

## **4 Weeks to Healing: Designing Your Hashimoto's Lifestyle**

### **Module IV Workbook: Using Exercise to Heal**

In this 4<sup>th</sup> and final module we take a look at exercise and what it can do for you physiologically and how to figure out what type of exercise is right for you.

#### **How to Exercise with Hashimoto's**

There is no question that exercise is a very important part of any healthy lifestyle. This is especially true if you have an autoimmune disease.

However, when you exercise with Hashimoto's you must be careful to do it properly or you can wind up doing more harm than good.

Let's take a look at some new research on exercise and look at the best type of exercise program for people with Hashimoto's.

#### **Exercise with Hashimoto's Has Many Health Benefits**

Exercise has many health benefits and many of these are hugely important if you suffer from Hashimoto's. I attended a lecture that was taught by Dr. Datis Kharrazian, here is some information I learned and how I think it applies to Hashimoto's people. According to Dr. Kharrazian, the benefits of exercise include:

- \* **Growth Hormone Release**
- \* **Opioid Response**
- \* **Nitric Oxide Synthase (eNOS) Responses**
- \* **Brain-Derived Neurotrophic Factor Release**
- \* **Insuline Receptor Sensitivity**
- \* **Immune Enhancement**

#### **Growth Hormone**

Growth hormone stimulates cell reproduction and regeneration, and growth in our bodies. It also has a number of positive effects on our nervous, endocrine, and immune systems.

A lot of growth hormone's effects are felt in the liver where it can improve the burning of body fat, improve blood glucose levels and increase protein synthesis.

It also has important effects on the nervous system where it can improve synapses in the brain. It also improves heart function, immune function and decreases recovery time.

In addition, it has been found to increase calcium absorption and improve bone density.

Studies have shown that growth hormone release is increased with increased exercise intensity. (So walking on a treadmill and watching t.v. probably won't result in much being released.)

Hypothyroidism can cause increases in body fat and alter lipid metabolism, and can lead to poorer absorption of calcium and protein. So these effects can be very beneficial for Hashimoto's patients.

### **Opioid Response**

Exercise has been found to release the body's natural opioids called endorphins and enkephalins. This is commonly known as the "runner's high" or that blissful feeling that you get after certain kinds of exercise and sports.

Endorphins have many positive effects including pain relief, stress reduction, and improving our moods. Exercise can also result in the release of more dopamine and serotonin both of which are responsible for happiness and satisfaction with life and relationships.

Studies have shown that moderately high to high intensity exercise stimulates the release of these natural proteins. It also seems to depend on the individual with some people needing to do more than others.

Hypothyroidism can lead to declines in dopamine and serotonin and to feelings of depression and overwhelm. Some of the most widely prescribed drugs for Hashimoto's people are anti-depressants, so exercise can have huge benefits for us, as well.

### **Nitric Oxide Synthase**

Nitric Oxide Synthases (NOS) are enzymes that can do both good and bad things in the body. Increased eNOS (endothelial NOS) increases blood flow which can get more blood to the brain, can improve heart health and can get more nutrients and oxygen to our bodies' cells. This results in tissue repair and more energy.

Increased nNOS (neuronal NOS) causes more muscle contraction and brain focus which results in improved performance in various activities.

On the other hand, increased iNOS (inducible NOS) can result in a host of bad things like: surges in destructive immune cells called cytokines, damage to

mitochondria and inflammation. Too much of this can lead to injury, muscle wasting and breakdown and pain.

(Arginine is an important nutrient for iNOS and should be avoided before exercise.)

NOS plays a key role in cardiovascular, immune and brain function. All things that can be compromised in Hashimoto's people.

It seems that the right amount of exercise is key for getting the right amounts of the right kinds of NOS.

Too little and you won't get the benefits, too much and you get the damaging consequences mentioned above. One again, the key is high intensity, but not for too long.

