

# *Pinch snap* body fat!

► Weight loss | By William Sukala



*Body fat is vital to our health, although too much can cause health risks. Clinical exercise physiologist William Sukala explains the risks and the best ways to get an accurate fat reading for your clients*

**F**at serves a number of valuable purposes in the body. For instance, it:

- Pads our internal organs.
- Aids in the digestion of vitamins A, D, E and K, which are stored in fat tissue and in the liver.
- Is used in making bile acids.
- Forms part of the cell wall structure and assists with cellular functions.
- Helps maintain body temperature and protect against the cold.
- Protects us against starvation.

Despite all this, though, it suffers a bad reputation. Yes, it is well known that excess body fat poses a health risk. However, as our scientific understanding improves, we now realise it's the regional location of fat on the body – particularly around the mid-section – that makes all the difference between healthy and harmful.

Unlike pinchable fat just beneath your skin surface, deep belly fat – or visceral fat, in technical terms – penetrates well into your abdominal cavity and wraps itself around your vital organs. Visceral fat is very metabolically active and secretes harmful chemicals called adipocytokines into the bloodstream. These have been shown to hasten the development of diabetes, cardiovascular disease, high blood pressure, high blood lipids and some types of cancers.

So, how do you get rid of belly fat? Firstly, all the infomercial gimmicks that promise to strip fat off your abs are complete rubbish – make sure your clients are aware of this and don't fall for them yourself in a weak moment either. And spot reduction – selectively targeting fat from your abs – is another myth that refuses to die.

The secret to losing belly fat is that there is no secret. The best available evidence, gathered using highly sensitive measures of visceral fat such as computed tomography (CT scans) or magnetic resonance imaging (MRI), shows that calorie reduction, moderate exercise, or a combination of both, will do the trick.

That said, certain factors do appear to stoke the fat-burning furnace. A study conducted at Duke University in the US found that exercising at a higher intensity enhanced visceral fat loss. More research, conducted this time among postmenopausal women with Type 2 diabetes, showed that adding moderate-

intensity aerobic exercise to a reduced-calorie diet resulted in a 13 per cent reduction in visceral fat tissue, compared to a 7.5 per cent reduction in a control group on a diet only. Resistance training – which is also excellent for bone health and muscle tone – has been shown to reduce abdominal fat too.

## TESTING FOR FAT

In my two decades in this industry, I have marvelled constantly at how people fixate on their percentage of body fat, but really don't care if the numbers are accurate or reliable. There are several ways to estimate body composition – that's the amount of muscle, fat, body water, and percentage of body fat that goes to make you up. Unfortunately, however, the most reliable methods, such as underwater weighing, CT scans and dual energy x-ray absorptiometry, are only available in exercise physiology labs or hospitals.

As a fitness professional, on the other hand, you probably use more readily

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available field measures such as skinfold calipers and bioelectrical impedance analysis (BIA) to make a best 'guestimate' of your clients' body composition. And, of course, with our growing knowledge of the health risks associated with belly fat, the trusty tape measure is also making a resurgence.



### Skinfold calipers

This assessment method entails pinching the fat at various sites on the body, using precise anatomical landmarks, and measuring the skinfold thickness in millimetres. The sum of the skinfolds from all the sites is then entered into an equation to calculate an estimate body fat percentage.

### BIA

A BIA device sends a small, harmless electrical pulse through your body and measures your internal resistance to the current, providing an estimate of total body water. This information is then used to calculate body fat and lean muscle mass. In general, the leaner you are, the more body water you have on-board,

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so the easier the current passes through you. BIAs must not be used on clients with a pacemaker or any implanted cardioverting device.

### Waist circumference

Believe it or not, a basic tape measure can provide valuable information when it comes to body fat. It doesn't give a body composition result in the strict sense of the word, but it does offer an idea of the regional distribution of body fat and the potential for future health risks.

You need to be aware, though, that there is a margin of error associated with all these techniques. If you're a new trainer and not yet experienced in handling skinfold calipers, you may grab both muscle and fat, giving an artificially high reading. Pinching the skin at the wrong sites can also skew the results, as the method is based on taking precise measurements from standardised anatomical landmarks.

BIA can fluctuate depending on a person's hydration status. This, in turn, can be influenced by such factors as fluid intake, diuretic medications and menstruation. Measure your clients' body fat at the same time

on a different day and under similar circumstances to help minimise any potential for error. Also understand that BIA may not give accurate results in very obese individuals.

For circumference measures, make sure the tape is level and is applied evenly to either bare skin or a thin shirt. You should familiarise yourself with the technique to make sure you're measuring at exactly the same location each time. ◀

