



Lakeland Health & Wellness

Ultimate Guide to Never Paying to Lose Weight Again

Pursue longevity through
health and wellness. -
Encouraging the pursuit of
a long life through
prioritizing health and
wellness.

Start Today

Longevity
Discover the tools to
nurture your well-being and
maintain lasting health

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WHAT IS SEMAGLUTIDE

Semaglutide is a medication that works in a few ways to help with weight loss and blood sugar management:

Mimics a Hormone

Semaglutide mimics the effects of the GLP-1 hormone, which is released in the gut after eating.

Increases Insulin

Semaglutide helps the pancreas release insulin, which moves sugar from the blood into cells.

Slows Digestion

Semaglutide slows down the movement of food through the stomach, which can help you feel full and reduce appetite.

Acts On The Brain

Semaglutide acts on the brain's appetite centers to promote a sense of fullness and reduce food intake.

Reduces glucagon release

Semaglutide reduces the release of glucagon, another pancreatic hormone that raises blood sugar levels.

Semaglutide is approved for weight loss under the brand name Wegovy. The typical dose is 2.4 milligrams, administered weekly as a subcutaneous (under the skin) self-injection.



SUBLINGUAL ORGANIC METHYCOBALAMIN B12 VS B12 SHOTS

Sublingual vitamin B12 methylcobalamin and vitamin B12 injections are both effective ways to increase vitamin B12 levels in the body:

Sublingual

Methylcobalamin is an active form of vitamin B12 that's more easily absorbed and stays in the body longer than other forms. Some say that sublingual supplements are more effective because they bypass the liver's filtration system and digestive juices. Comparing the sublingual method to vitamin B12 injections, research found that taking B12 under the tongue had a higher absorption rate, making it a better option (Bensky, 2019).

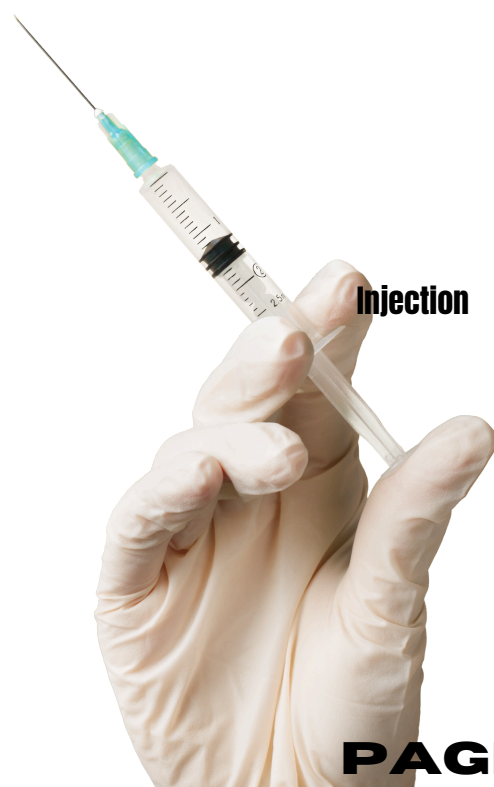
Several research studies note that Vitamin B12 aids in the treatment tolerance with GLP-1 agonists. Two of the most common adverse side effects of Semaglutide are nausea and Hypophagia. These reactions have been illustrated to be significantly reduced when employed in conjunction with Vitamin B12.

Injections

A medical professional administers these shots intramuscularly, directly into the muscle and blood. However, injections are probably not necessary if you don't have a vitamin B12 deficiency.



Sublingual



Injection

Paleo Diet

Recommendations vary among paleo diets promoted in books and online. In general, paleo diets follow these rules.

What to eat

- Fruits
- Vegetables
- Nuts and seeds
- Eggs
- Lean meats, especially grass-fed animals or wild game
- Fish, especially those rich in omega-3 fatty acids, such as salmon, mackerel and albacore tuna
- Oils from fruits and nuts, such as olive oil or walnut oil

What to avoid

- Grains, such as wheat, oats and barley
- Legumes, such as beans, lentils, peanuts
- Dairy products, such as milk and cheese
- Refined and added sugar
- Added salt
- Starchy vegetables, such as corn, jicama, peas and white potatoes
- Highly processed foods, such as chips or cookies

A typical day's menu

- Breakfast. Broiled salmon and cantaloupe.
- Lunch. Salad made with romaine, carrot, cucumber, tomatoes, avocado, walnuts and lemon juice dressing.
- Dinner. Lean beef sirloin tip roast; steamed broccoli; salad made with mixed greens, tomatoes, avocado, onions, almonds and lemon juice dressing; and strawberries for dessert.
- Snacks. An orange, carrot sticks or celery sticks.



Results

In general, a paleo diet has many features of recommended healthy diets. Common features the paleo diet has include the emphasis on fruits, vegetables, lean meats and the avoidance of processed foods. But there is limited research on paleo diets compared with studies of balanced diets with more varied food groups.

Most studies of paleo diets included small numbers of people. Also, they only lasted from a few weeks to a few months. The definitions of the diet also vary from one study to another. So it's hard to say for sure what people can expect, especially over time.

