THORNE



Medically Guided Weight Loss

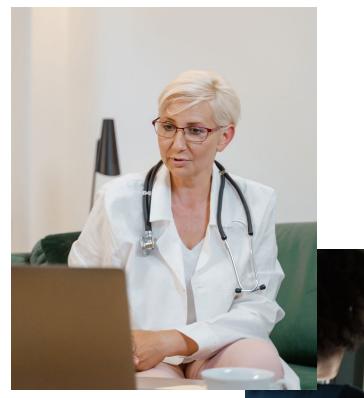
Support program

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Introduction





Medically guided weight loss, also called medically assisted or physicianguided weight loss, is a health practitioner-supervised program that helps you meet your weight-loss goals in a safe and healthy manner. It can be difficult to achieve weight-loss goals on your own, and studies show that individuals who receive support have better success.

A medically guided weight-loss program usually includes recommendations and guidance for proper nutrition, physical activity, optimal sleep, and stress management. Some medically guided weight-loss programs utilize pre-packed foods or meal-replacement drinks, while others rely on medications to assist weight-loss goals. The best medically guided weight-loss program is the one that's right for you.

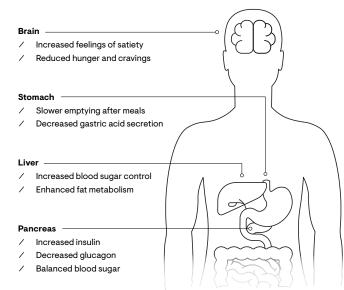
With the increase in popularity of medication-assisted weight loss, many individuals try to achieve weight loss without support. At Thorne, we consider ourselves your partner in helping you manage your health. This Guide is meant to serve as a companion for medically guided weight loss, helping you to understand common side effects of weight-loss medications you might be prescribed, how to pair diet and exercise with your medication to maintain lean muscle mass and overall health, and what to expect and how to navigate when transitioning off medication.



Commonly prescribed weight-loss medications



Effects of GLP-1 and GIP in the body



In combination with lifestyle changes, certain medications can assist you with weight loss and long-term weight management. For most individuals, use of these medications results in a weight reduction of 5-10 percent of starting weight. These medications reduce appetite, decrease fat absorption, or improve blood sugar balance – or a combination of those actions. The most common medications prescribed for weight loss include:

Xenical[®] or Alli[®] (orlistat)

Reduces the absorption of fat from food in the gut; FDA-approved for long-term use.

Adipex-P[®] or Lomaira[™] (phentermine)

Works in the brain to decrease appetite; FDA-approved for short-term use only.

Qsymia® (phentermine and topiramate)

Works in the brain to decrease appetite and increase feelings of fullness after eating; FDA-approved for long-term use.

Contrave® (naltrexone and bupropion)

Works in the brain to decrease hunger and cravings; FDA-approved for longterm use.

Saxenda® (liraglutide); Wegovy® or Ozempic® (semaglutide)

Increases feelings of fullness by keeping food in the stomach for longer and improves blood sugar regulation; Saxenda and Wegovy are FDA-approved for long-term use; Ozempic is FDA-approved for type 2 diabetes and can be used off-label for weight loss.

Mounjaro™ or Zepbound™ (tirzepatide)

Increases feelings of fullness by keeping food in the stomach for longer, reduces cravings, and improves blood sugar regulation and cholesterol metabolism; Zepbound is FDA-approved for long-term use; Mounjaro is FDAapproved for type 2 diabetes and can be used off-label for weight loss.

The newest medications from this list – Saxenda, Wegovy, Ozempic, Mounjaro, and Zepbound – work in a different way than other weight-loss medications. These medications mimic a hormone in the body called glucagon-like peptide-1 (GLP-1). When these drugs bind to receptors on cells where GLP-1 connects, they stimulate the pancreas to secrete insulin, a hormone that lowers blood sugar after a meal, and to stop secreting glucagon, a hormone that has the opposite effect of insulin by raising blood sugar when it gets too low. GLP-1 also slows down stomach emptying, which aids in digestion, increases feelings of fullness, and signals the brain to stop eating.

In addition to GLP-1 activity, Mounjaro and Zepbound also activate another type of receptor called GIP (glucose-dependent insulinotropic polypeptide). GIP is a hormone produced in the small intestines with actions similar to GLP-1. It also increases insulin secretion, slows digestion by decreasing gastric acid secretion, and increases feelings of fullness.

Managing GI side effects of assisted weight loss



One way in which certain weight-loss-supportive medications work is to slow down how quickly food moves through the digestive tract — also known as delayed gastric emptying. This causes the food you eat to make you feel full faster and for a longer period. Although this can be helpful in discouraging overeating and controlling portion size, there are often side effects associated with delayed stomach emptying, such as nausea, vomiting, belching, constipation or diarrhea, and feeling gassy and bloated.

