

The Key to Sustainable **Weight Loss**





The Key to Sustainable Weight Loss

Table of Contents

Discover the Key to Successful Weight Loss **3**

Flip the script! Achieving a healthy weight isn't a task that one day you'll be able to check as "done." It's a complex, biological and psychological maze of factors you'll need to understand to achieve your goals long-term.

How to (Finally) Let Go of Extra Pounds **5**

Learn to listen to your body; it will tell you when things are out of balance. Here are seven reasons why your body may be holding on to those extra pounds.

Healthy Weight, Healthy Mindset **13**

Changing your mind set will help you make the necessary adjustments to your lifestyle choices and habits to achieve a sustainable weight loss journey.

Pop Quiz: Are YOU Holding on to Extra Pounds? **14**

Take these quizzes to assess whether you may be holding on to extra pounds. Some simple diet and lifestyle changes may be all that you need to get back on track.

Discover the Key to Successful Weight Loss

Have you tried different diets and still find that you struggle to reach and sustain your goal weight? Don't feel bad...you're not the only one. Sustainable weight loss is more than just "eating less and moving more," especially as we age. That's because our bodies are complex, and many factors beyond calorie intake influence weight.



Why it's challenging to achieve lasting change

The key to successful weight loss is reestablishing the connection you have with your body.

This means resisting the urge to try a fad diet or intense exercise fad—which may work quickly, but won't bring about lasting change — and instead accept that achieving and staying at a healthy weight is a full, mind-body experience. Part of that mindfulness includes recognizing when health imbalances are impacting how we digest and metabolize food.

This journey requires learning to pay attention to what your body is telling you, so that you can adjust your lifestyle and create sustainable habits that promote your overall health and well-being. There is much to appreciate about our finely calibrated systems and honoring our bodies, rather than punishing them with restriction, is a more effective way to achieve long-term success. More importantly than (finally) seeing your desired number on the scale, you'll develop a lifestyle that'll empower you to be your best self—inside and out.

Read this eBook instead of a new diet book

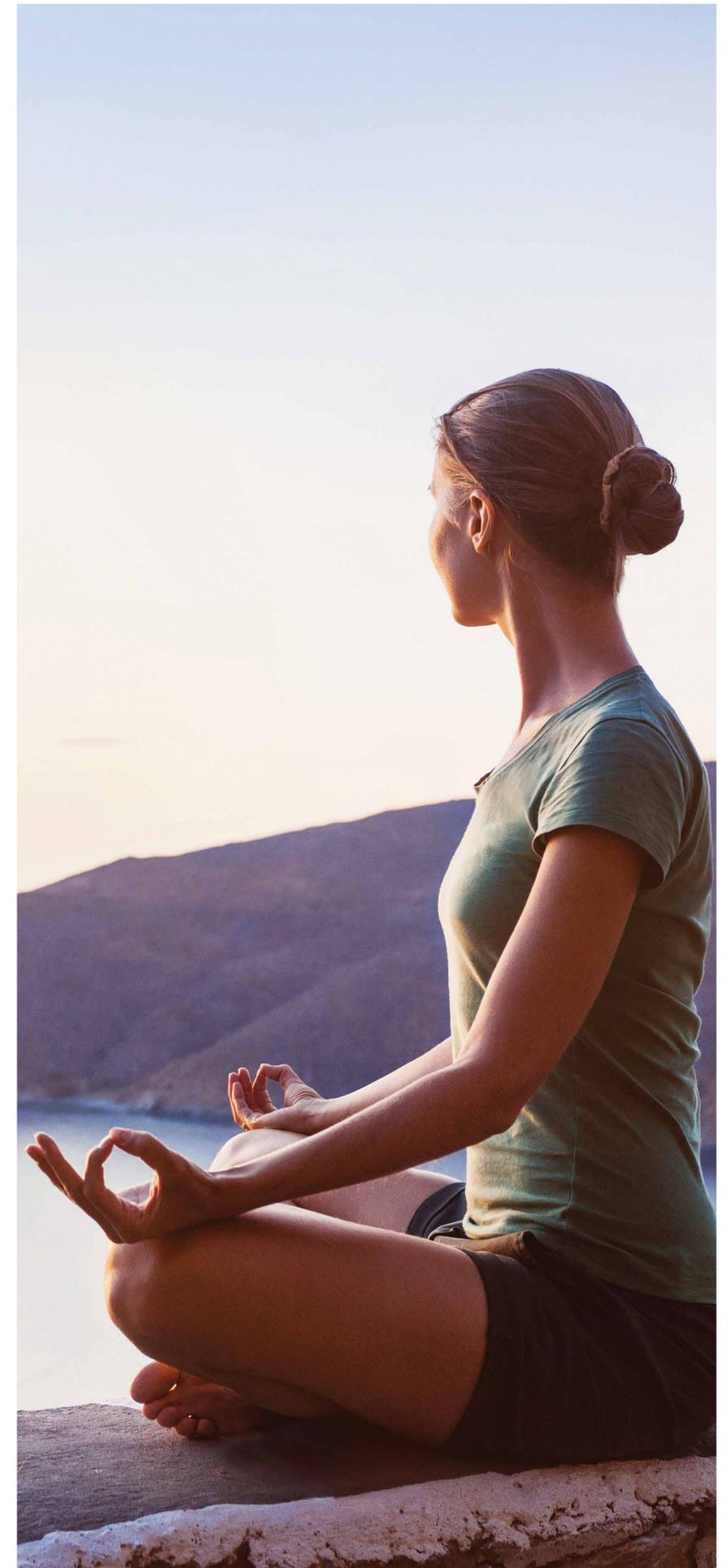
If you've chosen to download this eBook, you might also be on the market for a new diet book. We recommend you commit to taking restrictive diets off your reading list—permanently. For most of us, these plans fail in the long term because they attempt to make big changes in a short period of time and aren't designed for that inevitable “beyond the honeymoon” phase we all slip into after some initial weight loss success, when the demands of real life set in.

Plus, many diets don't take into consideration the underlying biological imbalances that may be driving weight gain in the first place.

That's why we've put together this eBook.

We'll discuss the physiological factors that could be stunting your weight loss goals and go over some lifestyle changes you can start implementing to achieve a healthy weight—for the long haul.

Lastly, we included a section with a sequence of quizzes that will help you gauge the areas that you can start addressing, as well as nutrients you can incorporate in your meals, to support your weight management journey.



How to (Finally) Let Go of Those Extra Pounds

Your body works in an intricate cascade of biological reactions that govern the different physiological functions that keep you alive and healthy.

One of them, for example, is regulating how your body breaks down foods and converts them into the energy that is used by every single cell.