In general, short-term, small studies suggest a paleo diet might help manage:

- Weight loss
- Blood pressure
- Cholesterol
- Triglycerides

One large study looked at the benefits of self-reported, long-term dietary patterns in young adults from Spain. The researchers found that the paleo diet was linked to lower heart disease, or cardiovascular, risk factors. The lower risk mostly came from avoiding highly processed foods, such as chips and candy, and eating lots of fruits and vegetables.

Keto Diet Food List

For Print and Use.

Best: Foods that contain less than 3 grams of net carbs per 100 grams of food.

Good: Foods that contain 3-6 grams of net carbs per 100 grams of food.



Produce area

Best:

- Lettuce (Boston, butter, endive, field greens, iceberg, matcha, romaine, and watercress)
- Greens (collard, kale, mustard, spinach, Swiss chard, and turnip)
- Asparagus, avocados, bok choy, celery, eggplant, herbs, kohlrabi, mushrooms, radishes, rapini (broccoli raab), tomatoes, and zucchini

Good:

- Artichokes, broccoli, broccolini, Brussels sprouts, cabbage, cauliflower, cucumbers, fennel, green beans, jicama, okra, snap peas, snow peas, and turnips
- Blackberries and raspberries

Meat-fish-seafood counters

Best:

- Beef, chicken, game, lamb, pork, and veal
- Bacon, hotdogs*, organ meats, and sausage
- Fatty fish and white fish
- Crab, lobster, mussels, octopus, oysters, scallops, shrimp, and squid

Deli counter

Best:

- Sliced chicken, corned beef, ham, pancetta, pastrami, prosciutto, roast beef, speck, and turkey
- Sliced chorizo, pepperoni, salami, and soppressata
- Prepared chicken salad*, egg salad*, and tuna salad*

Good:

- Sliced cheese
- Bologna and mortadella

Dairy case

Best:

- Butter and ghee

- Heavy cream
- Softer cheeses (blue, buffalo mozzarella, brie, camembert, colby, cream cheese, goat, gouda, muenster, provolone, and Swiss)
- Eggs

Good:

- Harder cheeses (cheddar, feta, havarti, mozzarella, parmesan, and pepper jack)
- Full fat crème fraîche, cottage cheese, Greek yogurt (plain), mascarpone, ricotta, and sour cream
- Whole milk

The rest of the store

Best:

- Avocado oil, cocoa butter, coconut oil, nut oils, and olive oil
- Duck fat, lard, schmaltz (chicken fat), and tallow
- Canned fish or seafood (anchovies, crab, salmon, sardines, and tuna)
- Canned or jarred olives* and sauerkraut
- Hot sauce*, mayonnaise*, mustard*, and vinegar*
- Bouillon cubes and broth
- Dried herbs, psyllium husk powder, and spices
- Pork rinds* and parmesan crisps
- Club soda, coffee, tea, and unsweetened cold brewed coffee or iced tea

Good:

- Brazil nuts, macadamia nuts, pecans, and pili nuts
- Seeds (chia, flax, hemp, and pumpkin)
- Beef jerky* and meat bars*
- Canned coconut milk
- Artichoke hearts, hearts of palm, pickles*, pizza sauce*, tomato sauce*, and soy sauce*
- Cold brewed Bulletproof coffee

* Be sure to check label and avoid brands with unwanted sugars and starch

SNACK ON FITNESS

The next time you find yourself creeping towards the pantry in the evening after dinner looking for some crunchy munchies. Break the cycle! Instead of eating a snack, try snacking on Fitness. Just 10 simple air squats, 10 simple deep breaths with an overhead arm raise will get you the same dopamine release that your brain and your body are looking for when you're craving a snack at night. If you need to be careful put a little seat or stool behind you and do 10 slow stand up and sit downs engaging your core engaging those big quad muscles.



Squats are a fantastic lower body workout that work your glutes, hamstrings, and quadriceps. Just 10 of these will increase blood flow, tone your lower body, and help you fight sugar cravings.

- 10 air squats
- 10 overhead arm raises with a deep inhale and exhale

Snacking on Fitness will get you the same dopamine release your brain's looking for.



GUIDE TO BREATHWORK

WHY IS IT IMPORTANT?

This technique is great because its portable. You can utilize it anywhere you go. This 8-12 minute routine can be done on airplanes, in hotel rooms, or anywhere that you travel.

Breathing is scientifically linked to:

- 1.Reduce Stress**
- 2.Reduce symptoms of anxiety**
- 3.Improved Sleep**
- 4.Boost Mood**
- 5.Improve energy**
- 6.Improve immunity**
- 7.Improve focus and concentration**
- 8.Better Energy**
- 9.Elevated Emotions**

The average person only uses around one-third of their lung capacity, and they hardly ever exhale in a way that eliminates pollutants completely. Did you know that our subconscious breathing patterns frequently correspond with how we are feeling? Different breathing patterns correspond to different emotional states. Our nervous system can be stimulated and calmed by breathing. It has the power to both relax and wake us.