General management with diet



Eat smaller and more frequent meals

This can help prevent feeling overly full and avert issues like gas and bloating from undigested food lingering in your digestive system.

^z ^{7z} Don't eat too close to bedtime

Having an excessive amount of food in your stomach before going to bed or lying down can exacerbate nausea and symptoms of reflux.



Avoid overly fatty or greasy foods

Because food stays in your system longer than usual, your digestive system must work harder to process excess fats. This can contribute to gas, bloating, and nausea.



Limit alcohol consumption

Alcohol can contribute to nausea and upset stomach. In addition, because of delayed gastric emptying, it can be more difficult to accurately assess your alcohol intake. Worse, if you are eating smaller amounts and fewer calories, then it's not advisable to fill your stomach with empty-calorie liquids like alcohol.



Skip overly processed foods

Not only are these undesirable when you're trying to lose weight, they can exacerbate the digestive issues common to weight-loss medications.



Follow your gut, literally!

If you find that certain foods or food groups are causing excess nausea, heartburn, or changes in bowel patterns, then skip them. Maybe you find that acidic foods make you uncomfortable after a meal, or too many sweets cause an energy crash. Listen to your body and do what makes you feel best.



Managing GI side effects of assisted weight loss



Supplementing for common GI side effects

Nausea, belching, gas, and bloating

Supporting digestive prowess helps process the food that stays longer in your stomach and causes issues. Thorne's <u>*Pancreatic Enzymes*</u> can help digest a meal, particularly when it's high in fats.*

Note: Use caution with products containing Hydrochloride (HCI)I. Although this ingredient is great for supporting digestion,* it can cause irritation by remaining in the stomach for an excess period.

Bowel changes

Depending on your microbiome and the normal tendencies of your digestive system, you might experience constipation and/or diarrhea from assisted weight-loss medications. Adding a daily probiotic, like Thorne's *FloraMend* <u>*Prime Probiotic*</u>, can help regulate digestion while supporting healthy weight loss.* You can also consider adding *FiberMend*[®] to promote bowel regularity.* If constipation is a problem, then consider adding a magnesium product, like Thorne's <u>Magnesium CitraMate</u>[™], to promote regular bowel movements.*

Reflux

Reflux can accompany delayed gastric emptying. While avoiding overeating or eating too close to bedtime can help with reflux, you still might experience lingering irritation. Thorne's <u>GI Relief</u> helps soothe irritated tissues and eases digestive discomfort.*

Thorne products to minimize GI side effects*	Dyspepsia/indigestion	Gas/bloating	Difficult stools	Loose stools	Reflux irritation	Fat digestion	Healthy weight	Healthy blood sugar
FiberMend			•	•				•
FloraMend Prime Probiotic		•	•	•			•	
GI Relief	•				•			
Magnesium CitraMate			•					
Pancreatic Enzymes	•	•				•		

Aesthetics – support for your skin



*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease. Rapid weight loss can cause skin to feel and appear loose and sagging. In addition, certain medications are known to cause an undesirable hollowed appearance in the face. Although you can't directly address the fat loss under the skin surface that causes this issue, there are things you can do to support skin elasticity and hydration.



Hydrate

In addition to the general health benefits of staying hydrated, adequately hydrated skin will appear firmer and more resilient.



Avoid sun damage

Sun-damaged skin can suffer from additional loss of elasticity and pigmentation issues. Protect your skin with a daily sunscreen or provide shade for delicate skin.



Consume adequate nutrients

Protein provides the amino acids needed to produce collagen, which keeps skin firm and resilient.



Topical support for skin sagging helps hydrate the superficial skin layers, supports collagen production, fights the visible signs of aging, and helps the skin appear more radiant.



Consider facial acupuncture

Acupuncturists with specific training in facial acupuncture can use very fine needles to help stimulate collagen production and skin rejuvenation to assist with the visible signs of aging.



Supplement with skin-supporting nutrients

Thorne's <u>Collagen Plus</u> provides not only a rich source of hydrolyzed collagen, but also skin-supporting botanicals that enhance hydration, radiance, and elasticity, as well as reducing fine lines and wrinkles.* Supplementing with a high quality, high potency fish oil supplement, like Thorne's <u>Omega Superb</u>, supports skin elasticity and promotes healthy skin aging.*



Dietary support while on a weightloss program



Reductions in caloric intake can lead to nutritional "gaps" that can impede weight-loss goals and lead to low energy and loss of lean muscle mass. For safe and sustainable weight loss, consume nutrient-dense foods that deliver high concentrations of beneficial nutrients — like vitamins, minerals, antioxidants, amino acids, and fiber — relative to their caloric content.

