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FOOD ALIMENTS

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ABSTRACT

Good health starts with proper digestion and robust metabolism in this all process all the vitamins, minerals has crucial part to make it possible. Everything in limit, can make sure you don't visit doctor; all the elements should be consumed. Apart from this, exercise and hydration with water is utmost vital for human wellbeing. Health is wealth.

KEYWORDS: Nutrition, vitamins, healthy diets, pregnancy, Ashwagandha.

INTRODUCTION

Health can be illustrated as interrelated dimensions of cognitive and physical functional status. To more add, nutritional and endocrine status, are related to quality of the life and morbidity. Level of energy, procured from food which will balance energy expenditure, when the individual has a body size and composition and level of physical activity, consist with long term good health. Increment of energy is equivalent to that stored in lean tissue and fat in infants and children growth. The everyday intake of energy allowance is based on a variation of energy needs of ± 400k calorie at any age.[1] After maturity men have greater mass and women bodies contain greater proportion of fat. During the time of gestation, women often gain weight upto 12-5 kg more than actual weight and the deliver baby having weight to 3 – 3.5kg.[2]

Nutrient deficiency interferes with early brain development and functions. Tissue levels of neurotransmitter like serotonin, dopamine, norepinephrine etc. are altered. Early 2 years of life are particularly essential for brain, to be more precise for Cortex, which deals with higher order thinking.[3] Early levels of malnutrition have poor effect on IQ, cognitive functions, school achievement also greater behavior pattern. 25% world population suffer from IDA,

33% population have shortage of zinc intake, while 30% have shortage of iodine intake. Among the top essential nutrients first tops the Iron, then Iodine then followed by zinc intake. Speaking of Zinc, it is 4th most abundant ion in the brain, zinc has capacity to contribute to brain structure and function in DNA and RNA. Also involved in synthesis and metabolism of protein, carbohydrate and fat.[4]

Whole grain cereals contain 13% of dietary fibres also 2% of bioactive compounds other than fibre. (Table no. 1) Dietary fibers improve Gut health, they also acts as antioxidant and anti-inflammatory which prevents Cancer and CVD. Whole grain package acts like synergetic which contribute health protection and maintain various physiological function. It helps to protect against obesity, body weight regulation, Type -2 Diabetes, Cancer, mental/nervous system and skeletal health.

Cereals like rice, maize, oats, barley, sorghum and millet contain bioactive compounds, which in turn contain oryzonol, and saponin are specific to cereals other than wheat.[5]

Table no. 1: Essential amino acids with their levels recommended.

Amino Acid	Barley	Wheat	Rye	WHO (Recommended)
Lysine	1.0	0.9	0.9	1gram
Histidine	1.2	1.7	1.3	12mg (infants)
Serine	2.9	5.4	5.8	-
Proline	20.1	17.3	20.2	-
Cysteine	2.9	1.9	2.5	3.5

Entire body is not composed of whole grains to facilitate proper co-ordination vita-amines, minerals are key to healthy and balanced life. Boosting of immunity, healing wounds, making of hormones, maintaining normal heartbeat, are their role. Further there is description of vitamins, minerals etc.

Vitamin A act as growth regulator and as nuclear receptor modulator. To compare, the vitamin A obtain from animal origin is 6 times more efficacious than vegetable pro-vitamin A. the reason behind this is, animal origin supplies ready to use vitamin A, whereas vegetable origin contain precursor that has to be transformed in the body. Retinol-rich products are liver, milk, butter, eggs, some cheese and fish, green vegies include carrot, coloured tubers, yellow fruit, and oranges rich source of carotenoids. Interesting thing to add is, vegetable oil increase by at least 6 fold the bioavailability of beta carotene in the intestine.

Vitamin B1 (Thiamine) - Doctors usually say B1 is essential, but the most strong reason behind is, its important for brain, as it facilitates the use of glucose. Depletion in the level usually causes Beri-Beri, lower intelligence, irritability, cramps, and abnormalities in ECG. The patients having Alzheimer disease, noted that there is borderline thiamine status.

Vitamin B3 also commonly as Niacin. Now, Niacin deficiency is usually called Pellagra. Niacin, this name is coined from nicotinic acid vitamin, which comes in several forms, including niacin amide and inositol. Yeast, meat, fish, milk, eggs, nuts, green vegetables, beans, enriched breads and cereals are the promoters of Niacin. National Institutes of Health claimed that niacin is also obtained from amino acid tryptophan.

Vitamin B6 is also called as Pyridoxin. The highest level of B6 in the blood is associated with the best performance in memorization test. It is one of the eight B-complex water –soluble vitamin. Purpose of Niacin has many application in helping functions in the digestive system, skin and nervous system. Pyridoxine could play a role in tryptophan metabolism, increasing the production of 5-hydrotryptophan. Adding more, animal products restrain no measurable amount of Glycosylated B6. Grains and Legumes generally have a high level of this bound form (6-57% of the total vitamin B6). Of the fruits analyzed, orange juice has highest level of glycosylated vitamin B6 close to (47%). Among all fresh vegetables studied, raw carrots had the highest level (51%). For broccoli and cauliflower, the glycosylated value was estimated to be excessive for processed food as compared to raw food.