### **Brain Derived Neurotrophic Factor (BDNF)**

BDNF helps with nerve growth and differentiation in the brain. It is very important in building new nerve pathways and preserving and keeping healthy old ones. So it is critically important in maintaining a healthy brain and in slowing the destruction of nerves in the brain that can lead to dementia and Alzheimer's.

Exercise increases levels of BDNF and also improves brain function. Once again (are you seeing a trend emerging?), the amount released is dependent on the intensity of the exercise.

Brain fog and neuro-degeneration are very common complaints from people with Hashimoto's. This is caused by numerous things, but the underlying mechanism is inflammation caused by immune cells and the destruction of brain cells.

### **Insulin Receptor Sensitivity**

Problems with insulin resistance are very common in today's society and are a driving force in the initiation of Hashimoto's. It can also prevent people from getting any better once they have developed the disease.

Insulin normally helps sugar get into cells, when people become insulin resistant because they are exposed to too much sugar, the cells of the body start blocking insulin because they can't deal with so much sugar.

This person feels like she needs to nap after every meal, and may actually fall asleep after eating a carbohydrate rich meal. This person will also have belly fat and will complain of insomnia.

Insulin resistance can drag down thyroid function and contributes to diabetes, heart disease, sleep apnea, hormone problems, obesity and certain types of cancer.

Aerobic and strength-training exercises improve insulin sensitivity by increasing the number of protein molecules called glucose transporters (GLUT), which allow your cells to better respond to insulin.

### **Immune Enhancement**

Hashimoto's is an autoimmune disease. The immune system has short circuited and attacks the thyroid as if it were a foreign invader.

Exercise can be very beneficial for improving immune function. The right kind of exercise can be helpful in healing the gut and in improving gastrointestinal immunity. Since 70% of the immune system lives in the gut, this can be very beneficial.

But, excessive exercise can actually cause major problems with immune function. And if you have Hashimoto's it is very important not to overtrain or you can wipe out all of the benefits and actually make many things worse.

### **What Kind of Exercise Is The Right Kind?**

It is clear that exercise can be very beneficial for Hashimoto's patients, but before we just jump into exercising, we must figure out which type is right for where you are.

And with Hashimoto's the critical questions are always going to be:

What is the best kind of exercise?

And

How much is too much?

According to research, the optimal exercise level to achieve all the health benefits described above is high intensity: when doing this you will:

- \* **Break a sweat after 3-5 minutes**
- \* **Breathe deeply and rapidly**
- \* **Only talk in short phrases while you are doing this.**

You want to go hard enough to achieve 70% or greater of your maximum heart rate. This can be calculated by this simple equation:  $220 - \text{your age in years} = \text{your maximum heart rate}$ .

### **Fine Line Between Just Right and Too Much**

There is a fine line between the right amount of exercise which can really improve health and too much which can actually cause more health problems.

The key point is this: The more intense the exercise, the greater the potential for health benefits that include everything mentioned above, but also the greater risk of doing too much and this results in the loss of all those benefits.

This is especially true if you suffer from an autoimmune disease like Hashimoto's because you may not be able to exercise like a normal person and you may reach the threshold of maximum benefit sooner than people who do not have this condition.

### **Certain Factors Can Make You More Vulnerable to Overtraining**

Dr. Kharrazian also noted that there are a number of things that can make exercise not work for you. If you have any of these conditions, you must be very careful not to overdo it when working out.

These conditions include:

- \* Pre-existing high or low cortisol levels
- \* Pre-existing systemic inflammation
- \* Pre-existing immune weakness
- \* Pre-existing intestinal permeability
- \* Pre-existing hormone imbalance
- \* Pre-existing nutrient deficiencies
- \* Pre-existing obesity

People who suffer from Hashimoto's often have a majority of conditions from that list, which means they are very vulnerable to getting worse as the result of exercise.

### **How Do You Know If You are Doing Too Much?**

There are a number of signs and symptoms that can help you identify if you are working out too much.