Because stored toxins accumulate in fatty tissues, weight loss is often accompanied by a release of toxins that need to be metabolized by the liver and excreted from the body. Nutrient-dense foods high in antioxidant and amino acid content support healthy detoxification, and the beneficial fiber they provide supports bowel regularity and the elimination of toxins.

Nutrient-dense foods to focus on

- Consume 3-5 servings/day of high-quality protein from a variety of sources.
- \checkmark "Eat the rainbow" of non-starchy vegetables and whole, fresh fruits.
 - Leafy, green vegetables (spinach, kale, arugula) are rich in fiber and other nutrients.
 - Cruciferous vegetables (broccoli, Brussels sprouts, cauliflower) support healthy detoxification.
 - Dark red, blue, and purple berries and fruits (blueberries, blackberries, raspberries, cherries) contain beneficial plant compounds with **antioxidant benefits**.
- Choose 100-percent whole grains, beans and legumes, and healthy fat sources (nuts, seeds, fish, and extra virgin olive oil).

Other considerations

- / Skip processed foods, refined carbohydrates, and fried foods.
- Zeat within two hours of waking, stop eating two hours before bedtime, and avoid late night snacking.
- \checkmark Adequate hydration supports detoxification and elimination.
 - / Drink at least one-half ounce of water per pound of body weight daily (a 180-pound person should drink 90 ounces of water daily).
 - $\checkmark\,$ Nourishing herbal teas and soups can increase fluid intake.
- Add leafy greens to a smoothie or puree cooked veggies for soups or sauces to increase nutrient intake and hydration simultaneously.

Maintaining lean muscle mass with diet







Without adequate protein consumption, weight loss can lead to a loss of lean muscle. When caloric intake is low or reduced, high protein diets can help preserve lean muscle mass and support fat loss.

- Aim for one-half gram of protein daily per pound of body weight (90 grams for a 180-pound person).
- Consume protein from lean meats, eggs, beans, nuts, and dairy products like cottage cheese and Greek yogurt.
- / Pair beans with whole grains to make a complete protein.

Consider an app like Cronometer or MyFitnessPal to track daily protein intake.

Note: Protein estimates below are approximate.

Chicken or turkey (3 oz: 26 g) ℃ / Wild salmon (4 oz: 24 g) Sirloin steak with fat removed (5 oz: 42 g) ۲ Cottage cheese (1 cup: 23 g) ٩ Plain Greek yogurt (1 cup: 22 g) 0 Eggs (2 eggs: 12 g) \Box Tempeh (3 oz: 19 g) \Box Extra firm tofu (3 oz: 11 g) φ Black beans (1 cup: 14 g) ♥/ Chickpeas (1 cup: 11 g) ♥/ Lentils (1 cup: 18 g) Quinoa (1 cup: 8 g) Nuts (2 tbsp peanut or almond butter: 7 g)

Maintaining lean muscle mass with exercise



Along with proper nutrition, exercise is another tool for optimizing muscle maintenance. This is especially important for maintaining (or improving) fitness level, physical activity, and overall health. While some muscle loss is expected with any significant weight loss, regular exercise can minimize this. A 2017 study found that both endurance and resistance exercise help preserve muscle mass during weight loss, with resistance training being best for improving muscle strength.

Resistance training: what is it and what are the benefits?

Resistance training (RT), also referred to as weight or strength training, is a form of exercise intended to increase muscular strength and endurance. It involves exercising muscles using some form of resistance, such as weights, bands, or even your own bodyweight against gravity to increase muscle strength and endurance. Common RT exercises include push-ups, pull-ups, bicep curls, squats, and planks. With RT, there are usually noticeable changes in muscle size, strength, power, and joint stability.

Resistance training helps preserve and increase muscle mass at any age, which can make everyday activities such as climbing stairs, picking up groceries, or working in the yard easier. Along with increases in muscle strength and endurance, RT can also improve mental health, bone density, stress management, and overall body and brain health. Over time, consistent RT leads to improvements in metabolic health as well, including better blood sugar regulation, healthy cholesterol and triglyceride levels, and balanced hormones.

Getting started with resistance training

According to the Physical Activity Guidelines for Americans, adults should engage in 150 minutes of moderate-intensity physical activity per week, with muscle-strengthening activities at least two days per week. Although 150 minutes of exercise seems like a lot, it is not meant to be accomplished at one time — aim for 30 minutes daily, five days a week.

Research also suggests benefit from engaging in short periods of physical activity. For example, split exercise sessions into 10- or 15-minute bouts, repeated 2-3 times during the day.

One great thing about RT is that you don't need to be an expert to start. It can be done at all levels and even at home. If you are just getting started, using your bodyweight to perform exercises such as push-ups, squats, lunges, or pull-ups can effectively increase muscle strength and endurance. Hand weights or resistance bands can easily be used at home as well.