Top athletes, our finest special forces, and health-conscious biohackers use breathwork regularly to clear their brains, get ready for performance, or calm their nervous systems before bed or after strenuous exercise.

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HOW TO DO IT

- Sit or lie down comfortably on a flat surface.
- NEVER DO THIS WHILE DRIVING OR STANDING.
- Place one hand on your stomach and the other on your chest.
- Slowly inhale through your nose. Feel your stomach push against your hand as you breathe in.
- Exhale through your mouth, allowing your stomach to relax as you do so.
- Repeat these steps three times and you're ready to start.

WEEK 1

1. Start with 5 deep breaths.
2. At the end of breath 5, exhale and hold your breath for 30 seconds (if you can't last 30 seconds it's OK).
3. Then inhale as deep as possible.
4. At the end of the inhale, hold your breath for 30 seconds (it's also OK if you can't hold for 30 seconds here either, just go as long as you comfortably can).
5. Then exhale.
6. Start over at #1 with 5 deep breaths.
7. REPEAT THIS SEQUENCE THREE TIMES.

WEEK 2

Add 5 breaths to each round, targeting 3 rounds of 10 deep breaths.

WEEK 3

Add 5 more breaths to each round targeting 3 rounds of 15 deep breaths.

WEEK 4 and beyond

Add 15 more breaths to each round targeting 3 rounds of 30 deep breaths.

ADDITIONAL BREATHING TECHNIQUES

STRAW BREATH

In essence, it involves inhaling deeply and then exhaling through a made-up straw. Purse your lips and gently release the breath through a little hole in them, taking three to four times as long to exhale as it took to inhale.

BELLY BREATH

Cover your lower abdomen with your hand and take a breath, concentrating on pressing your tummy against your palm. This compels you to concentrate on inhaling deeply into your largest lung regions and employing your lower lobes of the lungs. Additionally, it is well recognized for "massaging" the gut and intestines, making it beneficial for constipation, upset stomachs, and overall abdominal pain.

***Beginner tip:** If you are a beginner, breathe in slowly for four counts and exhale for four counts. As you improve in your practice, your exhalation can be a little longer (six to eight counts) than your inhalation (four counts). As you advance in your practice, you can gradually increase the length of your inhalation and exhalation.

MINDFUL BREATHING

Focus your mind on a specific thought and then breathe deeply and slowly while focusing intently on that thought. This is a great way to be intentional about your day. One of the most effective ways to orient yourself before a task is through the mind-body link. Use this to envision the result you want from an event and imagine it in your mind's eye as you breathe it into existence before a crucial meeting, discussion, or event.

