

# Research and Reviews: Journal of Medical and Health Sciences

## An Approach for Alleviating Global Inanition

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### Commentary

Received: 10/01/2015  
Revised: 06/02/2015  
Accepted: 12/02/2015

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Keywords: Starvation, Malnutrition, Vitamin deficiency, Metabolism, Skin rashes

### Introduction

Inanition is familiarly known as Starvation. Starvation means lesser or no intake of calories, proteins and vitamins. It is the most extreme malnutrition. Protein malnutrition is prevalent in the developing parts of the world and children are the most affected <sup>[1]</sup>. Malnutrition is a significant public health problem not only in developing countries but also in the world <sup>[2,3]</sup>. It is a serious problem because it is causing death of 3.5 million children under 5 years old per- year. About half of the population affected from malnutrition are from Sub Saharan Africa and South Asia <sup>[3]</sup>. Its magnitude is still highest in Ethiopia as well as in Amhara region that remains a major public health problem. In general, elders are at increased risk of malnutrition due to insufficient amount of food intake and poor selection of food.

### Causes for Inanition

#### Medical Causes

The major medical reasons include:

Major Depressive Disorder

Celiac Disease

Digestive disease

Constant vomitings

Other causes are Famines, Poverty and Fasting <sup>[1]</sup>.

The most common cause is poverty. Due to poverty, some people cannot get enough food rich in proteins and calories and suffer from malnutrition. If there is a decrease in the production of food to the world, then there will be a global inanition<sup>[2]</sup>. In Some Clinical Conditions especially after surgery or burns, persons may not be able to take the food normally and may be starved. If a person is prone to certain diseases including intestinal parasitic disease, then he/she will not be able to take food resulting in inanition <sup>[4]</sup>.

### Symptoms

Persons who experienced starvation will lose the muscle mass as the body breaks down these tissues. The common problem is vitamin deficiency which includes beriberi, scurvy and rickets <sup>[5]</sup>.

Early symptoms of starvation include hyperactivity and irritation. In the Later Cases, the vitamin deficiency can lead to serious complications such as Heart failure, Diarrhoea and Skin rashes <sup>[5, 6]</sup>.

Movement of muscles becomes almost impossible. Body becomes irresistible to diseases. Growth of fungi below the oesophagus makes the problem complex and swallowing difficult.

Fatigue is the most common condition in the patients with malnutrition. Patient loses capacity to fight against diseases and in Females irregular menstruation is the common problem [6].

### Effects of Starvation

The effects of starvation on the brain cause a lack of concentration, loss of motor skills, and increased likelihood of anxiety and depression. As the condition progresses, brain function decreases, leaving the victim in a state of fatigue [7,8]. The problem results in reduction of total energy expenditure mainly due to decrement of resting energy expenditure and activity-induced energy expenditure, chronic diseases, chewing problems, , and low income explains the high vulnerability of the population to energy imbalances [8]. There is a need for a systematically planned and integrated approach addressing both food consumption patterns and physical activity to reduce the risk of many chronic diseases such as hip fracture, stroke, dementia, diabetes mellitus type 2, cardiovascular diseases and some types of cancer, as well as the limitations associated with advancing age and disability later on the life [8,9].

### Treatment

Problem of malnutrition in children continues to be critical in most underdeveloped and developing countries like India. This problem associated with inadequate protein and amino acids supply to the growing child [10, 11]. Administration of proteins intravenously increases the amount of serum proteins. Starved patients have to be fed but precautions should be taken to avoid refeeding syndrome.

Refeeding syndrome causes disturbances in the metabolism of the starved patients who are refeeded. It can lead to serious problems like increase or decrease in glucose level. In some cases it may lead to cardiac arrhythmias, coma and cardiac failure [12,14].

Patients should be given sufficient rest. Sip of water and fruit juices are recommended. Later food has to be given but the food should be slowly increased.

