

Wellness Newsletter
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Featured Story:

Intermittent Fasting



Intermittent fasting may be a great technique to help avoid those extra pounds over this holiday season. Fasting has been a part of many religious, cultural and health rituals for centuries. In this newsletter we will review the basics of intermittent fasting including the different fasting options, fasting and the gut, health benefits of fasting.

A fast implies no calories consumed. Dr Tello with the Harvard Health Blog discusses the backstory of Intermittent Fasting in her 2018 blog post *Intermittent fasting: Surprising update*. In her blog post Dr Tello explains how carbohydrates are quickly broken down into sugar and made available for cells to use as energy.

Any unused sugars are transported into fat cells by insulin and stored as fat. If we are able to avoid eating between meals, then our insulin levels go down and our fat cells release their stored sugars to be used as energy.

Many fasting diets discuss no food or drink, but currently I do not recommend abstaining from fluids (water) during the fasting period. Intermittent fasting generally does not change what you eat as much as when you eat. However, by combining an intermittent fasting diet with a high plant fat diet including lean meats and legumes, we can optimize insulin sensitivity and improve overall health. There are several varying fasting approaches that are currently popular including time restricted eating, modified fasting, alternate day fasting, crescendo fasting, cycle fasting and prolonged fasting.

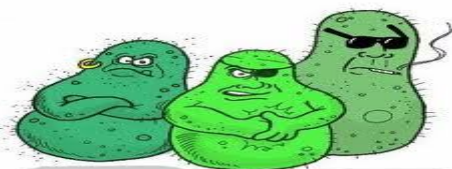
Time restricted fasting is an approach in which people eat during a certain time of the day such as 7:00 am to 3:00 pm. People may choose to eat over a time frame that varies between six and twelve hours and fast for twelve to eighteen hours. In the modified fasting approach, people eat normally for five days then eat a restricted calorie diet (500 cal) for two days. The alternate day fasting approach involves eating for 24 hours then fasting for 24 hours. Crescendo fasting involves following the time restricted fasting method following the 16:8 method on two non-consecutive days a week. The cycle fasting method involves fasting for three days a week on non-consecutive days. Finally, prolonged fasting involves fasting for 48 hours or more.

The most important eating approach is one that works into your lifestyle. Additionally, it is very important to understand that our health is directly related not only to when we eat but what we eat. There is much mis-information circulating on social media and various blogs. I see many articles discussing the benefits of Intermittent Fasting and telling readers to eat whatever they want as long as they fast for a period of time. Think about taking a road trip and managing the gasoline you put in your vehicle. Your vehicle likely gets better gas mileage on the interstate, but that does not mean that when you stop to fill up, you will put diesel fuel in your Honda Civic. What you eat still matters.

To start an intermittent fasting diet, first evaluate the best time of day for you to fast. For most people, it is easy to fast from supper one day to breakfast the next. Eating an early supper is best, since our gut is happiest when we eat our last meal at least four hours prior to bedtime. This means no snacking or drinking beverages with calories (soda, alcohol, juice, milk, etc). Consuming diet beverages is also not recommended as this will increase our insulin output and insulin resistance, as well as feed bad bacteria in our gut.

Next, it is helpful to purchase a refillable stainless steel or glass water bottle in order to monitor fluid intake throughout the day. A good rule of thumb for healthy individuals is to drink half your body weight in ounces of water daily.

The Human Microbiome



In 1683, in a letter to the Royal Society of London, Antonie van Leeuwenhoek described and illustrated five different “animalcules” (bacteria) present in his own mouth and that of others. He went on to describe differences between the bacteria found at different body sites as well as differences between healthy bacteria and disease causing bacteria. In 1853 Joseph Leidy published a book entitled *A Flora and Fauna within Living Animals*. Many consider this the foundation of microbiota research. Subsequent researchers developed varying theories regarding the role of bacteria in human health and disease. Once scientists were able to culture anaerobic bacteria in the 1940’s and grow microbiota in the laboratory, research was able to flourish.

It is well recognized that a symbiotic relationship exists between many living animals. Scientists developed a deeper understanding of this when they bred germ-free mice in laboratories and realized that much of the normal physiology was absent in this mouse

population. It was discovered that the microbiome plays an essential role in normal growth and development of the host organism.

By using these germ free mice, scientists have been able to develop a deeper understanding of the role specific bacterial strains play in health of the host. With advanced diagnostic tools, scientists are also able to identify the specific bacteria present in and on humans. The National Institute of Health has created the Human Microbiome Project which aims to collect, map, and understand the human biome.

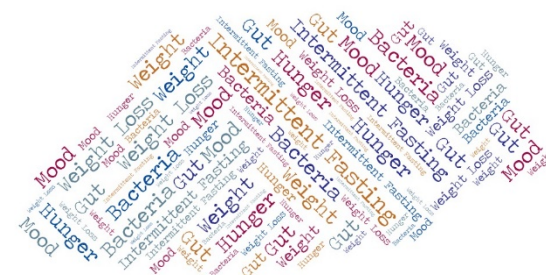
Through the efforts of collaborative work done all over the world, we now understand that an average adult human is composed of 10% percent human cells and 90% bacterial cells. We have discovered that our microbes produce vitamins that we do not have the genes to manufacture, produce anti-inflammatory compounds, aid in digestion of food, extract nutrients and calories from food, and manufacture hormones such as serotonin. Scientists have linked bacterial dysbiosis to many chronic health conditions including chronic dental disease, weight gain, depression, autoimmune diseases and skin conditions.

