

**Project No: 3573/2006**

**ESTABLISHMENT OF REFERENCE VALUES OF WEIGHT FOR ARMED FORCES PERSONNEL BY ANTHROPOMETRIC ASSESSMENT**

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**Principal Worker**

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**Unit**

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**Objective**

To establish reference values for weight for male Armed Forces Personnel between the age of 28 and 52 years

**Method**

902 personnel in the age group of 28-52 yrs in SHAPE -1 were selected by multistage random sampling. Personal information was obtained by an investigator administered questionnaire. Further complete physical examination, measurement of blood pressure and estimation of fasting blood glucose and lipid profile was carried out. Anthropometric measurement including weight, height, waist circumference and hip circumference were made in accordance with the recommended measurement protocols laid down by WHO

**Results**

The distribution of height, weight and BMI in 902 subjects followed almost a Gaussian distribution. No individual was found to have BMI  $>30 \text{ kg/m}^2$ . Older age groups were found to have higher 5<sup>th</sup>, 10<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup>, 90<sup>th</sup> and 95<sup>th</sup> percentile of weight, BMI, WC and WHR as compared to younger age groups. The average weight for majority of height and age category was found to be higher than in the Indian Army chart. Levels of fasting blood sugar, total cholesterol and triglycerides increased with increase in BMI.

**Recommendations**

It is recommended that large multicentric study should be taken up and more evidence based weight for height and age chart be devised for to replace the current chart. Compared to global BMI cutoffs, BMI cutoffs recommended for Asian population are more appropriate for Indian population.