**Week 5: Toxins**

We have to take some time now to acknowledge the issues of toxins in our environment and in the foods we eat and how they affect us nutritionally. From air and water pollution to pesticides and food additives we are surrounded and saturated with toxins. In this section we will briefly cover some common toxins found in food, how they affect your body when you eat them, and how to best avoid them.

**You Are What You Eat**

Remember, the health of your body really comes down to the health of the individual cells that make it up. When your cells are able to do their jobs your body systems will be running smoothly. If your cells are weak, compromised, not reproducing properly, or dying off too fast, then you will find yourself sick, aging quickly, and not feeling well, or even battling degenerative diseases. What you need to remember is that your cells are reproducing at incredible rates and as we learned in week one, every cell in your body is being reconstructed with new materials each day!

* The cells in your digestive track are replaced every 3 to 4 days
* Red blood cells are replaced every 120 days
* All of the protein in muscle cells is replaced every 120 days
* All the protein in the brain is replaced twice a year
* Even the protein in bone structure is completely replaced

When we have too many toxins in our bodies, this can cause major problems for our cells which lead to diseases such as cancer and many others.

**What toxins are in our foods?**

* **Artificial Sweeteners**

Since the 1950’s, nonnutritive sweeteners, also referred to as: intense sweeteners, alternative sweeteners, low calorie sweeteners and artificial sweeteners, have become part of food additives. There are five FDA approved nonnutritive sweeteners: saccharin, aspartame, acesulfame potassium, sucralose and neotame. While they may help in reducing caloric intake there has been much controversy about their effects on health.

**What’s happening in your body?**

Artificial sweeteners are not necessarily healthy substitutes for sugar and they can often cause people to eat more food and gain weight. Why is this so? When the body detects a sweet taste, it expects carbohydrates that contain nutrients (glucose, fibre etc), and when there is no nutrition found from the foods in the stomach, the message is sent to the brain to eat more in order to get the nutrition needed. For example: you are hungry for a snack but decide to have a diet pop instead because you don’t want the extra calories. You drink the pop, your body begins to digest the pop looking to pull nutrients out that you can use. There are no real nutrients to be found so the body sends a signal to the brain telling you to eat more. You end up having a snack anyways, and it is likely to be an unhealthy one.

**Natural sugar alternatives**

While there are no definitive answers as to how much nonnutritive sweeteners are safe, there are several natural alternatives to sugar.

* Raw honey
* Organic maple syrup
* Agave nectar
* Stevia
* Sucranet
* Amasake
* Brown rice syrup
* Date sugar
* Fructose
* FruitSource
* Barley malt

*You may have heard of detoxing - a process to rid your body of the toxins you've built up from bad foods and the environment. But do you know what it involves?*

**The real deal on detoxing**

More and more people, especially the overstressed, time-strapped, and nutrition-starved, are turning to detoxification to improve their diets and cleanse their systems.

**What does detox atually mean?**

Detox is a naturally occurring physiological process wherein the body rids itself of toxic substances through sweat, urine, and feces. These toxins typically include air and water pollutants and processed food chemicals. The body first eliminates these toxins through the gut; whatever the gut can't catch gets into the bloodstream and passes through the liver, which flushes them out.

**What is detoxing?**

Sometimes toxins don't leave our body - they hang around in our lymph and digestive systems.

Detoxing provides the body with a nutritional break so that it can become better at getting rid of waste and absorbing nutrients. A proper detox lasts about a week and involves eating a nutritious, well-balanced diet that's high in essential vitamins, minerals, fiber, and antioxidants, drinking plenty of water and clear fruit juices, and getting enough rest. You can also incorporate moderate exercise into your routine.

You should talk to your physician or a registered Dietitian to develop a detox plan that suits your body and health goals.

**What is detoxing *not* about?**

The main misperception about detoxing is that you need to go to a dietary extreme to achieve results. Detox plans that you should steer clear of are: water fasts, juice fasts, and combination water-juice fasts. Detoxing is also *not* about using laxatives to clean out your digestive system.

**What would a basic detox consist of?**

Elimination of foods, including the following, would be a good start: sugar, processed foods, caffeine, alcohol, and artificial sweeteners. Some people also switch to organic cleaners to give their bodies a break.

A detox diet varies from person to person based on their age, gender, fitness level and dietary restrictions, but in general, it should include whole-grain foods; probiotic yogurts; fruits and vegetables; sufficient protein sources, including beef, nuts, and salmon; and ample water and clear natural juices. Make sure there's enough colour and variety in all the food you eat, and that all the food groups are represented.

**What to eat:**

* whole-grain cereals, pastas, and breads: high in vitamin B, fibre and minerals
* probiotic yogurt: rich in calcium and protein, and the live cultures aid in digestion
* whole fruits, especially acid fruits such as orange, grapefruit, lemon, pineapples, and tangerines. If you are taking any medications, check with your pharmacist to see if it's safe for you to have grapefruit or grapefruit juice.
* cruciferous vegetables, including broccoli, kale, Brussels sprouts and arugula: high in vital vitamins and minerals, fibre, antioxidants, and isothiocyanates, which help your body break down potential carcinogens
* salmon: low in saturated fat and calories, high in protein, and a source of omega-3 fatty acids, which promote heart health
* water and clear natural juices: digest most easily and keep you hydrated

**What are the overall health benefits?**

Detoxing helps enhance general physical and mental well being. When you're more in tune with your body, you feel better and you look better. It gives you energy and helps you achieve inner peace and enlightenment.

A detox is meant to help clear the body's natural toxin filters and return your system to a natural balance and homeostasis. Think of them not as a method of weight loss, but more like clearing the lint from your dryer. Cleansing and detoxing will help your body run at optimum capacity.

**Who shouldn't detox?**

Individuals should avoid detoxing, or talk to their doctor or Dietitian first, if they:

* are under 18
* are pregnant or lactating
* have a gastrointestinal disorder such as Crohn's disease or gastritis
* have an autoimmune disease such as lupus or arthritis
* are training for an endurance event
* have any other serious health condition not listed here