



## WEIGHT LOSS: A BEGINNER'S GUIDE

### ABSTRACT

This guide cuts through the noise with straightforward, evidence-based strategies to help you achieve sustainable weight loss. It focuses on the fundamentals: understanding how calorie balance drives weight changes. It emphasizes realistic goal setting, building habits that last, and avoiding the common pitfalls of fad diets and overcomplicated advice. Whether you're starting your journey or recalibrating your approach, this resource offers practical tips to help you lose weight and keep it off—without gimmicks or shortcuts.

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*'Medical Disclaimer: The information provided on weight loss and nutrition advice within this text is intended for general informational purposes only and should not be considered as a substitute for professional medical advice, diagnosis, or treatment. Always seek the advice of your physician or other qualified health provider with any questions you may have regarding a medical condition, dietary changes, or weight loss goals.*

*It is essential to consult with a healthcare professional before starting any new diet or exercise regimen, particularly if you have pre-existing health conditions: including but not limited to diabetes, heart disease, allergies, or other health concerns. Individual results may vary, and no guarantees are made regarding specific outcomes. Furthermore, the information provided may not be appropriate for all individuals, and modifications may be necessary based on individual health status, dietary preferences, and lifestyle factors.*

### **Abstract:**

*Weight Loss: A Beginner's Guide* is an educational resource that details a comprehensive approach to weight loss, addressing key aspects such as goal setting, the mechanics of weight loss, specific strategies, long-term maintenance, pitfalls, and common myths and misconceptions. By delving into these topics, individuals can gain a deeper understanding of the simple, yet multifaceted nature of weight management. Through a combination of education and practical guidance, you can become empowered to make informed choices, adopt healthier habits, and achieve your weight loss aspirations.

### ***Why should I listen to you, Dr. Levi?***

Well, you don't have to. I'm no "expert." I don't have the educational accolades of a registered dietitian or certified nutritionist. I'm a Chiropractor by trade. I have obtained graduate-level education in nutrition. Maybe 100 hours' worth. Your medical Doctor may have 20 or thereabouts, for reference.

The information I'm about to present can be found anywhere; in textbooks, research articles, online, and almost all for free. Which is great, information like this should be free. But the problem these days is not access to information, but the abundance of misinformation. The weight loss industry is a multibillion-dollar industry. It's full of gimmicks, hacks, fad diets, etc... It's almost all B.S. That's where I come in. I'm your professional B.S. sifter. That's what you're paying the few bucks for. For me to sift through the muck, pull out the useful information so that you can lose weight. This way, you don't have to spend the last 10 years sifting, like I have.

### ***But if you're a chiropractor, why not write a book on treating back pain per se?***

I've thought about it, and maybe in the future I will. The issue with such an undertaking is that back pain is heterogeneous (a heterogeneous condition has several different root causes). As opposed to treating obesity, which is a homogenous condition (same root cause for all individuals in a given group). It's much more straightforward, and much less daunting, to disperse information to a homogenous group.

## GOALS

*"If you have a goal, write it down. If you do not write it down, you do not have a goal - you have a wish."*

— Steve Maraboli

Set goals first! Setting goals is essential in providing direction, motivation, and a roadmap for achievement. Whether pursuing short-term objectives or long-term aspirations, individuals can benefit from the clarity, focus, and sense of purpose that goal-setting provides. As you will see, it's a little more complex than just saying "I want to lose weight." At the very least, you should have progress goals and process goals. And they should be SMART.

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### PROGRESS GOALS VS. PROCESS GOALS

Progress goals and process goals are two types of objectives used in goal-setting, each serving distinct purposes in achieving desired outcomes. Here's a breakdown of the differences between the two:

Progress goals focus on the desired result that an individual aims to achieve. For example: Losing 10 pounds, running a marathon in under four hours, or reducing body fat percentage by 5% are all examples of progress goals. Progress goals emphasize the end result and the ultimate destination an individual is striving to reach. Progress goals are typically quantifiable and measurable, making it clear when the goal has been achieved.

Process goals focus on the actions, behaviors, or steps that an individual must take to reach their desired outcome. For example: Committing to exercising five times per week, tracking daily food intake, or practicing mindfulness for 10 minutes each day are examples of process goals. Process goals emphasize the specific actions or habits that contribute to progress. Process goals are often qualitative and focused on behaviors rather than outcomes. Progress is measured by adherence to the prescribed actions or habits.

In essence, progress goals define the destination, while process goals outline the journey's steps. Both types of goals are important in goal-setting. Research has shown that process goals may actually be more important, or impactful, than progress goals as process goals provide the necessary steps for achieving progress goals. By setting and adhering to both process and progress goals, individuals can effectively work toward their desired outcomes while building sustainable habits and behaviors for long-term success.

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### SMART GOALS

SMART goals are a framework used for setting objectives that are specific, measurable, achievable, relevant, and time-bound.

1. **Specific:** Goals should be clear, concise, and well-defined. They should answer the questions of who, what, where, when, and why. Specific goals leave no room for ambiguity or confusion, making it easier to understand what needs to be achieved.
2. **Measurable:** Goals should be quantifiable, allowing progress to be tracked and measured objectively. Establishing specific criteria for success enables individuals to determine whether they are making progress toward their goal or if adjustments are necessary.
3. **Achievable:** Goals should be realistic and attainable, considering the resources, skills, and time available. While it's essential to aim high, setting goals that are within reach helps maintain motivation and fosters a sense of accomplishment upon achievement. One way to determine if your goals are appropriately achievable is to use the confidence ruler. In general, a confidence ruler could be a visual or numerical scale used to gauge the level of

confidence someone has in a particular decision. 0 = No confidence, whereas 10 = Very high confidence. Your goals should be at a 7-10 confidence level. If you score your confidence lower, try adjusting your goals, until you can reach that 7-10 confidence level.

4. Relevant: Goals should be relevant and aligned with broader objectives or aspirations. They should contribute to personal growth and be meaningful to the individual pursuing them. Ensuring relevance helps maintain focus and prioritize efforts effectively. How do I know if my goals are relevant? Try this visualization exercise. Imagine your best self. Where do I want to be physically, emotionally, and mentally in 6 months, 1 year, 5 years, or 10 years? How did you see yourself? Do your goals line up with the best version of yourself? If so, your goals are relevant.

5. Time-bound: Goals should have a defined timeframe or deadline for completion. Establishing deadlines creates a sense of urgency and accountability, motivating individuals to take action and make progress toward their goals within a specific timeframe.

By applying the SMART criteria to goal-setting, individuals can create clear, actionable, and achievable objectives that increase the likelihood of success and facilitate progress toward desired outcomes. Here are some examples of how to apply SMART to progress and process goals.

#### Progress Goal (SMART):

- Specific – I want to lose 15 lbs.
- Measurable – I will measure my weight weekly. Record these measurements in the MyFitnessPal App.
- Achievable – Yes. Confidence ruler 7/10.
- Relevant – Yes. I envision myself having more energy to take on daily tasks, and also looking better in the mirror. Losing 15 lbs. aligns with this vision.
- Time-bound – 2 months.

#### Process Goal (SMART)

- Specific – I will eat under 2000 calories daily.
- Measurable – Calories will be counted and recorded in the MyFitnessPal App.
- Achievable – Yes. Confidence ruler 8/10.
- Relevant – Yes, calories consistently below TDEE will initiate my desired weight loss.
- Time-bound – 2 months

## SETTING THE STAGE

Before we begin, let's get our weight loss priorities straight. Listed in order from the most important factor to the least important are the following:

1. Adherence

2. Calories
3. Macros
4. Diet
5. Miscellaneous

Let's dive into the details of these categories, as to understand why they are ordered the way they are.

## ADHERENCE

Adherence refers to the extent to which a person's behavior aligns with their goals. It is commonly used in the context of healthcare to describe a patient's commitment to following the prescribed course of action to manage their health condition effectively. Adherence plays a crucial role in the success of medical treatments and lifestyle interventions. Simply put, adherence is your ability to "stick with" the plan.

### ***Why is adherence so important?***

You may have the perfect weight loss plan, but if you can't stick with it, it's simply not going to yield results. Weight loss requires a consistent effort over time, which often involves making changes to eating habits, physical activity levels, and lifestyle choices. Adherence helps individuals adopt and maintain these new behaviors over time, leading to long-term success.

### ***OK, so how do I increase adherence?***

Increasing adherence to a weight loss routine involves implementing strategies that make it easier for you to stick to your plan and stay motivated. The most important factor associated with increasing adherence is whether or not you *enjoy* what you are doing. Frankly, we're all human, and if you don't enjoy something, it's unlikely that you'll stick with it.

Think about the things you do enjoy. Maybe it's a favorite restaurant, going shopping, or going to see your favorite sports team. It's not hard to talk yourself into these things, because you *enjoy* them. If you can make your weight loss endeavors more enjoyable, or at the very least less miserable, you're more likely to achieve results. Tailor your weight loss plan to your individual preferences, lifestyle, and needs. This increases the likelihood of adherence as the plan will be more aligned with your preferences and capabilities. Make it simple, and make it easy. Choose convenient meal choices and exercise options that fit into your schedule and preferences.

Here are some ways to enhance adherence, in no order of importance:

Get educated about how to lose weight and the reasons behind specific dietary and exercise recommendations. Understanding the rationale behind the plan can increase motivation and commitment.

Establish achievable and realistic weight loss goals. Unrealistic goals can lead to frustration and decreased motivation. Break down larger goals into smaller, manageable milestones. Want to lose 100 lbs. or more? Start with the first 10. Then move on to the next 10, etc....

Regularly track progress toward weight loss goals using tools such as food journals, weight logs, or fitness apps. Monitoring progress provides feedback and motivation, helping you stay on track. Acknowledge and celebrate successes along the way, no matter how small. Celebrating achievements boosts morale and reinforces positive behaviors.

