

Anthropometric Assessment of Nutritional Status

A. Measurements

1. Stature (cm): _____

2. Weight (kg): _____

3. %body fat (BIA) _____

4. Skinfolds:

 Triceps skinfold (Tr) (mm) : _____

 Biceps skinfold (Bi) (mm) _____

 Subscapular skinfold (Sub) (mm) _____

 Suprailiac skinfold (Sup) (mm) _____

5. Mid Arm Circumference (MAC) (cm): _____

6. Waist Circumference (Wst) (cm) _____

7. Hip Circumference (Hip) (cm) _____

B. Calculated indices:

1. Body Mass Index = $Wt(kg)/Stature(m)^2 =$ _____

2. Arm Muscle Area (cm^2) = $(MAC - [(Tr \times 0.1)(\pi)])^2 / 4 \pi =$ _____
for adults: correct for area of the humerus:
males subtract 10 cm^2 ; females subtract 6.5 cm^2

 (Adults) Corrected Arm Muscle Area (cm^2) = _____

3. Waist:Hip Ratio = $Wst/Hip =$ _____

4. Sum of 4 skinfolds (mm): $sumskin4 = tr+bi+sub+sup =$ _____

5. Estimation of Body density from sum of 4 skinfolds
 (from JVA Durnin & J Womersley [1974] *British Journal of Nutrition* 32:77-97)

$$\text{Density} = c - [m \times \log(\text{sumskin4})]$$

where:

Sex/Age (years)	c	m
Males: 17-19	1.1620	0.0630
20-29	1.1631	0.0632
30-39	1.1422	0.0544
40-49	1.1620	0.0700
50 & older	1.1715	0.0779
Females: 16-19	1.1549	0.0678
20-29	1.1599	0.0717
30-39	1.1423	0.0632
40-49	1.1333	0.0612
50 & older	1.1339	0.0645

Body Density =

Estimated Percent Fat:

$$\%fat = 100 \times [(4.95/D) - 4.5] = \underline{\hspace{2cm}}$$

Where: D = Body Density