It was concluded that soy blended products could be considered the best from both nutritional and sensory points of view which was good in terms of proteins and minerals. Supplementation of 10% skimmed milk powder further increased the amount of calcium, phosphorus and other proteins [13].

### Prevention

Some circumstances such as world wars, famines etc. cannot be prevented [15]. During the World War II so many people died due to starvation. Certain Measures has to be taken by the government to reduce starvation. Increase in food grain production can decrease starvation. Organisations should take partvoluntarily to reduce the deaths caused due to starvation [16].

## CONCLUSION

According to Food and Agricultural Organisation, the number of people dyeing due to malnutrition has been decreased. But there is still malnourishment mostly in under developed countries. According to their statistics, about 16% of patients died due to starvation and it was 28% in 1980. The persons who died of starvation have been significantly decreased faster compared to malnourished patients [16,17].

Under nutrition is a major cause of children suffering from malnutrition. Stunting (deficit in height) affects close to 195 million children under five years of age in the developing world [17-19]. It was more or less related to the illiterate mothers and non-exclusive breastfeeding practice. Thus, an organized effort should be made at all levels to improve maternal education and exclusive breastfeeding practice of the

poor rural population particularly mothers to avoid the problems of chronic under nutrition (stunting) in children, especially in the first two years of life. Research has to be carried out to increase the taste abilities for the patients affected with cancer [20-22].

Higher levels of social and family support are associated with better and less perceived barriers to diet. Healthcare providers, dietitians and health educators should consider involvement of entire family as well as elderly patients in self-management training and education programs with dietary counselling sessions can enhance the adherence to dietary regimen, decrease diet self-care barriers and consequently improve the nutritional status of the people [23].

Global Inanition is a serious problem affecting the world. To overcome this, every country needs to develop its own food-data system with particular attention given to locally available, natural and nutritious foods. Rather than using expensive supplements or imported food, it is ideal to use a nutritious, locally produced food-based approach for the prevention of micronutrient deficiencies [24,25].

## REFERENCES

1. <http://ebook.worldlibrary.net/articles/inanition>
2. Sobral MB, Pereira RM, Faintuch J, Marzinotto MAN, Teixeira AC, et al . High Frequency of Osteopenia and Osteoporosis in Alcoholic Chronic Pancreatitis Patients: Preliminary Results. *J Nutr Disorders Ther.*2014; 4:139.
3. Dereje N Determinants of Severe Acute Malnutrition among Under Five Children in Shashogo Woreda, Southern Ethiopia: A Community Based Matched Case Control Study. *J Nutr Food Sci.*2004; 4:300.
4. Navam SH, Tajudini AL, Srinivas JR, Sivarooban T, Kristofor RB, et al. Physio-Chemical and Sensory Properties of Protein-Fortified Extruded Breakfast Cereal/Snack Formulated to Combat Protein Malnutrition in Developing Countries. *J Food Process Technol .*2014;5:359.
5. <http://omicsonline.org/inanition-scholarly-open-access-journals.php>.
6. Susser ES, Lin SP. Schizophrenia after prenatal exposure to the Dutch Hunger Winter of 1944-1945. *Arch Gen Psychiatry* 1992 Dec49: 983-988.
7. <http://www.wisegeekhealth.com/what-are-the-effects-of-starvation.htm>
8. Pozefsky T, Tancredi RG, Moxley RT, Dupre J, Tobin JD Effects of brief starvation on muscle amino acid metabolism in nonobese man. *J Clin Invest.*1976; 57: 444-49.
9. Ndeba PM, D'ÂAlessandro U, Hennart P, Donnen P, Porignon D, et al. Efficacy of Artesunate Plus Amodiaquine for Treatment of Uncomplicated Clinical Falciparum Malaria in Severely Malnourished Children Aged 6â€“59 Months, Democratic Republic of Congo. *J Clin Exp Pathol.*2012; S3:005.
10. Mohammed FA, Farhood HF, AtheemWtw MA Prediction of Malnutrition Using Modified Subjective Global Assessment-Dialysis Malnutrition Score in Patients on Chronic Hemodialysis. *J Community Med Health Educ.*2014; 4:291.
11. de Lima CBV, Moraes FL, Cristine Souza LA Nutritional Status and Associated Factors in Institutionalized Elderly. *J Nutr Disorders Ther.*2012; 2:116.
12. Wang J, Liu Y, Aikebaier A, Tong Z, Zhang Y, et al. Nutritional Status of 35 Elderly People Residing in a Nursing Home: A Dual Challenge of Energy Surplus and Nutrient Insufficiency. *J Nutr Disorders Ther.*2012; S5:001.
13. Salve RV, Mehrajfatema ZM, Kadam ML, More SG Formulation, Nutritional Evaluation and Storage Study of Supplementary Food (Panjiri). *J Food Process Technol.*2011; 2:131.
14. <http://eda.org.au/wp-content/uploads/the-effects-of-starvation-and-refeeding.pdf><http://eda.org.au/wp-content/uploads/the-effects-of-starvation-and-refeeding.pdf>

