So you want to lose weight…

-The bioMechanic-

Weight loss is both a complex thing and a very simple thing. In this article we'll break it down a little for you and help you understand the process. Knowing what's going on will help you be successful at both losing weight and keeping it off.

WEIGHT LOSS OR FAT LOSS

When we talk about weight loss as a health and fitness goal, we really mean *fat loss*. Our body weight comes from more than just fat and most of the other things are beneficial to health to fitness. Broadly speaking, we can divide body weight into fat free mass and fat mass. When losing fat we want to maintain or even add fat free mass.

Fat free mass includes things like bone, muscle, blood, connective tissue, stored glucose, and water. All of these weigh something and could increase to varying degrees as fitness improves. This is a good thing! Stronger bones reduce the risk of fractures and delay or prevent osteoporosis. Stronger muscles improve our ability to do activities of daily living and improve our quality of life. Increased blood volume allows us to deliver more oxygen and energy to our muscles, making physical activity and exercise feel easier and doable for longer periods of time. Glucose is a main energy substrate in our body. Storing more of it enables us to do higher intensity exercise and activities more readily. Storing (and using) more glucose also means we store less of the food we eat as fat. Being well hydrated allows us to perform at our best, whereas being even a little dehydrated reduces our exercise capacity.

Fat mass includes, well, fat! A certain amount of fat is essential to life. It protects our organs, makes up part of our cell walls, keeps us warm, and is necessary to absorb and transport many important nutrients. The bare minimum necessary to keep you functioning is around 3-5% for men and around 10-12% for women. At such a low level of body fat you probably won't feel great most of the time. Body fat percentages above 20% for men and 30% for women are normally associated with overweight status and increased risk for things like type 2 diabetes, cardiovascular disease, metabolic disease, and some types of cancer. Excess body fat also puts more stress on joints and has been associated with decreased physical activity and comfort in some social situations.

There is a big range between essential and excess fat. This means you can be healthy in a wide range of body fat percentages. And yes, you can be overfat and still be both fit and healthy, but it rarely happens without some concerted effort.

THE SIMPLE PART

Now that we've got some fat basics out of the way, let's look at the simple part of managing body weight. Body weight is determined by the difference between the amount of energy that comes into the body and the amount of energy that is expended. This energy is measured in units called calories.

If you habitually consume more calories than you expend, you will gain weight. If you habitually consume fewer calories than you expend, you will lose weight. If your habitual calorie consumption and expenditure are equal, you will maintain weight. Simple! This calories in calories out equation is at the root of all weight gain, loss, and maintenance for all people, even those with fast or slow metabolisms, chronic conditions, and genetic predispositions for being more or less fat.

Everybody who has ever lost weight has done so because they consumed fewer calories than they expended over some period of time. In order to lose fat, we recommend creating a caloric deficit amounting to an average of 200-500 calories per day over the course of the week. The exact number will vary from person to person and depends on your current habitual intake, how much fat you have to lose, and how difficult it is for you to make changes to your eating habits. We will provide you with a number of strategies to help you create this deficit.

THE COMPLICATED PART

It gets a little more complicated when we start looking at all the things that affect both the calories in and calories out of the equation.

Calories in: A lot of things influence the amount of calories we put into our bodies.

- Our *appetite* is influenced by hormones that regulate appetite and satiety;
- The *food we consume* is influenced by food availability, palatability, energy density, sleep quality, education, socioeconomic status, and culture;
- The *amount of calories* we absorb is influenced by our macronutrient intake, how food is prepared, our age, our microbiome, our health status, and our energy status.
- Many of our *eating behaviors* are influenced by psychological factors including stress levels, mindset, perceived control, self-esteem, and sleep quality.

Calories out: The amount of calories we burn is also dependent on many factors.

- Our *resting metabolic rate* (the amount of calories we burn at rest, just keeping the lights on) is influenced by our body size and composition, hormonal status, dieting history, genetic factors, health status, sleep quality, and age.
- The *amount of calories we burn in exercise* is influenced by our exercise ability, intensity, duration, frequency, type, environment, hormonal status, and sleep quality.
- The *amount of calories we burn by non-exercise activity* is influenced by our health status, energy status, stress levels, hormonal status, occupation, leisure activities, and genetic factors.
- The *amount of calories we burn by metabolizing food* (yes, this requires calories!) depends on the macronutrient makeup of the food and on how processed it is.

If that sounds like a lot to think about, it is! Fortunately, we don't need to get that granular when we're trying to change our body composition. There are a few things we can do to help us successfully expend a few more calories than we consume:

- **Sleep well**: get more high quality sleep to better regulate hunger hormones, recover from exercise, and increase metabolic rate.
- **Manage stress**: balance your stress level with stress resilience techniques like meditation, deep breathing, and spending time in nature.
- **Stay active**: Increase daily non-exercise activity by walking more, parking the car farther away, actively commuting, taking the stairs, and/or taking movement breaks at work.
- **Listen to your body**: Learn to pay attention to what your body is telling you regarding hunger, thirst, sleep, pain, stress, etc. When you learn to interpret the signals you will be able to respond appropriately.
- **Prioritize food quality**: focus on improving the quality of what you eat, not just the quantity. Improving the quality often allows you to eat the same amount or more with fewer total calories.
- **Experiment with your eating**: Try increasing your protein and fiber intake, or increasing your carb to fat ratio, or your fat to carbohydrate ratio.
- **Check-in**: What you're doing should pass the "How's that working for ya?" test. Are you losing fat? Is your sleep improving? How are your stress levels? Is this a way you can see yourself living/eating for a long time?

The key is to find a strategy that works well for you. Almost anyone can lose fat, but many people have trouble maintaining fat loss because they pick a fat loss strategy that doesn't fit their life. Sustainable fat loss comes from adopting eating and lifestyle behaviors that you can stick to over the long term.

Good luck and remember fat loss doesn't happen by accident! You'll have to put some effort into adopting new eating and lifestyle habits. You'll experiment with things that work and don't work well for you. Either way you will gain valuable insight into what sustainable fat loss looks like for you. Embrace the process and stay the course. Don't hesitate to ask when you have questions, and be sure to let those around you know of your successes!

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