

# Basic tools in nutrition

Nutrition



**BASIC TOOLS IN NUTRITION** The main nutrition tools are: Food groups, dietary standards (RDA) and food exchange lists Food groups or food guides

- \* Food guides translate quantitative nutritional requirements into simple, practical and non- technical language using available and common foods of the country.
- \* Food groups are developed by nutrition experts as a quantitative tool in planning nutritious diets for the masses.
- \* The three main food groups are: 1. Body-building foods: foods that supply good quality proteins, some vitamins and minerals. 2. Energy foods: mostly of rice and other cereals, starches, sugars and fats contribute the bulk of Calories. 3. Regulating foods: composed of fruits and vegetables that provide vitamins and minerals, particularly ascorbic acid and pro vitamin A.

**DIETARY STANDARDS**

- \* Dietary standards are compilations of nutrient requirements or allowances in specific quantities.
- \* Dietary requirement is the minimum amount needed for a nutrient to attain good health under specific conditions (age, weight, physical activity, sex, physiological condition, state of health status, etc).
- \* Dietary allowance is the minimum requirement plus a safety factor or “ margin of safety” to account for individual variations in body storage of nutrients, state of health, nutrient utilization, day to day variations within an individual, etc.

**Recommended Dietary Allowance:**

- \* The RDA, the estimated amount of a nutrient (or calories) per day considered necessary for the maintenance of good health by the Food and Nutrition Board of the National Research Council/ National Academy of Sciences. The RDA is updated periodically to reflect new knowledge. It is popularly called the Recommended Daily Allowance

**Nutrient density**

- \* Nutrient density is a measure of the nutrients a food provides compared to the calories it provides. Foods low in calories and high in nutrients are nutrient dense, while

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foods high in calories and low in nutrients are nutrient poor. \* Nutrient-dense foods should be eaten often, whereas nutrient-poor foods should only be eaten occasionally. A healthful diet includes mostly nutrient-dense foods. \* People who restrict their calories should obtain as much nutrition as they can from the calories they consume by choosing nutrient-dense foods. Those who consistently choose nutrient-poor foods will not get the nutrients they need. \* Liver has a moderate amount of calories but is rich in vitamins and minerals and is considered a high nutrient density food. \* A cyclist has an increased energy demand but no significant increase in nutrient requirements. Because of this he/she can eat foods with a lower nutrient density than the average person. This means that a cyclist can be less choosy about the foods that are eaten provided he/she realizes his/her specific nutrient and energy requirements that must be met. Food exchange list \* The word exchange refers to the fact that each item on a particular list in the portion listed may be interchanged with any other food item on the same list. An exchange can be explained as a substitution, choice, or serving \* Within each food list, one exchange is approximately equal to another in calories, carbohydrate, protein, and fat. Each list is a group of measured or weighed foods of approximately the same nutritional value. \* The exchange lists are intended for planning diabetic diets, therefore the foods included are simple and only those allowed in the diabetic diet are listed. Besides, because of the accuracy and convenience of the exchange system, the exchange lists are used for weight management as well . Examples: \* Cereals, grains, pasta, breads, crackers, snacks, starchy vegetables, and cooked beans, peas, and lentils are on the starch list. In general, one starch exchange is  $\frac{1}{2}$  cup cereal, grain, or starchy vegetable; one ounce of a bread

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product, such as one slice of bread; one-third cup rice or pasta; or three-fourths to one ounce of most snack foods. \* Fresh, frozen, canned, and dried fruits and fruit juices are on the fruit list. In general, one fruit exchange is: one small to medium fresh fruit, one-half cup of canned or fresh fruit or fruit juice, or one-fourth cup of dried fruit.