Encourage social support from friends, family, or support groups. Having a support system can provide motivation, accountability, and encouragement during the weight loss journey.

If needed, consult with a healthcare provider, dietitian, or personal trainer for personalized guidance and support. Professional guidance can provide expert advice, accountability, and motivation throughout the weight loss journey.

By implementing these strategies, you can increase adherence to your weight loss routine and improve your chances of achieving your weight loss goals.

## CALORIES IN VS. CALORIES OUT (CICO)

The concept of "calories in vs. calories out" (CICO) as it pertains to weight management and energy balance has been recognized for a long time, but it became more prominently discussed in the late 19th and early 20th centuries with advancements in nutritional science and metabolism research.

One significant milestone was the work of American scientist Wilbur Olin Atwater in the late 19th century. Atwater conducted extensive studies on the energy content of various foods and how the human body utilizes that energy. His research laid the groundwork for understanding the calorie content of different macronutrients (carbohydrates, proteins, and fats) and their role in human metabolism.

However, it was not until the 20th century that the concept of "calories in vs. calories out" became more widely understood and accepted as a fundamental principle of weight management. As the fields of nutrition, physiology, and obesity research progressed, the importance of balancing energy intake (calories consumed) with energy expenditure (calories burned through physical activity and metabolism) became increasingly emphasized.

Today, the principle of CICO remains a cornerstone of weight management and is widely recognized by health professionals, researchers, and the general public as a fundamental aspect of maintaining a healthy body weight.

### ***What is a calorie?***

A calorie is a unit of measurement used to quantify energy. Specifically, it's the amount of heat energy required to raise the temperature of one gram of water by one degree Celsius.

In nutrition, calories are used to measure the energy content of food and beverages. When people talk about "calories" in the context of diet and nutrition, they are usually referring to kilocalories (kcal), which are equivalent to 1000 calories. This is the unit typically used on food labels and dietary recommendations. On food labels, kcals are represented simply as "Calories."

### ***Ok, so how does this work?***

“Calories in vs. calories out”, or CICO, refers to the balance between the number of calories you consume through food and beverages (calories in) versus the number of calories your body expends through metabolism and physical activity (calories out).

Here's a breakdown of each component:

1. Calories in: This refers to the number of calories you consume through your diet. This includes all the food and beverages you eat and drink throughout the day. The calorie content of different foods can vary widely based on their macronutrient composition (carbohydrates, proteins, and fats) and portion size.

2. Calories out: This encompasses the number of calories your body expends for various functions, including:

- Basal metabolic rate (BMR): The number of calories your body needs to maintain basic physiological functions, such as breathing, circulation, and cell production, while at rest. On average, BMR accounts for about 60% to 75% of total daily calorie expenditure for most individuals.
- Non-exercise activity thermogenesis (NEAT): The calories burned through activities of daily living, including spontaneous physical activities, such as fidgeting or pacing. Estimates vary, but it's generally believed that NEAT can contribute anywhere from 15% to 50% or more of total daily calorie expenditure.
- Exercise: As a rough estimate, programmed exercise might contribute anywhere from 10% to 30% of total daily calorie expenditure.
- Thermic effect of food (TEF): The calories burned during the digestion, absorption, and metabolism of food.
  - Protein: The thermic effect of protein is estimated to be around 20-30% of the calories consumed. This means that for every 100 calories of protein consumed, approximately 20-30 calories are expended during digestion and metabolism.
  - Carbohydrates: The thermic effect of carbohydrates is estimated to be around 5-10% of the calories consumed. This means that for every 100 calories of carbohydrates consumed, approximately 5-10 calories are expended during digestion and metabolism.
  - Fats: The thermic effect of fats is estimated to be around 0-3% of the calories consumed. This means that for every 100 calories of fats consumed, approximately 0-3 calories are expended during digestion and metabolism.

The principle of CICO suggests that to maintain weight, the number of calories you consume should roughly equal the number of calories your body expends. If you consume more calories than your body needs, you'll likely gain weight over time because the excess energy is stored as fat. Conversely, if you consume fewer calories than your body needs, you'll likely lose weight because your body will tap into its fat stores for energy.

It's important to note that individual factors such as metabolism, body composition, hormonal balance, and genetics can influence calorie balance and weight management. You may have acquired a medical condition, or just have been dealt a bad hand genetically. Your metabolism may be slower than the person next to you (we all know that person who can eat their weight in food and not gain any weight).



Hypothyroidism, for example, significantly slows the “calories out” portion of the CICO equation, making weight loss more difficult. Regardless of how the equation is tilted, whether it be in your favor or against, consuming fewer calories than what your body uses is how you lose weight.

### ***What does the science say?***

Never, in all the studies that I’ve read, has there been any instance in which a calorie deficit didn’t lead to weight loss. Never, in all the studies I’ve read has there been an instance in which a caloric surplus did not lead to weight gain.

Science generally doesn’t produce facts, or answer our questions definitively. It tends more to deliver us probabilities. There are, however, some very helpful scientific laws.

In the context of science, a law is a statement or description that summarizes a consistent pattern observed in nature. Laws are typically based on repeated empirical observations and have been found to hold under a wide range of conditions. Scientific laws describe what happens in nature but do not necessarily explain why or how those phenomena occur. One such law, the first law of thermodynamics, also known as the law of conservation of energy, states that energy cannot be created or destroyed in an isolated system. Instead, it can only be transformed from one form to another or transferred from one part of the system to another.

In the context of human metabolism and nutrition, the first law of thermodynamics implies that the total energy (calorie) content of the food we consume is either used by the body for various physiological processes (such as metabolism, physical activity, and maintaining body temperature) or stored as potential energy in the form of fat or glycogen. This principle underlies the concept of “calories in vs. calories out” in weight management, as discussed earlier.

Simply put, consume too many calories, you gain weight. Consume fewer calories than what you currently need, and you’ll lose weight.

### ***How do I know how many calories I need?***

Use a “TDEE Calculator.” They’re available online and free. Just type it into Google or your favorite search engine. TDEE stands for Total Daily Energy Expenditure, and it represents the total number of calories your body burns in a day, taking into account all activities and bodily functions. TDEE is an estimate of your BMR, NEAT, and TEF. It’s an estimate of the “calories out” half of the CICO equation.

When you add your information to the calculator, you will be prompted to input your physical activity level. Always choose the “sedentary” option as your baseline. The reason for this is that most people underestimate the number of calories they consume, and overestimate the calories they burn from physical activity and exercise. Choosing the “sedentary” number helps balance these errors and make the equation more accurate.

Once you have your estimated TDEE, you can use it as a guideline for setting calorie intake goals.

### ***How much should I lower my calories?***

As a general recommendation, guidelines support lowering the number of calories you consume by 500 per day. Which should equate to ½ to 1 pound of weight loss per week. You can be as conservative or aggressive as you want here. We’ll dive deeper into this in the “What to Expect in Terms of Weight Loss” section.

## DIETS

Ok. So far, we've established that "calories are king" when it comes to weight loss.

### ***What about the actual foods we eat? Does it matter?***

I find it useful to separate weight loss from nutrition and diet. Even though they are related, they are distinctly different concepts. Weight loss refers to the reduction of body mass, typically involving a decrease in body fat, muscle mass, or both. It can occur intentionally, through changes in diet, exercise, or lifestyle, or unintentionally due to an underlying medical condition.

Nutrition is the science that studies the relationship between food, nutrients, and health. It encompasses the processes by which organisms ingest, digest, absorb, transport, utilize, and excrete food substances. Nutrition is essential for growth, development, maintenance, and overall well-being. Nutrition is important for health, but not so much for weight loss.

Although "dieting" is often used to delineate a weight loss endeavor. The term "diet", actually refers to the food and drink regularly consumed by an individual or a group of people. It can also refer to a specific eating pattern or plan followed for health reasons, weight management, cultural practices, religious beliefs, or personal preferences.

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### WHAT IS GOOD NUTRITION?

Good nutrition refers to eating a variety of foods from different food groups in appropriate proportions to meet your body's needs for energy, growth, repair, and maintenance.

You should aim to include a balance of macronutrients: carbohydrates, proteins, and fats. Choose complex carbohydrates (whole grains, fruits, vegetables), lean proteins (poultry, fish, legumes), and healthy fats (avocado, olive oil, nuts).

Consume a variety of colorful fruits and vegetables to ensure a range of vitamins, minerals, and antioxidants. Aim for at least 5 servings of fruits and vegetables daily.

Choose whole grains over refined grains for increased fiber and nutrient content. Examples include brown rice, quinoa, oats, and whole wheat products.

Opt for lean protein sources such as poultry, fish, beans, lentils, tofu, and low-fat dairy. Limit processed and fatty meats.

Include sources of healthy fats, such as avocados, nuts, seeds, and olive oil. Limit saturated and trans fats found in fried foods, processed snacks, and certain oils.

Minimize the intake of foods and beverages high in added sugars. Be mindful of sugary drinks, candies, and processed snacks. Reduce the consumption of processed and packaged foods that may be high in sodium, additives, and preservatives. Choose whole, minimally processed foods whenever possible.

Adhering to these basic tenets can contribute to improved energy levels, better weight management, and a reduced risk of chronic diseases, fostering overall health and well-being.

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### WHAT IS A HEALTHY DIET?

