# MODULE 5: THE GUT

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# WHAT CAUSES GUT ISSUES?

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# GUT HEALTH

#### My experience:

After removing gluten from my life, I continued to struggle with many health issues mainly due to intestinal permeability and the damage resulting from gluten.

However, this is what caused me to research anything and everything I could get my hands on and so I began my journey to health.

It took me years to get well but I learned so much in the process.

Studying to become a health coach only cemented the facts I had come to assimilate over the years and further studying and training this year to become a nutrigenetic practitioner also opened up another whole new world.

# THE COGS

Let's talk a bit about the human body.

I want you to imagine a system of cogs. Each cog turns another cog which in turn also allows other cogs to turn. They all work together in perfect unison.

Now remove one of those cogs and what happens? Everything stops turning and working. **They all need each other to turn.** 

The body is like that. Everything is designed to work together in harmony. If one system is out, the rest are not able to work to their best ability. Maybe it will have to work harder to make up for the other systems that are not working.

# NUTRITION

What is Nutrition? How is it different from Diet? Nutrition refers to the quality of the food you consume. It is the process of **utilizing food for growth, metabolism and repair of tissues.** 

Diet refers to the **total amount of food consumed by individuals.** 

Diet and nutrition is a 2 way process. Your health status can be affected by nutrient deficiency and vice versa. Nutrients are divided into two categories: **macronutrients** consisting of proteins, carbohydrates and fat; and **micronutrients** consisting of vitamins and minerals.

The food we give our bodies can help it to function, survive and thrive or it can contribute towards towards disease and unfavorable conditions in the body.

This also includes water intake. Most people don't drink enough water. Water is vital for so many functions of the body. A micronutrient-dense, high-fiber diet with sufficient water intake and high-quality protein, along with avoidance of saturated and trans-fat, sugars, refined flours, high-fructose corn syrup, and processed foods, is believed to have a protective effect regarding intestinal dysbiosis.



# **DIET AND NUTRITION**

#### WORKSHEET

1.	What are some ways you think you can better your diet and
	nutrition?

2. What changes would you like to make?

Do you think you would benefit from some guidance around diet and nutrition? If yes, it may time to seek some further help with health coaching. As a coach, I don't do meal plans as I am not a dietitian, but I do offer guidance and give education around good food choices.

I also recommend my clients take the DNA Diet genetic test which is not only for weight management, but recommends, according to your genetics, what type of diet would most suit you.

#### **EXERCISE**

Exercise beneficial for so many things including managing weight, preventing disease, building muscle, strength, flexibility, keeping our heart strong and our bodies and minds working effectively, liver function, digestive function and metabolism as well as cognitive activity.

It has a role in the immune function.

Take for example the T cell. It is a key immune cell in the body. This lymphocyte is largely responsible for the adaptive immune response when a new pathogen or virus makes it way into the body. Vigorous exercise has been found to negatively impact the presence of T cells and regular or moderate exercise has been found to increase the T cell production. The result is an improvement in immune function.

Lack of exercise is known to be a leading contributing factor towards such things as obesity, Cardiovascular diseases, hypertention, depression, stress, and many more conditions.

Load bearing exercises are vital especially as we age. We start to lose collagen from the age of 25. Weight lifting or resistance training is vital as we age to build bone strength, collagen and keep joints subtle. Without strong bones we run the risk of breakages and disease like osteoporosis. You don't need to lift super heave weights, having dumbells or a kettle bell in varying weights will suffice.

# **EXERCISE**

## WORKSHEET

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1.	Think about your current exercise routineAre you exercising at least 3-5 times a week for at least 30-60 minutes at a time? Are you incorporating load bearing exercises? Stretching, flexibility, core?
2.	If you answered no to many of the above questions, if could be an indication that it is time you analyse ways to include more movement in your life.
3.	What benefits do you think exercise will provide for you?

### **SLEEP**

Sleep is as necessary as water and food. It is a critical part of the body's repair process, general biological function and even gene expression.

When we sleep the body reduces movement and heart activity, reduces responses to external stimuli and reduces breathing rate.

When we don't sleep enough, we age faster, have poorer cognitive function like slow thinking, reduced attention span, fatigue, poor decision making and poor memory.

The center for disease control and prevention recommends at least 7-9 hours per night.

Adequate sleep can improve hormone function, regulate the appetite and metabolism and how the body responds to stress.

There is a strong link to inadequate sleep and high blood pressure, being overweight, type 2 diabetes, and mental health and cognition problems.

# **SLEEP**

#### WORKSHEET

How much sleep do you currently get per night? The average adult needs at least 8 hours a night.

2. What is currently impacting your sleep quality? Think about what you can do to improve your sleep hygiene.

Try to go to bed at the same time every night and wake up at the same time each morning. Also reduce the amount of blue light and distractions at least an hour before bed.

As a health coach, I help my clients with sorting out their sleeping pattern. The DNA Diet test also gives recommendations based on your clock gene which determines your circadian rhythm. It will tell you if you have a morning or a night preference and give intervention recommendations accordingly.