### **Performance Signs and Symptoms**

If you have a hard time recovering from workouts, can't complete your workouts, notice your performance is declining or that you have more injuries then you may be doing too much.

### **Psychological Signs and Symptoms**

If you are exercising frequently and you notice a loss of motivation and enthusiasm, a loss of competitive drive, depression, irritability or aggression for minor reasons then you may be doing too much.

### **Physical Signs and Symptoms**

If you are exercising regularly and you notice that you have a weakened immune system, a loss of libido, loss of menstrual cycle, decreased muscle strength or unexplained increases or decreases in weight then you may be over doing it.

So before jumping into the type of exercise described above we need to first have some way of assessing your exercise readiness and tolerance.

I've come up with 3 stages that describe your level of readiness so that you can decide on them.

**Stage 1:** The idea of exercise makes you exhausted. You know you need to, but it's a really hard sell.

**Stage 2:** You've tried exercise, but every time you do, it just wipes you out and you have to rest for days.

This used to happen to me. I'd work out with a buddy or a trainer and they'd feel great, the other people felt great and I'd feel like I wanted to throw up and lie down. Especially the next day or 2.

**Stage 3:** You get plenty of exercise, but it's not giving you the results you want.

Ok, so **if you are in Stage 1 or Stage 1 and 2.** Where it's going to be hard for you to do much of anything, then we need to start simply.

**We want to focus on 3 things:**

- 1. Less sitting and more standing**
- 2. Walking**

### 3. Qi Gong, yoga or tai chi

So, just like we have to heal our guts, we also need to give our bodies a chance to heal by moving the right way.

And these 3 things are all ways of moving and getting exercise that can really help us get the benefits without feeling like we just got run over by a truck.

**1. Sitting:** most of us spend too much time sitting. It's part of modern life. But the problem is, we didn't evolve to be sitters. And sitting can actually be contributing to your health problems.

It can reduce the action of insulin, making it less effective and making blood sugar problems worse.

It can also weaken your bones.

It can increase the risk of cardiovascular disease and contribute to higher triglyceride and lower HDL (the good cholesterol).

So what do you do instead?

#### **Stand.**

Adapt your desk to make it so that you can stand and write, check email and do other online stuff.

Take standing breaks periodically.

Your goal should be to try and stand about half the day.

And today I'm going to teach you some standing meditation postures so we can build on what we learned last week and do it standing instead of sitting.

**2. Walking.** You don't have to do intense exercise to get the benefits. Walking, just simply walking can be hugely beneficial.

It can help with pain, lower blood sugar help you lose weight around your waist.

I rescued a dog over the holidays because our old dog passed away and because I needed to have something that made me walk more.

He has and it has been wonderful. His name is Tommy.

Also, gardening for me is a great pleasure and it involves me moving and walking around. Then I get to eat all the wonderful stuff we grow.

3. The third thing I recommend is gentle exercise like yoga, tai chi or qi gong. I am going to focus on qi gong today, but yoga may also be something for you to try and practice if that resonates with you.

Qi gong and tai chi are very similar. They are both ancient practices that involve simple gentle movements which are restorative. They help your body to heal, they give you energy.

Qigong translates from Chinese to mean cultivate or enhance your qi.

Qi has been translating to many different things. Some say it's breath, some call it your natural essence and vitality.

In Chinese medicine there are many different kinds of qi. Qi we get from breathing, from food, qi that gets transformed in our bodies. Our intention. I like to think of Qi as information. It's data that our bodies use to function, to heal, to find our destiny and our path. It's all the data that you put into your operating system and use to make your life go.

And qi gong is a way of cultivating and saving your qi. It is considered to be the modern offspring of some of the most ancient (before recorded history) healing and medical practices of Asia.

Earliest forms of Qigong make up one of the historic roots of contemporary Traditional Chinese Medicine (TCM) theory and practice.