A healthy diet provides the necessary macronutrients and micronutrients your body needs to function properly while also supporting overall health and well-being. Here are just a few examples:

1. Mediterranean Diet: Emphasizes fruits, vegetables, whole grains, legumes, nuts, and seeds. Includes olive oil as the primary source of fat. Moderate consumption of fish and poultry, with limited red meat. Encourages red wine in moderation.
2. Keto Diet (Ketogenic Diet): Very low carbohydrate intake, high fat intake, and moderate protein intake. The goal is to induce ketosis, where the body burns fat for energy instead of carbohydrates.
3. Paleolithic Diet (Paleo): Focuses on foods presumed to have been available to Paleolithic humans, such as lean meats, fish, fruits, vegetables, nuts, and seeds. Excludes processed foods, grains, dairy, and legumes.
4. Vegetarian Diet: Eliminates meat but includes plant-based foods like fruits, vegetables, grains, legumes, nuts, and seeds. Variations include lacto-vegetarian (includes dairy) and ovo-vegetarian (includes eggs).
5. Vegan Diet: Excludes all animal products, including meat, dairy, eggs, and honey. Relies on plant-based foods like fruits, vegetables, grains, legumes, nuts, and seeds.
6. DASH Diet (Dietary Approaches to Stop Hypertension): Emphasizes fruits, vegetables, whole grains, lean proteins, and low-fat dairy. Limits sodium intake to help manage blood pressure.
7. Weight Watchers (WW): Uses a point system to assign values to foods based on their nutritional content. Encourages a balanced diet with an emphasis on portion control and includes a supportive community aspect.
8. Intermittent Fasting: Focuses on alternating periods of eating and fasting. Common methods include the 16/8 method (16 hours fasting, 8 hours eating) or the 5:2 method (eating normally for 5 days and drastically reducing calories for 2 non-consecutive days).
9. Low-Fat Diet: Reduces the intake of dietary fat, particularly saturated fat. Emphasizes lean proteins, whole grains, and plenty of fruits and vegetables.

#### ***Which diet should I choose?***

Whichever you can adhere to.

#### ***Do you have to choose a particular diet?***

No, you can mix and match the components of different diets if that suits your preferences and lifestyle. With regards to what constitutes a healthy diet, it's not so much as what you eat, as what you don't eat.

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#### **EAT THIS, NOT THAT**

I'm not a huge fan of the "eat this, not that" craze. Nevertheless, swapping out calorie-dense foods for nutrient-dense foods is a smart move. Generally speaking, foods in and of themselves should not be thought of as "good" or "bad." They should simply be taken in context as one part of your overall weight loss plan.

With that said, it's useful to have an idea of what foods are generally regarded as good, nutrient-dense options and which are bad. I've included a brief "eat these, not these" list that you may find helpful.

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## EAT (PLENTY OF) THESE.

### **Vegetables**

Asparagus  
Beets  
Broccoli  
Brussel sprouts  
Cabbage  
Carrots  
Cauliflower  
Celery  
Cucumber  
Greens (collard/mustard)  
Kale  
Lettuce (any kind)  
Peas  
Peppers  
Potatoes  
Pumpkin  
Squash  
String beans  
Sweet potatoes  
Turnips  
Yams  
Zucchini

### **Fruits**

Apple  
Apricot  
Avocado  
Bananas  
Berries  
Cantaloupe  
Cherry  
Kiwifruit  
Lemon  
Lime  
Mangosteen  
Melons  
Oranges  
Papaya  
Peach

Pear

Pineapple

Plum

Prune

### **Grains**

Basmati rice  
Brown rice  
Oatmeal  
Quinoa  
Wild rice

### **Seafood**

Shrimp  
Cod  
Flounder  
Mackerel  
Oysters  
Salmon  
Trout  
Tuna

### **Meats**

Beef (lean cuts)  
Buffalo/Bison  
Lamb  
Chicken  
Turkey  
Wild game (deer, elk, moose, etc...)

### **Beans and legumes**

Black beans  
Garbanzo beans  
Green beans  
Kidney beans  
Lentils  
Pinto beans  
Split peas

### **Seeds and Nuts**

Walnuts  
Almonds  
Sunflower seeds  
Flaxseed

### **Dairy and eggs**

Almond milk  
Organic cow's milk  
Omega-3 fortified  
eggs

### **Spices and herbs**

Use any and enjoy!

### **Sweeteners**

Pure maple syrup  
Raw honey  
Stevia  
Vanilla

### **Oils and fats**

Butter  
Extra virgin olive oil  
Coconut oil  
Avocado oil

### **Beverages**

Water  
Herbal teas  
Coffee  
Sparkling water

*\* Eat organic when possible.*

*\*\* Grass-fed, wild caught meats are preferable to grain-fed, farm raised meats.*

*\*\*\* Wash fruits and vegetables thoroughly*

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## NOT (TOO MANY OF) THESE

**Refined flours and grains:** Refined flours and grains are rapidly broken down into sugars in the body and do not contribute to fiber in the diet. Avoid white flour, white rice, refined pasta, and gravies. They tend to be highly processed, low in nutrients, and high in calories. Refined grains increase inflammation in the body.

**Omega-6 fatty foods:** Increased consumption of foods containing Omega-6 fatty acids has been linked to increased rates of heart disease, cancer, obesity, depression, insulin resistance, allergies, and other autoimmune diseases. Oils to avoid include corn, safflower, sunflower, cottonseed, sesame, grapeseed, borage, and primrose oils.

**Sugar:** Refined sugars quickly raise blood sugar levels, causing large amounts of insulin to be released. Insulin causes blood sugar to drop rapidly, producing hypoglycemia, which leads to cravings for more sugar. These large rises and falls in blood sugar lead to insulin resistance. This means your body's insulin doesn't work as it should.

When your insulin stops working properly, blood sugar (glucose) remains in the bloodstream. This leads to metabolic syndrome, pre-diabetes, and/or full-blown diabetes (type II is most common). Refined sugars are in sodas, fruit drinks, sweetened beverages, cereals, and almost all processed/junk foods. Look for sucrose, glucose, high fructose corn syrup, and dextrose on food labels. Avoiding these foods altogether is a good idea.

**Artificial sweeteners:** Artificial sweeteners such as Acesulfame, Aspartame (Equal) (NutraSweet), Saccharin, and Sucralose (Splenda). Artificial sweeteners are chemicals, not food. Side effects may include blurred vision, gastrointestinal problems, seizures, dizziness, migraines, and blood sugar increases.

**Trans-fats:** Trans-fats are added to foods to increase shelf life and retain flavor in foods. Avoid Trans-fats and any hydrogenated oils when possible. They raise bad cholesterol and lower good cholesterol, increasing your risk for cardiovascular disease.

Margarine, frostings, toppings, soup mixes, pre-packaged frozen foods, fast foods, commercial baked goods, snack foods, cereal bars, dips, and salad dressings all usually contain Trans-fats.

**Foods with Added Sodium.** This includes nearly all processed food in which sodium is used as a preservative:

canned foods, instant soups, cured meats (bacon, sausage, ham, hot dogs, and lunch meats), chips and crackers. Many processed foods have sodium preservatives such as sodium nitrate and nitrite, which should be avoided. Excess sodium is a common cause of high blood pressure.

**Unwashed Fruits and Vegetables.** Fruits and vegetables contain pesticides and waxes. You should thoroughly wash them before eating. Visit [www.ewg.org/foodnews/](http://www.ewg.org/foodnews/) to see which foods are best bought organic and which foods have lower pesticide levels.

### ***So, what does diet/nutrition have to do with weight loss?***

As long as your calories are below maintenance, you will lose weight regardless of what you eat. Scientific studies have demonstrated this over and over again.

Notwithstanding, healthy, nutrient-dense foods should play a role in your weight loss efforts.

Nutrient-dense foods provide a wide array of essential vitamins, minerals, and other nutrients that support overall health and well-being. When your body is well-nourished, it may be less likely to crave additional food, reducing the urge to overeat.

Prioritizing nutrient-dense foods also supports overall health and reduces the risk of chronic diseases such as heart disease, diabetes, and certain cancers. Eating a diet rich in nutrients ensures that your body has the essential building blocks it needs to function optimally.

Nutrient-dense foods are often whole, minimally processed foods that provide sustained energy and nourishment. Incorporating these foods into your diet can help you feel more energized, satisfied, and motivated to stick with healthy eating habits long-term, which is crucial for successful weight loss and weight maintenance.

## MACROS (AND MICROS)

Macronutrients are the primary nutrients consumed in larger quantities that provide energy to the body. They include carbohydrates, proteins, and fats. Each macronutrient provides a certain number of calories per gram:

- Carbohydrates provide 4 calories per gram. They are the body's main source of energy and are found in foods like grains, fruits, vegetables, and legumes.
- Proteins also provide 4 calories per gram. They are essential for building and repairing tissues, as well as for various metabolic functions. Protein-rich foods include meat, poultry, fish, eggs, dairy products, legumes, nuts, and seeds.
- Fats provide the most concentrated source of energy, supplying 9 calories per gram. They play a crucial role in providing energy, supporting cell growth, protecting organs, and aiding in the absorption of fat-soluble vitamins. Healthy sources of fats include avocados, nuts, seeds, olive oil, fatty fish, and plant-based oils.
- It's important to note that while alcohol is not considered a macronutrient, it does provide calories at 7 calories per gram. However, alcohol does not provide essential nutrients and should be consumed in moderation.

Micronutrients are essential nutrients required by the body in smaller quantities compared to macronutrients. However, they are vital for various physiological functions and overall health. Micronutrients include vitamins and minerals, which are necessary for proper growth, development, metabolism, and immune function. Here's an overview of the main micronutrients:

- Vitamins are organic compounds that are essential for various biochemical processes in the body. They can be categorized into two groups based on solubility:
  - Fat-soluble vitamins: These vitamins are soluble in fats and oils and are stored in the body's fatty tissues. Fat-soluble vitamins include vitamins A, D, E, and K. They play roles in vision, bone health, immune function, and blood clotting.
  - Water-soluble vitamins: Water-soluble vitamins dissolve in water and are not stored in the body to the same extent as fat-soluble vitamins. They include the B vitamins (such as B1, B2, B3, B6, B12, folate, and biotin) and vitamin C. Water-soluble vitamins are involved in energy metabolism, red blood cell production, nervous system function, and antioxidant defense.

