

Differences between Two Commonly Measured 'Suprailiac' Skinfold Sites

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Skinfold measurement is an accepted method of body composition assessment. Despite accurate guidelines set by the American College of Sports Medicine indicating specific skinfold sites, inconsistency may arise in the interpretation of these guidelines. Current guidelines may lack precision, particularly in the identification of the suprailiac skinfold site. **PURPOSE:** To examine potential error associated with the measurement of the suprailiac skinfold site at two commonly interpreted locations within ACSM guidelines. **METHODS:** College-aged students from Slippery Rock University were recruited. Three skinfold measures were taken at each of three distinct anatomical sites using standard collection methods by a single criterion anthropometrist. One trial (SUPRA1) of three measures was taken at a site inferior to the anterior axillary line (a requisite component of the ACSM site definition) as the investigator observed from the sagittal plane. A second trial (SUPRA2) was taken at a site visually identified as the anterior axillary line from the frontal plane. A reference trial (SUPRA3) was taken at a site marked by hanging a plumb bob at the anterior axillary line. A repeated-measures analysis of variance test was conducted to compare the differences in measured skinfold thickness between sites, using a Bonferroni adjustment. An a-priori α -significance level was set at 0.05. **RESULTS:** Forty-six, young, apparently healthy individuals (20.9 ± 1.2 y; 24.3 ± 4.7 kg/m²) participated. A greater average distance was measured between SUPRA1 and SUPRA3 compared to SUPRA2 and SUPRA3 (6.7 ± 1.5 v. 1.3 ± 0.9 cm, respectively). Significant differences in measured skinfold thickness were recorded between SUPRA1 and SUPRA3 (-11.8 mm; $p < 0.05$), and SUPRA 2 and SUPRA3 (3.1 mm; $p < 0.05$). **CONCLUSION:** Site identification may have a marked effect on the measurement of the suprailiac skinfold site. Further studies are needed to determine if potential differences in suprailiac site identification affect the validity of body composition assessment.