But our body's function declines naturally over time, and without proper nutrition and physical activity, it can lead us to hold on to unnecessary body fat. The good news is that identifying which areas need to be addressed will help you see where you can make adjustments.



What's BMI and how can you calculate it?

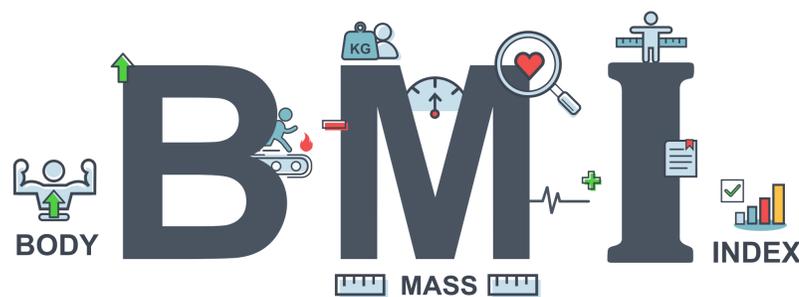
Body mass index or BMI is an estimated way to measure body fat based on your height and current weight.

The BMI category reference is:

- Underweight averages a BMI of 18.5 or less

- Normal weight averages a BMI of 18.5 to 24.9
- Overweight averages a BMI of 25 to 29.9
- Obesity averages a BMI of 30 or greater

You can calculate your BMI by taking your weight in kilograms and dividing it twice by your height in meters.



Seven surprising reasons why you might not be losing weight

1. You might not be managing glucose properly

Insulin is a hormone made by the pancreas. It's essential to regulating how your body uses glucose (sugar) from the foods you consume and whether it should be broken down to make energy or stored as fat for future use.

As we age, however, insulin receptors found on cells' membranes lose their youthful sensitivity and functionality. This can result in a chronic condition called insulin resistance that impairs the ability of cells to efficiently take up glucose and utilize it for energy production. When glucose is not taken up by energy-producing cells, it prompts the release of excess insulin or hyperinsulinemia, which is associated with higher blood sugar levels and a greater conversion of sugar into fat. This condition significantly increases the risk of heart disease.

Work with your body

If you've been diagnosed with type II diabetes, it means you have insulin resistance. Before you set out to make any major changes, make sure you continue to take your medication and speak with your doctor about adding supplementation and physical activity to your wellness journey.

Lifestyle suggestions

- **Eat regularly.** Contrary to popular belief, maintaining a healthy weight is not about restriction. Eat your meals and snacks every four hours to keep your insulin and glucose levels within a normal range.
- **Don't go to bed stuffed.** Aim to finish your meals at least two to three hours before bed to encourage restful sleep.

- **Include protein in your breakfast.** Hard boiled eggs or protein shakes are great choices, or get creative!
- **Snack regularly.** A handful of nuts and some fruit is the perfect in-between-meals treat.
- **Go easy on simple sugars.** Limit simple and processed sugars like junk foods and white breads and pastas.



2. You could have a hormone imbalance

In theory, reducing your caloric intake coupled with physical activity leads to weight loss. But many of us experience the frustration of restrictive diets and intense sweat sessions — without seeing the number on the scale go down. This can be attributed to the alteration in hormone levels that occurs as part of the aging process.

Did you know?

Your thyroid is a butterfly-shaped gland located low at the front of your neck. It secretes important thyroid hormones that act throughout your body; in adulthood, your thyroid hormones regulate your metabolism and body temperature.

Thyroid glitches in men and women

Healthy thyroid levels play an important role in maintaining healthy metabolic rate — and subsequently a healthy body weight.

Hormone imbalances affect women and men differently, but a large percentage of aging adults have less-than-optimal thyroid levels, which predisposes them to weight gain.

- **For women** — There's an imbalance between estrogen and progesterone. While levels of these hormones naturally decline over time, progesterone tends to drop at a faster rate due to anovulatory cycles, or menstrual cycles without egg production, which occurs when your body adjusts and transitions to menopause. This results

in estrogen dominance, which makes it more challenging to lose weight.

- **For men** — There's a lower testosterone-to-estrogen ratio. This hormone imbalance leads to a deficiency in free testosterone and an excess of estrogen, which causes the body to store and hold on to abdominal fat, making it more challenging to lose inches off the waistline.²⁻⁴

Work with your body

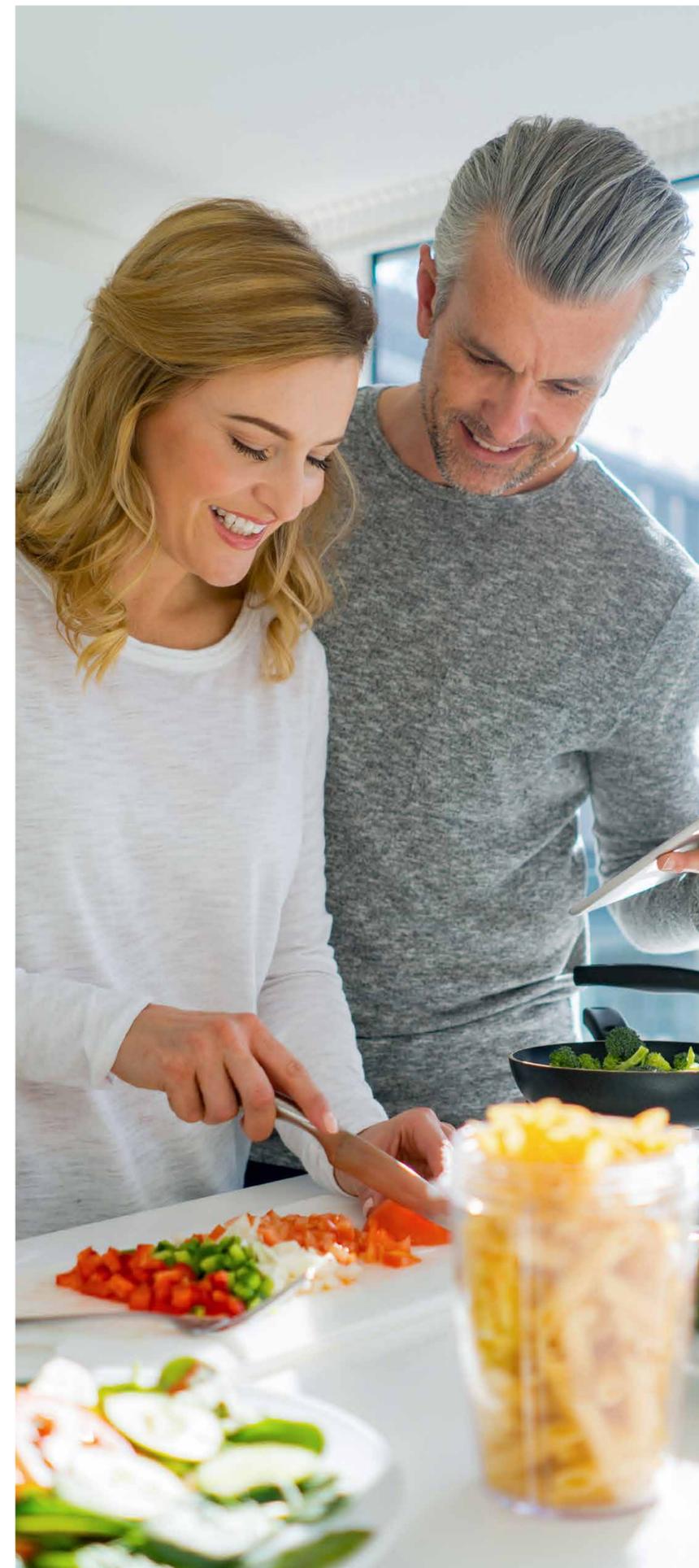
For a more accurate understanding of your own hormone balance, you can have blood tests done for the following hormones: total and free testosterone, DHEA, estradiol, pregnenolone, progesterone, PSA and a thyroid panel.