- Minerals are inorganic elements that are essential for various physiological functions. They can be divided into two categories:
  - Major minerals: Major minerals are required in larger amounts by the body and include calcium, phosphorus, magnesium, sodium, potassium, chloride, and sulfur. These minerals are essential for bone health, muscle function, fluid balance, nerve transmission, and other metabolic processes.
  - Trace minerals: Trace minerals are needed in smaller amounts but are still critical for health. They include iron, zinc, copper, selenium, iodine, manganese, fluoride, and chromium. Trace minerals are involved in enzyme activity, immune function, hormone synthesis, and antioxidant defense.

### ***Do macros matter during weight loss?***

Somewhat. Ultimately, the key to successful weight loss is creating a calorie deficit, which means consuming fewer calories than you expend. However, the macronutrient composition of your diet can influence factors like hunger, satiety, energy levels, and metabolic rate, making it easier or more challenging to maintain a calorie deficit.

Protein, specifically, appears to be of significant importance. Multiple meta-analyses examining controlled feeding trials have indicated that higher-protein energy-restriction diets result in superior weight loss, reduction in fat mass, and retention of lean mass compared to lower-protein energy-restriction diets. When protein and total calorie intake are equalized, the composition of fat and carbohydrates in weight loss diets does not significantly influence outcomes.

Finding the right balance of carbohydrates, proteins, and fats that work for your body and lifestyle can help you achieve sustainable weight loss. We'll cover the good, the bad, and whether or not the macronutrient is even necessary.

## **CARBOHYDRATES**

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The good: Carbohydrates are the body's primary source of energy. They are broken down into glucose, which is used by cells for energy. Carbohydrates also play a role in providing fiber, which aids in digestion and helps regulate blood sugar levels.

The bad: High-carb foods often have a high glycemic index, causing spikes and crashes in blood sugar levels, which can increase hunger and cravings. Choosing complex carbohydrates with a lower glycemic index, such as whole grains, fruits, and vegetables, can help regulate blood sugar levels and support weight loss.

***Are carbohydrates necessary?*** No. There is no such thing as an essential carbohydrate. You can maintain optimal health on a low, or even zero, carbohydrate diet.

### ***What is the glycemic index?***

The glycemic index (GI) is a measure of how quickly carbohydrates in a food raise blood sugar levels. Foods with a lower GI value are digested and absorbed more slowly, resulting in a slower and more gradual increase in blood glucose levels.

### ***Do I need to worry about the glycemic index?***

No, not really. The glycemic index is based on the assumption that a person is eating a single source of carbohydrates and nothing else. But this isn't what happens in the real world. Most meals contain a combination of carbohydrates, fats, and proteins.

Adding fat and protein to a meal can significantly lower its glycemic index (GI) by slowing down the digestion and absorption of carbohydrates. When fat and protein are present in a meal, it slows down the emptying of the stomach contents into the small intestine, where most nutrient absorption occurs. This delay in gastric emptying results in a slower release of carbohydrates into the bloodstream, which can help stabilize blood sugar levels and lower the glycemic response.

Slowing down the digestion and absorption of carbohydrates through the addition of fat and protein can also lead to a blunted insulin response. Insulin is released by the body in response to rising blood sugar levels to help shuttle glucose into cells for energy or storage. By slowing the rate at which carbohydrates are absorbed, fat and protein can help prevent sharp spikes in blood sugar levels, leading to a more moderate insulin response and more stable blood sugar levels.

## PROTEINS

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**The good:** Proteins are essential for building and repairing tissues in the body, including muscles, organs, and the immune system. Including an adequate amount of protein in your diet is essential for preserving lean muscle mass during weight loss. Protein helps you feel full and satisfied, reducing overall calorie intake by curbing hunger and cravings. Additionally, the thermic effect of protein—the energy required to digest, absorb, and metabolize protein—is higher than that of carbohydrates and fats, which means your body burns more calories processing protein-rich foods. Good sources of protein include lean meats, poultry, fish, eggs, dairy products, legumes, nuts, and seeds.

**The bad:** There are hardly any downsides to increasing the amount of protein in your diet.

***Is protein necessary?*** Yes. Amino acids are the building blocks of proteins, and nine amino acids are classified as essential because the body cannot produce them on its own and you must obtain them from the foods you eat.

### *The case for increasing protein...*

When losing weight, it's common to lose both fat and muscle mass. However, consuming an adequate amount of protein can help preserve lean muscle mass during weight loss. Muscle tissue is more metabolically active compared to fat tissue. This means that even at rest, muscle tissue requires more energy to maintain itself. Therefore, having more muscle mass increases your basal metabolic rate (BMR), the amount of energy your body needs to perform basic functions at rest.

Improved muscle mass can also improve insulin sensitivity, which means your body is better able to regulate blood sugar levels. Improved insulin sensitivity can lead to better regulation of appetite and energy balance, potentially preventing excess fat storage.

Protein is more filling than carbohydrates or fats, leading to increased feelings of fullness and reduced appetite. This can help control calorie intake by reducing the likelihood of overeating.

Protein has a higher thermic effect compared to carbohydrates and fats, meaning that more energy is required to metabolize protein compared to other macronutrients. This can result in a slightly higher calorie expenditure during digestion and metabolism. This is why, in studies where calories are equated, higher protein diets cause



more weight loss. Example: Let's say you consumed 300g of carbohydrates. The TEF of carbohydrates is roughly 5%.  $300 \times 0.05 = 15$ . Meaning, that if you consume 300g of carbohydrates, roughly 15 calories are used in metabolizing that food, netting you 285 calories to be used or stored. If you consumed 300g of protein with a TEF of 20% ( $300 \times 0.2 = 60$ ), you will have only netted 240 calories to be used or stored. Since the TEF of carbohydrates and fat are roughly the same, if you control for calories and protein, fat loss will be the same. Which studies have shown time and time again.

### ***How much protein should I consume then?***

The recommended protein intake varies based on factors like age, gender, activity level, and overall health. However, a commonly cited guideline for protein intake is around 0.8 to 1 gram of protein per pound of body weight per day for sedentary individuals.

For those who are more physically active or engage in regular strength training, the protein requirements may be higher, typically ranging from 1 to 1.2 grams of protein per pound of body weight per day.

It's essential to note that these are general guidelines, and individual needs may vary. Consulting with a healthcare provider or a registered dietitian can provide personalized recommendations based on your specific circumstances and goals. Additionally, factors such as the quality of protein sources and overall dietary balance are crucial considerations for meeting nutritional needs.

## **FATS**

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**The good:** Fats are a concentrated source of energy and provide insulation and protection for organs. They are also involved in the absorption of fat-soluble vitamins (such as vitamins A, D, E, and K) and the production of hormones. Despite being the most calorie-dense macronutrient, dietary fats can still play a role in weight loss. Including healthy fats in your diet, such as monounsaturated and polyunsaturated fats found in avocados, nuts, seeds, olive oil, and fatty fish, can help promote satiety and keep you feeling full between meals. Additionally, fats slow down digestion, which can help stabilize blood sugar levels and prevent spikes in insulin, a hormone that promotes fat storage.

**The bad:** It's essential to consume fats in moderation, as they are calorie-dense.

***Is fat necessary?*** Yes. Essential fatty acids, such as omega-3 and omega-6 fatty acids, must be obtained from the diet as the body cannot produce them on its own.

### ***The case for lowering fats...***

Fat is the most energy-dense macronutrient, providing 9 calories per gram compared to 4 calories per gram for both carbohydrates and protein. High-fat, calorie-dense foods tend to be easy to overconsume. By lowering fat intake, you can reduce overall calorie consumption, which is essential for weight loss.

High-fat diets, particularly those high in saturated fats, have been associated with insulin resistance, a condition where the body's cells become less responsive to insulin, leading to elevated blood sugar levels and increased fat storage. Lowering fat intake, especially unhealthy fats, can improve insulin sensitivity, which may facilitate weight loss and reduce the risk of type 2 diabetes.

Opt for healthy unsaturated fats found in foods like nuts, seeds, avocados, and fatty fish while limiting intake of saturated and trans fats found in processed foods, fried foods, and fatty cuts of meat.

Ultimately, the key to successful weight loss is creating a calorie deficit, which means consuming fewer calories than you expend. Each macronutrient plays a role in the body's functioning, and a balanced diet typically includes all three in appropriate proportions to meet individual nutritional needs. Finding the right balance of carbohydrates, proteins, and fats that work for your body and lifestyle can help you achieve sustainable weight loss.

## MISCELLANEOUS

Adherence, calories, macros, diet. If you nail these things, you will lose weight. It will take time, but you will lose weight.

You may, however, find yourself in a situation in which weight loss needs to be aggressive. This is likely to occur if you are experiencing pressing health complications that could be treated effectively with weight loss interventions other than lifestyle changes. There are 2 possible interventions: medications, and surgery.

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## MEDICATIONS

There are several medications approved by regulatory agencies such as the FDA (Food and Drug Administration) for weight loss. However, it's important to note that these medications are typically prescribed for individuals who have obesity or overweight with other health conditions and have not been successful with lifestyle changes alone. They should always be used under the supervision of a healthcare provider and combined with diet and exercise for best results.

Weight loss drugs can be classified into several categories based on their mechanism of action and how they affect the body's metabolism and appetite regulation. Here are the main classes of weight loss drugs:

- **Appetite Suppressants/Stimulants:** These drugs work by reducing appetite and increasing feelings of fullness, leading to decreased food intake. They often act on the central nervous system to suppress hunger signals. Examples include:
  - **Phentermine:** A sympathomimetic amine that stimulates the release of norepinephrine, which reduces appetite.
  - **Diethylpropion (Tenuate):** Similar to phentermine, it acts as a sympathomimetic amine to suppress appetite.
  - **Phendimetrazine (Bontril):** Another sympathomimetic amine used to suppress appetite.
  - **Benzphetamine (Didrex):** Stimulates the release of norepinephrine and dopamine to reduce appetite.
- **Fat Absorption Inhibitors:** These drugs work by blocking the absorption of dietary fat in the intestines, thereby reducing calorie intake. They prevent the enzyme lipase from breaking down fat molecules. The most common example is:
  - **- Orlistat (Xenical, Alli):** Inhibits pancreatic lipase, leading to reduced absorption of dietary fat. It is available in both prescription and over-the-counter strengths.

