause of all chronic diseases are Chronic miasms. § 72 explicitly defined that Chronic miasms cause chronic diseases, and these diseases will begin with a small, imperceptible origin, deranged the vital force, but it does not extinguish these miasms until leads to the organism are destroyed. In § 88, he mentioned that the Psora is the only authentic, fundamental cause and producer of all the other numerous diseases [8].

Dr Kent emphasized under the Chronic disease that the 'congenital debility and marasmus, and varying types of chronic diseases are due to the cause of chronic Miasm. Further, he reaffirmed that Hahnemann's cause of all chronic diseases is Psora- 'a hydra-headed, oldest, most universal and most pernicious chronic miasmatic illness' [7]. Dr H.A. Roberts explicated under chapter Disease Classification, concerning complete cure removal of the cause is the first step. Now and then, surgical procedures, the refinement of diet, the removal of irritating substances, change of environment, anything and everything take itself when the cause is removed. He further emphasized that Psora causes all nutritional disorders. He clearly defined that about deficiency disorders, aroused due to lack of certain elements in our system, or the inability to assimilate nutrients from foods, it the standard measure of almost all so-called Psoric conditions, and above a lack of balance in the equilibrium of health that manifests through a hypersensitivity of impressions-functional disturbances and that contrasts from consciousness to neuroses [6].

### Nutritional Assessment [25]

Unfortunately, there is no single clinical or laboratory indicator to assess the comprehensive nutritional status. Therefore, it requires the systematic integration of patient history and physical examination information.

Table 2: summarizes the physical findings of the characteristics of nutrient deficiencies

S. No	Element	Notes & findings
		Weight loss of >10% of usual body weight prognoses clinical outcomes.
		Look for any medical or surgical conditions or chronic diseases.
1.	History of The Patient	Any medications can poorly affect nutrient intake or assimilation.
		Enquire about dietary intake supplements.
		Ask about socio-demographic data, habits, and lifestyles.
2.	Dody Mass Inday (DMI)	BMI= weight in kg/ (height in meters) <sup>2</sup>
۷.	Body Mass Index (BMI)	BMI< 18.5 kg/m <sup>2</sup> wished-for screen for Malnutrition.
3.	Weight Loss	Assess the loss of muscle mass and subcutaneous fat: temporal and neck muscle wasting, anthropometrics including skin-folds and circumferences.
4.	Weakness/ loss of strength	Decreased hand-grin and leg extensor strength. Lower extremity weakness may be detected in thisming
5.	Peripheral oedema	It may mistake weight measurements and is often observed with reduced visceral proteins and inflammatory states. It's also be observed in Thiamine deficiency.
		Hair findings and specific nutrient deficiencies are as follows.
6.	Hair examination	Loss: Protein, B12, Folate
		Brittle: Biotin

		Colour change: Zinc
		Dry: vitamin A and E
		Easy pluck ability: Protein, Biotin, zinc.
		Coiled, corckwise: vitamin A and C
		Alopecia is commonly seen in severely malnourished people.
		Enquire about excessive hair loss on a pillow or when combing the hair.
		Desquamation; riboflavin
		Petechiae; Vitamin A and C
		Perifollicular haemorrhage: Vitamin C
		Ecchymosis; Vitamin C and K
7.	Skin Findings	Xerosis, bran-like desquamation: essential fatty acids
		Pigmentation, cracking, crusting: Niacin
		Acne form lesions, follicular keratosis, xerosis: Vitamin A
		Acro-orofacial dermatitis, erythematous, vesiculobullous, and pustular: zinc.
		Wounds and pressure sores are indicators of compromised nutritional status.
		Bitot's spots: Vitamin A
8.	Eiti	Xerosis: Vitamin A
8.	Eye examination	Angular palpebritis: Riboflavin
		Night blindness: Vitamin A
		Angular stomatitis and cheilosis; B complex, iron and protein
		Glossitis: Niacin, Folate, and Vitamin B12
9.	Perioral examination	Magenta tongue: Riboflavin
).	T CHOI at Chammation	Bleeding Gums, gingivitis, tooth loss: Vitamin C
		Angular stomatitis, cheilosis, glossitis, poor dentition, caries, tooth loss, difficulty swallowing and flatulent dyspepsia are associated with vitamin and mineral deficiencies.
		Arthralgia: Vitamin C
		Calf pain: thiamine
10	Extremity / Nervous	Ophthalmoplegia and foot drop: thiamine
10	examination	Paresthesia: Thaimain, vitamin B12, and biotin.
		Depressed vibratory and position senses; Vitamin B 12
		Hyporeflexia, loss of lower extremity deep tendon reflexes: thiamine and Vitamin B12.
		Anxiety, depression, dementia, and hallucinations: Niacin
11.	Mental status examination	Memory disorders: vitamin B12
		Wernicke-korsakoff syndrome – Severe thiamine deficiency.