Vitamin B9 alternative name called as folic acid. This term is not new to us, lower level of them induce decrease in intellectual capacity and impairs memory. Maximum source is observed from liver, eggs, maize, chickpeas, almonds, chestnut, green vegetables.

Vitamin C commonly called as Ascorbic acid. It has influence on the elaboration and function of nervous system. It helps in transformation of dopamine into noradrenaline. Adding to it, it reduces risk of Cataract.[6]

Vitamin D is required for intestinal calcium and phosphorous absorption. Their deficiency causes skeletal mineralization defect and hypocalcaemia. It is derived in minor amount from dietary supplements, which we get from fatty fish, mushroom, cholecalciferol or ergocalciferol.[7] It helps in prevention of various aspects of neurodegenerative or neuroimmune disease.[6]

Vitamin E has antioxidant properties which in turn balance oxidation. Structure of Vitamin E contains lipid soluble compounds like and tocopherol and tocotenenol.[8] Tocopherol induces retinal abnormalities. Increase in dose is used to treat CNS. To treat Dementia we need to focus on Vitamin E. Large amount of tocopherol are found in certain vegetable oil and eggs.[6]

Vitamin B12 levels are associated with developing brains in neonates that is depletion in the levels of Vitamin 12 causes negative (-ve) consequences on developing brains, which are greater risk at depressing state during Adulthood.[3] We can observe the neurological disorders, psychic disturbances and haematolofical alteration, retard myelination (childhood), cause nerve injury. Cobalamine are synthesized by micro-organism, bacteria and yeast. To maintain good levels of B12 one must intake meat, eggs, fish, milk.[6]

The infants are dependent on the breast-feeding of healthy mother. Thus, its utmost vital to supply them with important nutrients for proper growth and development. Basic essential value of Vitamine 12 in them is less than 360pmol/L. Infants with Vitamins12-defiicient breast-feeding mother or infants receiving low amount of animal-source foods, may be vulnerable to Vitamins B12deficiency. If the definite level is not reached between the 6-12 months of age is associated with brain Atrophy. Those mothers with Vegan, Vegetarian, Lactro-ovo vegetarian diet are prone with B12 deficiency. The reason there so much stress on this vitamin is that, in has direct influence on delayed motor skills, when mother is vegan. Pernicious Anemia (the instrinc factor from GIT Tract required for absorption of Coalmine) is again co-related with lessen level of Vitamin12. Depression in adults is not just related to mental habit but also dietary habits like reduced amounts of coalmine, Folic Acid. (3) The 0.4mg of Folic Acid/day to reduce the risk of NDT affected Pregnancy. So, level of Folate intake can be increased by- a) use of folic acid supplements b) consumption of foods fortified with Folic acid c) selection of Folate-rich foods. There is boom trend of intremediate fasting through out in world, this often comes with pros-cons. When the child-bearing mother observes fast, this may affect the plasma folate, the effect observed is concentration of plasma folate and bilirubin (indicator of hepatic excretory activity) elevates. Fasting interrupts enterohepatic circulation which in turn blocks elimination route.[9]

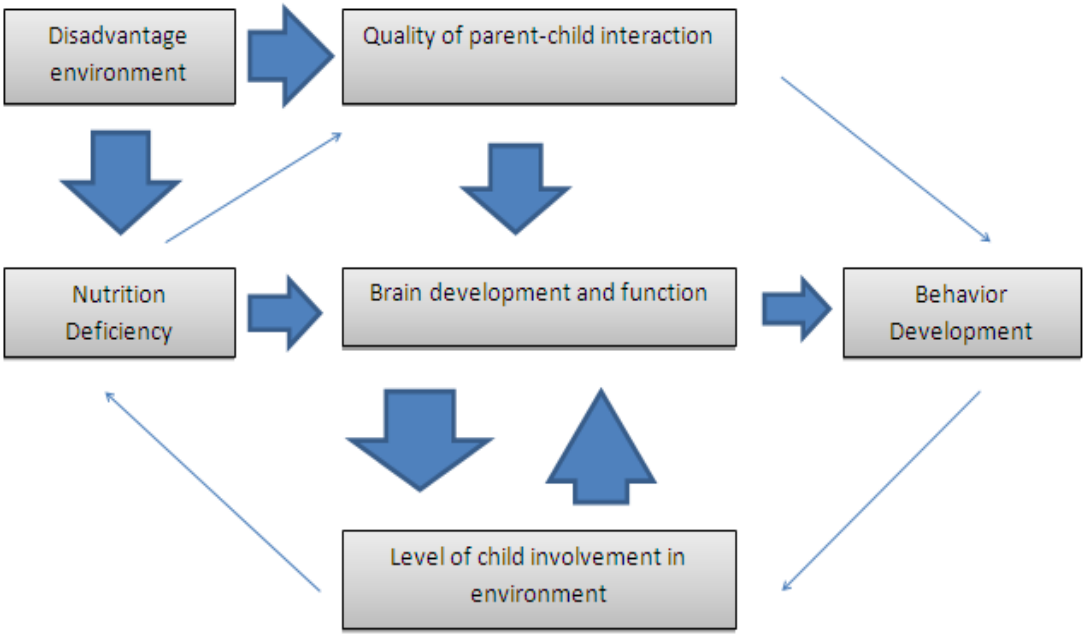

Fig - Flow-chart of functioning of B12 (3)