- **Combination Drugs:** Some weight loss medications combine multiple mechanisms of action to enhance their effectiveness. Common combinations include:
  - **Phentermine/Topiramate (Qsymia):** Phentermine suppresses appetite, while topiramate reduces food cravings and increases feelings of fullness.
  - **Bupropion/Naltrexone (Contrave):** Bupropion acts on the brain's reward system to reduce food cravings, while naltrexone blocks opioid receptors involved in food addiction.
- **GLP-1 Receptor Agonists:** These drugs mimic the action of the hormone GLP-1, which regulates appetite and food intake. They can help reduce calorie intake and promote weight loss. Examples include:
  - **Liraglutide (Saxenda):** Originally approved for diabetes treatment, liraglutide has also been approved for weight loss at a higher dose.
  - **Semaglutide (Ozempic):** Another GLP-1 receptor agonist approved for diabetes treatment, with the potential for weight loss.
- **Serotonin and Norepinephrine Reuptake Inhibitors (SNRIs)\*\*:** Some antidepressant medications that act as SNRIs have been found to have weight loss effects. Examples include:
  - **Bupropion (Wellbutrin):** Can help with weight loss by reducing appetite and cravings.
  - **Duloxetine (Cymbalta):** May cause weight loss as a side effect in some individuals.

It's essential to use weight loss medications under the supervision of a healthcare provider, as they can have side effects and may not be suitable for everyone. Again, these drugs are typically prescribed for individuals with obesity or overweight who have not been successful with lifestyle changes alone.

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## SURGERY

Bariatric surgery, also known as weight loss surgery, includes several types of procedures designed to help individuals lose weight by making changes to their digestive system. Some common types of bariatric surgery include:

**Gastric Bypass Surgery (Roux-en-Y Gastric Bypass).** This procedure involves creating a small stomach pouch and bypassing a portion of the small intestine. It restricts food intake and reduces the absorption of nutrients, leading to weight loss.

**Sleeve Gastrectomy (Gastric Sleeve).** In this surgery, a large portion of the stomach is removed, leaving a sleeve-shaped stomach about the size of a banana. This limits the amount of food that can be eaten and helps in reducing hunger hormones.

**Gastric Banding (Laparoscopic Adjustable Gastric Banding).** A silicone band is placed around the upper part of the stomach, creating a small pouch. The band can be adjusted by adding or removing saline solution, which regulates the size of the pouch and the rate of weight loss.

**Biliopancreatic Diversion with Duodenal Switch (BPD/DS)** This surgery involves two steps. First, a portion of the stomach is removed to create a smaller stomach pouch. Then, the small intestine is rearranged to divert bile and pancreatic juices to the distal portion of the small intestine, reducing nutrient absorption.

Biliopancreatic Diversion (BPD). Similar to BPD/DS, this surgery involves removing a large portion of the stomach and rerouting the small intestine to reduce the absorption of nutrients.

Mini-Gastric Bypass Surgery (One Anastomosis Gastric Bypass). This procedure is a simpler and faster version of the traditional gastric bypass surgery, involving creating a long, narrow tube of the stomach and connecting it to the small intestine.

Each type of bariatric surgery has its own advantages, risks, and considerations. The choice of procedure depends on various factors such as the patient's health, weight loss goals, and medical history, and should be discussed thoroughly with a healthcare provider. While lifestyle interventions and medications can help some individuals achieve weight loss, bariatric surgery generally offers the most significant and sustained weight loss outcomes for severely obese individuals. Bariatric surgery is not without risks and requires careful consideration, including potential complications and the need for lifelong lifestyle changes post-surgery.

## LOSE THE WEIGHT

### TRACKING CALORIES

Tracking calories is the most effective way to manage your weight and ensure you're consuming the appropriate amount of food for your goals. There are two ways to do it:

Option 1: Write it down. You can keep a written journal of everything you eat and drink throughout the day, adding up the calories per meal or at the end of the day. This is tedious. It requires you to keep track of the journal, take it with you wherever you go, and write down the calorie content of everything you consume.

Option 2: (which I much prefer) is to use a calorie tracking app on your phone. These apps often have large databases of foods and their nutritional information, making it easy to log your meals and track your calorie intake. Some popular calorie-tracking apps include MyFitnessPal, Lose It!, Cronometer, and MacroFactor. Some of these apps are free and some require a small fee.

These apps have a vast database of foods, including both branded and generic items, making it easy to find and log the foods you eat. This extensive database reduces the time and effort required to track your calorie intake accurately. Most of the apps feature a barcode scanner that allows you to scan the barcode of packaged foods to quickly log their nutritional information. This feature simplifies the process of adding foods to your diary, especially for pre-packaged items with barcode labels.

With the apps, you can log individual meals as well as entire recipes. This feature is particularly useful for those who cook at home and want to track the nutritional content of homemade dishes.

These apps allow you to customize your goals based on factors such as your age, weight, height, activity level, and weight loss or maintenance goals. The app then calculates a target calorie intake and nutrient goals tailored to your specific needs. Tracking calories with a smartphone app allows you to see exactly what you're consuming and can help you identify patterns or areas where you might be consuming excess calories.

I personally use MyFitnessPal. It's free and does everything I need it to do. It "remembers" some of my most commonly consumed foods. Tallying up the calories from a meal takes me about 2 minutes or less in most cases. Regardless of the method you choose, consistency is key when tracking calories. Aim to track your intake consistently over time to get a clear picture of your eating habits and make any necessary adjustments to support your weight loss.

## WAYS TO LOWER CALORIES

You can choose to implement multiple calorie-lowering techniques simultaneously, or just start with one. For example, just eliminating liquid calories from your diet to begin with may substantially lower your daily calorie consumption and initiate weight loss.

There are several ways to reduce calories:

Practice Portion Control: Use smaller plates and bowls to help control portion sizes. Be mindful of serving sizes.

Choose Low-Calorie Foods: Opt for foods that are naturally low in calories, such as fruits and vegetables. Select lean protein sources like chicken, turkey, fish, and legumes.

Cook at Home: Prepare meals at home to have more control over ingredients and cooking methods. Experiment with herbs and spices for flavor instead of relying on high-calorie sauces and dressings. Experiment with meal prepping.

Eat More Fiber: Include high-fiber foods like whole grains, fruits, and vegetables in your diet. Fiber helps you feel full, reducing the likelihood of overeating.

Limit Added Sugars: Reduce the consumption of sugary beverages, candies, and processed foods high in added sugars. Choose water, herbal teas, or other low-calorie beverages.

Limit High-Fat Foods: Choose lean cuts of meat and poultry. Use cooking methods like baking, grilling, or steaming instead of frying. Remember:

- Carbohydrates - Calories per gram: 4 calories
- Proteins - Calories per gram: 4 calories
- Fats - Calories per gram: 9 calories

Be Mindful of Liquid Calories: Cut back on sugary drinks, including soda and sweetened beverages. Be cautious with alcoholic beverages, as they can contribute significant calories.

Snack Wisely: Choose healthy snacks like fruits, vegetables, and nuts. Avoid mindless snacking and be aware of portion sizes for snacks.

Stay Hydrated: Drink water throughout the day, especially before meals. Sometimes, feelings of thirst can be mistaken for hunger.

Practice Mindful Eating: Eat slowly. Pay attention to hunger and fullness cues to avoid overeating.

Remember that it's important to make sustainable changes to your diet rather than extreme restrictions, as overly restrictive diets can be difficult to maintain long-term. Gradual, manageable changes are more likely to lead to lasting success in lowering calorie intake and achieving your weight loss goals.

## MORE TIPS FOR LOWERING CALORIES

### COOKING

Lowering calorie intake while cooking at home can be achieved with some simple adjustments and strategies.

Be mindful of portion sizes when serving meals. Use smaller plates and bowls to help manage portion sizes visually. Aim to fill half of your plate with vegetables, one-quarter with lean protein, and one-quarter with whole grains or starchy vegetables. This is in line with USDA's MyPlate and Harvard's Healthy Plate recommendations.

Reduce the amount of added fats and oils in your cooking by using non-stick pans or cooking sprays instead of butter, oil, or lard. This can significantly lower the calorie content of your dishes while still preventing sticking. Experiment with healthier cooking methods such as steaming, baking, grilling, or sautéing with minimal oil instead of frying. These methods require less added fat and can help cut down on calories.

Cut down on added sugars in recipes by using natural sweeteners like honey, maple syrup, or mashed bananas, or reducing the amount of sugar called for in recipes. You can also try using spices like cinnamon or vanilla extract to enhance sweetness without adding extra sugar.

Pay attention to ingredients that can add a lot of calories to your dishes, such as cheese, creamy sauces, and heavy dressings. Use these ingredients sparingly or look for lighter alternatives. Instead, enhance the flavor of your dishes with herbs, spices, and citrus juices instead of relying on salt, butter, or high-calorie sauces. Fresh herbs and spices can add depth and complexity to your meals without adding extra calories.

### MEAL PREPPING

Meal prepping is a fantastic tool to utilize in your weight loss efforts. It involves preparing meals or ingredients ahead of time, typically in bulk, to have ready-to-eat or easy-to-assemble meals throughout the week. It often involves cooking large batches of food, portioning them out, and storing them in individual containers for quick access. Meal prepping can be an effective strategy for weight loss for several reasons.

By pre-portioning your meals, you can control serving sizes and avoid overeating. This can help you stick to appropriate portion sizes and manage your calorie intake more effectively.

When you prepare your meals in advance, you have more control over the ingredients you use. You can choose nutrient-dense foods like lean proteins, whole grains, and plenty of vegetables while minimizing added sugars, unhealthy fats, and processed foods.