**Table 3:** Therapeutics [26]

S.No Cl	linical Condition	Therapeutics
	Night blindness	Argentum. Nitricum., China, Cyclamen, Hyoscyamus, Lycopodium, Rananculus. bulb, stram., Sulphur,
1		Veratrum. album
Co	orneal ulcers and	Arsenicum album, Calcarea carb, Hepar sulph, Kali. Bich, Lachesis, Merc. sol.,. Natrum. muriaticum, Silicea,
	scars	Sulphur
	Rickets	Calcarea carb, Calcarea Phos, Causticum, FlouricAcid, Lycopodium, Merc. sol, Phos, Phos. acid, Silicea,
	Kickets	Sulphur, Syphillinum, Symphytum,
	Osteomalacia	Calcarea carb, Calcarea. Flour, Calcarea Phos, Flourica acid, Merc. sol, Phos, Silicea,
Bl	leeding disorders	Arnica, Crocus. Sativus, Ferrum. Met, Lachesis, Phosphorus., Secale cornutum,
	Neuritis	Aconite napellus, Arsenicum. album., Causticum., Lac. caninum, Merc. solubulis, Nux. vomica, Phosphorus,
	Neurius	Silicea., Sulphur.,
	Stomatitis-	Baptisia tincotria, Borax, Hydrastis, Muriatic. acid
	Glossitis-	Arsenicum. album., Benzoic. acid, Cantharis, Lachesis Merc. sol, Sulph. acid.,
	Anaemia	Alumina, Cina, Hydrastasis, Ferrum. met, Natrum. mur., Nux.Vomica, Pulsatilla., Silicea,
	Gingivitis-	Bovista, Calcarea. carb, Carbo vegetabilis, Crotalus. horridus, Lachesis, Merc. sol, Natrum. mur, Nitric. Acid,
		Phosphorus.,
	Marasmus-	Abrotanum, Calcarea Phos, Iodium, Lycopodium, Muriatic. acid, Natrum. Mur, Oleum Jec., Silicea, Sulphur,
D	Dental caries and	Antimonium Crud Polladona Poray Elugria said Mara sal Mazaraum Pilhum mat. Stanbusagria
	Fluorosis-	Antimonium. Crud, Belladona, Borax, Fluoric acid. Merc. sol., Mezereum, Plbum met., Staphysagria.
	Ataxia-	Agaricus, Alumina, Causticum, Conium maculatum, Cuprum met, Gelsimium sempervirens, Helleborus, Nux.
		Vomica, Onosmodium, Phosphoric acid, Picric acid, Plumbum meet, Stramonium., Zincum met.

# Conclusion

Homoeopathy is a holistic system of medicine, and it considers man as a whole. Miasms are the fundamental

cause of alteration in healthy human beings. In aphorism 261, Dr Hahnemann gave directions about diet and regimen, treating nutritional disorders like "The most appropriate

regimen during the employ of medicine in chronic diseases consists in the removal of such obstacles to recovery, and in supplying the necessary nutritious food where necessary, innocent moral and intellectual recreation, an active, regular exercise in the open air in all kinds of weather, unmedicinal food and drink, etc. Understanding the miasmatic perspective of various nutritional deficiencies is necessary for every Homoeopath. Apart from Psoric Miasm, Tubercular Miasm also plays a vital role in most nutritional deficiencies. Sycosis, Syphilitic trait, and some deficiencies like vitamin A, copper deficiency disorders mixed Miasm causes the diseases. This type of miasmatic manifestations will develop because of the inability to assimilation; the results present various clinical presentations and will continue to be corrected through a healthier diet and natural way of living like active exercise and exposure to sunlight.,

The indicated ultra-dilution of the miasmatic remedy would alleviate the signs and symptoms of the nutritional disorders. Even after giving nutrients that are deficient through diet or directly, the respective miasmatic treatment is necessary to remove the fundamental cause of illnesses, the Miasm, to establish the cure. Dr J. H. Allen concluded that "we cannot select the most similar remedy possible unless we understand the phenomenon of the acting and basic miasms. The actual similarity is always based upon the basic Miasm, whether conscious or unconscious of the fact."

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#### References

- Park K. Park's Textbook of Preventive and Social Medicine. 23 rd. edition, Banarsidas Bhanot publishers, 1167 Prem Nagar, Jabalpur, 482001. (M.P.) India. P.G. 2015, 608-667.
- Narayan J, John D, Ramadas N. Malnutrition in India: status and government initiatives Public Health Pol. 2019;40:126-141. https://doi.org/10.1057/s41271-018-0149-5. Last accessed on 12.02.2021
- India State-Level Disease Burden Initiative Malnutrition Collaborators. The burden of child and maternal Malnutrition and trends in its indicators in the states of India: The Global Burden of Disease Study 1990-2017. The Lancet. Child & adolescent health. 2019;3(12):855-870. https://doi.org/10.1016/S2352-4642(19)30273-1. Last accessed on 12.02.2021
- 4. Allen JH. Allen's the Chronic Miasms, Psora & Sycosis Low Priced Edition: August-, B Jain Publishers Pvt. Ltd. New Delhi. 2002.
- 5. Phyllis Speight. A Comparison to the Chronic Miasms (Psora, Pseudo-Psora, Syphilis, Sycosis), B. Jain Publishers Co. New Delhi. 1948, 8, 14, 15, 19, 22, 28, 32, 60, 76, 78.
- 6. Roberts HA. The Principles and art of cure by Homoeopathy, reprint edition B. B. Jain publishers Pvt. Ltd. New Delhi. P.G. 1999, 180-240.