Find a balance between limiting yourself and pushing yourself too hard. It is important to be aware of your body and adjust your workouts accordingly. Remember that results look different for everybody, so be mindful not to compare yourself to others. The key to progress is consistency!

Examples of exercises, including many free RT videos, are easily found online. If you're new to RT and looking for a place to get started, then search YouTube for free workout videos.

Nutritional supplementation

for bridging dietary gaps and maintaining muscle mass and bone health



Note: See Appendix II for how to create a resistance training routine and a sample routine. Even with the best of intentions, a modern lifestyle can make it difficult to consistently obtain the needed nutrition from diet alone. Coupled with a decreased appetite and fewer cravings for food, those 5-9 recommended servings of fruits and vegetables per day can begin to feel out of reach. Supplementation helps you bridge nutritional gaps in both micronutrients – vitamins and minerals – and macronutrients, such as protein and healthy fats like omega-3 fatty acids.

Supplements to bridge nutrient gaps

<u>Basic Nutrients 2/Day</u> is a daily multi-vitamin/mineral supplement that provides comprehensive nutritional support with fewer capsules – only two per day. <u>Super EPA</u> provides essential omega-3 fatty acids – EPA and DHA – that support a healthy heart and brain, enhance mood, help maintain a healthy inflammatory response in muscles and joints, and promote healthy skin.*

For a combination multi-vitamin/mineral and protein option, consider Thorne's <u>MediClear-SGS™</u>. This pea- and rice-protein powder is fortified with a complete multi-vitamin/mineral complex, antioxidants, and liver-supportive botanicals and is available in chocolate and vanilla flavors.

Supplements to support lean muscle mass

In addition to MediClear-SGS for maintaining healthy muscle mass and achieving adequate protein intake, consider <u>Whey Protein Isolate</u>. Available in chocolate and vanilla flavors, Thorne's Whey Protein Isolate provides 21 grams of protein per serving with a complete amino acid profile and enhanced leucine content for optimal muscle maintenance.*

If you follow a vegan diet, then <u>Amino Complex</u> is a Thorne "Verified Vegan" nutritional supplement that contains all of the essential amino acids and is high in branched-chain amino acids (BCAAs), including leucine, to support the growth of lean muscle mass.* Amino Complex is available in lemon and berry flavors.

Creatine is an amino acid found in meat, poultry, eggs, and fish, and plays a vital role in the body's production of cellular energy and maintaining lean muscle mass.* Thorne's <u>Creatine</u> is an easy-to-mix powder that is colorless, flavorless, and odorless.

If you are seeking support for maintaining lean muscle mass with a capsule rather than a powder, then consider <u>NiaCel® 400</u>, a nicotinamide riboside (NR) supplement that enhances cellular energy production and helps preserve lean body mass.*

Supplements for bone support

Bone mineral density can also decrease during a weight-loss program. In addition to adequate protein and regular exercise, certain nutrients are essential for maintaining healthy bones, including <u>vitamin D and vitamin K</u> and the minerals <u>calcium and magnesium</u>.* Now might be a good time to check your vitamin D level with Thorne's <u>Vitamin D Test</u>.

Plateaus: why and what you can do about it

Weight loss that has stalled for at least two weeks is referred to as a plateau. As frustrated as you might be to see the needle on the scale stop moving downward, plateaus are an expected part of the weight-loss process. Water weight is typically the first weight that is lost, making weight loss seem rapid at the beginning. But then it can slow down as your metabolism begins to adjust and slow as well. In these moments, you might be even quicker to prioritize food and movement, but there can be a lot of different factors at play to consider.

Ć ^{Food}

Make sure you're eating enough! Eating too little can actually stall weight loss as the body goes into "starvation mode," so be sure to fuel up with nutrient-dense foods and focus on variety.

Having a protein source with every meal and snack can help ensure lean muscle mass is preserved, even with a goal of weight loss.

Physical activity

Switch up your exercise routine. If you're focusing primarily on aerobic exercise, then incorporate more resistance training to boost your metabolically active muscle tissue.

Building on your flexibility and balance can also use your muscles in new ways they might not be used to, furthering their capacity for movement. Changing up the exercise intensity or duration can also challenge your body in different ways to help push past a plateau.

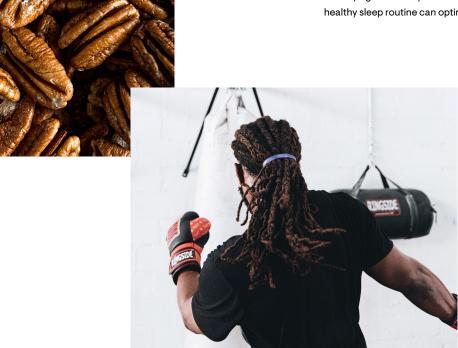
C Sleep

Sleep is an essential part of life and health, and a lack of highquality sleep can contribute to a weight-loss plateau. Sleep can be disrupted by many things, including loud noise, bright or blue light, a sleep environment that is too warm, a high stress level, alcohol intake, a large meal before bed, or even exercising too close to bedtime.