15. Wolde T, Emiru Adebaba, Alemu Sufa Prevalence of Chronic Malnutrition (Stunting) and Determinant Factors among Children Aged 0-23 Months in Western Ethiopia: A Cross-Sectional Study. *J Nutr Disorders Ther.*2014; 4:148.
16. Sidiq T, Khan N Protein Calorie Malnutrition in Liver Cirrhosis. *J Nutr Food Sci.*2014; 5:337.
17. Kalaskar AR Management of Chemotherapy Induced Dysgeusia: An Important Step Towards Nutritional Rehabilitation. *Int J Phys Med Rehabil.*2014; 2:198.
18. Thane T, Oljira L, Atomesa GE, Agedew E Treatment Outcome and Associated Factors among Under-Five Children with Severe Acute Malnutrition Admitted to Therapeutic Feeding Unit in Woldia Hospital, North Ethiopia. *J Nutr Food Sci.*2014; 4:329.
19. Talley L, Boyd E, el Sharief F, Blanton C, OmerAli M, et al. Prevention of Acute Malnutrition During the Lean Season: Comparison of a Lipid- Based Nutrient Supplement and an Improved Dry Ration, South Darfur, Sudan. A quasi-Experimental Study. *J Nutr Disorders Ther.*2012; 2:117.
20. Darkwa S, Darkwa AA TARO (Colocasia esculenta): It's Utilization in Food Products in Ghana. *J Food Process Technol.*2013; 4:225.
21. Prudence MN, Alessandro U, Donnen P, Hennart P, Porignon D, et al. Clinical Malaria and Nutritional Status in Children Admitted in Lwiro Hospital, Democratic Republic of Congo. *J Clin Exp Pathol.*2012; S3:004.
22. Ndeba PM, Alessandro U, Hennart P, Donnen P, Porignon D, et al. Efficacy of Artesunate Plus Amodiaquine for Treatment of Uncomplicated Clinical Falciparum Malaria in Severely Malnourished Children Aged 6-59 Months, Democratic Republic of Congo. *J Clin Exp Pathol.*2012; S3:005.
23. Fattah Badr SAE, Elmabsout AA, Denna I Family Support, Malnutrition and Barriers to Optimal Dietary Intake among Elderly Diabetic Patients in Benghazi, Libya. *J Community Med Health Educ.*2014; 4:270.
24. Sobral MB, Pereira RM, Faintuch J, Marzinotto MAN, Teixeira AC, et al High Frequency of Osteopenia and Osteoporosis in Alcoholic Chronic Pancreatitis Patients: Preliminary Results. *J Nutr Disorders Ther.*2014; 4:139.
25. Husain SS Behavioral Toxicity of Cadmium in Normal and Protein Malnourished Rats (Two-Generation Study). *Biochem Physiol.*2014; 3:124.