



# Western Sydney Nutrition & Dietetics Newsletter

## Body Composition

Ultrasound technique for measuring body composition is an efficient, accurate and minimally invasive method for determining body composition of patients.

Valid ways of measuring body composition should become part of preventative medicine; allowing for better tracking of body composition for treatment and prevention of disease<sup>3</sup>. Excess BODY FAT has been shown to be strongly associated with increased obesity-related conditions; including insulin resistance, type 2 diabetes, dyslipidaemia, hypertension and metabolic syndrome<sup>3</sup>. The most commonly used tool, BMI, is not a direct measure of body fat, although the terms used to categorise results (overweight, obese and morbidly obese) suggest that it is<sup>3</sup>.

Along with other anthropometric measures, estimation of body composition, through the use of ultrasound, can be tracked along time and be a determinant for health. It can be used in conjunction with the BMI to form a more coherent understanding of health; rather than relying on one single value alone. Studies have identified that measuring obesity

in individuals with a BMI <30kg/m<sup>2</sup> through estimating body fat percentages is more accurate than BMI<sup>2</sup>.

Skin-fold calipers have previously been the tool of choice when it comes to measuring subcutaneous fat levels (to which body composition estimations can be derived), the use of ultrasound methods for measuring the same fat levels, has been shown to be just as accurate, more efficient and lower level of invasiveness<sup>1</sup>; it is pain free, and doesn't require the client's fat stores to be pinched (making the patient feel more at ease).

This progressive approach of estimating body composition via ultrasound is available as part of a consultation at Western Sydney Nutrition and Dietetics; it is a vital tool for identifying changes in body composition, that may not be apparent through weight changes alone. This tool is great for those wishing to lose body fat, increase muscle mass, maintain optimal body composition (including athletes).

Reference:

1. Utter A, Hager M; 2008; Evaluation of Ultrasound in Assessing Body Composition of High School Wrestlers; Official Journal of the American College of Sports Medicine pg. 943-949
2. Frankenfield, Rowe, Cooney et al; 2001; Limits of body mass index to detect obesity and predict body composition; Nutrition; Volume 17, Issue 1, January 2001, pg. 26-30
3. Johnson, Naccarato, Corder et al; 2012; Validation Of Three Body Composition Techniques With A Comparison Of Ultrasound Abdominal Fat Depths Against An Octopolar Bioelectrical Impedance Device; International Journal of Exercise Science; Volume 5, Issue 3, pg. 205-213.

**Please do not hesitate to contact us if you have any queries or if we can assist you in any way.**

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