Identifying factors in your own sleep environment that prevent a healthy sleep routine can optimize your rest.

Plateaus: why and what you can do about it





4 Stress

Cortisol, the body's stress hormone, also impacts weight loss because your body circulates more glucose, ready for use for fight or flight.

Using stress relief techniques like mindfulness, meditation, physical activity, positive affirmations, and relying on your support network can help you manage stress and the physical or mental symptoms that arise.

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Hydration

Fluids matter! Especially because water weight is typically lost during weight-loss efforts, staying adequately hydrated is key to ensuring your muscles and organs have the fluids they need. When eating a higher fiber diet, your body needs more fluid to go with that fiber and keep the digestive process running smoothly.

Alcohol not only contains empty calories, but also has a diuretic effect, leading to further dehydration. Sugar-sweetened beverages provide a high number of calories in a small serving size, so consider other beverage options like sparkling water, fruit-infused waters, dairy or plant-milk drinks, or small servings of 100-percent juice instead.

Hormones

Particularly in menstruating and perimenopausal women, hormone fluctuations can contribute to weight loss slowing or plateauing.

Noticing monthly changes in both hormone levels and weight can be a helpful way to recognize your natural pattern of weight loss, including plateaus.

Life after weight-loss medication



This section helps you navigate life after $\mathsf{Ozempic}^{\circledast}$ or another weight-loss medication.

Within the first few weeks of discontinuing medication, your appetite will return, gastric emptying will speed up, and related GI side effects will likely go away. If you have type 2 diabetes, then blood sugar can rebound and return to a similar, elevated level as before starting the weight-loss medication. For example, in a study of patients who discontinued semaglutide after 68 weeks of medication use, participants regained approximately two-thirds of the weight they had previously lost within one year of stopping use.

Now that you are no longer taking a medication that makes you feel full with less, helps you metabolize your foods better, or supports healthy blood sugar, it is important to have the tools to help you maintain your goals.

Diet and lifestyle tips

- Eat foods that are filling. You have been used to feeling full and there are ways to continue to feel full without adding a ton of calories. High-fiber foods help fill you up because they take longer to digest so they stay in your stomach longer:
 - / Avocados
 - / Lentils/split peas
 - / Brown rice
 - Air-popped popcorn (seasoned with your favorite spice but leave off the butter)
- Stay well hydrated. Drinking water can make you feel full and also improve the health of your kidneys and the look of your skin, hair, and nails. But staying well hydrated doesn't just mean drinking water. Foods with a high water content can also help you feel full faster. Most fruits and veggies are high in fiber and water, such as:
 - Grapes (82% water; choose grapes over raisins; 1 cup of grapes has 104 calories while 1 cup of raisins has 410 calories)
 - / Carrots (88% water)
 - / Grapefruit (64% water)
 - / Watermelon (92% water)
 - / Cucumbers (a whopping 95% water; tzatziki anyone?)
 - / Lettuce (95% water)
- Plan your meals in advance and don't wait until you are starving to eat. You will be much less likely to spontaneously start nibbling if you can avoid getting "hangry." A little planning will assure you have healthy foods at your fingertips.
- Engage in regular exercise. Look for activities you enjoy. You will be more likely to stick to exercise when it's something you look forward to instead of dread. Do you like exercising alone or do you enjoy a group activity or walking with a buddy? It's also best to choose activities that are convenient.
- / Manage your stress. Stress can result in binge eating or at least grabbing for the first junk food within reach. Stress can also increase cortisol that contributes to weight gain. Consider testing your cortisol level with Thorne's at-home <u>Stress Test</u>.

Life after weight-loss medication



Diet and lifestyle tips (cont.)

- Get a good night's sleep. We can't stress enough the importance of sleep for keeping the weight off. If you're having trouble sleeping but don't know why, then you can gain insight from Thorne's at-home <u>Sleep Test</u>, which measures the ebb and flow of your melatonin and cortisol levels over a 24-hour period. Not only do studies show a link between short sleep duration and weight gain, but it might even be worse if you have artificial light on – like the TV. One study of 43,722 U.S. women enrolled in the Sister Study found women who slept with artificial light, compared to those who did not, experienced an average 11-pound weight increase over a 5.7-year follow-up.
- Focus on benefits beyond weight loss. Non-scale victories related to positive lifestyle behaviors like exercise, good sleep, and stress reduction can include improved flexibility, reduced joint pain, increased muscle tone and strength, and improved energy levels.

