

Effective tips for changing body composition parameters

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Many athletes, and individuals, want to change body composition. Some need to loose weight, while others desire to gain weight. But, in nearly all instances the weight that wants to be lost is fat, while maintaining muscle mass and the weight that wants to be gained is muscle mass, not fat. With this perspective there are certainly several tips that can be undertaken to help athletes achieve a more ideal body composition.

Weight Loss

The Grapefruit Diet, the Liver Cleansing Diet, Eating in the Zone, the Shape Up for Summer Bikini Diet - the list of popular, self-help diets goes on. Weight loss is a booming industry, with the topic selling magazines, foods, supplements, and gym memberships. Creating the latest fad or jumping on the latest bandwagon, means increased sales. Unfortunately, there are no quick fixes and a long-term approach is required to lower body fat levels while maintaining the ability to train effectively. The ultimate goal is to change the balance between daily energy intake and energy expenditure. Body fat stores are reduced when there is an energy deficit (intake is less than expenditure) and this loss is maintained by achieving a new energy balance (intake equals expenditure).

Health experts estimate that between 96-98% of dieters regain all the weight lost on a diet within 2-3 years and the faster the weight is lost, the faster it returns. One reason for this failure is that dieting may cause bingeing (and nobody binges on cottage cheese and lettuce!) Another problem is that metabolic rate is reduced by 15-30% within 24-48 hours of starting a kilojoule-restricted diet. Metabolic rate is the energy required to keep all the baseline functions of the body working and accounts for most of the body's daily energy requirements. A reduction in metabolic rate means a lower energy budget to survive on. This makes it harder to create the energy deficit that produces a loss of body fat. In other words, the more you restrict your intake, the less you may need to eat and the harder it becomes to lose weight (body fat). Therefore, long-term changes are much more likely to be successful and achievable.

In sports, a loss of body fat may be desired for several reasons related to performance:

- to decrease the amount of weight to be transported around, especially over long distances (e.g. marathon)
- for appearance reasons (e.g. gymnastics)
- to improve the power-to-weight ratio (e.g. sprinting)
- to make the weigh-in requirements in sports with weight divisions (e.g. lightweight rowing, boxing and judo)

However, athletes need to remember that many factors will contribute to achieving the optimal body composition. It is not necessary or always healthy to strive to have the same body physique as another successful athlete, or the lowest level of body fat possible. In fact, a low level of body fat, or the methods used to achieve it, may have a detrimental effect on performance:

- loss of the cushioning and insulating effects of body fat
- interference with normal hormonal status, and in females, menstrual cycle, with flow-on effects of bone health

- inadequate intake of important nutrients due to inadequate intake of key foods
- loss of the enjoyment of eating and social dining occasions

Therefore, any dietary changes need to be mindful of keeping the body fit and healthy.

Weight - what does it mean?

While most people talk about losing weight, what they are actually after is a loss of body fat. In fact, for successful long-term weight loss, the goal is to lose body fat while preserving muscle mass. Body weight is a poor measure of the amount of fat we carry and changes measured on the scales do not necessarily reflect changes in body fat stores. Using a number of measurements of body composition will provide a better overall picture of body composition and its changes. Measurements of "skin fold" fat levels and body girths or circumferences (e.g. waist and hip measurements) are all useful to build up a picture of body fat loss or gain. Importantly, such measurements should be made by people who are trained in kinanthropometry, and following standardized protocols.

Dietary Fat

Over the past decades, people have become increasingly aware of the fat content of foods. There are many low-fat and reduced-fat food products, food labels that identify the fat content of food, and recipe books based on low-fat cooking. All these factors make it easier to adopt a low-moderate fat diet. There is no doubt that too much fat in the diet increases the risk of becoming overweight (over fat). Fats are energy dense (37 kJ/g) compared to protein (17 kJ/g) and carbohydrate (16 kJ/g). (Alcohol is also quite energy dense at 29 kJ/g). Studies show that increasing the fat content of the foods offered to normal weight individuals increases the spontaneous intake of energy. In addition, excess intake of dietary fat is stored more efficiently in the body than either protein or carbohydrate.

Reducing dietary fat is an easy way to reduce energy intake and promote fat loss. Registers of people who have successfully lost weight and managed to keep it off for at least one year, show that the most common factors for success are increased activity and low-fat eating. However, low-fat eating by itself isn't a guarantee of achieving or maintaining loss of body fat. Other important factors are the total energy density of the diet and exercise/activity patterns.