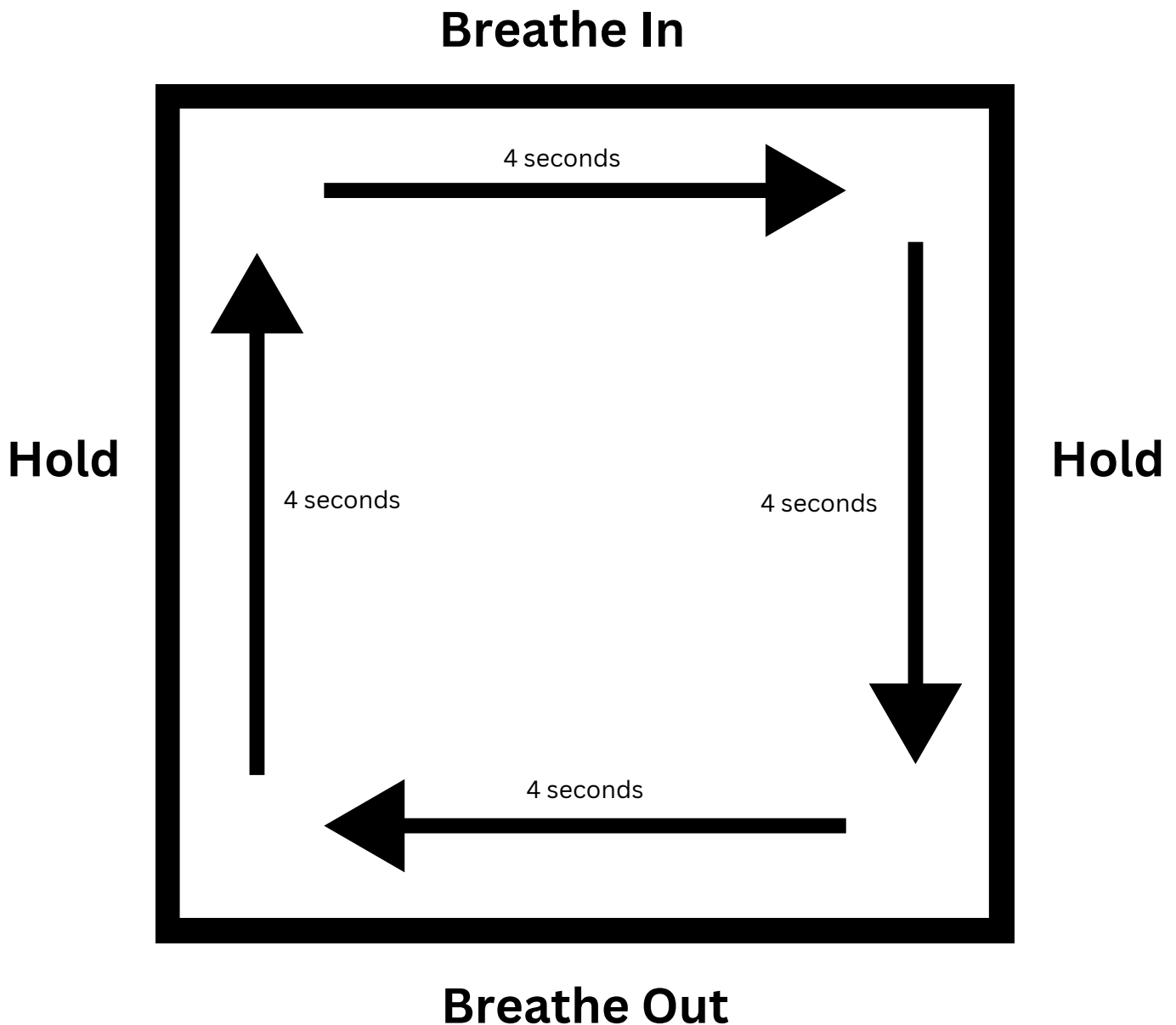


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Box Breathing

Box breathing is a deep breathing technique.

It can help with: Stress and anxiety management, Improved focus and concentration, Lowered heart rate and blood pressure, Enhanced relaxation and sleep quality, and Emotional balance.



THE ULTIMATE GUIDE TO

10,000 STEPS



WHY 10,000?

The 10,000-step target is not just a random number; it is a benchmark endorsed by numerous health experts to aid individuals in achieving a healthier lifestyle. Regularly meeting this goal can lead to enhanced cardiovascular health, improved mental well-being, and a variety of other benefits, including weight loss and increased energy levels.

MEDICAL DISCLAIMER

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GET PREPARED FOR TOMORROW

TRACKING

Keeping track of your steps is important for your health. Make sure to use a reliable device like a smartphone app, pedometer, or fitness watch to count your steps accurately.

COMFORT

Choose shoes and clothes that are comfortable and will help you during your walk.

REMINDERS

Set reminders to help you stay on schedule throughout the day.

PLAN

To keep things interesting, create varied and enjoyable routes.



**“DON'T UNDERESTIMATE THE
POWER OF SMALL STEPS.”**

NUTRITION ESSENTIALS

DAY 1

MORNING: Take a quick, brisk stroll for 15 minutes to start your day.

AFTERNOON: Include a 20-minute stroll in your midday meal.

EVENING: Finish with a walk of 30 minutes or any other activity that increases your step count.

DAY 2

MORNING: Incorporate at least a 20 minute walk into your morning routine.

AFTERNOON: Every hour, take a quick 5-minute walk break at work or home.

EVENING: Take a 40-minute walk or try a fun activity like dancing.

DAY 3

MORNING: Set a goal for yourself to go for a 30-minute walk.

AFTERNOON: Stay active by trying a walking meeting or a walk in the park.

EVENING: Celebrate your success with a relaxed walk to reflect on your achievement!

MAXIMIZE YOUR EFFORT

- **HYDRATION:** Drink plenty of water during and after your walks. You can even add electrolytes to your water.
- **MIX IT UP:** Vary your walking pace, incorporate different terrains, or even add some light jogging.
- **CONNECT WITH OTHERS:** Share your progress, challenges, and photos in the Lakeland Health & Wellness FB Page to stay motivated.

KEEP UP THE MOMENTUM

Continue to maintain, or even increase, your daily step count. Consider adding longer walks, venturing to new hiking trails, or making additional fitness goals to continue improving your active lifestyle.

***Congratulations on completing
your 3-day 10,000 Step Challenge!***

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GUIDE TO WATER FASTING

GUIDELINES FOR SAFETY

Because there are no specific guidelines to 3-day water fasting, We consolidated the generally accepted evidence based guidelines for a safe, effective 3-day water fast so that we can safely derive all of the benefits from fasting.

Several groups of people should not water fast without medical supervision. Since our upcoming water fast will not be medically supervised, I would encourage those of you that fit any of the below categories, seek the advice of a licensed medical professional before beginning this 3 day journey with us.

Here is a quick list of conditions that would require additional medical supervision:

- 1. Gout**
- 2. Diabetes (both types 1 and 2)**
- 3. Eating Disorders**
- 4. Older Adults (over age 65)**
- 5. Pregnancy**
- 6. Children or Minors under 18**

The water fast lasts for 24–72 hours. You should not water fast for longer than this without medical supervision regardless of your current health status because of health risks. Some people may feel weak or dizzy during a water fast and may want to avoid operating heavy machinery and driving to avoid causing an accident.

If you have never water fasted before, spending 2-3 days preparing your body for being without food is a good idea.

You can do this by eating smaller portions at each meal or by fasting for part of the day. A good way to start is 2-3 days out from your water fast, cut out 1 meal per day (if you are eating 3 meals per day), and don't eat within 2 hrs of bedtime.