Support for your mental and emotional needs

The rebound effects on weight loss, food cravings, or blood sugar that you experience after stopping a weight-loss medication can lead to distrust in your body, so prioritizing your mental health is a critical component to supporting your overall health and wellbeing. Weight regain and the return of many food cravings and "normal" hunger/fullness cues may bring about feelings of failure and distrust, both in your body and in food. These negative associations with body image and food can contribute to disordered eating patterns and further exacerbate the mental and emotional effects of internalized weight stigma.

Self-compassion. In those moments where mental and emotional health are struggling, practicing self-compassion can go a long way. Accepting and embracing full body positivity might feel like a stretch, and the odds of feeling positive about your body 100 percent of the time are low. However, viewing your body as a partnership and something that supports activities of enjoyment or accomplishment can be a powerful way to shift how you view your body. Even just taking a body neutral approach can be a more effective way to begin removing judgment around your body shape, size, or look. For additional support of an overall healthy mood and promoting a calm state of mind, look toward the help of Thorne's <u>Emotion Balance Support</u>.*

Positive affirmation. Build your resilience and mental fortitude by practicing affirmative "I" statements:

- ' "I have..." Resources-focused mindset when thinking about your internal and external support network.
- ' "I am..." Strengths-focused mindset to highlight your values and good things about yourself.
- "I can..." Abilities-focused mindset to include how you can use your resources and strengths to your advantage.

Life after weight-loss medication





Support for your mental and emotional needs (cont.)

Food cravings and attitudes. As cravings rebound after medication use and weight changes occur, you might look at food as the villain. Societal views already demonize certain foods and praise others, but this is not the best approach to "healthy" eating. There is no one-size-fits-all method of eating that works for everyone's lifestyles and food preferences. Working to identify the rules that dictate whether you label certain foods as "good" or "bad" can slowly remove morality from your food choices and allow you to find a more neutral perspective toward nourishing your body.

Questions to ask yourself:

- / Are there any foods I have labeled as "forbidden" foods?
- \checkmark $\;$ Where is the voice of the food police coming from? Is it helpful or hurtful?
- / Do I have self-imposed "shoulds" of what foods to eat?

Thorne's <u>Craving and Stress Support</u> provides supplemental support with botanicals and nutrients to help you manage the effects of stress and increased cravings.*

Finding ways to support positive mental and emotional wellbeing during periods of major change while on and off a weight-loss program are key components to prioritizing overall health.

Supplements to support metabolism

Nutritional supplements can support weight maintenance as you move forward. Here are several suggestions to complement the diet, lifestyle, and mental/ emotional tips. If you are working with a health professional for supplementation, then they can provide you with recommendations specifically tailored to your needs. You could also consider taking Thorne's at-home <u>Weight Management</u> <u>Test</u> to find out if any hormones – such as adrenal, thyroid, or sex hormones – are out of balance; the test also examines blood sugar metabolism and vitamin D level.

Thorne's <u>Metabolic Health</u> supplement helps maintain healthy blood sugar and cholesterol levels.* Note that this recommendation is not intended to replace any medications your doctor prescribed for blood sugar control. Metabolic Health also promotes normal fat metabolism in the liver and maintenance of healthy body composition.* Like Metabolic Health, Thorne's <u>Berberine</u> also supports maintenance of healthy lipid and blood sugar levels, in addition to providing support for maintaining your desired waist circumference.*

Green tea could also be considered, either in the form of a nutritional supplement like Thorne's <u>Green Tea Phytosome</u> or as a soothing cup of tea. Green tea is a potent antioxidant, can help burn calories, and provides liver support.*

For additional support for weight maintenance, check out Thorne's <u>Weight</u> <u>Management Program</u> and <u>Metabolic Syndrome Guide</u> that contain information on how to fill your plate, meal plans, recipes, and a lot more.

Appendix I: Nutritional supplements



Note: See Appendix I: Nutritional Supplements for more information on the supplements discussed in this Guide.

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Nutritional supplements for managing GI side effects

FiberMend®

A prebiotic fiber blend that supports GI function*

- / Promotes bowel regularity in the case of either difficult or loose stools*
- Provides the added benefit of supporting a healthy blood sugar level*
- / Start with ¼ scoop and increase gradually as tolerated

FloraMend Prime Probiotic®

A probiotic for offsetting several GI side effects*

- / Promotes bowel regularity and decreases gas and bloating*
- Supports a healthy gut microbiome for enhanced mood*
- Studies show decreased waist circumference and support for weight management*

GI Relief

A soothing blend of botanicals

- Soothes irritation from acid reflux*
- / Helps relieve stomach discomfort*
- Can be taken out of the capsule and mixed with water for a warm, soothing tea