Lifestyle suggestions

- **Go green.** Start adding more cruciferous vegetables like broccoli, kale and cauliflower. Aim for one to two servings a day.

- **Add antioxidants to your cooking.** Incorporate herbs like oregano, thyme, rosemary, sage and turmeric to your seasoning.

- **More flavonoids, please!** Flavonoids are plant compounds found in foods such as wine, tea and dark chocolate. Incorporating flavonoids in your meals helps your body function more efficiently while offering antioxidant protection against cellular stress. (Yes, you read that correctly: we're recommending wine and chocolate in a weight loss eBook.)



3. You might be absorbing too many starches

We've all heard the term "you are what you eat," but have you ever stopped to consider what that means?

Your body takes what you consume and breaks it down into smaller molecules so your cells can use them and fulfil their individual functions. In other words, those molecules become part of your proteins, tissues and organs—they, in fact, become you.

To your body, food is energy

Whether it's a nutrient-rich meal or junk food, your body will draw from it what it can and use it or store it as fat.

Providing your body with more nurturing foods allows your cells to use most of that food to function and sustain your well-being. There's less excess to store as fat.

However, simple and processed sugars, along with packaged and synthetic foods, are prevalent in our food supply. They also cause excessive sugar absorption from the digestive tract into the bloodstream, which can influence insulin resistance.

That's why it's imperative to be choosy about how you nurture yourself.

Learn to recognize how foods impact your body by assessing how you feel after you eat them.

Do you feel energized, light and ready to tackle your day? Or, do you feel sluggish, heavy and not motivated?

Eating more fiber may minimize sugar absorption and improve glucose metabolism. Check with your healthcare provider to make sure you're eating the right foods.

Work with your body

If you've had trouble maintaining a healthy weight, it's time to take a hard look at what's on your plate. You could be absorbing the starches from your food because you're lacking nutrients such as fiber that slow the absorption. *Take Quiz 3 for some nutrient suggestions you can start incorporating in your meals.*

Lifestyle suggestions

Boost your fiber intake. Studies indicate that eating more plant fibers keeps you full longer and helps reduce the quantity of your in-between meal snacks and binging later in the day.

Say goodbye to sugary drinks. Sure, they are tasty, but they only contribute to blood sugar levels and reduced hydration. Water is your best friend, but if it's hard for you to drink plain H₂O, cold brewed herbal teas can help you ease that transition. Pomegranate or passionfruit cold teas are great alternatives to sugary drinks.

Go beyond white bread and pasta. Switch to whole grain, which is richer in fiber, or try

black bean, beet or spinach pasta for additional nutritious alternatives.

Pile your plate with nutrient-dense foods.

Think lean protein, healthy fats, complex carbohydrates like vegetables, legumes, nuts, seeds and fruits.





4. You may have lost muscle mass

On a scale of couch potato to athlete, how physically active are you? You certainly wouldn't be the only one to admit that bringing the groceries from the car to the house has been "exercise" enough. The problem, though, is that we tend to think in these extremes. We're either in beast mode at the gym—which can cause burn out, injury or both—or not active at all. Indeed, being sedentary may be why you're holding on to extra pounds...not because you're not burning calories, but because you lack the muscle mass to metabolize the foods you eat.

More than just burning stored body fat

Regardless of your relationship with exercise, staying active is essential to living a happy and healthy life.

Body movement induces beneficial changes at a cellular level that contribute to sustaining a healthy weight and maintaining muscle tissue. A less active lifestyle leads to a low metabolic rate, which means your body may find it difficult to breakdown fats and sugars and contributes to excess body fat, loss of muscle strength and endurance and subsequential weight gain.

Work with your body

If you find it challenging to stay active, start by redefining your relationship with exercise. A huge misconception about exercise is that we have to do intense workouts for hours at a time. The fact is, you don't have to train like an athlete to stay active. There is value in *any* movement.

Pump up the music and move your body!

Change your view of physical activity and focus instead on movement that brings you joy. Dance like nobody's watching, or skip around the house like a toddler. Whether you pick up tai chi, yoga or Pilates, or you discover a new love for weightlifting — even if you find that daily walks are your thing — incorporate regular movement that you can commit to and enjoy. This will help you maintain muscle mass...and ultimately, pay tribute to this body of yours instead of punishing it with exercises you hate, simply because they burn more calories.

Lifestyle suggestions

- **Stay consistent.** Get your body moving at least three times per week for 30 minutes a day. Mix it up! Cardio and weights are a great combo.
- **Stay strong.** If weightlifting is not your thing, you can still add resistance to your body movement with resistance bands.
- **Step it up.** If nothing else, aim to get 10,000 steps every day.

5. Your resting metabolism may be slow

When it comes to maintaining a healthy weight, one key piece of the puzzle is your resting energy expenditure, and this goes hand in hand with the expenditure of calories from exercise. The key difference, though, is that your resting metabolism refers to the total number of calories burned while at rest. If yours is slow—which can happen if you haven't been exercising, among other factors — that can make it harder for you to lose weight or maintain weight loss.