Soyabean curd is the traditional Chinese cuisine, having high quantity of proteins which function well in absorption and digestion, perhaps they don't have Cholesterol. They prevent and treat chronic diseases like Cancer, CVS etc. Ratio of polyunsaturated to saturated fatty acid of Soyabean curds HIGHER than cheese. This Soyabean curd should be included in diet as it is good coagulant, the best is used in salt-coagulant like gypsum and bittern. Gypsum has good water retentivity, smooth texture, also higher product yield. On the other hand Physalis is rich in Lactic Acid, which break down proteins, fat and polysaccharide.[10]

CASE STUDY

Theory of Planned Behavior

The female subjects studying in College from a University in Seoul, Korea. They theory was introduced, by doing survey on them. It suggests, the framework for understanding factors regarding nutrition behaviour. This is because it covers diverse motivational factors influencing health or nutrition behaviour. Theory enables systematic, comprehensive investigation of factors influencing nutrition behaviour. This theory should be adopted.[11] Along with the nutrients, few toxic practises should be avoided. Nicotine administration in Child-bearing mother causes increase in body weight; fat deposition.[12]

Coconia Grandis

Aldose reductase inhibitor of GAE Coconia grandis. When the extraction with methanol is obtained it contains Phenolic content while with water extracted contains flavonoids. The juice of roots and leaves, are highly effective in diabetes, gonorrhoea, constipation. Leaves contains high amount of phenolic and flavonoid possess antioxidant properties. Fruits are anti-glysation insulinotropic activities. Pharmacologically active in Hexadecanoic acid, methyl ester, tocopherol.[13]

Ashwagandha

Ashwagandha also called Panax Gingseng also is equally contributing in terms of antioxidant, Vitamin E, C, phenolic acid, diterpenes, flavonoids, anthocyanin, procynidins are the important dietary factor. The medical terms like antibiotic, antitumor, anxiolytic, and antidepressant are also fulfilled by Ashwagandha. They are pharmacologically active in stabilizing endocrine, women menopause, mensuration problem also used in medicine, cosmetics, tonic, spice etc. Dang Gui (Dragon Herb) is a female ginseng which grows in mountains regions of Korea, Japan, China. Dang gui is mostly used as spice tonic medicine and cosmetics. It shows great effect in stabilizing endocrine. It is also useful in menstruation problems and women having menopause. Panax ginseng is a plant used n Ayurveda. In various therapeutically aspects it is used as Anti-aging, Antidiuretic, Anticarcinogenic as well as Antipyretic. It shows Analgesic, Anti-stress and Anti-fatigue activities.

Method for determination

For the determination of flavonols, phenolic acid, purines, indole and isoquinoline alkaloid content in Ashwagandha, Dang Gui and Panax ginseng following methods are used as follows

1) Extraction
2) Evaluation of antioxidant activity
3) Determination of total phenolic content
4) Mycotoxin determination like alfatoxins, ochratoxin A
5) Mycological analysis
6) Cytotoxicity evaluation
7) Statistical analysis[14]

MINERALS

Iron – Apathy, irritability, poor attention capacity, memory loss, perturbation results during the diminish level of iron is observed. Iron concentration is increased in Umbilical artery than in vein during the development of embryo. Chances of decreasing is level is usually seen in childhood. Excessive blood loss also causes depletion of iron level. Iron is composed of Heme-Iron (found in brain, related to oxygen required organ), which enables physiology to absorb 25-30% of heme iron but only 2-4% present in vegetable which is non-heme iron.

Zinc – After Iron, Zinc is followed. Lower zinc leads to reduced appreciation of taste. Multidose of physiological mechanism is often played by Zinc. Oyster are the food that is richest in zinc to more add cheese, poultry livers. Green vegetables, fruits, sugar, fats, drinks contain low zinc.

Iodine – There are certain elements involved in cerebral functioning, intelligence, mental retardation during pregnancy. 15-20mg in adult required the daily dose. Useful amount is seen in oyster, seafish, eggs. In addition, salt used by food processing industry should be iodinated.[6]

CONCLUSION

Seasonally grown fruits and vegetables are rich-in providing Nutrition. There is no extra efforts for us, focusing on body requirements, depending upon sex, weight our body is set to be healthy.

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