

ADULTHOOD

Proper nutrition in adulthood ensures good health right until old age. Therefore adequate amount all essential nutrients need to be provided to adult through their diet for maintaining both physical and mental health. Various factors which affect body need for different nutrient include age, sex, activity and the body weight, height and composition. requirement for men and women differ primarily due to difference in their body and body composition.

Since recommended allowance for various nutrient can not be given for any individual person, ICMR has based the recommendations for adults in terms of **REFERENCE ; INDIAN MEN AND WOMEN.**

Reference Indian adult man:

Reference man is b/w 20-39 yrs of age and weights 60kgs height of 163cms. He is free from diseases and physically fit for active work. On each working day he is employed for 8 hrs in occupation that usually involves moderate activity. While not at work, he spend 8 hrs in bed, 4-6 hrs sitting and moving about and 2 hrs in walking and in active recreation or household duties.

Reference Indian woman:

Reference woman is 20-39 yrs of age, and healthy and weigh 50kgs height of 151cms. She may be engage in 8hrs in general household work, or in any other moderately active work. Apart from 8hrs in bed, she spends 4-6 hrs sitting or moving around in light activity, and 2 hrs in walking or active recreation or household work.

NUTRIENTS NEED AND RECOMMENDED ALLOWANCE

- Age, sex, activity, and body weight determine the nutrient requirement of an individual.
- **ENERGY:** Men require higher level of energy to support body metabolic activity because of greater lean body mass RDA for Indian are given for three category of activities: **2425kcal** (Sedentry), **2865kcal** (moderate) and heavy work **3800 kcal** for men and women separately.
- the energy requirement of an individual has been defined as level of energy intake from food that will balance energy expenditure when the individual has a body size and composition and level of physical activity and BMR, consistent with long term good health , and that will allow for maintenance of economically necessary and socially desirable activity.
- **PROTEIN:** The protein need of adult are expressed in terms of body weight and are identical for both sexes at 1 gm per body weight. Adult require protein basicaly for maintaining purpose and hence decline in RDA from 2.08 gm/kg body in infant to the level of 1gm/body weight in adulthood.
- **1.0g of protein /kg body** weight is recommended both for males and females. Since protein needs are not influenced by activity of the individual ICMR, has recommended a level of 60g of protein per day for reference adult man and 50 g per day for a reference adult woman.
- **FATS AND ESSENTIAL FATTY ACIDS:** fat is one of the major nutrients and has several functions. Certain amount of fats has to be prevent in the diet to meet the minimum requirements of two essential fatty acids linolenic and linolenic acid.fat intake should be kept below 50kg/day.(visible+invisible)
- **CALCIUM AND PHOSPHOROUS:** calcium is the major element in the body present in bones. ICMR has recommended an intake of 400mg of calcium per day for both adult men and women. Function of calcium and phosphorous are closely linked therefore Ca:P ratio of 1:1 may be maintained for both. Of the dietary calcium, only about 20-30% is absorbed and this absorption is facilitated by vitamin D.

- **IRON:** dietary intake of iron for adult man is **28mg/day** and that for women 30mg/day.
- **OTHER MINERAL ELEMENTS:** apart from iron ,other trace elements considered important for man include **iodine(150ug)** , zinc(15.5mg/day), copper”(2.2mg/day), chromium(67ug/day) ,cobalt ,manganese ,molybdenum and selenium.
- **VITAMIN A:** it is essential for normal vision maintaining the integrity of epithelial tissue and in variety of metabolic functions. Being fat soluble vit. A can be stored in liver and utilised. Vitamin exists in either RETINOL (performed vitamin) or B-CAROTENE (precursor). Daily allowance of **600ug of retinol** for both male and female and 2400ug/day of carotene is recommended.
- **Vitamin D:** it is consider as a pro-hormone. It is synthesized in body in adequate amounts by simple exposure to sunlight therefore no recommendation has been made.
- **THIAMINE:** this vitamin in the form of thiamine-pyrophosphate functions as a coenzyme for co-carboxylase which is intimately involved in carbohydrate metabolism. Being water soluble this vitamin is not stored in the body and one has to depend on its intake, recommended dietary allowance for thiamine is **0.5mg per 1000kcal**.
- **VITAMIN C: (ASCORBIC ACID):** plays an important role in the synthesis of collagen, wound healing, amino acid and carbohydrate metabolism, synthesis of some hormone and absorption and metabolism of some iron. 50 % of the vitamin is lost during cooking an intake of **40 mg** of ascorbic acid /day is recommended

DIET AND FEEDING PATTERN

- To maintain good health, diet of the adult men and woman should include all the nutrients in required amounts.
- Diet should be balanced and include all food groups.
- Cooking oils and animals foods should be used in moderation and vanaspati /ghee should be used only sparingly.
- Over eating should be avoided to prevent obesity. Proper physical activity is essential to maintain desirable body cut.
- Salt should be used in moderation.
- Healthy and positive food concepts and cooking practices should be adopted.
- Water should be taken in adequate amount and beverages should be consumed in moderation.
- Processed and ready to eat food should be sparingly used.

• **NUTRITION RELATED PROBLEMS**

- chronic energy deficiency
- obesity
- coronary heart diseases
- osteoporosis