Burning off stored body fat while at rest

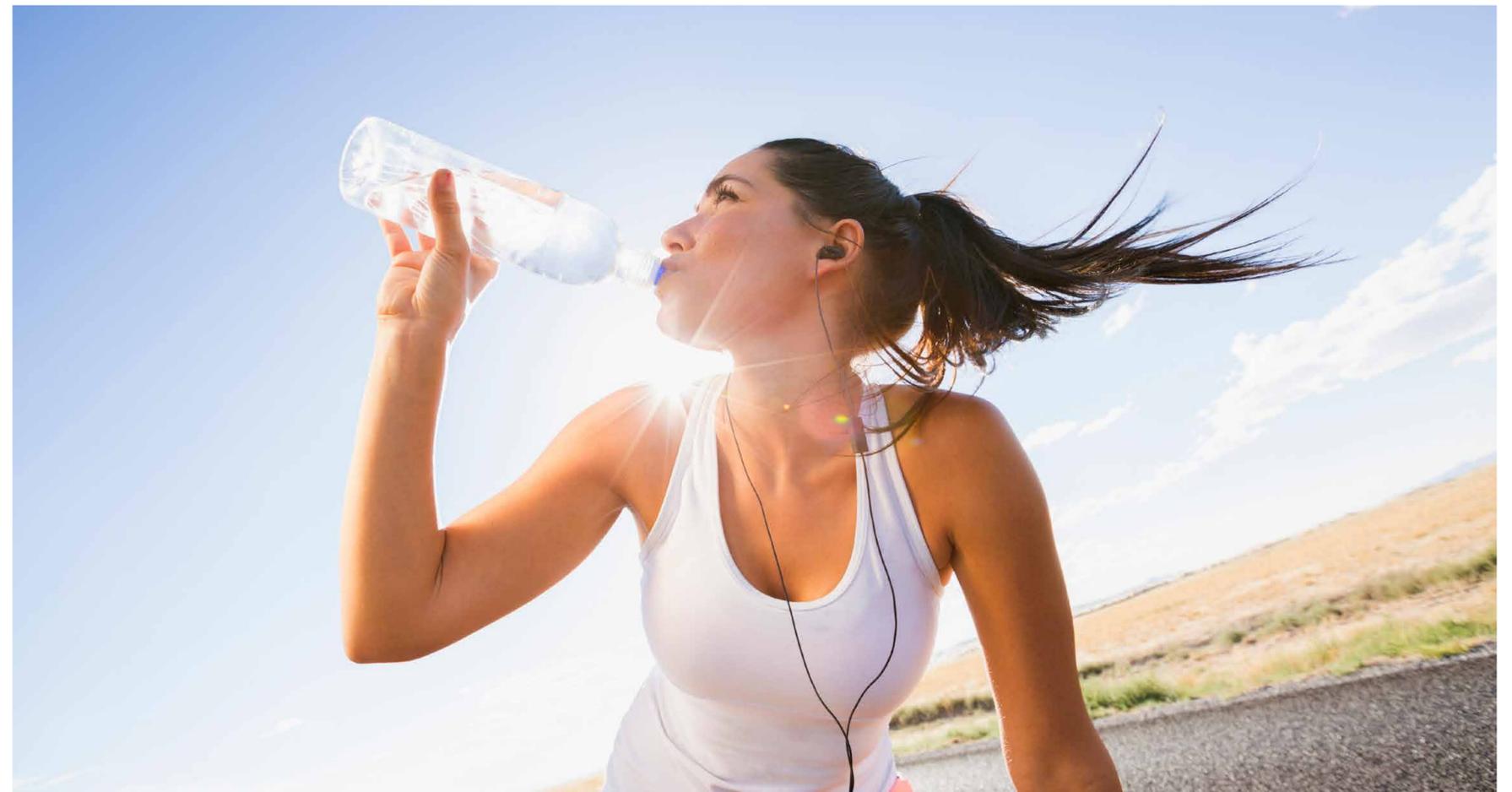
About 70% of your total energy requirement comes from basic biological processes within in your tissues and organs—your brain alone accounts for 20% of the energy your body uses. If your resting metabolism is slower than what's optimal, you will burn fewer calories than someone with a faster metabolism.

Work with your body

To encourage sustainable weight loss, it's essential to replenish youthful resting metabolism levels—here's where maintaining lean muscle mass is key, it'll help you burn more fat even when you're not engaging in a physical activity. Think back to your high school years when you could eat as much of anything as you wanted without it significantly affecting your body composition, even if you were more of a debater than a track runner.

Lifestyle suggestions

- **Stay fit.** If you're used to an active lifestyle, keep it up and enjoy your journey!
- **Beginners: be cautious.** If you've been sedentary, start slow. Maybe you go for long walks three times a week. As you discover what you like, you can incorporate different exercises to your routine. As you advance on your journey, incorporate resistance training to tone and build muscle mass—it's the best way to raise your resting metabolism.
- **Fuel adequately.** Don't forget to stay hydrated and eat frequently to fuel your body.



6. You can't tell when you're full

A crucial part of healthy weight management is knowing how to listen to your body. But this takes practice, and many of us spend our whole lives stopping when our plates are empty, not when we're no longer hungry. Reestablishing the connection with your body will allow you to recognize when to eat and when you're full, well before you feel the need to unbutton your pants.

Food fuels your lifestyle

It's time to reframe how we see food and appreciate it for the nutrients that fuel our bodies so we can stay active, stave off infections and enjoy pleasures in life that go beyond how things taste.

Learn to recognize when you're hungry and avoid long periods of time without food. Often people who skip meals end up making up for it—and then some—late at night. Sometimes this isn't just because of physical deprivation, but because if we don't feed ourselves, we feel emotionally deprived, too. It's important to be well-nourished, but not stuffed.

Work with your body

After a meal, your gut sends a signal to your brain which then releases neurotransmitters like serotonin, along with other hormones, to indicate satiety or fullness. This feeling is difficult to recognize when serotonin levels in the brain are low and can lead to overeating.



If you're taking antidepressants, make sure you speak with your doctor before using nutrients that can influence serotonin levels in the brain.

Lifestyle suggestions

- **Feel fuller faster with protein.** Replace sugary snacks with high-protein alternative. Nuts, seeds and cheeses are great options.
- **Stay well-hydrated.** Thirst can easily be confused with hunger. Make sure you drink plenty of water to avoid overeating after your meals and snacks.
- **Avoid mindless noshing.** When you feel like munching after a meal or a snack, take a moment to assess yourself. Are you really still hungry, or are you just bored or stressed? Body movement is a great way to decompress and take your mind off of sweets.

Did You Know?

Studies have shown that people with a BMI of 30 or higher have low blood levels of tryptophan, the amino acid precursor for serotonin production. This indicates that there may be a link with overeating and serotonin deficiency in the brain.



