

Role of Nutrients in Children and Adolescents in Darbhanga, Bihar

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ABSTRACT

Man needs a wide range of nutrients to lead a healthy and active life and these are derived through the diet he consumes daily. The components of diets must be chosen judiciously to provide all the nutrients he/she needs in adequate amounts and in proper proportion. The amount of each nutrient that is required by human depends upon his age and physiological status. Adults need nutrients for maintaining constant body weight and ensuring proper body function. Infants and young children who are growing rapidly required nutrients not only for maintenance but also to choose from to make up his diet; and because all foods are not of the same nutritive value, the health of a person depends on the type and quantity of food stuffs he chooses to eat. The paper deals about role of for maintenance of physiological status of children and adolescents.

Keywords: *Nutrients, Food stuffs, Chemical substances, Body weight.*

INTRODUCTION

Food stuffs, according to availability are broadly classified as plant foods and animal foods. The former include Cereals, pulses, nuts and oils, vegetables, fruits and the latter, milk and its products, eggs, and flesh foods. These foods contain chemical substances known as nutrients which are in the body to perform various function. Age and body weight largely determine the nutrient requirements of an individual. Body weight and height of children reflect their state of health and growth rate, while adult weight and height of children reflect their state of health and growth rate, while adult weight and height represent what can be attained by an individual with normal growth. The nutrition goal of any country provides adequate nutrition and health support to its population so that they attain their full genetic potential in growth and development. On the basis of anthropometric data on well-to-do Indian children have shown that their heights and weights correspond to National Centre for Health Statistics (NCHS) Standard (1987), up-to the age of 14 years in the case of boys and 12 years in the case of girls.^{1,2} The data given by NCHS of boys and girls of their age groups are shown in Table-1.

MATERIALS AND METHODS

Practical works regarding the availability of various kinds of foods and food intake involve survey of different types of food supply, its procurement, food habits, preparations and assessment of the calorie needs of groups of persons for their better life and health.

Dietary data collection methods involve two major categories of methods (a) according of food intake of families of the groups, based on estimates of food purchases and (b) based on dietary intake of individuals which can be determined by record or recall of all foods consumed over specified period of time.

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Table 1

Reference body height & weights of well-to-do children and adolescents of different age groups according to NCHS (1987).

NCHS				
	Boys		Girls	
Age (Years)	Height (cms)	Weight (Kg)	Height (cms)	Weight (Kg)
0(At Birth)	50.5	3.3	49.9	3.2
6 Months	67.8	7.8	66.6	7.2
1 Year	76.1	10.2	75.0	9.5
2 Years	85.6	12.3	84.5	11.8
4 Years	102.9	16.7	101.6	16.0
6 Years	116.1	20.7	114.6	19.5
8 Years	127.0	25.3	126.4	24.8
10 Years	137.5	31.4	138.5	32.5
12 Years	147.0	37.0	148.0	38.7
14 Years	160.0	47.0	159.0	48.0
16 Years	171.0	58.0	162.0	53.0
18 Years	177.0	65.0	164.0	54.4

RESULTS AND DISCUSSION

During the investigation, a survey of different markets of Darbhanga town advocated that nutrients mainly constitute protein, carbohydrate, vitamins and minerals were found in richly (Table 2).

Table 2

Availability of food stuffs category in Darbhanga, Bihar

1.	Cereals	Bajra, Jowar, Maize fresh & dried, Rice parboiled, Wheat whole, Wheat flour.
2.	Pulses and Legumes	Arhar, Khesari dried, Gram red dried and gram green (seasonal in spring), Moong, Peas dry and Rosted and Soyabeen.
3.	Leafy Vegetables	Bathua leaves, Cabbage, Cauliflower green, Coriander leaves, Khesari leaves, Mustard leaves, Palak leaves, Raddish leaves (all seasonal)
4.	Root & Tubers	Beet root, Carrot, Onion, Potato, Radish, White and Red sweet potato, Turnip
5.	Fruits	Apple, Apricot, Cashew fruit, Cherries red, Figs, Pale green and blue Grapes, Seedless grapes, Guava, Jack, Kesaur, Kusuin, Lemon, Sweet, Lichi, Mango, Melon musk, Water melon, Orange, Papaya, Pine apple
6.	Nuts & Oil seeds	Almond, Badam, Chestnut, Chilgoza, Coconut, Ground nut, Linseed, Mustard seed and Sunflower seed.
7.	Fishes & Prawn	Bhunni, Boari, Changa, Garai, Gainchi, Hilso, Catla, Rohu, Naine, Mangur, Singhi, Sauri, Tengra, Small Prawn.

From embryonic condition to young and adult and the advent of old age, the body requires each and every food stuffs required for unique and balance diet. One Scientist has reported that in fast growing human infant protein regenerates per unit mass are much greater than those of adults, whereas another demonstrated that premature infants have growth faster on high protein containing formulas than the human milk^{3,4}. Similarly carbohydrate, lipids, vitamins, minerals, and other food constituents promote health and growth from embryonic to adult and old age groups as studied by some workers⁴⁻⁶. The role and deficiency of Vitamin A, B – complex, Vitamin B-12, Vitamin C,D,E and K from 0(at birth) – 18 years *i.e.* children to adolescents variously was studied⁷⁻⁹.

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