Energy Density

An effective technique to create an energy deficit to achieve loss of body fat is to replace energy-dense foods in the diet with low energy-density foods. Roughly speaking, the energy density of our diet can be thought of as the calories or kilojoules per mouthful of food. Since we like to eat a certain volume of food each day to feel comfortably "full", or even to spend a certain amount of time at the dinner table, a reduction in energy intake must be achieved by reducing the energy density of each mouthful, as well as the excessive size of some meals.

Theoretically, switching from high-fat foods to low-fat foods looks like a good way to reduce the energy density of our food intake, and reduce total energy intake. However, the replacement of foods chosen by many people are often high in sugar, low in water and fiber, and easy to consume in large amounts. Think about tubs of low-fat ice-cream, jumbo low-fat muffins or economy-size packets of pretzels and jellybeans. Although these foods may be 99% fat free, they are still energy-dense and can quickly contribute to excessive energy intake. To achieve the real goal of reducing energy intake, we need to replace high-fat foods with low-energy density choices such as fruit and vegetables.

Carbohydrate-rich eating is still an important principle of healthy eating. High-fiber versions of carbohydrate-rich foods should be included in meals and snacks - for example, wholegrain breakfast cereals and whole meal versions of bread, rice and pasta. Low glycaemic index versions of carbohydrate-rich foods are also useful in improving the satiety ("filling") value of meals - for example, oat-based breakfast cereals such as porridge and Bircher muesli, or legumes, beans and al dente pasta. However, these strategies should be underpinned by having the main volume of the meal filled by fruit and vegetables, and by meeting our fluid needs with low-energy choices, especially water.

Exercise

The register of successful "weight losers" (people who have lost 7 kg or more and maintained that weight loss for at least 1 year) identifies that a substantial increase in physical activity is an essential factor in staying leaner. Although experts generally consider that 30 minutes of physical activity each day will achieve beneficial outcomes in terms of cardiovascular health, it seems that a daily commitment of 60 minutes of exercise is needed to have a real effect on energy balance. This probably reflects the way our daily lives have become so inactive - we must now choose to exercise or be active rather than take it for granted. The best type of exercise for weight loss is anything that can be undertaken at a moderate to high intensity for 30-60 minutes or longer. Aerobic activities such as brisk walking, jogging, cycling and swimming are effective.

However, for those not accustomed to regular exercise, jumping into strenuous exercise will usually be unsustainable. Feeling like you 'ought' to do exercise is unlikely to be successful. Instead, look for ways to incorporate active living into your daily routine - for example, walk instead of drive, take the stairs and cycle to get around. With this activity providing a baseline, it may be easier to add extra exercise, such as a brisk walk 2-3 times a week.

Food Quantities

Surprisingly, much of our eating is done for reasons other than hunger. In these situations it is difficult to identify why someone might be eating. Common reasons include:

- the clock says it's mealtime
- the food tastes great
- feeling bored or tired
- eating as a reward
- confusing thirst with hunger
- eating out of habit
- eating because it's there
- eating too quickly and failing to recognize "full" signals
- "just in case I get hungry later"
- eating but not feeling satisfied

Rather than eating on 'automatic pilot', take time-out prior to meals to ask how hungry you really are, what type of foods would be enjoyed and what other stressors are pushing you to eat. Eat smart!

Summary of Strategies for Successful Weight Loss

- Health should be higher on the list of priorities than low body weight. In the long term, this will benefit performance, training, emotions and health.
- Try to keep yearly weight fluctuations to within 3 to 6% of total body weight.
- Choose a balanced diet, emphasizing a nutrient-dense foods.
- Only have junk food, sweets and fast food once per week, as a treat!
- Investigate reasons for eating when not hungry. Everybody does it, but some people do it more than they realize.
- Include some aerobic training into your lifestyle or increase the levels of active living, by using stairs, walking or commuting by bicycle.
- Combining increased exercise (mainly resistance exercise) *WITH* diet will help minimize the potential for losing lean muscle mass.
- Approach weight loss as a long-term change in lifestyle that is comfortable and will be sustainable. Weight loss is not a race and needs to be approached consistently over time
- Include more fruits and veggies, and less processed and snack foods.
- Slightly increase the amount of protein you eat, compared to carbohydrates, to better ensure the ability to be at a slight energy deficit without losing muscle mass. Incorporation of protein shakes with added fruit are a great way to achieve this.
- Try to diet at night. Do most of your dieting at dinner in the evening. Do not skip meals, instead smaller portions are key.