Having healthy, pre-prepared meals readily available can reduce the temptation to grab convenience foods or order takeout, which are often higher in calories, sodium, and unhealthy fats.

Meal prepping can save you time during busy weekdays. Instead of spending time each day planning and cooking meals, you can devote a few hours one day a week to preparing meals for the entire week. This can be especially helpful for people with busy schedules or limited time for cooking.

Knowing that you have healthy meals ready to go can reduce stress and make mealtime more enjoyable. You won't have to worry about what to eat or spend time cooking after a long day at work.

Consistency is key to successful weight loss. Meal prepping helps you stay consistent with your eating habits by providing a structured plan and ensuring that you have healthy options available whenever hunger strikes.

To make meal prepping work for weight loss, plan your meals ahead of time, choose low-calorie foods, and vary your meals to avoid boredom. Additionally, make sure to store your prepped meals properly to maintain freshness and safety. With consistency and dedication, meal prepping can be a valuable tool in your weight loss journey.

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## EATING OUT

Lowering calorie intake while eating out can be challenging, but there are several strategies you can employ to make healthier choices.

Plan ahead. Look up the menu online before you go out to eat and decide on healthier options in advance. Having a plan can help you make better choices when you're faced with a menu full of tempting but calorie-laden dishes. Look for healthier options on the menu such as salads, grilled lean proteins (like chicken or fish), and vegetable-based dishes. Avoid items that are deep-fried, battered, or heavily processed.

Starting your meal with a salad or soup can help fill you up with fewer calories. Opt for dressings on the side and choose broth-based soups over creamy ones to save on calories. Dressings, sauces, and condiments can add a significant number of calories to your meal. Ask for dressings on the side and use them sparingly. Choose vinaigrettes or salsa instead of creamy dressings or sauces.

Don't be afraid to ask for substitutions or modifications to make your meal healthier. For example, ask for grilled or steamed vegetables instead of fries, or request that your dish be prepared with less oil or butter. Avoid adding extra toppings like cheese, bacon, or extra sauces to your meal, as these can quickly increase the calorie content. Stick to the basics and focus on the main components of your dish.

Opt for water, unsweetened tea, or sparkling water instead of sugary drinks or alcoholic beverages, which can be high in calories. If you choose to drink alcohol, do so in moderation.

Restaurant portions tend to be larger than what you might serve yourself at home. Consider sharing an entree with a friend or asking for a half-portion or a smaller plate. If you're served a large portion, consider asking for a to-go box at the beginning of the meal and set aside a portion to take home before you start eating. This can help prevent overeating.

Slow down and savor your food. Eating more slowly can help you recognize when you're full and prevent overeating. Take the time to enjoy your meal and pay attention to your hunger and fullness cues.

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## PRACTICE STIMULUS CONTROL

Stimulus control techniques involve modifying your environment to minimize cues or triggers that may lead to unhealthy eating habits or behaviors. Implementing stimulus control techniques can help you create an environment that supports your weight loss goals. Here are some effective strategies:

Keep unhealthy foods out of sight. Store unhealthy snacks or treats in places that are less visible or less accessible, such as in opaque containers at the back of cabinets or in the pantry. This reduces the likelihood of mindless snacking on calorie-dense foods.

Create barriers to unhealthy choices. Make it more difficult to indulge in unhealthy behaviors by creating barriers or obstacles. For example, if you tend to snack while watching TV, consider keeping your snacks in another room or portioning them out before sitting down to watch.

Fill your kitchen with nutritious, whole foods that align with your weight loss goals. Keep plenty of fruits, vegetables, lean proteins, whole grains, and low-calorie snacks readily available so that you're more likely to reach for healthy options when hunger strikes.

Stick to regular meal times and avoid eating outside of designated meal times whenever possible. This helps regulate hunger cues and prevents mindless snacking or grazing throughout the day. Plan your meals and snacks in advance to avoid impulsive eating decisions. Having a structured meal plan can help you stay on track with your calorie goals and make healthier choices throughout the day.

Minimize exposure to environments or situations that trigger cravings or temptations. For example, if you tend to overeat at parties or social gatherings, plan ahead by eating a healthy meal before you go or bringing your own nutritious snacks to curb temptation.

Surround yourself with supportive friends, family members, or online communities who encourage and reinforce your weight loss efforts. Having a strong support system can help you stay motivated and accountable for your goals.

By implementing these stimulus control techniques, you can create an environment that promotes healthy eating habits and supports your weight loss journey.

## TRACKING PROGRESS

How do you know if your weight loss efforts are working? Well, you have to track your progress of course. “What gets measured, gets managed.” Measuring weight loss can be done in various ways, depending on personal preference, convenience, and the level of detail desired. Here are some common methods:

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### THE SCALE

Using a basic bathroom scale is one of the simplest ways to track weight. Record your weight at the same time of day (e.g., morning, before breakfast) for consistency. You can weigh daily, and calculate the average at the end of the week. Or, you can simply weigh yourself weekly, biweekly, or however often you would like.

If you weigh yourself daily, be aware that your weight will fluctuate based on different factors.

Changes in hydration levels can cause noticeable fluctuations in weight. Factors such as sodium intake, hormonal changes, and the amount of water consumed can affect water retention. A particularly large or salty meal can also lead to temporary weight increases due to water retention. Certain medications can cause fluid retention or changes in appetite, which may affect weight as well.

Consuming meals and snacks throughout the day can add weight temporarily due to the mass of food in the digestive system. Weight tends to be lowest in the morning after emptying the bladder and before eating or drinking. Throughout the day, weight can increase due to food and fluid intake.



It's essential to understand that these fluctuations are normal and often temporary. Tracking long-term trends rather than daily fluctuations is a more accurate way to monitor weight changes

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## BODY COMPOSITION

Bodyweight is just one measurement you can track. Body composition may be more important to you than body weight. There are several methods to track body composition, each with its advantages and limitations.

Body mass index (BMI) is a simple calculation based on a person's height and weight. While it's easy to calculate, BMI doesn't directly measure body fat and may not be accurate for individuals with a high muscle mass.  $BMI = \text{weight (kg)} / (\text{height (m)})^2$

You can also measure your body fat percentage. This method measures the proportion of fat mass to lean mass in the body. It can be measured using various techniques such as bioelectrical impedance analysis (BIA), skinfold calipers, dual-energy X-ray absorptiometry (DEXA), hydrostatic weighing (underwater weighing), and air displacement plethysmography (Bod Pod). BIA scales are relatively accessible and easy to use at home, while methods like DEXA and Bod Pod provide more accurate results but require specialized equipment and may be more costly.

Waist-to-Hip Ratio (WHR) compares the circumference of the waist to that of the hips. It's used as an indicator of abdominal fat distribution and overall health risk. A WHR higher than 0.85 for women or 0.90 for men indicates an increased risk of developing cardiovascular diseases and other health issues. Waist-to-hip ratio (WHR) is considered a good measurement for several reasons. Research has consistently shown that individuals with higher waist-to-hip ratios, indicating more weight around the waist relative to the hips, are at an increased risk of various health problems, including cardiovascular diseases, type 2 diabetes, and certain cancers. This association is often stronger than the relationship between body mass index (BMI) and these health risks. Calculating WHR is relatively simple and requires only two measurements: waist circumference and hip circumference. It does not require complex equipment or specialized training.

It's important to note that no single method is perfect, and each may have its limitations. It's often recommended to use multiple methods in combination for a more comprehensive assessment of body composition changes over time. Additionally, consistency in measurement techniques and conditions (e.g., time of day, hydration status) is crucial for accurate tracking. Consulting with a healthcare professional or certified fitness expert can also provide guidance on selecting the most appropriate methods for individual needs and goals.

## WHAT TO EXPECT IN TERMS OF WEIGHT LOSS?

The rate at which you should aim to lose weight can vary depending on factors such as your starting weight, body composition, overall health, and individual goals. However, a safe and sustainable rate of weight loss is generally considered to be 1-2 pounds per week.

It's often cited that a pound of fat consists of 3500 calories. So, if you cut 500 calories from your diet every day, by the end of the week you will have lost 1 pound of body fat. (500 Cal x 7 days in a week = 3500). If you reduce your calorie intake by 1000, you would presumably lose 2 pounds per week, and so on. Now, of course, you don't just lose fat when you diet. It's a mixture of body fat, lean body mass, and water. We'll get more into that later.

Which brings me to my next point. How much should you cut your calories when trying to lose weight?

Well, there's no right answer here. It depends on your goals. But in large, one could safely say that decreasing by 250 calories would be a conservative approach. Cutting by 1000 calories per day or more would be considered aggressive. Cutting anywhere between 500 and 750 would be advisable.

Losing weight too quickly can be unhealthy and unsustainable, potentially leading to muscle loss, nutrient deficiencies, and a higher likelihood of regaining weight. On the other hand, losing weight too slowly might feel discouraging and can make it harder to stay motivated.

It's also important to focus on making long-term lifestyle changes rather than just short-term weight loss. This is where designing and accomplishing your process goals becomes paramount.

How much weight you will lose will be determined by a multitude of factors. Adjusting to a calorie deficit and losing weight involves intricate feedback systems, with variations among individuals likely influenced by various undefined genetic factors. These differences also stem from varying reactions in neurohormonal processes, such as metabolic efficiency, non-exercise activity thermogenesis, food-induced thermogenesis, and even the gut microbiome. This doesn't mean CICO doesn't work. Only that the equation may have to be adjusted over time.

## LONG TERM MAINTENANCE

All diets that create a calorie deficit work. If you can stick to them.

Many, but not all, of the long-term studies done on weight loss indicate there is the potential for weight regain. Individuals that successfully kept their weight off have a few things in common. They:

1. Increase their physical activity (NEAT and/or exercise).
2. Follow a lower fat diet.
3. Practice self-monitoring, or utilize some measure of accountability. This can be regular follow ups with a medical professional, regular weigh-ins, consistently logging calories, or obtaining social support from weight loss groups.