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GET PREPARED

Here is what I use to prepare for my water fast:

1. **Spring Water**

Have 3 liters of spring water for each day of the fast so purchase 9 liters of spring water and have it on hand to start your fast. NOTE: Day 1, we will only drink 2 liters of spring water because we are also consuming 32 oz of bone broth.

My preference is Mountain Valley Spring water (Still) which you can get at most grocery stores. If you can't find mountain valley purchase a "spring water" and not distilled water (as this will actually strip valuable minerals and electrolytes from your system).

2. **Organic Bone Broths**

Have two cartons of 16.9 oz. Bone broth for day 1 of the fast. My preference is Organic Kettle & Fire which you can purchase at most grocery stores or through this link.

3. **Electrolytes/Amino Acids**

We are going to take 1 scoop of Perfect Amino's with Electrolytes first thing in the morning with water. This will keep us from becoming electrolyte deficient.

4. **Baja Sea Salt**

On days two and three you'll want to put a pinch of Baja sea salt in each glass of your water.





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DAY 1

Today we are going to ease our way into the water fast. We are **NOT** going to eat any solid food or anything that is not on this list. Today we will drink 2 liters of water because we are also consuming 32 oz of bone broth. Days 2 and 3 we will **ONLY** drink spring water and will consume 3 liters of spring water on those days.

During the course of the entire day, drink as much water as you want, trying to evenly spread out the 2 liters of spring water through the entire day. I divide the day into halves to make this easy.

Make sure that you drink 1 liter every 8 hours so that over the course of a 16 hour day you have consumed 2 liters of spring water in addition to the two bowls of bone broth.

1. In the morning upon waking, take 1 scoop of Perfect Amino's with Electrolytes in 8 oz of spring water

2. Consume 1 liter of water every 8 hours. (You can spread this throughout the day)

3. At noon consume 1 bowl of bone broth (16.9 oz)

4. At 6:00pm consume 1 bowl of bone broth (16.9 oz)

DAY 2

Today we are going deeper into the water fast and will **ONLY** consume 3 liters of spring water.

Upon waking, consume your first 8oz glass of spring water in the morning.

1. Divide the day into three 5-6 hour portions and consume 1 liter of spring water every 5-6 hours. Don't stress about evenly consuming the water, just make sure that you get 1 liter down every 5-6 hours. Sip it, drink it in 8 oz portions or whatever portion suits you. The point is to just consume 3 liters over the course of the day between waking and going to bed.



DAY 3

Today we will repeat the same process we did on day 2.

1. In the morning upon waking consume your first 8oz glass of spring water

2. Divide the day into three 5-6 hour portions and consume 1 liter of spring water every 5-6 hours. Don't stress about evenly consuming the water, make sure that you get 1 liter down every 5-6 hours. Sip it, drink it in 8 oz portions or whatever suits you. The goal is to consume 3 liters over the day between waking and going to bed.

**YOU'RE DONE! CONGRATULATIONS ON DOING YOUR
BODY SOME SERIOUS GOOD. BUT IT'S NOT QUITE OVER.**

Let's ease back into solid food.

1. Start today with 1 scoop of perfect amino's with electrolytes and pick one of the options below for your first meal of the day.

Before Noon:

- Bowl of Bone Broth
- Whole Fat Greek yogurt with organic berries
- Smoothie
- Organic, grass-fed Cottage Cheese
- Soup
- Cold-pressed juices
- Mix of nuts and berries (preferably macadamia or pistachio)

After Noon:

- Resume healthy solid whole-food diet.



BENEFITS OF WATER FASTING

The benefits of water fasting are well documented in animal and human studies. Links to several of those studies are at the end of this guide. Here are some of the documented benefits of water fasting:

May promote autophagy

Autophagy is a fascinating cellular process that allows your body to break down and recycle old or damaged cell components. Here's a concise breakdown:

1. What Is Autophagy?

- Autophagy (pronounced “ah-TAH-fah-gee”) is your body’s natural recycling system.
- Cells disassemble their “junk” parts and repurpose salvageable bits into new, usable cell components.
- Think of it as quality control for cells, optimizing their performance by getting rid of nonfunctional parts.
- The word “autophagy” comes from Greek, meaning “self-devouring.”

2. Why Is Autophagy Important?

- o Autophagy:
 - Recycles damaged cell parts into fully functioning ones.

- Eliminates space-consuming junk components.
- Destroys pathogens (like viruses and bacteria) within cells.
 - o It’s crucial for cell survival and function.

3. How Does Autophagy Work?

- o Autophagy-related proteins (ATGs) create structures called autophagosomes.
- o Autophagosomes transport junk cell pieces to lysosomes (cellular “digesters”).
- o Lysosomes break down the junk, releasing reusable raw materials.
- o Cells use these materials to build new parts.

4. Factors That Trigger Autophagy:

- o Nutrient or oxygen deprivation.
- o Cellular damage or stress.
- o Metabolic challenges (e.g., fasting).