7. Your body isn't communicating with your fat cells

Many of us have become accustomed to see fat, and consequently fat cells, as the villains in our wellness journey. But it's not about *eliminating* fat cells, it's about regulating their size through healthy lifestyle choices and the right nutrients, to achieve a leaner physique. Especially when it comes to abdominal fat.

The importance of fat cells

Adipocytes, or fat cells, are important components of your overall health. These cells are the major energy storage sites in your body; they play a role in energy balance and insulin sensitivity.

Your body regulates fat storage and release through cell signaling, the interaction between your cells and the chemicals they release to communicate with one another. When there's excess body fat, adipocytes grow in size because they start storing large amounts of triglycerides.

Work with your body

As we age, cell signaling can get faulty and lead to more challenges in healthy weight management. This is partly due to the decline in activity of a crucial enzyme in fat cell signaling.

Adenosine monophosphate-activated protein kinase, or AMPK for short, is an enzyme found in every cell in your body. AMPK promotes longevity factors that have been shown to extend

life span in numerous organisms.¹⁰ Increasing AMPK signaling encourages cells to return to their youthful vitality.¹¹

More About AMPK

Studies show that greater AMPK activity supports reduced fat storage and encourages healthy blood glucose and fats already within normal range.¹² Fortunately, you can make simple changes to activate AMPK. *Look for the bonus question in the last quiz regarding AMPK activity.*

Lifestyle suggestions

- **No magic way around fat cells.** There is no lifestyle suggestion that can specifically influence how your body manages fat. That's a physiological process unique to *your* biology.
- **Healthy life, happy you.** Staying on track on your wellness journey is the best way to encourage healthy cell to cell communication.
- **Supplementation support.** You can implement nutrients in your meals that can help trigger AMPK activity.
- **Stay hydrated.** Drinking adequate amounts of water will keep your cells in optimal health.

Healthy Weight, and Mindset

Congratulations, you've made it this far!

Now you know the key to sustainable weight loss is reconnecting with your body and learning to listen to the signs it gives you when things are out of balance.

You also have a better understanding of why it can be challenging to reach weight loss goals as we age — as well as the importance of staying active and building a new mentality around your wellness journey. Now it's time to revisit your relationship with your diet. Instead of thinking about what you need to stop eating, empower yourself by choosing foods that fuel your goals, rather than satisfying a passing craving.

Wholesome foods are the gateway to a long and healthy life

- **Plants, please.** Start incorporating more plant-based foods in your meals. Think in an 80 to 20 ratio: 80% plant-based, 20% lean protein.

- **Ethically raised meats for the win.** Always choose free-range poultry and grass-fed beef. They are leaner choices than their conventional counterparts.

- **Add juicing to your routine.** It's an easy way to breach the gap of fruits and vegetables. A healthy ratio for juicing is 3:1—that's three vegetables to one fruit.

- **Eat more fiber.** Go for nuts, seeds, fruits, whole grains and vegetables.

- **Feed your microbiome.** Fermented foods are your gut's best friend. Think yogurt, cheeses, kimchi and sauerkraut (fermented vegetables with a variety of seasonings).

- **Get fresh.** Always choose fresh produce. If it's not available, frozen fruits and vegetables are the way to go—ignore canned produce.

- **Eat what's in season.** During fall, eat more root vegetables and take in lots of ripe berries and white-flesh fruits. If it's springtime, go with Chinese yam, bamboo and mushrooms. Summer is great for leafy greens, tomatoes and cruciferous vegetables. And lentils and beans are good in any season.

- **Water check.** And last but not least: hydrate, hydrate, hydrate! Staying hydrated will keep you strong and radiant from the inside out!