Many branches of Qigong have a health and medical focus and have been refined for well over 5000 years.

Tai chi and qi gong have actually been researched quite a bit and we know that they can:

1. Expand lung capacity
2. Balance hormones
3. Improve circulation
4. Strengthen heart function
5. Strengthen the nervous system
6. Increase flexibility and range of motion
7. Improve energy



For us, some important findings from the research are on how it impacts inflammation and immune responses.

Interleukin-6, an important marker of inflammation that has been found to be high in Hashimoto's patients, was found to be significantly modulated in response to practicing Qigong, compared to a no-exercise control group.

Other interesting research found improvements in TSH (thyroid-stimulating hormone), follicle-stimulating hormone, T3 (triiodothyronine), and lymphocyte production in response to Tai Chi compared to matched controls.

In addition, some non-Randomized Controlled Trials have suggested that Qigong improves immune function and reduces inflammation profiles as indicated by cytokine and T-lymphocyte subset proportions.

And anxiety decreased significantly for participants practicing Qigong compared to an active exercise group.

Depression was shown to improve significantly in studies comparing Qigong to an inactive control, newspaper reading and for Tai Chi compared to usual care, psychosocial support or stretching/education controls.

It can do some amazing stuff.

We have created a free video for you that introduces you to a medical qi gong form called The Golden 8, that I learned from a student of the man who developed it, Master Hong Liu. Her name is Merle Morgan Drennan and she's a pretty accomplished medical qi gong practitioner and teacher.

I know a few different forms and I chose this one because it's so simple and easy to learn and practice.

And what's important here is to start slowly and simply and to add a little at a time. You can do 1 exercise a week until you learn them all or you can simply choose one and do it that day.

Like the meditation we learned last week, it doesn't have to be overly complicated or a major chore. It should be simple and easy.

In the Golden 8 there are actually 10 parts. There's the warm up, which can be a practice all by itself and there's the Golden 8 or 8 different exercises that focus on different organ systems and parts of your body and then there's the winding down part that we call the Completion, which can also be something you do all by itself.

And right now I want to focus on one simple part of this and that is the standing postures. These standing poses will be done prior to each exercise and they can be practiced all by themselves.

**If you are in Stage 3 where you have enough energy and stamina to exercise, then the workout described below is something that you should absolutely try.**

**Caution: This is a vigorous workout that involves high intensity exercise. So make sure you warm up adequately. The warm up for the Golden 8 Qi Gong series can work well for this.**

**In addition, be conservative. While we want high intensity, we do not want to hurt ourselves so be careful to push, but not so hard that you hurt yourself.**

**Everything in moderation.**

### **The Best Workout: Maximum Results With Minimal Energy Expenditure**

An article in the May-June issue of the American College of Sports Medicine's Health & Fitness Journal offered an example of an optimal 7 minute workout that can be used as a starting point for Hashimoto's patients and can be utilized to achieve all the health benefits without causing any of the negative effects of overtraining.

I have included the entire article with the workout so that you can read it.

I really like this workout because it can help you achieve all the health benefits we have discussed in a very short time, it works on your entire body and it can be modified so that you can do more or less.

This entire workout can be done at home, in a hotel room or anywhere that has an open room and a chair. You don't need to purchase any equipment and you can do it by yourself without having to hire a personal trainer or therapist.

The entire workout is 7 minutes and you can repeat the circuit up to 3 times. It consists of 12 different exercises each done at high intensity for 30 seconds.

For people with Hashimoto's, I recommend starting with one cycle and seeing how you feel. For some, even a 7 minute workout will prove to be too much. If that is the case, cut the 30 second intervals in half.

If you are able to do all 12 exercises as suggested for 30 seconds then do one interval for one to 2 weeks (a minimum of 4 times per week). Repeat the entire

sequence after 2 weeks and then add a third repetition after an additional 2 weeks. If pressed for time, you can simply do 1 round of 7 minutes.