Continued



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5. Health Benefits and Aging:

- Autophagy plays a role in aging and longevity.
- As we age, autophagy decreases, leading to cellular dysfunction.
- Promoting autophagy through methods like water fasting may have protective effects against diseases.

Remember, autophagy is like cellular spring cleaning, ensuring your cells stay efficient and functional!

Factors like nutrient deprivation and metabolic challenges trigger autophagy. Promoting autophagy through methods like water fasting may have protective effects against diseases and play a role in aging and longevity.”

Longer, medically supervised water fasts have been associated with potential benefits for people with high blood pressure. Let’s break down the findings:

1. Blood Pressure Reduction:

- A study involving 48 overweight or obese individuals found that water fasting for an average of 17 days, under medical supervision, led to reductions in systolic blood pressure.

- Additionally, improvements were observed in levels of LDL (bad) cholesterol and inflammation.

2. Leptin and Insulin Sensitivity:

- Water fasting may enhance sensitivity to hormones like leptin and insulin.
- Greater sensitivity means these hormones are more effective:
 - Insulin Sensitivity: Efficient blood sugar regulation.
 - Leptin Sensitivity: Better hunger signal processing, potentially lowering obesity risk.

3. Reduced Risk of Chronic Diseases:

- Evidence suggests that water fasting may lower risk factors for chronic diseases like diabetes, cancer, and heart disease.
- In a 2013 study, healthy adults who followed a 24-hour water fast had significantly lower blood triglyceride levels (a measure of fat in the blood).
- Water fasting may also protect the heart against damage from free radicals, which play a role in chronic diseases.
- Further research is needed to explore its effects on cancer cell growth and chemotherapy outcomes.

**WATER FASTING HAS MANY BENEFITS
BUT THERE ARE SOME RISKS.**

May experience orthostatic hypotension

Dehydration caused by water fasting can lead to Orthostatic Hypotension which is blood pressure going too low. This is usually a sign of dehydration which is why it is so important to get 3 liters of water each day that you're fasting.

Orthostatic Hypotension is defined as a drop in blood pressure that happens when you suddenly stand up, and it can leave you dizzy, lightheaded, and at risk of fainting.

If you experience these symptoms during a water fast, this type of fasting may not be a good option for you. Break the water fast, eat a bowl of soup and increase your fluid intake.

Conditions that may be negatively affected by water fasting:

Although a water fast is relatively short, there are a few conditions that may be aggravated by water fasting.

People with the following medical conditions should not water fast without first seeking advice from a healthcare professional:

Gout: Water fasting may increase uric acid production, a risk factor for gout attacks.

Eating disorders: There is evidence that fasting may encourage disordered eating behaviors for some people.

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CLINICAL STUDIES

The Effects of Prolonged Water-Only Fasting and Refeeding on Markers of Cardiometabolic Risk

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8951503/>

Efficacy and safety of prolonged water fasting: a narrative review of human trials

<https://academic.oup.com/nutritionreviews/advance-article-abstract/doi/10.1093/nutrit/nuad081/7209209?redirectedFrom=fulltext>

A Pilot Study on the Effects of Medically Supervised, Water-Only Fasting and Refeeding on Cardiometabolic Risk.

<https://www.medrxiv.org/content/10.1101/2020.08.07.20169680v1.full.pdf>

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30-30-30 MORNING ROUTINE

Nothing burns fat for energy, and sheds pounds faster or more effectively than this.

Do this. For six weeks. It will change the trajectory of your health.

- Within 30 minutes of waking.
- Consume 30 grams of protein.
- Get 30 minutes of steady state cardio.

Great sources of protein for this.

- Pure protein drinks: 8 ounces has 30 grams of protein.
- Scrambled eggs 6 grams of protein each. Plus all nine essential amino acids.
- Cottage Cheese $\frac{1}{2}$ cup has 14 grams of protein.
- Chicken Breast 4 ounces has over 30 grams of protein.



Great ways to get 30 minutes of steady state cardio.

- On a treadmill. You should be able to read a book.
- Use an elliptical machine, or stationary bicycle at a moderate pace.
- Take a brisk walk around your neighborhood, or at a park.
- Get your heart rate elevated but keep it below 135beats per minute.

FAST MIMICKING DIET



Not eating is called fasting. It is not for everyone. According to science and nutrition experts, fast “mimicking” can allow you to eat and still get the benefits of fasting.

This approach “tricks” your body into thinking you’re fasting when you’re actually still taking in some food.

The fasting-mimicking diet relies on a specific macro- and micronutrient breakdown:

Day 1: You consume 1,100 calories. Of those calories, 11% are from plant-based protein sources, 46% from mono- and polyunsaturated fats and 43% from complex carbohydrates that are rich in fiber.

Days 2 to 5: You’ll consume just 725 calories per day, with a macronutrient breakdown of 9% protein, 44% fat and 47% carbohydrates.

During each of the five days, it’s recommended that you consume a minimum of 70 ounces of water. This fast period should be repeated once per month for the first three consecutive months to achieve optimal results, says Kristine Dilley, a registered dietitian at the Ohio State University Wexner Medical Center in Columbus.