## EXERCISE

### WORKING UP AN APPETITE

Physical activity, including exercise, burns calories. It can and should be utilized as part of your weight loss efforts. When studies compare no intervention groups to groups practicing caloric restriction, to groups practicing caloric restriction and exercising, the groups that include caloric restriction and exercise always yield greater results. This should be no surprise. This group is decreasing the calories-in while simultaneously increasing the calories-out of the CICO equation.

With that said, the adage "you can't outrun your fork" still holds.

When studied, groups that only practice a calorie restriction compared to groups that only increase exercise, are more successful at losing weight. This is because exercise in itself often leads to you "working up an appetite." Working up an appetite means doing physical activity or engaging in some sort of effort that increases your hunger. When you're physically active or exerting yourself, your body burns energy, and as a result, you might feel hungrier than usual. If you're not minding your calories, you will likely just eat more food, increasing your calories, and not losing weight.

Albeit, if calorie restriction *is* maintained, exercise does help with weight loss. It not only burns calories but builds muscle. Muscle tissue is metabolically active, meaning it burns more calories at rest compared to fat tissue. Therefore, having more muscle mass can boost your resting metabolic rate, leading to more calories burned even when you're not actively exercising. Building muscle can also enhance your body's ability to regulate blood sugar levels and improve insulin sensitivity. This can help prevent insulin resistance, a condition associated with obesity and type 2 diabetes.

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## BODYWEIGHT SET POINTS

Exercise helps you push through bodyweight set points.

The body-weight set point is a concept in physiology and weight management that refers to the weight range at which an individual's body is inclined to maintain over the long term, given the person's genetics, metabolism, lifestyle, and other factors. It is believed that the body has a natural tendency to defend this weight range and resist significant and sustained changes in either direction.

You may not have noticed it, but if you think back, you can probably identify your set points. Here are mine: 250, 220, 200, and 190 lbs.

The idea behind the body-weight set point is that when a person's weight moves away from this range, certain physiological mechanisms come into play to try to restore the weight to the set point. For instance, if someone loses weight below their set point, their metabolism might slow down, hunger hormones may increase, and energy expenditure may decrease—all of which work to encourage weight gain and return the body to its established set point.

Conversely, if someone gains weight above their set point, the body may increase metabolic rate, reduce appetite, and increase energy expenditure to try to bring the weight back down to the set point range.

The body-weight set point is not a rigid, fixed number but rather a range of weights that the body seems to naturally gravitate toward. For people trying to manage their weight, understanding the body-weight set point can be helpful in recognizing that weight loss or weight gain can be challenging, as the body tends to resist drastic changes.

***But Dr. Merritt, you always say weight loss comes down to “calories in vs. calories out.” Can’t I just keep lowering calories for additional weight loss?***

Yes, you can, but here’s why it’s not optimum. When you consume fewer calories than your body needs to maintain its current weight and energy expenditure, the body will respond and adapt in various ways to the decreased calorie intake. This response is part of the body's survival mechanism to help maintain essential functions and energy balance. Here are some common responses to decreased calorie intake:

- The body may decrease its metabolic rate in response to decreased calorie intake. This means it burns fewer calories at rest and during daily activities, conserving energy to maintain vital functions.
- With a calorie deficit, the body will start to use its stored energy reserves, primarily in the form of fat, to meet its energy needs. This can lead to weight loss. However, it's essential to note that a significant calorie deficit may also result in the breakdown of lean tissue (muscles), which can be detrimental to overall health.

- Caloric restriction can affect hormone levels in the body. For example, the body may produce more cortisol (the stress hormone), which can impact metabolism and potentially lead to muscle loss and fat storage.
- The body may increase hunger signals and cravings for high-calorie foods when it detects a significant calorie deficit. This is a survival mechanism to encourage increased food intake and restore energy balance.
- Decreased calorie intake can lead to reduced energy levels and feelings of fatigue. Some individuals may experience a decrease in their activity levels when consuming fewer calories. This decrease in physical activity can further contribute to reduced calorie expenditure.

It's important to note that while short-term calorie deficits may be used for weight loss purposes, long-term and severe calorie restriction can have negative effects on overall health. Prolonged calorie deficits may lead to nutrient deficiencies, decreased muscle mass, hormonal imbalances, and other health issues.

While there is ongoing research on the topic, exercise is believed to play a role in helping to reset body-weight set points by:

- Increased metabolism: Exercise can help boost your resting metabolic rate, which is the number of calories your body burns at rest. A higher metabolic rate can contribute to better weight management.
- Muscle mass preservation: Exercise, especially resistance training, can help preserve and build muscle mass. Muscle tissue burns more calories than fat tissue, even at rest, which can aid in weight management.
- Appetite regulation: Some studies suggest that exercise can help regulate appetite hormones, leading to better control over food intake and potentially influencing body-weight set points.
- Improved insulin sensitivity: Regular physical activity can enhance insulin sensitivity, allowing the body to better manage blood sugar levels and potentially impact fat storage.

It's important to note that while exercise can be beneficial for weight management and overall health, it is just one piece of the puzzle. If someone is trying to reset their body weight set point, a comprehensive approach that includes a balanced diet, regular exercise, adequate sleep, stress management, and, gradual and sustainable changes to lifestyle habits is typically recommended for long-term success.

## COMMON BARRIERS

If weight loss was easy. Everyone could do it.

But it's not. As of January 2022, the prevalence of overweight and obesity in the United States was quite high. According to the Centers for Disease Control and Prevention (CDC), in 2017-2018, approximately 73.6% of adults aged 20 and over were overweight or obese. Around 42.4% of adults were classified as obese. Approximately 31.2% of adults were classified as overweight.

There are several common barriers that individuals may encounter when attempting to lose weight. These barriers can vary from person to person but often include:

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#### KNOWLEDGE.

Lower levels of education are often associated with poorer health outcomes, including obesity. Limited health literacy can result in a lack of understanding about proper nutrition, exercise, and weight management techniques. Higher education levels may correlate with access to better health information and resources for weight loss. Hopefully, after you've read this book, knowledge will no longer be a barrier.

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#### RESOURCES.

There is no greater determinant to health, than one's zip code. Social determinants of health (SDOH) are conditions and resources available in the environments where people are born, live, learn, work, and play. These determinants can significantly impact an individual's ability to engage in behaviors conducive to weight loss.

Individuals with lower socioeconomic status may have limited access to resources such as healthy foods, safe places for physical activity, and healthcare services. Financial constraints may make it difficult to afford gym memberships, fresh produce, or other weight loss support services. High-stress environments associated with low SES can lead to emotional eating and difficulty adhering to weight loss plans.

The availability of parks, sidewalks, and recreational facilities can influence opportunities for physical activity. The food environment, including the presence of grocery stores with fresh produce versus fast food outlets, can affect dietary choices. Living in food deserts—areas with limited access to affordable and nutritious food—can contribute to unhealthy eating habits and weight gain.

Limited access to healthcare services, including preventive care and weight management programs, can impede weight loss efforts. Insurance coverage and affordability of weight loss treatments and medications may vary based on socioeconomic status.

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#### OTHER PEOPLE.

Cultural preferences and traditions may influence dietary habits and attitudes toward physical activity. Social norms within communities can either support or hinder healthy behaviors related to weight loss. Peer influence and social networks may impact motivation and adherence to weight loss efforts. Having friends and family on your side when you're trying to lose weight is a huge asset. When they're not, it can be a major drawback.

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#### WORK/TIME.

The ability to plan, cook, prep, and exercise all requires time. Work schedules, job stress, and lack of flexibility may interfere with opportunities for exercise and meal planning. Shift work and irregular hours can disrupt sleep patterns, which in turn can affect weight regulation.

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#### OUR OWN PHYSIOLOGY.

The body regulates several physiological processes very closely to maintain internal balance and optimal functioning. Some of the most tightly regulated physiological parameters include body temperature, blood pH, oxygen levels, and electrolyte balance. Dysfunction in any of these regulatory mechanisms can lead to serious health problems and even death.

The body cares a little less about regulating energy expenditure. After all, it can simply store the extra energy as fat to be used later on if need be. Which brings us to one of the biggest sticking points against weight loss. Our own physiology. It's geared for weight gain due to evolutionary adaptations that helped our ancestors survive in environments where food was often scarce and energy expenditure was high.

Humans, like many other animals, have evolved mechanisms to efficiently store excess energy as fat during times of food abundance to serve as a reserve during times of scarcity. This adaptation allowed our ancestors to survive periods of famine by drawing on stored fat for energy.

Evolutionarily, humans have developed a preference for calorie-dense foods, such as those high in fats and sugars. This preference likely evolved as a survival mechanism to ensure the intake of sufficient energy when food was available, helping to prevent starvation during times of scarcity. Our bodies are designed to efficiently extract energy from food and store it as fat for future use. This metabolic efficiency was advantageous for our ancestors, allowing them to thrive in environments where food sources were unpredictable and energy expenditure was high.

While our ancestors were often physically active due to the demands of hunting, gathering, and other survival activities, modern lifestyles are much more sedentary. Our physiology, however, remains adapted to conditions where physical activity is the norm. As a result, the combination of abundant, calorie-dense food and reduced physical activity can lead to weight gain in modern society.

While these physiological adaptations were beneficial for survival in the past, they can contribute to obesity and related health problems in environments where food is abundant and physical activity is limited.

## MYTHS

Now that you know how weight loss works. You can easily begin to dispel the many myths about weight loss.

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### SPECIAL DIETS.

By now, you can begin to understand why there is no such thing as a special weight loss diet. The caloric density of the foods you eat, and how much of it you eat, determines weight loss or gain.

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### GRAZING AND GORGING

Grazing and gorging refers to meal frequency, or how often you eat.