## **GENETICS**

DNA is a double stranded helix that contains the entire genetic code of an organism. It houses the instructions for each cell's development and functions via nucleotide bases which are made of nucleic acids that link to one another. These bases can be read through a multi step process of DNA transcription and RNA translation to create proteins acting within a cell in other areas of the body.

We are all born with 99.9 % of the same genes **but 0.1% of those genes is what sets us apart as unique**. Some of those genetics are inherited and others are variations or mutations in the genetic code either from a duplication, removal or insertion of a genetic sequence during translation or transcription. There are common locations along the DNA where a single coded nucleic acid can differ by individual and they are referred to as single nucleotide polyphorsims (SNP)

The benefit of using DNA to understand the body is that your DNA does not change. Specific SNP's can be identified through genetic testing that determine whether you have favorable or unfavorable combinations of nucleotides that can signal how your body functions.

We cannot change our genes, but we can change how they express themselves. Our genes can be influenced by our diet, exercise, sleep, stress, environment and lifestyle.

#### **STRESS**

It is well known that it is stress of some kind that activates the celiac genes.

The body's stress response is regulated by the **HPA axis** which makes up the hytothalamas, pituitary gland and adrenal glands. When the body encounters a stressful situation, the hypothalamus responds by secreting two hormones: CRH which is corticotropin-releasing hormone and AVP arginine vasopressin. Together these release a third hormone from the pituitary gland called ACTH which is adreno-cortico-tropic hormone. This ACTH then stimulates the adrenal glands to release cortisol.

Short term cortisol is beneficial because it can increase metabolism, reduce inflammation, control blood sugar, improve memory and contributes to the fight or flight response of the autonomic nervous system. But when it is activated long term, when it doesn't switch off, then this negative feed back loop can weaken the immune system, increase blood pressure and contribute to the development of chronic health problems like cell damage, immune dysfunction, nerve and digestive issues and others.

# STRESS

#### WORKSHEET

How are you currently managing your stress? Do you have coping tools in place? What are those coping tools?

How do you feel when faced with stressful situations?

Some of us just cannot cope with stress. We fall to pieces. Others seem to thrive under stress and it seems to give them a rush. Did you know that we have certain genetics that can predispose us to social stress and that can impact us negatively when we are faced with stress?

The DNA Mind test helps you to see how you respond to stress and what you can do to minimize your stress and cope with it.

# MEDICATIONS

Many medications come with side effects that cause other problems in the body.

Antibiotics are one such one. Antibiotic means anti-life. It is known that antibiotics destroy both good and bad life in the body and that it upsets the healthy gut microbiome. Which in turn lower immunity and makes you more vulnerable to infections. Which means you get sick and so go on another course of antibiotics, further exacerbating the cycle.

It can take a long time for your gut to recover and from a course of antibiotics and sometimes even taking probiotics along with it is not enough to reestablish healthy gut bacteria.

The advice from many is to let the common cold run it's course. Those who run off to the doctor at the slightest sniffle or cold and who take antibiotics are routinely more often sick than those who let it run its course, rest,drink plenty of water, take natural medications like Vitamin c, echinchea, zinc, magnesium and plenty of fruit and vegetables.

## LIFESTYLE & ENVIRONMENT

#### Lifestyle:

Numerous studies and research clearly show that drug abuse whether recreational or pharmaceutical; excessive alcohol consumption, smoking, can all cause many health problems both physical and mental and can accelerate aging.

#### **Environment**

Our environment plays a huge part too. Living in a city and breathing in pollution everyday can be hazardous to your health, causing oxidative stress which can lead to disease.

Some of those pollutants we unknowingly use in our own homes and on our own bodies. Our washing powders, cleaning agents, body and face products, cosmetics. From the Harsh chemicals we use on our skin to the fumes we breathe in. – all of it to some degree affects our health.

#### SO WHAT DOES THIS ALL MEAN?

Making changes is never easy. As humans we like things to stay the same, it is what is known as **homeostasis**. A state of being comfortable, at ease. Change is hard. That is why it takes so long to form new habits and break old ones. It takes time and it doesn't happen overnight.

As a health coach, part of my job is to help people make sustainable health changes in all these areas.

That is why when you get diagnosed with Celiac disease, going off gluten is really only the beginning.

Your body, especially your gut has been the target of damage and in the process many of those cogs have suffered collateral damage.

Repairing the gut is about much more than just nutrition and supplements.

## **GUT HEALTH**

## WORKSHEET

Write down how you think you can improve your diet and nutrition
Write down ways that you can improve your <b>sleep hygiene</b>
Write down ways you can change things in your <b>lifestyle and environment</b> that could you be adding to your gut issues.
Write down ways you can improve in your <b>exercise routine.</b>

In doing this worksheet, you may have gotten stuck. It's good to identify areas in your life that you need to give further attention to. Working with a health coach will help you to do this in all these areas.