Scientists continue to study the benefits of our microbiome and how intricately we are connected to these microscopic organisms. Unfortunately, evidence is mounting regarding how our modern lifestyle and eating habits are adversely affecting our microbiome. For example, glyphosate (a patented herbicide used

in agricultural and home gardening) is present in much of our food, is known to preferentially kill beneficial bacteria and lead to an overgrowth of pathogens. Other commonly ingested compounds that negatively alter the gut bacteria include pesticides, antibiotics, BPA, simple carbohydrates, high animal fat diet and trans-fats.

The good news is that we are unraveling the intricacies regulating the gut microbiome. We are able to discriminate between positive and negative influences on our symbiotic friends. In this way, we have more information regarding the role of gut bacteria and weight. The next article will discuss the effect of Intermittent Fasting on the gut biome.

Intermittent Fasting and the Gut



Intermittent fasting is demonstrating many health benefits, one of them being how it helps promote healthy bacteria ratios in the gut. There are two large phylum of bacteria (among others) that live in the gut – the firmicutes and the bacteroidetes. What scientists are learning is that much of our gut

health depends on the ratio of these phyla to each other. The firmicutes are efficient at helping us absorb calories from the food we eat. Studies have demonstrated that people who have a higher firmicutes to bacteroidetes ratio will gain weight eating the same amount of food and engaging in the same activity level as their thinner counterparts who have a higher bacteroidetes to firmicutes ratio. Intermittent fasting has a rapid and dramatic effect on the firmicutes to bacteroidetes ratio, improving it in as little as 24 hours.

Our gut microbiome follows a circadian rhythm along with our body's cyclic changes that regulate insulin sensitivity and energy production. Our bacteria have many housekeeping jobs they are responsible for maintaining. However, digestion often trumps all other responsibilities, or directly interferes with other responsibilities. By following a natural circadian rhythm and eating early in the day to early afternoon, we allow our gut bacteria to engage in the rest of their responsibilities in the evening and overnight.

Multiple studies continue to evaluate the effects of Intermittent Fasting on the gut microbiome and how this in turn effects other body systems. Discoveries link these changes to protection from Multiple Sclerosis, increasing brown fat (good fat), protection against non-alcoholic fatty liver disease.

Keep your vitality. A life without health is like a river without water.

Maxime Legace

The human body is the best picture of the human soul.

Tony Robbins

***After dinner rest a while.
After supper walk a mile.***

T. Cogan

Fasting and Insulin Sensitivity

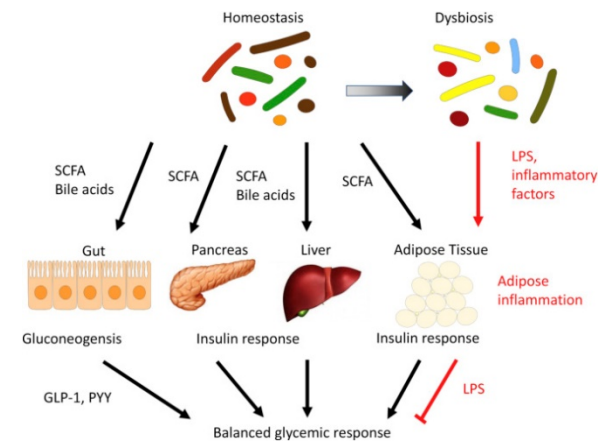


Image from Science Direct

Certain gut bacteria have been shown to cause diabetes and other bacteria prevent it. Through intermittent fasting, it is possible to influence the diversity of the microbiome to preferentially maintain a preventive colony of bacteria. Additional health benefits to altering the gut microbiome is a demonstrated reduction of diabetic retinopathy (hardening of the blood vessels to the eyes) in individuals with type 2 diabetes.

Not only can Intermittent Fasting assist with weight reduction, which decreases diabetes risk, but it also dramatically lowers insulin levels and blood pressure. Intermittent fasting reduces pancreatic fat which allows for improved insulin production by the pancreas.

With all these health benefits documented, it is still necessary to discuss fasting with your healthcare provider.

Recipe of the Month

High Protein Coffee Cake



2 cups almond flour
1 cup walnut flour
1 cup gluten free flour
½ cup brown sugar
2 tbsp baking powder
1/3 cup organic coconut oil *
2 eggs
½ cup whole milk organic yogurt
1/3-1/2 cups coconut or almond milk

*can flavor with organic blueberries or cinnamon and vanilla or peanut butter or pumpkin or any favorite fruit – just adjust the liquid as needed

Baking Directions

Preheat oven to 350

Mix dry ingredients in one bowl.

Beat eggs in another bowl then add melted coconut oil, yogurt, fruit/pumpkin, milk, vanilla and stir.

Add wet ingredients to dry ingredients and pour into a greased baking pan.

Bake for 35 min or until a toothpick comes out clean from the center.

Enjoy with organic butter, honey, cinnamon, natural fruit preserves and your favorite beverage!

*coconut oil offers many health benefits including a boost in good cholesterol, boosts energy, helps protect the brain from degenerative diseases, decreases blood pressure and aids in liver health.



***Most people have
no idea how good
their body is
designed to feel.***

Kevin Trudeau