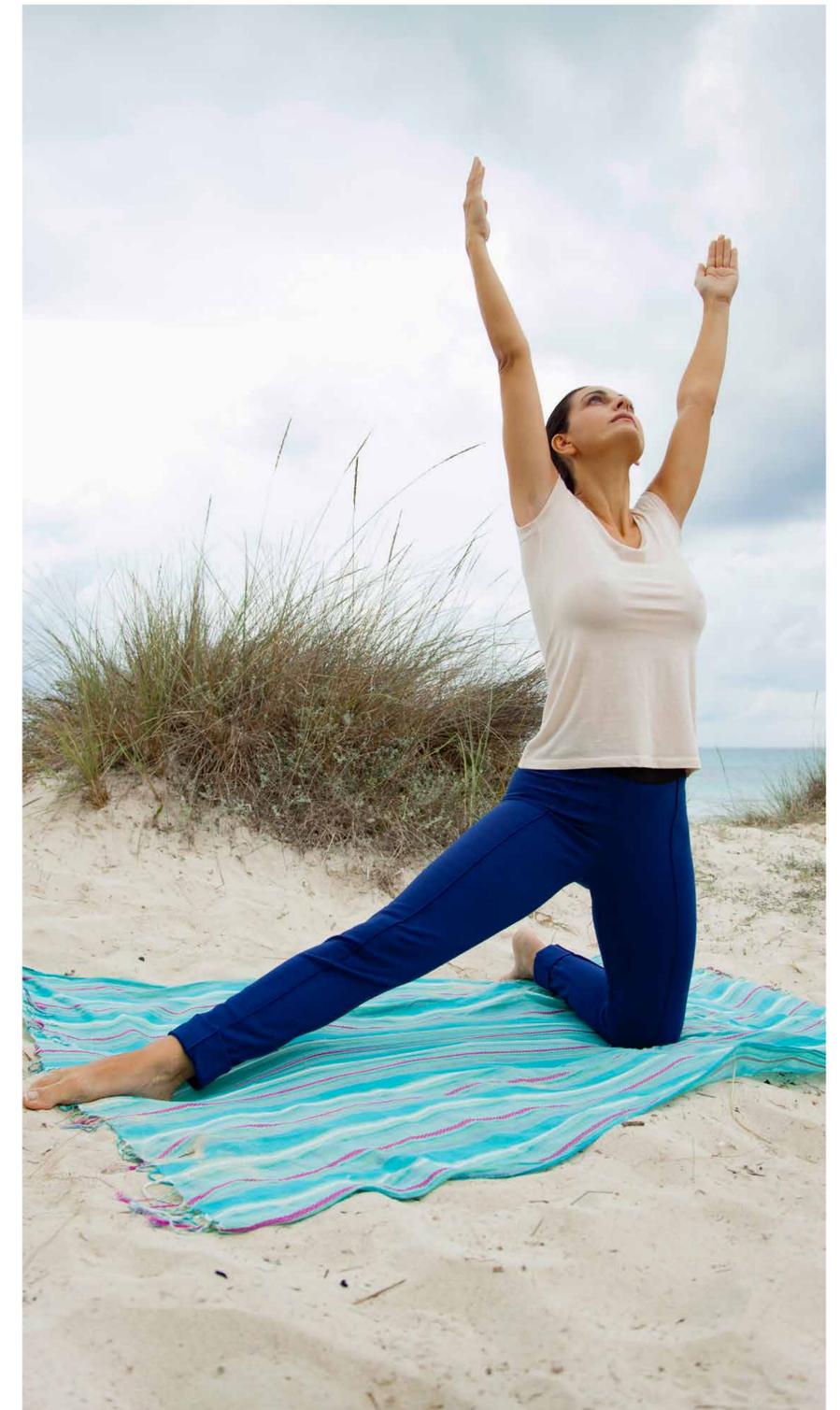
Keep calm & do it step by step

If making these changes feels overwhelming, remember that it's about making small changes over time. That's what will help you create new lifestyle habits that you'll be able to sustain for the long haul.

Take it one day at a time and be patient with yourself; if you start slipping into old habits — say you binge on junk food because you didn't make time in the day to eat a balanced meal—forgive

yourself. The important thing is to catch and redirect yourself with an encouraging and positive mentality—your body composition will follow.

Don't know where to begin? Start by taking our quizzes to identify the areas you can adjust in your journey.



Pop Quiz:

Are YOU Holding on to Extra Pounds?

1. Are you managing insulin efficiently?

	Yes	No
Men: Is your waist size 40 inches or more? Women: Is your waist size 35 inches or more?		
Do you have a history of high blood sugar or have you been diagnosed with pre-diabetes?		
Is your blood pressure 130/180 or higher?		
Are you taking blood pressure medication?		
Do you have family members who have type II diabetes?		
Do you have Latino, African American, Native American or Asian American Ancestry?		
Is your body mass index (BMI) more than 25 (kg/m ²)?		

Total:

Answers

If You Answered With	We suggest
0 Yes—Normal insulin sensitivity	You're doing great. Keep it up!
1 to 3 Yes— On the verge of insulin resistance	Start implementing our lifestyle suggestions to your daily routine.
4 Yes— Mild insulin resistance	Chromium*
5 Yes— Moderate insulin resistance	Chromium + magnesium*
6 or more Yes— High insulin resistance	Chromium + magnesium + green tea extract*

*Look for further descriptions and average doses for these nutrients in the appendix.



Pop Quiz:

Are YOU Holding on to Extra Pounds?

2. Are your hormones in balance?

	Yes	No
WOMEN		
Is your skin dry and itchy and or do you have vaginal dryness?		
Do you have night sweats?		
Do you experience mood swings?		
Do you have trouble remembering names and where you've place things?		
Do you have irregular and/or painful and/or heavy menstrual cycles? OR Have you not had a cycle in more than one year?		
		Total:

Answers

If You Answered With	We suggest
0 Yes— Normal hormone sensitivity	You're doing great. Keep it up!
1 to 2 Yes— On the verge of hormone imbalance	Start implementing our lifestyle suggestions to your daily routine.
3 Yes— Mild hormone imbalance	Lignan extract*
4 Yes— Moderate hormone imbalance	Lignan extract + hops*
5 Yes— High hormone imbalance	Lignan extract + hops + licorice*

**Look for further descriptions and average doses for these nutrients in the appendix.*

2. Are your hormones in balance?

	Yes	No
MEN		
Do you fatigue easily and/or have trouble sleeping?		
Do you lack motivation or feel depressed for long periods at a time?		
Have you lost muscle mass but gained belly fat?		
Do you have low sex drive?		
Is it hard to remember names and where you place things?		
		Total:

Answers

If You Answered With	We suggest
0 Yes— Normal hormone sensitivity	You're doing great. Keep it up!
1 to 2 Yes— On the verge of hormone imbalance	Start implementing our lifestyle suggestions to your daily routine.
3 Yes— Mild hormone imbalance	Chrysin or Nettle root*
4 Yes— Moderate hormone imbalance	Chrysin or Nettle root + lignan extract*
5 Yes— High hormone imbalance	Chrysin or Nettle root + lignan extract + muira puama or maca root*

**Look for further descriptions and average doses for these nutrients in the appendix.*

Pop Quiz:

Are YOU Holding on to Extra Pounds?

3. Are you absorbing too many starches in your diet? Yes No

Do you eat two or more servings of white bread and/or white pasta a day?		
Do you consume at least one sugary drink every day?		
Do you eat more carbs in a day than protein?		
Do you often feel shaky or have low energy after a meal?		
Do you have a high level of fat in your blood (triglycerides >100)?		
Total:		

Answers

If You Answered With	We suggest
0 Yes— No signs of an absorption issue	You're doing great. Keep it up!
1 to 2 Yes— On the verge of an absorption issue	Start implementing our lifestyle suggestions to your daily routine.
3 Yes— Mild absorption issue	Arabinose*
4 Yes— Moderate absorption issue	Arabinose + white kidney bean extract*
5 Yes— High absorption issue	Arabinose + white kidney bean extract + propolmannan*

*Look for further descriptions and average doses for these nutrients in the appendix.

4. Has your weight loss stalled because you've lost muscle mass? Yes No

Would you say you walk, jog or swim often?		
Has it been several months or years since you lifted weights or did resistance training?		
Do you feel like you're losing muscle mass in your arms, chest and mid-section?		
Is it difficult for you to stretch and touch your toes?		
Are you gaining fat around your midline, chin are or under your arms?		
Total:		

Answers

If You Answered With	We suggest
0 Yes— Active lifestyle	You're doing great. Keep it up!
1 to 2 Yes— Somewhat active	Start implementing our lifestyle suggestions to your daily routine.
3 Yes— Active on occasion	Whey or pea protein*
4 Yes— Rarely Active	Whey or pea protein + branched chained amino acids*
5 Yes— Not active	Whey or pea protein + branched chained amino acids* + DHEA**

*Look for further descriptions and average doses for these nutrients in the appendix.

**Make sure you discuss your bloodwork with your doctor before you start taking hormones like DHEA.

Pop Quiz:

Are YOU Holding on to Extra Pounds?

