TRINITY COLLEGE FOR WOMEN
NAMAKKAL

DEPARTMENT OF NUTRITION AND DIETETICS

NUTRITIONAL ASSESSMENT AND DIET COUNSELLING IN CLINICAL SETTINGS

ODD SEMESTER

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Anthropometric Assessment

Introduction

Anthropometric Assessment mean body measurements and provide information on body muscles mass and fat reserves.

Human body reflects changes in morphological variation due to inappropriate food intake or malnutrition.

A variety of Anthropometric Measurements can be made either covering the whole body or parts of the body.

There is no permanent stabdards as there is no uniformity of growth in subsequent generation.

Anthropometric Measurements are :

1) Body Weight
2) Height
3)Mid – Upper Arm Circumference (MUAC)
4) Head and Chest Circumference
5) Skinfold Thickness Measurements
6) Fat Fold at Triceps
7 Arm Anthropometry

Body Weight

Body Weight is most widely used and the sensitive and simplest reproducible anthropometric measurement for the evaluation of nutritional status of young children.

It indicate the body mass and is a composite of all body constituents like water, mineral, fat, protein, and bone.

For Measuring body weight, ***Beam or lever actuated scales***, with an accuracy of 50 – 100g are preferred.



Bathroom scales may give errors upto 1.5kg.

Beam balance are extensively used in ICDS.

Weights should be taken with the individual under basal conditions with minimum clothing and without shoes.



Height :

The Height of an individual is influenced both genetic and environmental factors. The maximum growth potential of an individual is decided by hereditary factors, while the environmental factors, the most important being nutrition and morbidity, determine the extent of exploitation of that genetic potential.

The children below the age of 2 years who cannot stand properly, recumbent length should be measured with infantometer. The legs need to be held straight and firm with the feet touching the sliding board.

In older children and adults, heights are measured with a vertical measuring rod using anthropometer or stadiometer.

The subject stand erect looking straight on a levelled surface with heels together and toes apart, without shoes



Mid – Upper Arm Circumference (MUAC)

MUAC is recognised to indicate the status of muscle development. It is useful not only in identifying malnutrition but also in determining the mortality risk in children.

On the left hand, the mid-point between the trip of the acromion of scapula and tip of the olecranonof the fore arm bone, ulna is located with the arm flexed at the elbow and marked with marker pen.

Fibre glass tape is used and reading is taken to the nearest millimeter.

MUAC can also be measured using Shakir tape, quack stick or bangle test.





Head and Chest Circumference

The Head size relates mainly to the size of brain which increases quite rapidly during infancy.

Head circumference and chest circumference ratio is equal at one year.

If head circumference is more than chest circumference, it indicates malnutrition.

Flexible fibre glass tape is used.

The chest circumference is taken at the nipple level preferably in mid inspiration.

The Head circumference is measured passing th etape round the head over the supra-orbital ridges of the frontal bone in front and the most protruding point of the occiput on the back of the head.

Head circumference



Chest circumference



THANK YOU

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