Magnesium CitraMate™

Combines two well-absorbed forms of magnesium

- ✓ Use in the case of bowel irregularity*
- / Start with one capsule and increase as needed
- / Helps offset low dietary magnesium intake

Pancreatic Enzymes

Pure pancreatin without the additives that can inhibit absorption

- / Important for absorbing nutrients after they leave the stomach*
- \checkmark Necessary for digesting foods, especially fats*
- $\checkmark~$ Helps alleviate indigestion, gas, and bloating*

Appendix I: Nutritional supplements





Aesthetics: nutritional supplements for supporting healthy skin

Collagen Plus

A unique formula for supporting healthy skin*

- / Contains small peptides of hydrolyzed collagen for easy absorption
- / Unique nutrients and botanicals support the skin's hydration, elasticity, and radiance*
- A great-tasting powder that can be mixed with water, Amino Complex, Creatine, or a protein powder

Omega Superb

EPA and DHA in a lemon-berry flavored liquid

- Supports skin elasticity and healthy skin aging*
- / Lightly sweetened and flavored with no fishy taste
- / Goes down easily with no residual fish burps

Bridging nutrient gaps

Basic Nutrients 2/Day

Easy, two-capsule per day use

- / Provides a complete multi-vitamin/mineral formula
- $\ensuremath{\,^{\prime}}$ Nutrients in their most well-absorbed, tissue-ready forms to cut down on capsule bulk and number
- / 360-degree, whole-body support

MediClear-SGS™

Vegetarian protein, a multi, and detox nutrients all in one

- $\prime~20$ grams of protein per serving for promoting muscle, skin, and bone health*
- Added nutrients to support the natural detox process that occurs when you lose fat*
- / In two great-tasting flavors chocolate or vanilla

Super EPA

Concentrated EPA and DHA

- / High concentration means fewer gelcaps
- / Provides support for heart, brain, nerve, joint, immune, and skin health*
- / Promotes insulin sensitivity and a healthy inflammatory response*

Appendix I: Nutritional supplements





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Support for lean muscle mass

Amino Complex

Contains all nine essential amino acids

- High in branched-chain amino acids, including leucine, for making lean muscle*
- / Thorne Verified Vegan
- In two great flavors berry or lemon

Creatine

An amino acid for supporting muscle mass and endurance*

- Supports muscle mass, cellular energy, and brain power*
- Vegans or others not eating protein sources (meat, eggs, fish) can be low in creatine
- / In an easy-to-mix, colorless, flavorless, odorless powder

NiaCel[®] 400

Nicotinamide riboside: a capsule option for maintenance of lean muscle mass*

- / Clinical studies show NR increased fat-free mass in overweight adults*
- / Increases energy-producing NAD+ in muscle cells*
- Supports cellular energy production*

Whey Protein Isolate

Provides 21 grams of protein per serving

- Contains a complete amino acid profile
- / Whey is high in leucine to enhance muscle maintenance*
- / Available in great-tasting chocolate or vanilla flavors

Support for bone health

Vitamin D + K2

In liquid with metered dropper for ease of adjusting dose

- / The two most essential vitamins for bone support*
- / Provides cardiovascular health and immune health benefits*
- / As D3 and K2 the most potent and well-studied forms for bone health*

Calcium-Magnesium Malate

In a 1-to-1 ratio of calcium-to-magnesium

- / The two most important minerals for supporting healthy bone mass*
- / Provides support for muscle function, including the heart*
- / In a concentrated and well-absorbed malate form

Appendix I: Nutritional supplements





Support for bone health (cont.)

Vitamin D Test

An easy, at-home blood (finger prick) test

- / Being overweight, having diabetes, or being on a food-restrictive diet can contribute to a low vitamin D level
- / Tests total vitamin D (25-hydroxyvitamin D)
- Provides diet, lifestyle, and supplement recommendations tailored to your test results

Mental and emotional support

Craving and Stress Support

Two botanicals and six B vitamins for a balanced stress response*

- / Helps to down-regulate an overactive cortisol response*
- Supports weight management by helping to minimize stress eating and nighttime cravings*
- / Contains the patented, clinically studied botanical formula Relora®

Emotion Balance Support

Comprehensive vitamin, amino acid, botanical formula

- / Enhances mood and feelings of well-being*
- / Provides balanced neurotransmitter and adrenal support*
- ✓ Is non-habit forming

Metabolic support after medication

Berberine

Dual-action formula contains well-absorbed berberine phytosome and wellstudied berberine HCl

- / Supports a healthy blood sugar level*
- Promotes lipid metabolism to maintain healthy cholesterol and triglyceride levels*
- / Helps maintain healthy body composition*

Green Tea Phytosome

Green tea catechins provided in a well-absorbed phytosome complex

- / Green tea's thermogenic effect helps burn calories*
- Potent antioxidant activity provides liver support and helps maintain a balanced inflammatory response*
- / Supports insulin sensitivity for achieving healthy weight management*

Appendix I: Nutritional supplements





*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Metabolic support after medication (cont.)

