



May 31-June 4, 2022 • San Diego, California USA

[Print this Page for Your Records](#)

[Close Window](#)

Control/Tracking Number: 22-SA-4517-ACSM

Activity: Scientific Abstract

Current Date/Time: 11/2/2021 12:13:49 AM

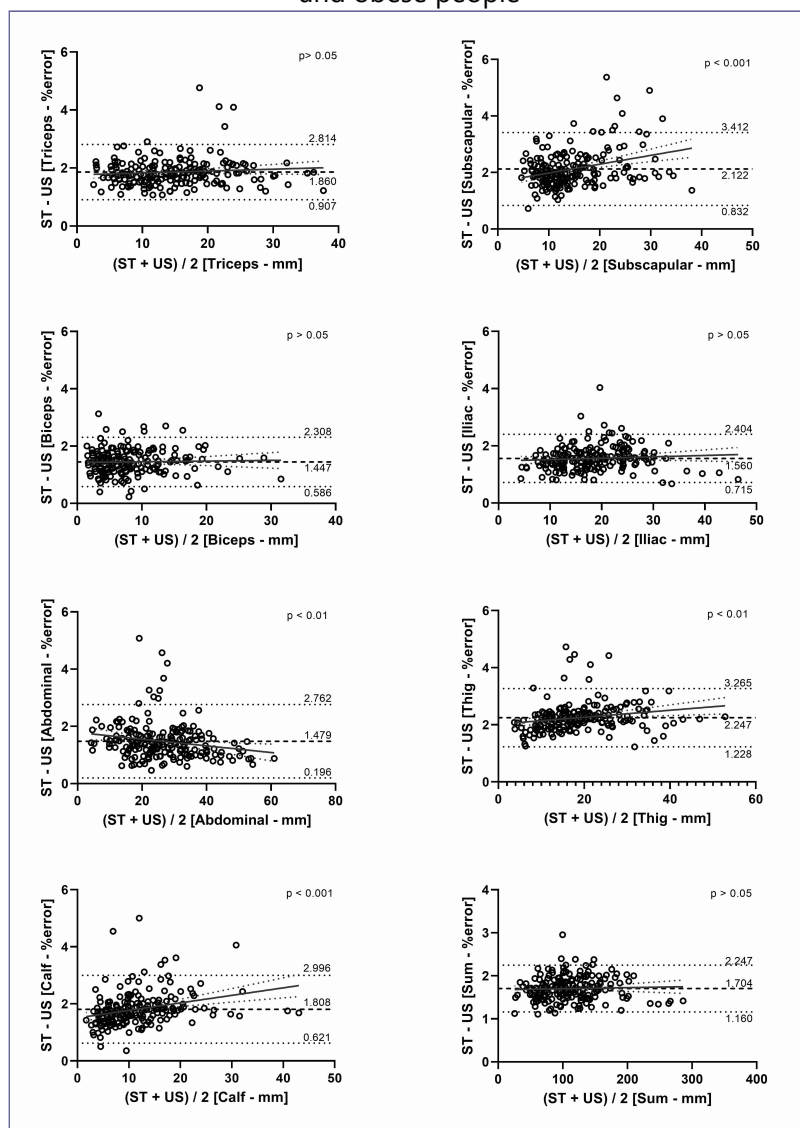
Comparison Of Thickness Of Adipose Tissue Between Skinfolds And Ultrasound Method In Brazilian Adults

Author Block: Victor Zaban Bittencourt¹, Tathiany J. Ferreira¹, Carolina R. Pessanha¹, Igor C. Salvador¹, Gabriel G. Costa¹, Ana Clara R. Assumpção¹, João P. B. Sacom¹, Fhelipe A. Fernandes¹, Valden L.M. Capistrano Jr², Márcio L.R. Souza³, Luiz L. Loureiro¹, Anna Paola T.R. Pierucci¹. ¹*Federal University of Rio de Janeiro, Rio de Janeiro, Brazil.* ²*Federal University of Ceará, Fortaleza, Brazil.* ³*Faculdade de Minas FAMINAS-BH, Belo Horizonte, Brazil.*

Abstract:

Abstract Ultrasound (US) and skinfold (ST) methods can evaluate the measurement of subcutaneous fat thickness and predict body density. Measurements made with the two techniques at the same spot typically produce different mean estimates of fat thickness. The reproducibility of techniques and the correlation between the points are still unclear in literature. **PURPOSE:** Evaluate the ratio between methods at different anatomical points according to the size of the fat thickness. **METHODS:** The sample consisted of 195 Brazilian adults who 106 were female, age $35,1 \pm 12,3$ years, height $169,1 \pm 8,8$ cm, weight $74,4 \pm 16$ kg. The participants were evaluated through ST (Cescorf, Porto Alegre, Brazil) by an anthropometrist Isak level 2 and US model BX 2000 (IntelametriX®, CA, USA) in triceps, subscapular, biceps, iliac, abdominal, thigh, and calf. The Bland e Altman (1986) and Spearman correlation was used to determine the agreement and correlation between methods. **RESULTS:** Confidence interval values are represented by the dotted line and the BIAS by the dashed line (Figure 1). The BIAS value of the ratios between ST and US ranged from 1.44 (biceps) to 2.25 (thigh). The correlation between the methods for the sum of thicknesses, triceps, thigh, calf, biceps, subscapular, iliac, and abdominal was 0.92; 0.89; 0.89; 0.87; 0.86; 0.81; 0.78 and 0.68, respectively. Triceps, biceps, iliac and the sum had no significant p value for linear regression on the Bland-Altman plot. The other points showed a change in the ratio according to the increase in thickness size, indicating a possible loss of precision in one of the methods. **CONCLUSIONS:** It is possible that the ST method has less precision in thicker regions, changing the proportion when compared to anatomical points with less fat or easier to measure. Therefore, US can be an alternative for thickness evaluation in overweight

and obese people



Author Disclosure Information:

V.Z. Bittencourt: None.**Category (Complete):** 505. Epidemiology and Biostatistics - biostatistics/research methodology ; 611. Metabolism and Nutrition - other**Keyword (Complete):** Body Composition ; Ultrasound ; Skinfold**Unlabeled/Disclosure (Complete):**

***If you disclosed a relationship, has the relationship ended? If the financial relationship existed during the last 24 months, but has now ended, please select YES. CME staff will use this information to determine any mitigation steps.:** No

***If you disclosed a relationship, will any of these relationships impact your ability to present an unbiased presentation? :** No

: No

Please select: Yes**Presentation Preference (Complete):** Hybrid format (in-person & virtual)**Area of Interest (Complete):****Area of Interest:** Applied Science**Check if this abstract is translational research :** True

Payment (Complete): Your credit card order has been processed on Monday 1 November 2021 at 11:59 PM.

Status: Complete

[OASIS Helpdesk](#)

[American College of Sports Medicine](#)

401 West Michigan Street
Indianapolis, IN 46202-3233
(317) 637-9200

 Feedback

Powered by [cOASIS](#), The Online Abstract Submission and Invitation System SM

© 1996 - 2021 [CTI Meeting Technology](#). All rights reserved. [Privacy Policy](#).