

Nutritional Assessment

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Objectives:

1. Understanding how nutritional status can be assessed for the individual person and the population
2. Being familiar with the meaning of dietary surveys and how they can be conducted

Nutritional assessment Provides the information needed to determine how well a person's nutritional needs are being met (the amount of nutrients in the diet are compared with RDA)

Aims of nut. Assessment:-

- 1.To determine the magnitude and geographical distribution of malnutrition.
- 2.To discover and analyze factors that are responsible for malnutrition
- 3.To plan and put an effective measure not only for control & eradication of malnutrition but also for subsequent maintenance of good nutrition.

Nutritional assessment:

1- For an individual

2- For the community

Assessing nutritional status for an individual :

A) Historical information

Medical history

Drug history

Socioeconomic history

Diet history

Diet history:

A/provides a record of eating habits & food intake

B/can help identify possible nutritional imbalances and factors that affect food intake

C/provides the background for developing nutrition needs.

1/24- Hour Recall

it provides data for one day only & is commonly used in nutritional surveys to obtain estimates of the

typical food intakes for a population.

For individual, the assessor uses 24- hour recall to get an idea of general eating habits & meal times.

2/Usual intake – assessment of usual meal patterns & details of food intake.

3/Food frequency checklist – a checklist of foods on which a person can record the frequency with which he or she eats different types of foods.

4/Food records – a record of food intakes that is maintained over several days.

5/Observing food intake – direct observation of person's food intakes is possible in health care facilities such as hospitals or nursing homes.

B) Physical examination: an assessor search for signs of nutrient deficiency or toxicity

C) Anthropometric measurements:

D) Biochemical tests (laboratory test):

Ex. Hemoglobin level, and biochemical tests for protein status such as serum albumin.

Anthropometric measurements

Are measurements of the physical characteristics of the body such as height and weight.

They serve 3 main purposes:

1. To evaluate the progress of growth in pregnant women, infants, children, and adolescents.
2. To detect under nutrition & over nutrition in all age groups.
3. To measure change in body composition over time

A) Measures of growth & development:

*Height * Weight * Head circumference

B) Measures of body fat & skeletal muscle mass:

Fat fold measures (triceps fat fold thickness), waist-to-hip ratio.

Mid-upper –arm –circumference (MUAC) provides information about skeletal muscle mass.

Measures of growth & development:

Head circumference is a useful predictor of brain growth in children under 2 years of age.

Height / Length and weight are the most common and useful measurements.

How to assess?

- 1/ anthropometric measurements taken on an individual are compared to the median of healthy reference population (specific sex & age)
- 2/ take measurements periodically and compare them with previous measurements to reveal changes in an individual's status.

■ Growth monitoring- regular weighing of children and plotting the wt. on growth chart → early detection of any change in the wt. ►► helps in early prevention of under nutrition

-The nutritional indices of a child are taken to be assessed and compared with standard growth curves (weight for age, height for age, weight for height) & BMI.

→ This comparison is expressed as a percentage of median or the number of SDs from the median.

1. wt. for age:

child's wt. is compared with reference wt. value for his /her age.

Moderate Underweight (2SD) below ref. or < 80%

Severe Underweight (3SD) below ref. or < 70%

2. Wt. –for –ht:

child's wt. is compared with the international reference for a child of the same ht.

Moderate wasting (2SD) below ref. Or < 80%

Severe wasting (3SD) below ref. Or < 70%

3. Ht. for age. : Ht. of a child is compared with international reference ht. for a child of the same age.

Moderate Stunting (2SD) below ref. or < 90%

Severe Stunting (3SD) below ref. or < 85%

4. Body Mass Index A child whose BMI is (2SD) above the median is overweight

A child whose BMI is (3SD) above the median is obese

For adults the used standards for nutrition

1. Body mass index (BMI)
2. Weight-for-height table

Nutritional assessment of the community :

1. The task is done by a team.
2. The purpose is to provide a basis for decision –makers for planning a nutritional program.

A-Indirect: different indices (IMR, NMR, Prevalence of diseases related to nutrition--- etc.

2- Direct (Dietary Survey): -

Objectives :

A-Diagnose the problem & determine its extent.

B-To identify groups at high risk i.e.: specific Age group.

C-To estimate the no. of people needing assistance.

D-To act as a base line to monitor the impact of intervention.

Dietary surveys could be divided into:

1. Family surveys: useful for determining the food consumed by different socioeconomic groups.
2. Individual surveys: could be done on selected age group, or on people in various occupations.
3. National surveys: monitor the nutritional intake of the public by collecting information of food consumption of household & selected individual surveys.