- 7. Kent JT. Lectures on Homoeopathic Philosophy, Reprint edition: B. Jain Publishers Pvt. Ltd. New Delhi. P.G. 1999, 126-151.
- 8. Hahnemann S. Organon of Medicine student's Economy 6th edition, translated by William Boericke, M.D., Reprint Edition, B. Jain Publishers Pvt Ltd, Delhi. 1996;93-94:159-160, 282.
- 9. Hahnemann S. The Chronic Diseases, their Peculiar Nature and their Homeopathic Cure, Theoretical part with word Index, Rearranged and augmented Edition, B. Jain Publishers Pvt. Ltd. New Delhi, P.G. no. 2018, 51-94.
- Banerjea SK. Miasmatic Diagnosis, Practical tips with clinical comparison, revised edition, Second Extended Edition: B. Jain Publishers Pvt. Ltd, New Delhi. P.G. 2006, 13-114.
- 11. Shankar U, Hati AK, Prusty U, Panda F, Patel B, Importance of Diet/Nutrition and Regimen in Homoeopathic Treatment, Journal of Drug Delivery and Therapeutics. 2019;9(3):575-583. http://dx.doi.org/10.22270/jddt.v9i3.2801. Last accessed on 12.02.2021
- 12. Lindenmayer GW, Stoltzfus RJ, Prendergast AJ. Interactions between zinc deficiency and environmental enteropathy in developing countries. Advances in nutrition. 2014;5(1):1-6. Last accessed on 12.02.2021
- 13. Wazir SM, Ghobrial I. Copper deficiency, a new triad: anemia, leucopenia, and myeloneuropathy. Journal of community hospital internal medicine perspectives. 2017;7(4):265-8. Last accessed on 12.02.2021
- 14. Hammond N, Wang Y, Dimachkie M, Barohn R. Nutritional neuropathies. Neurologic clinics. 2013;31(2):477. Last accessed on 12.02.2021
- Lipshultz S, Law Y, Asante-Korang A, Austin E, Dipchand A, Everitt M, et al. Cardiomyopathy in Children: Classification and Diagnosis: A Scientific Statement From the American Heart Association, Circulation. Online publication date. 2019;140:1(e9-e68).
- 16. Pechova A, Pavlata L. Chromium as an essential nutrient: a review. Veterinarni Medicina-Praha. 2007;52(1):1. Last accessed on 12.02.2021.
- 17. Lingamaneni Prashanth, Kiran Kumar Kattapagari, Ravi Teja Chitturi. A review on the role of essential trace elements in health and disease, Journal of Dr NTR University of Health Sciences, Year. 2015;4(2):75-85.
- 18. Shreenath AP, Ameer MA, Dooley J. Selenium Deficiency. [Updated 2021 Feb 11]. In: Stat Pearls [Internet]. Treasure Island (F.L.): Stat Pearls Publishing; 2021 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK482260/ Last accessed on 12.02.2021
- 19. Novotny JA. Molybdenum Nutriture in Humans. Journal of Evidence-Based Complementary & Alternative Medicine 2011;16(3):164-168.
- 20. https://doi.org/10.1177/2156587211406732https://evide nceinmotion.com/the-doctor-of-the-future/. Last accessed on 24.02.2021.
- 21. Quotes by Thomas A Edison. https://www.goodreads.com/quotes/13639-the-doctorof-the-future-will-give-no-medication-but
- 22. Close S. The Genius of Homoeopathy, Lecture and Essays on Homoeopathic Philosophy, reprint edition chapter VII. Susceptibility, Reaction and Immunity, B.

- Jain Publishers Pvt. Ltd New Delhi. 2001, 76.
- 23. Dhawale ML. The Principles and Practice of Homoeopathy, Published by Institute of Clinical Research, fifth road, Chembur, Bombay. 1985;285-A:362.
- 24. Gerald Keusch T. The History of Nutrition: Malnutrition, Infection and Immunity, the Journal of Nutrition. 2003;133(1):336S-340S. https://doi.org/10.1093/jn/133.1.336S. Last accessed on 12 02 2021
- 25. Howie JW. Nutrition and Susceptibility to Infection. British Journal of Nutrition. Cambridge University Press. 1949;2(4):331-7. last accessed on 12.02.2021.
- 26. Jamerson Fauci, Kasper Hauser, Longo Loscalzo. Harrison's Principles of Internal Medicine.20th edition: Nutrition: McGraw-Hill Education, 2, 2303-2323.
- 27. Samuel Lilienthal MD. Homoeopathic Therapeutics, Re print Edition Fifth Edition B. Jain publishers, New Delhi 1981, No-27-28, 64-73,73-75, 90, 236, 452, 466-467, 472-475, 478-482, 571, 786-787, 913-915, 994-998.