“This is slightly higher than many other diet plans, but it is also not intended for long-term use,” Wroe notes, adding that “the ingredients are incredibly high quality, which is something that cannot be said of most other premade diet foods.”

MORE INFO

The Rules

The general idea on the fasting-mimicking diet is to consume fewer calories on fasting days and to adhere to a ratio of macronutrients that, as mentioned, are roughly 10% protein, 45% fat and 45% carbohydrates.

In general, you'll be eating:

- Clear broths and vegetable soups.
- Small amounts of nuts and olive oil for good fats.
- Vegetables, including leafy greens, broccoli, cucumbers and carrots.
- Small servings of berries.
- Limited amounts of beans, lentils and legumes, such as chickpeas or hummus.

You'll also need to restrict high-glycemic ingredients, Wroe says. High-glycemic foods are those that rapidly elevate blood sugar. Examples include:

- White rice, pasta, bread and other grains that have been stripped of their fiber and nutrients.
- Pastries, cookies, cakes and other baked goods.
- Foods with added sugar and sugar-sweetened beverages, such as soda and coffee drinks.
- Instant oatmeal, cornflakes and other prepared breakfast foods.
- White potatoes.
- Watermelon.

5-DAY MEAL PLAN

Day 1

Breakfast: 1 cup of herbal tea or black, decaf coffee (unsweetened) and a half cup of berries.

Lunch: Mixed salad with various leafy greens and cucumbers with a tablespoon of a light vinaigrette dressing.

Snack: 10 almonds.

Dinner: A cup of steamed or lightly sautéed vegetables, such as broccoli, cauliflower and carrots, with a tablespoon of olive oil.

Day 2

Breakfast: Herbal tea or black, decaf coffee (unsweetened) and a small piece of fruit, such as an apple or pear.

Lunch: A cup of clear vegetable broth with added diced vegetables.

Snack: Celery sticks with $\frac{1}{4}$ cup of hummus.

Dinner: A cup of low-salt, broth-based lentil or vegetable soup.

Day 3

Breakfast: Herbal tea or black, decaf coffee (unsweetened) and a half cup of berries.

Lunch: Half a cup of cooked quinoa or brown rice with a cup of steamed vegetables.

Snack: A piece of fruit, such as a small orange or a plum.

Dinner: 4 ounces of baked or grilled fish with a cup of mixed greens and 10 olives.

Day 4

Breakfast: Herbal tea or black, decaf coffee (unsweetened) and a small piece of fruit.

Lunch: Leafy green salad with a cup of assorted colorful vegetables and a tablespoon of a light vinaigrette dressing.

Snack: 10 almonds.

Dinner: A cup of stir-fried or roasted vegetables, such as broccoli, bell peppers or zucchini, with $\frac{1}{4}$ of a block of tofu.

Day 5

Breakfast: Herbal tea or black, decaf coffee (unsweetened) with a half cup of berries.

Lunch: A cup of clear vegetable broth with a cup of fresh, diced vegetables.

Snack: A medium cucumber, sliced, and a medium carrot sliced into sticks with $\frac{1}{4}$ cup of hummus.

Dinner: $\frac{1}{2}$ cup of cooked black beans or kidney beans with a cup of sautéed spinach and a tablespoon of olive oil.

5-DAY FOOD LIST

- Tofu or tempeh.
- Vegetable broth.
- Leafy greens (lettuce, spinach, kale, arugula).
- Carrots.
- Celery.
- Zucchini.
- Cucumber.
- Tomatoes.
- Broccoli.
- Cauliflower.
- Strawberries.
- Raspberries.
- Blueberries.
- Apples.
- Oranges.
- Plums.
- Almonds.
- Walnuts.
- Olive oil.
- Quinoa.
- Black or kidney beans.
- Hummus.

Desserts and snacks

Traditional desserts aren't really an option on the fasting-mimicking diet because of the diet's calorie restrictions. But you can certainly use berries and other fruit as a kind of dessert while staying within the parameters of the plan.

You can also enjoy a daily snack, such as:

- Almonds.
- Walnuts.
- Pecans.
- Macadamia nuts.
- Hummus.
- Carrots or celery sticks.
- Kale crackers.
- Specially formulated nutrition bars that conform to the prescribed macronutrient profile.

HEALTH BENEFITS

- Weight loss.
- Reduced belly fat.
- Decreased cholesterol levels.
- Decreased blood sugar levels.
- Decreased inflammation in the body.

The fasting-mimicking diet also claims to slow the aging process through improved cellular repair – a process called autophagy – and cellular regeneration, Dilley says.

“Autophagy is a process in which old, damaged cells are recycled to produce new, healthier ones,” she explains. “Intermittent fasting has been shown to optimize autophagy, which may protect against mental decline and slow cellular aging.”

Who should use (or avoid) a fasting-mimicking diet?

- Women who are pregnant or breastfeeding. Women need to take in more calories, not fewer, when pregnant or breastfeeding because these activities gobble up a lot of energy.
- People with nutritional deficiencies or those who are underweight. Cutting out so much food can worsen existing nutritional deficiencies.
- People with a history of eating disorders. Restricting your food intake can be triggering for people who have or have had an eating disorder and could lead to unhealthy behaviors. A 2022 study conducted among adolescents and young adults in Canada noted that intermittent fasting was associated with disordered eating behaviors.
- Dilley adds that people with a preexisting medical condition, such as hypertension, diabetes, liver disease or another chronic condition, should consult a physician prior to starting this or any other new diet.