### **When Is The Optimal Time to Exercise?**

**Really the answer to this depends on what you want to accomplish. For general workouts, first thing in the morning or early afternoon are best.**

We can also use exercise to accomplish some really specific things and one of them is to reset your cortisol clock. **This only works if you have low morning cortisol.**

This is something you can't do nutritionally or with drugs, but you can do it with exercise.

And this is something you want to try if you have an abnormal cortisol awakening response.

#### **If you have these symptoms:**

- **Difficulty waking in the morning**
- **You need coffee or nicotine to function in the morning**
- **You have no appetite in the morning**
- **You have no motivation in the morning**
- **Your lowest energy of the day is in the first hour of awakening**
- **Or you just can't function if you don't exercise**

And this is very simple.

You have to exercise at high intensity within 10 minutes of waking up.

But no more than 5 minutes.

So you can take some of the elements of the workout I told you about, or you can choose one exercise and do it for 5 minutes.

So you could jump rope, or do push ups or deep squats or run in place.

That's it, get up, do it within 5 minutes, do it every day. And you will reset your cortisol clock. The first week will suck and then you'll feel amazing and it will totally boost your energy dramatically.

Now, some words of caution. If you have high cortisol in the morning, don't do this. Do the other practices we spoke about.

How do you know?

You can test cortisol levels with a saliva test. Or you can look over your Metabolic Assessment Form. High morning cortisol makes you feel like you haven't slept or you wake up tired and feel like you need to sleep all over again.

If that's going on for you. You need to do the qi gong for a few months first.

The optimal time to do this is within 10 minutes after you wake up, before you have had breakfast.

This is the perfect time to do this because you can take advantage of your body's natural cortisol surge and exercising before breakfast will also help you burn fat more efficiently and help reduce insulin resistance.

### **Nutritional Support Before and After You Workout**

For my patients and myself, I recommend taking a drink that provides electrolytes (not Gatorade – which is loaded with sugar). Here's a recipe for a simple Electrolyte Lemonade:

#### **Electrolyte Lemonade:**

3 organic lemons, peeled, but leave white pith intact

3 tablespoons coconut oil, olive oil or flax oil

1 organic pear, cored

1 tablespoon Celtic sea salt or Himalayan Salt

6 cups filtered water

Blend everything well in a Vitamixer, makes 1 pitcher

Drink 1 glass before your workout.

It is also recommended to support nitric oxide synthase production. The following nutrients and co-factors can do this: ATP, N-Acetyl L-Carnitine, Huperzine A, Alpha-GPC, Vinpocetine and Xanithol Nicotinate. This will help boost eNOS and nNos.

In my online store at [www.hashimotoshealing.com](http://www.hashimotoshealing.com), we sell a product called Nitric Balance that contains all the ingredients mentioned above.

After the workout take something that will reduce inflammation and support the immune system like turmeric and/or resveratrol and another glass of electrolyte lemonade.

OK, awesome!

Let's take a look at some action steps we can take this week.

**1. Step One:** Figure out where you are on the exercise continuum. Are you at Stage 1, 2 or 3.

If you are in Stage 1 or 2 then keep it super simple. Standing, Walking and Standing Meditation are your best options.

If you are in Stage 3, consider trying the 7 minute workout found in the supplemental handout.

Start out doing it 3 to 4 times per week. If that proves to be too much, do it less. If that works for you, create a schedule and do it regularly.

**2. Step Two:** Try incorporating standing meditation instead of seated meditation every morning.

**3. Step Three:** Try doing some of the exercises from the Golden 8. Notice that there are different exercises aimed at different parts of the body and different health issues. Review your main issues and try some of the exercises for those specific issues.

Don't forget to relax and have fun!

This is the final Module of the program. Next week, we'll be doing a wrap up so review all 4 Modules and bring your questions and comments to the final webinar as we review what we've learned and put together a larger plan for continuing to build on what we've started here.