

Body Fat Assessment Between Inbody 770 & Skinfold Measurement Techniques in Older Males and Females

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Abstract : The purpose was to compare two body fat (BF) measurement techniques, Inbody 770 (IB770) and skinfold (SF), in healthy older (60-88 years old) males and females. Fifty healthy males (n = 25) and females (n = 25) had their BF assessed using two different measurement techniques: 1) Bioelectrical impedance Inbody 770 (IB770); and 2) Skinfold (SF). Paired t-tests ($p < 0.05$) were employed to assess differences between IB770 and SF for males and females, while an unpaired t-test was employed ($p < 0.05$) to assess differences in %BF between IB770 and SF for males compared to differences in %BF between IB770 and SF for females. In older males, the mean (\pm SD) percent BF was significantly less ($p < 0.001$) in SF ($19.8\% \pm 4.1\%$) compared to IB770 ($25.3\% \pm 6.4\%$). Similarly, in older females, the mean (\pm SD) percent BF was significantly less ($p < 0.001$) in SF ($26.1\% \pm 4.0\%$) compared to IB770 ($35.7\% \pm 5.5\%$). The difference in %BF between IB770 and SF was significantly greater ($p < 0.001$) in females ($9.5\% \pm 3.9\%$) compared to men ($5.5\% \pm 3.7\%$). While both IB770 and SF can easily and quickly assess %BF in clinical settings, %BF was underestimated using SF in both older males and older females. These findings help identify older males and females who may be at risk of cardiometabolic disease secondary to having excessive %BF.

Keywords : percent body fat, chronic diseases, cardiometabolic disease, Geriatrics

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