5. Is your resting metabolism slow?

	Yes	No
Are you struggling to lose a few pounds or plateau quickly after losing a few pounds? Do you consume at least one sugary drink every day?		
Are you 50+?		
Do you find that you gain weight easily after just a couple of days of splurging?		
Do you feel like you've lost muscle mass?		
Total		

Answers

If You Answered With	We suggest
0 Yes—Active lifestyle	You're doing great. Keep it up!
1 to 2 Yes— On the verge of slow metabolism	Start implementing our lifestyle suggestions to your daily routine.
3 Yes— Mild case of slow metabolism	Consider a DHEA* supplement
4 Yes— Moderate case of slow metabolism	Supplement with DHEA and get green tea in your diet*
5 Yes—Severe case of slow metabolism	Supplement with DHEA, green tea, and explore the nutrients of cayenne to give yourself a jumpstart.

*Look for further descriptions and average doses for these nutrients in the appendix.

6. Can you tell when you're full?

	Yes	No
Do you crave sweets when under stress and or in the afternoon?		
Do you suffer from depression or feel "blue" and down more days than not?		
Do you wake up many times throughout the night or do you feel tired after you wake up?		
Would you say you have low energy levels?		
Do you eat to feel better?		
Total:		

Answers

If You Answered With	We suggest
0 Yes—Active lifestyle	You're doing great. Keep it up!
1 to 2 Yes— On the verge of low serotonin	Start implementing our lifestyle suggestions to your daily routine.
3 Yes— Mild serotonin deficiency	Tryptophan or 5-HTP*
4 Yes— Moderate serotonin deficiency	Tryptophan or 5-HTP + saffron extract*
5 Yes—High serotonin deficiency	Tryptophan or 5-HTP + saffron extract + hops and or pine nut oil*

*Look for further descriptions and average doses for these nutrients in the appendix.

Pop Quiz:

Are YOU Holding on to Extra Pounds?

7. Is your body communicating with your fat cells?

	Yes	No
Is it rare for you to feel satisfied after eating?		
Do you have a non-alcoholic fatty liver?		
Do you have diabetes, prediabetes or consistently high blood sugar?		
Do you carry most of your excess body fat around your waist or neck?		
Have you ever been told you have high levels of inflammation or cortisol, the stress hormone?		
Total:		

Answers

If You Answered With	We suggest
0 Yes—Active lifestyle	You're doing great. Keep it up!
1 to 2 Yes— On the verge abnormal signaling	Start implementing our lifestyle suggestions to your daily routine.
3 Yes— Mild case of abnormal signaling	Consider adding African mango to your diet
4 Yes— Moderate case of abnormal signaling	Supplement with African mango, and the botanical power of S. Indicus flower and Garcinia mangostana
5 Yes—Severe case of abnormal signaling	Supplement with DHEA, green tea extract and cayenne and give yourself a jumpstart

**Look for further descriptions and average doses for these nutrients in the appendix.*

Bonus	Try
If you answered "yes" to three or more of the questions in quizzes I to VI, then you may have low AMPK activity.	Gynostemma pentaphyllum and trans-tiliroside derived from rose hip extract*

**Look for further descriptions and average doses for these nutrients in the appendix.*



Nutrients Appendix

5-HTP (5-Hydroxytryptophan) Intermediate metabolite between the amino acid tryptophan and serotonin. It improves sleep, enhances mood and modulates stress. Average dose: 50–100 mg/day.

7-keto DHEA A natural metabolite of the hormone DHEA that has been shown to safely increase thermogenesis, improve fat loss and help maintain healthy body weight when combined with a diet and exercise program. Average dose: 100 mg/day.

Arabinose (sometimes listed as L-Arabinose) Affects sucrose digestion and works synergistically with chromium to support healthy blood sugar and insulin levels already within normal range. Average dose: 475 mg/day.

Branched Chain Amino Acids (BCAAs) Special class of amino acids. Provide energy and may serve as fuel sources for skeletal muscles during periods of metabolic stress. BCAAs have been used with success to support liver function. A study in 2008 also showed BCAA supplementation improved insulin resistance and glucose tolerance in certain people. A mouse study showed restoring brain BCAA concentrations to normal had the effect of reinstating normal brain function by helping brain cells connect to each other and function efficiently. Average dose: 2 g/day

Cayenne A pepper related to bell peppers,

jalapeños, paprika and other spices and peppers. Phytochemicals found in the pepper are believed to improve metabolism and may play a role in maintaining a healthy weight. Average dose: 600 mg/day.

Chromium Picolinate A mineral. It plays an important role in maintaining healthy blood sugar levels. Chromium is recognized by the FDA as a treatment for type 2 diabetes. Average dose: 250–500 mcg/day.

Chrysin A plant-based antioxidant (bioflavonoid) found in passionflower (*Passiflora coerulea*), that promotes healthy testosterone levels and lean muscle mass by inhibiting aromatase, the enzyme that converts testosterone to estrogen. Average dose: 500 mg/day.

Coenzyme Q10 (as ubiquinol) An essential nutrient your body requires for healthy mitochondrial function, a process that produces body energy at the cellular level. Average dose: 100-200 mg/day.

Cyclodextrin A patented super-fiber that absorbs fat molecules from your food before they enter your bloodstream. Average dose: 2000 mg/day.

DHEA Considered by many doctors to be the anti-aging hormone. It has been shown that DHEA often declines by 75 to 80 percent from peak levels by age 70, leading to hormonal imbalances that can affect one's quality of life. The marked decline in serum DHEA with age

is believed to play a role in health problems associated with aging. Optimal, youthful levels can help support your immune system, metabolism and muscle mass. Average dose: varies based on blood serum testing.

Fucoxanthin A compound from brown seaweed kelp. It activates the uncoupling protein-1 in white fat, which results in increased fat burning. It supports healthy body fat composition and weight. Average dose: 600 mg/day in three divided doses.

Green Tea Extract This extract has been shown to provide many benefits: reduces oxidative stress; has fluid stabilizing properties; possibly promotes healthy weight; boosts liver detoxification; helps maintain healthy cell proliferation; helps maintain healthy blood cholesterol, LDL, and triglyceride levels; enhances immune function. Average dose: 725 mg/day.

Gynostemma pentaphyllum An extract of the plant *Gynostemma pentaphyllum* was traditionally used in Asian medicine to promote longevity through AMPK activation. Average dose: 150 to 300 mg/day.

Hops A plant extract that contains a phytoestrogen (8-prenylnaringenin) that offers natural female support during menopause. Average dose: 120 mg/day.

Irvingia gabonensis Plant extract. Helps to maintain healthy weight by decreasing hunger

and minimizing sugar's impact on body fat accumulation. Average dose: 300 mg/day in two divided doses.

Licorice Extract Clinically shown to reduce the severity and frequency of hot flashes. Average dose: 450 mg/day.

Maca Root Provides significant support to women undergoing menopause. Many women report improvements of menopausal discomforts in clinical trials. Average dose: 1000 mg/day.