Grazing involves eating small amounts of food frequently throughout the day, often every 2-3 hours. This approach typically involves consuming several small meals and snacks rather than a few larger meals. Advocates of grazing argue that it can help maintain stable blood sugar levels, prevent excessive hunger, and provide a steady source of energy throughout the day. Grazing may also be favored by individuals who have difficulty consuming large meals at once or who prefer to eat smaller portions more frequently.

Gorging, on the other hand, involves consuming large amounts of food in a short period, often through one or two large meals each day. This approach typically involves longer periods of fasting between meals, such as intermittent fasting protocols where individuals fast for 16-24 hours and then consume all their calories within a shorter eating window. Advocates of gorging argue that it can promote fat loss, improve metabolic health, and simplify meal planning and preparation by reducing the number of meals consumed each day. Gorging may also be

avored by individuals who prefer larger, more satisfying meals or who have busy schedules that make frequent eating impractical.

Some research suggests that meal frequency and timing can affect feelings of hunger and satiety, which may in turn influence overall calorie intake. For example, some people find that eating smaller, more frequent meals helps them control hunger and avoid overeating, while others may prefer larger, less frequent meals. Experimenting with different meal patterns can help individuals find what works best for them in terms of managing hunger and satiety.

Whether you graze or gorge, is your personal preference. Ultimately, weight loss comes down to maintaining a caloric deficit, where you consume fewer calories than you expend. Whether you achieve this deficit through three large meals a day or six smaller meals spread throughout the day does not make a significant difference in weight loss if the total caloric intake is the same.

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## THE FAT-BURNING ZONE

In general, the body prioritizes the use of macronutrients for fuel in the following order:

1. **Carbohydrates:** When carbohydrates are consumed, they are broken down into glucose, which is the body's primary and preferred source of energy. Glucose can be readily used by cells for energy production, and excess glucose is stored in the liver and muscles as glycogen for later use.
2. **Fats:** When carbohydrate stores are depleted, the body turns to stored fat for energy. Fats are broken down into fatty acids and glycerol through a process called lipolysis. Fatty acids can be used directly by many cells for energy production, while glycerol can be converted into glucose through a process called gluconeogenesis to provide energy for cells that require glucose.
3. **Proteins:** Proteins are typically considered the body's last resort for energy production. When both carbohydrate and fat stores are depleted, the body may break down proteins into amino acids through a process called proteolysis. These amino acids can be used to produce glucose through gluconeogenesis or can be directly metabolized for energy. However, using protein as a primary energy source is generally less efficient and can lead to loss of muscle mass if prolonged.

The order in which macronutrients are used for fuel by the body can vary depending on several factors, including the individual's metabolic state, activity level, and overall dietary composition. It's important to note that the body is constantly using a combination of these macronutrients for energy, even under normal circumstances.

***My friend says if I cut out carbs and do steady-state cardio, my body will switch to burning fat for fuel. Is this true?***

This myth of getting into a fat-burning zone, unfortunately still gets perpetuated.

It's essential to distinguish between "fat burning" and "fat loss."

"Fat burning" refers to the process by which the body uses stored fat as a source of energy. This can occur during periods of physical activity, particularly during aerobic exercise when the body relies on fat stores to fuel prolonged, low-to-moderate intensity activities.

“Fat loss”, on the other hand, refers to the reduction in the amount of body fat over time. Fat loss occurs when the body is in a state of negative energy balance, meaning you consume fewer calories than you expend. This can result from a combination of dietary changes (reducing calorie intake) and increased physical activity (increasing calorie expenditure). When the body is in a calorie deficit, it mobilizes stored fat for energy, leading to fat loss over time.

Think of it this way. You’re a gas tank. Carbs and fats are your gasoline. Overfilling the gas tank with either source will lead to weight gain. If you switch from carbohydrate gasoline to fat gasoline as your fuel, your engine will switch from utilizing carbohydrates to fat to run your engine (fat burning). This fat burning alone does not guarantee fat loss if overall energy balance is not achieved.

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## IT’S ALL GENETICS

Genetics plays a significant role in obesity, but it's essential to understand that it's not the sole determinant. The interplay between genetic predisposition and environmental factors influences an individual's risk of developing obesity.

Several studies have estimated the heritability of obesity, which refers to the proportion of variation in obesity traits that can be attributed to genetic factors. These studies have found that genetics can account for approximately 40% to 70% of the variability in body weight and body mass index (BMI) among individuals.

Specifically, genetic factors can influence various aspects related to obesity, including metabolic rate, appetite regulation, fat distribution, and hormonal regulation.

While genetics plays a role in predisposing individuals to obesity, environmental factors such as diet, physical activity, and cultural influences play crucial roles in the development of obesity. These environmental factors can interact with genetic predispositions, leading to variations in obesity prevalence among populations and individuals.

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## IT’S ALL HORMONES

Hormones play a crucial role in regulating various physiological processes related to weight loss, including metabolism, appetite, fat storage, and energy expenditure. Hormonal imbalances can significantly affect an individual's ability to lose weight and maintain a healthy body composition. Some of the key hormones involved in weight regulation include:

1. **Insulin:** Insulin is a hormone produced by the pancreas that regulates blood sugar levels and facilitates the uptake of glucose into cells. Insulin resistance, a condition in which cells become less responsive to insulin, can lead to elevated insulin levels and promote fat storage, making it more difficult to lose weight.
2. **Leptin:** Leptin is a hormone produced by fat cells that helps regulate appetite and energy balance by signaling to the brain when you've had enough to eat. Leptin resistance, where the brain becomes less responsive to leptin signals, can disrupt appetite regulation and contribute to overeating and weight gain.
3. **Ghrelin:** Ghrelin is known as the "hunger hormone" because it stimulates appetite and promotes food intake. Ghrelin levels typically rise before meals and decrease after eating. Imbalances in ghrelin levels can affect appetite control and may contribute to overeating and weight gain.
4. **Thyroid Hormones:** Thyroid hormones, including thyroxine (T4) and triiodothyronine (T3), play a crucial role in regulating metabolism and energy expenditure. Hypothyroidism, a condition characterized by an underactive



thyroid gland, can lead to a slowed metabolism and weight gain, while hyperthyroidism, an overactive thyroid gland, can cause weight loss and increased appetite.

5. Cortisol: Cortisol is a stress hormone produced by the adrenal glands that helps regulate metabolism, immune function, and the body's response to stress. Chronic stress and elevated cortisol levels have been associated with increased appetite, cravings for high-calorie foods, and abdominal fat accumulation.

6. Estrogen and Testosterone: Sex hormones such as estrogen and testosterone can influence body composition and metabolism. Imbalances in these hormones, such as estrogen dominance or low testosterone levels, may affect fat distribution, muscle mass, and metabolic rate.

While hormones can influence weight loss, it's essential to recognize that weight management is multifactorial, and hormonal imbalances are just one piece of the puzzle. Adopting a calorie-restricted diet, engaging in regular physical activity, managing stress, getting adequate sleep, and addressing underlying health conditions are all important factors for achieving and maintaining a healthy weight.

## FUN FACTS

### ***Where does your weight go when you lose it?***

Most assume, as I did, that it gets “burned off.” Maybe as heat? It’s actually simpler than that.

You are a \_\_\_\_\_-based life form. Answer: Carbon.

What do you breathe in? Answer: Oxygen (O<sub>2</sub>)

What do you breathe out? Answer: Carbon dioxide (CO<sub>2</sub>)

A significant portion of weight loss is expelled from the body as carbon dioxide (CO<sub>2</sub>) when you exhale. When your body breaks down fat for energy, the carbon atoms are released as CO<sub>2</sub> and exhaled from the lungs. This process occurs during aerobic metabolism, such as when you're exercising or even at rest.

Some weight loss occurs through excretion of waste products via urine and feces. Metabolized fat and other waste products are eliminated from the body through the digestive system. Small amounts of weight are lost as metabolic byproducts, such as urea, which is formed when the body breaks down proteins. Urea is excreted primarily through urine.

Here are some more interesting facts about weight loss:

**Fat Cells Don't Disappear.** When you lose weight, your fat cells shrink but don't disappear entirely. They can expand again if you regain weight.

**Losing Weight Changes Your Taste Buds.** As you lose weight, your taste preferences can change. Some people find they develop a preference for healthier foods while finding overly sweet or fatty foods less appealing.

**Your Gut Bacteria Influence Weight Loss.** The composition of bacteria in your gut (microbiome) can affect your weight. Research suggests that having a diverse microbiome with a balance of beneficial bacteria may support weight loss.

**Chewing Gum Can Suppress Appetite.** Chewing sugar-free gum can help reduce hunger and cravings, making it a simple tool for weight management.

**Spicy Foods Can Boost Metabolism.** Certain spices, such as chili peppers, contain compounds that can temporarily increase metabolism and promote calorie burning.

**Laughter Burns Calories.** Laughing not only improves mood but also burns a small number of calories. So, watching a funny movie or spending time with friends who make you laugh could indirectly support your weight loss journey.

## PULLING IT ALL TOGETHER

1. Set your goals. Make process and progress goals that are specific, measurable, attainable, relevant, and time-bound.
2. Find out what your TDEE is. Consume on average 250-750 calories less than your TDEE to lose weight.
3. Focus on consuming enough good quality protein, about 1g per pound of LBM or body weight.
4. Fill in the other macronutrients as you see fit, staying within a calorie deficit.
5. Consider exercise or increasing physical activity to aid in your weight loss efforts.
6. Track your weight loss and/or measurements over time. Adjust your deficit based on your specific goals.

As you close this book, remember that the journey to weight loss is not just about shedding pounds; it's about reclaiming your health, happiness, and confidence. Embrace the small victories along the way, celebrate your progress, and forgive yourself for setbacks (they will happen, and this is normal). Stay committed to the habits and lifestyle changes that have brought you this far, knowing that each step forward brings you closer to your goals. You possess the strength, determination, and resilience to transform your life. Keep believing in yourself, keep pushing forward, and remember: your journey doesn't end here—it's just the beginning of a healthier, happier you.

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