Metabolic Health

Two well-absorbed botanical phytosome complexes provide comprehensive metabolic support*

- / Helps maintain a healthy blood sugar level and optimal insulin response*
- ✓ Supports healthy cholesterol levels and fat metabolism in the liver*
- Supports a balanced inflammatory response*

Sleep Test

Easy, at-home saliva test

- Measures the daily circadian rhythm of melatonin and cortisol over a 24hour period
- / These two important hormones regulate your sleep/wake cycle
- Provides diet, lifestyle, and supplement recommendations tailored to your results

Stress Test

An easy, at-home saliva test for adrenal hormones

- / Measures cortisol fluctuations (circadian rhythm) over a 24-hour period
- Measures DHEA level, an adrenal hormone that works in tandem with cortisol
- Provides diet, lifestyle, and supplement recommendations tailored to your results

Weight Management Test

Easy, at-home blood and saliva test

- / Provides insights for support of your weight maintenance goals
- Tests sex, adrenal, and thyroid hormones, as well as blood sugar maintenance and vitamin D
- Provides diet, lifestyle, and supplement recommendations tailored to your results

Appendix II: Exercise





Create a resistance training routine

To build a resistance training workout, begin with the following components of resistance training:

- Type of resistance hand weights, resistance bands, weight machines, bodyweight
- $\checkmark~$ Amount of resistance determines the intensity of the exercise
- $\checkmark\,$ Number of repetitions how many times you perform each exercise
- $\checkmark\,$ Number of sets how many times you repeat a group of repetitions
- Rest time between sets important for recovery and muscle adaptation
- $\checkmark~$ Frequency how many days per week you perform the exercise

After you have determined the type and amount of resistance you wish to use, choose your exercises, repetitions, and number of sets. A good rule of thumb for rest time is to incorporate 30 seconds to 2 minutes of rest between sets. Shorter rest periods increase muscle endurance, while longer rest periods are better for strength. Begin each workout with a 5-10 minute warm-up of either walking, stretching, or light cardio to increase blood flow to the muscles and reduce risk of injury.

Sample workout: bodyweight only

Total time: 40 minutes / Level: beginner / Equipment needed: chair and exercise mat (optional)

Warm-up: Walk briskly for 5 minutes

Repetitions: Complete 5-15 repetitions of each exercise (approximately 1 minute of exercise)

Rest time: 30 seconds between each set. Perform all sets, then repeat set routine

 $\textbf{Cool down:} \ \textbf{Walk briskly or stretch for 5 minutes}$

Set instructions:

- Ballet squat: Start in ballet second position, with your legs about a yard apart and toes turned out. Bend your knees slowly into a deep plie squat, keeping your knees above the toes. Your back should stay straight and shoulders low. Return to standing. Complete 10 repetitions.
- Oynamic core plank: Lying on your stomach, push up into a high plank position. Pull one knee into your chest then extend your foot back, pointing your toes to the ceiling. Repeat 3 times, then switch legs. Lower to starting position on the floor. Complete 5 repetitions.
- Leg raises: Sit upright in your chair, facing forward. Straighten out your legs so they are parallel to the floor and hold them in place for 6 seconds. Complete 10 repetitions.

Appendix II: Exercise



Sample workout: bodyweight only (cont.)

- Bicep curl to shoulder press: Begin with arms at your sides, palms facing forward. Bend at the elbows, curl lower arms upward to shoulder level. Rotate palms to face outward and press hands up toward ceiling. Lower to shoulder height, rotate palms to face your chest, and return to starting position. Complete 15 repetitions.
- Forward lunge: Begin standing with your feet together. Step forward with your right foot, bend your knee to 90 degrees so your thigh is parallel with the floor, keeping your knee over your ankle. Return to standing and switch sides. Complete 10 repetitions with right leg then rest for 30 seconds before completing 10 repetitions with left leg.
- Standing side crunches: Start in a standing position, with feet slightly wider than hip-width apart, hands behind your head with elbows out to the sides. Bend your right knee and engage your right abdominal muscles to lift it toward the right side of your body. At the same time, bend your right arm, bringing your right elbow to meet your knee. Return to starting position. Complete 10 repetitions on the right, rest for 30 seconds, then complete 10 repetitions on the left.
- / Lateral walk: Lower into a half squat and maintain squat position while you take 3 steps to the right then 3 steps to left. Return to standing. Complete 5 repetitions.
- Chair dips: Sit on the edge of your chair, hands supporting your weight. Move your feet away from the bench, keeping legs straight and heels on the floor. Lower yourself until your upper arms are parallel to the ground, then push back up. Complete 10 repetitions.