SOURCES

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Fasting-Like Diet Lowers Risk Factors for Disease, Reduces Biological Age in Humans



USC study shows how cycles of a fasting-mimicking diet reduce insulin resistance, liver fat, immune system aging, and biological age in clinical trial patients.

By Beth Newcomb | February 20, 2024 | [Print](#)

Cycles of a diet that mimics fasting reduce signs of immune system aging as well as insulin resistance and liver fat in humans, resulting in a lower biological age, according to a new USC Leonard Davis School of Gerontology-led study.

The study, which appears in [Nature Communications](#) on February 20, 2024, adds to the body of evidence supporting the beneficial effects of the fasting-mimicking diet (FMD). The FMD is a 5-day diet high in unsaturated fats and low in overall calories, protein, and carbohydrates and is designed to mimic the effects of a water-only fast while still providing necessary nutrients and making it much easier for people

to complete the fast. The diet was developed by the laboratory of USC Leonard Davis School Professor [Valter Longo](#), the senior author of the new study.

“This study shows for the first time evidence for biological age reduction from two different clinical trials, accompanied by evidence of rejuvenation of metabolic and immune function,” Longo said.

Previous research led by Longo has indicated that brief, periodic FMD cycles are associated with a range of beneficial effects, including the promotion of [stem cell regeneration](#), lessening of [chemotherapy side effects](#), and reduction of the [signs of dementia](#) in mice, as well as the [lowering of the risk factors](#) for cancer, diabetes, heart disease and other age-related diseases in humans. The Longo lab also had previously shown that one or two cycles of the FMD for 5 days a month increased the healthspan and lifespan of mice on either a normal or Western diet, but the effects of the FMD on aging and biological age, liver fat, and immune system aging in humans were unknown until now.

Lower disease risks & more youthful cells

The study analyzed the diet’s effects in two clinical trial populations, each containing both men and women between the ages of 18 and 70. Patients who were randomized to the fasting-mimicking diet underwent 3-4 monthly cycles, adhering to the FMD for 5 days, then eating a normal diet for 25 days. The FMD is comprised of plant-based soups, energy bars, energy drinks, chip snacks, and tea portioned out for 5 days as well as a supplement providing high levels of minerals, vitamins, and essential fatty acids. Patients in the control groups were instructed to eat either a normal or Mediterranean-style diet.

An analysis of blood samples from trial participants showed that patients in the FMD group had lower diabetes risk factors, including less insulin resistance and lower HbA1c results. Magnetic resonance imaging also revealed a decrease in abdominal fat as well as fat within the liver, improvements associated with a reduced risk of metabolic syndrome. In addition, the FMD cycles appeared to increase the lymphoid to myeloid ratio – an indicator of a more youthful immune system.

Further statistical analysis of the results from both clinical studies showed that FMD participants had reduced their biological age – a measure of how well one’s cells and tissues are functioning, as opposed to chronological age – by 2.5 years on average.

“This is the first study to show that a food-based intervention that does not require chronic dietary or other lifestyle changes can make people biologically younger, based on both changes in risk factors for aging and disease and on a validated method developed by the Levine group to assess biological age,” Longo said.

The study, carried out by first authors [Sebastian Brandhorst](#), USC Leonard Davis research associate professor, and Morgan E. Levine, founding principal investigator of Altos Labs and USC Leonard Davis PhD alumna, lends more support to the FMD’s potential as a short-term periodic, achievable dietary

intervention that can help people lessen their disease risk and improve their health without extensive lifestyle changes, Longo said.

“Although many doctors are already recommending the FMD in the US and Europe, these findings should encourage many more healthcare professionals to recommend FMD cycles to patients with higher than desired levels of disease risk factors as well as to the general population that may be interested in increased function and younger age,” Longo said.

About the study

Along with Longo, Brandhorst and Levine, the studys’ coauthors include Min Wei, Mahshid Shelechi, Todd E. Morgan, Eileen Crimmins and Pinchas Cohen of the USC Leonard Davis School; Krishna S. Nayak of the USC Viterbi School of Engineering; and Tanya Dor and Kurt Hong of the Keck School of Medicine of USC.

Funding was provided by the USC Edna Jones chair fund to Longo, in addition to NIH/NIA 4R00AG052604- 02 to Levine, NIH/NIA 1R01AG060110-01 to Levine and Crimmins, and the Yale PEPPER Center P30AG021342 to Levine. Longo is the founder of and has an ownership interest in L-Nutra; the companys’ food products are used in studies of the fasting-mimicking diet. Longos’ interest in L-Nutra was disclosed and managed per USC’s conflict-of-interest policies. USC has an ownership interest in L-Nutra and the potential to receive royalty payments from L-Nutra. USC’s financial interest in the company has been disclosed and managed under USC’s institutional conflict-of-interest policies.