Magnesium Citrate The form of magnesium most absorbed into your body. Magnesium is used in 350 metabolic reactions and influences many body systems including healthy bone mineralization, muscle contractions, heart rhythm and nerve function. Average dose: 250–500 mg/day.

Mangosteen and Indicus Flower A combination of *Sphaeranthus indicus* flower and the Mangosteen fruit (*Garcinia mangostana*) targets the mechanisms by which fat-storing cells or adipocytes become bloated and metabolically dysfunctional, leading to excess fat accumulations in the belly and throughout your body. Average dose: 400 mg/day.

Muirapuama A rainforest herb classified in the Brazilian Pharmacopoeia as an aphrodisiac. It's been shown to improve libido and other sexual issues. Average dose: 425 to 850 mg/day.

Multivitamin/Multinutrient Provides all of the vitamins and minerals necessary for humans in one formula. Average dose: Varies.

Nettle Root Testosterone Testosterone converts to estrogen at higher rates as men age. Prostate cells are sensitive to estrogen's growth stimulatory effects. It helps support prostate cells against excess estrogen levels. Average dose: 120–240 mg/day.

Omega-3 Fatty Acids Healthy polyunsaturated fats known to ease inflammation and support brain, heart and immune health. Average dose: 1000 to 4000 mg/day.

Pea Protein Supports recovery after workouts, helps improve overall lean muscle mass, and may help to increase resting metabolism. Average dose: 1000 to 10000 mg/day.

Pine Nut Oil Natural compounds (pinolenic acid) found in pine nuts are known to reduce appetite by releasing hunger suppressing hormones like cholecystikinin. Average dose: 1 drop of oil per day or 450 mg capsule/day.

Probiotics Healthy gut bacteria that promote optimal digestion and immunity. Average dose: Varies. Best to supplement with a variety of strains.

Propolmannan A fiber that swells in the stomach after ingestion with water to help reduce calorie consumption. It binds to bile acids in the small intestine and helps transport them out of the body. Average dose: 2000 to 4000 mg/day.

Saffron Extract A spice that helps support a healthy weight by decreasing sugar cravings and between-meal snacking. It also improves mood by increasing the effective time of serotonin within the central nervous system. Average dose: 176.5 mg/day in two divided doses.

Sesame Lignans A plant-based antioxidant that helps to reduce excess estrogen and dihydrotestosterone effects (DHT). It helps guard against dangerous lipid peroxidation and helps ease chronic inflammation. Average dose: 50–100 mg/day.

Tryptophan An amino acid precursor to serotonin, the “feel good” neurotransmitter. It improves sleep, enhances mood and modulates stress. Average dose: 1000 mg/day.

Whey Protein Supports recovery after workouts, helps improve overall lean muscle mass and may help to increase resting metabolism. Average dose: 5000 to 20000 mg/day.

White Kidney Bean Extract Helps support normal levels of the gut hormones that control appetite and satiety. The result is reduced desire for food and less food intake. Average dose: 100 to 200 mg/day.



References

1. Yamasa T, Ikeda S, Koga S, et al. Evaluation of glucose tolerance, post-prandial hyperglycemia and hyperinsulinemia influencing the incidence of coronary heart disease. *Intern Med.* 2007;46(9):543-6.
2. Abate N, Haffner SM, Garg A, Peshock RM, Grundy SM. Sex steroid hormones, upper body obesity, and insulin resistance. *J Clin Endocrinol Metab.* 2002 Oct;87(10):4522-7.
3. Vermeulen A, Kaufman JM, Goemaere S, van Pottelberg I. Estradiol in elderly men. *Aging Male.* 2002 Jun;5(2):98-102.
4. Marin P, Krotkiewski M, Bjorntorp P. Androgen treatment of middle-aged, obese men: effects on metabolism, muscle and adipose tissues. *Eur J Med.* 1992 Oct;1(6):329-36.
5. Kromhout D, Bloemberg B, Seidell JC, Nissinen A, Menotti A. Physical activity and dietary fiber determine population body fat levels: the Seven Countries Study. *Int J Obes Relat Metab Disord.* 2001 Mar;25(3):301-6.
6. Breum L, Rasmussen MH, Hilsted J, Fernstrom JD. Twenty-four-hour plasma tryptophan concentrations and ratios are below normal in obese subjects and are not normalized by substantial weight reduction. *Am J Clin Nutr.* 2003 May;77(5):1112-8.
7. Brandacher G, Hoeller E, Fuchs D, Weiss HG. Chronic immune activation underlies morbid obesity: is IDO a key player? *Curr Drug Metab.* 2007 Apr;8(3):289-95.
8. Salminen A, Hyttinen JM, Kaarniranta K. AMP-activated protein kinase inhibits NF- κ B signaling and inflammation: impact on healthspan and lifespan. *J Mol Med (Berl).* 2011 Jul;89(7):667-76.
9. Zelenak C, Föller M, Velic A, Krug K, Qadri SM, Violette B, Lang F, Macek B. Proteome analysis of erythrocytes lacking AMP-activated protein kinase reveals a role of PAK2 kinase in eryptosis. *J Proteome Res.* 2011 Apr 1;10(4):1690-7.
10. Towler MC, Hardie DG. AMP-activated protein kinase in metabolic control and insulin signaling. *Circ Res.* 2007 Feb 16;100(3):328-41.
11. Steinberg GR1, Kemp BE. AMPK in Health and Disease. *Physiol Rev.* 2009 89:1025-78
12. McCarty MF. AMPK activation--protean potential for boosting healthspan. *Age (Dordr).* 2014 Apr;36(2):641-63.
13. Bijland S, Mancini SJ, Salt IP. Role of AMP-activated protein kinase in adipose tissue metabolism and inflammation. *Clin Sci (Lond).* 2013 Apr;124(8):491-507.
14. Stevens GA, Singh GM, Lu Y, Danaei G, Lin JK, Finucane MM, Bahalim AN, McIntire RK, Gutierrez HR, Cowan M, Paciorek CJ, Farzadfar F, Riley L, Ezzati M; Global Burden of Metabolic Risk Factors of Chronic Diseases Collaborating Group (Body Mass Index). National, regional, and global trends in adult overweight and obesity prevalences. *Popul Health Metr.* 2012 Nov 20;10(1):22.
15. Cohen SS, Signorello LB, Cope EL, McLaughlin JK, Hargreaves MK, Zheng W, Blot WJ. Obesity and all-cause mortality among black adults and white adults. *Am J Epidemiol.* 2012 Sep 1;176(5):431-42.



LifeExtension.com