



## Eating for Healthy Hormones

### Genes

The very genes that helped our pre-historic ancestors survive numerous feast and famine cycles thousands of years ago directly influence our 21<sup>st</sup> century health. The ability to store fat when food was plentiful and slow metabolism when food was scarce proved beneficial to early man. But today the only "hunting and gathering" most people do involves selecting a frozen meal and placing it in the microwave, or selecting a meal from the menu board at a fast food restaurant. The typical American takes in too many daily calories (without a corresponding increase in activity) and our pre-historic genes, not realizing that a famine is unlikely to follow, stores the excess energy as fat! This phenomenon is known as the "thrifty gene hypothesis". And because food acts as information for our genes, we need to make sure that we are sending the proper messages.

### Diet and hormones

Inflammation is regulated by a group of hormones known as prostaglandins. Some of these hormones intensify the inflammatory response; while others reduce it. You can greatly affect this system by the kinds of foods you eat.

**Pro-inflammatory foods** - Place stress on the body by activating pathways that lead to inflammation and tissue injury

- have no real nutritional value.
- These foods have been stripped of their nutrients and fiber and trigger a rapid insulin response that leads to inflammation.
- Includes high sugar foods and packaged foods made with refined flours (Pastries, muffins, biscuits, noodles, crackers)

**Anti-inflammatory foods** – Provides vitamins, minerals, essential fatty acids and dietary fiber needed for good health and offers protection against many disease processes

- Rich in fruits, veggies, whole grains, legumes, nuts & seeds
- Small amounts of meats
- Provides a variety of disease fighting “phyto” chemicals
- High in unprocessed foods

### **Insulin**

Insulin is a “fat storing” hormone that is triggered after carbohydrate consumption, especially processed carbohydrates. The sugar molecules present in processed foods have the ability to pass quickly from the intestines to the bloodstream, and the pancreas responds by delivering a LARGE AMOUNT of insulin. Insulin will either divert sugar from the bloodstream to the muscles or convert it to fat. As a result blood sugar levels drop rapidly and the brain’s sugar supply is depleted. This results with the brain responding with a ravenous craving for something sweet, and this cycle is repeated every time we fuel our body improperly.

### **Glucagon**

Glucagon is a fat burning hormone that sends signals to transport fat to the mitochondria (tiny little kilns within the cells that combust fat into heat) to be used for energy. Unfortunately, when insulin dominates the blood, glucagon can not work effectively.

### **Leptin**

Leptin is a hormone, produced in fat cells, that helps regulating energy intake and expenditure, including appetite, metabolism and hunger. Leptin works by stimulating receptors in the hypothalamus to aid in appetite regulation. When leptin binds to these receptors it stimulates the release of appetite-suppressing chemicals.

### **Ghrelin**

Ghrelin is a hunger hormone that is made in the stomach and tells the brain when it’s time to eat. Besides its role as a “hunger hormone” ghrelin also affects our regulation of insulin and glucose. Ghrelin levels increase just prior to a meal and then fall immediately following food ingestion.

# Sleep, Stress and Hormones

## Sleep

It is believed that insufficient amounts of sleep affect your hunger-regulating hormones, leptin and ghrelin. Studies have shown that when you are sleep deprived, your body decreases production of leptin while at the same time increasing levels of ghrelin, a hormone that triggers hunger. Research shows that people who don't sleep for seven to eight hours a night are more prone to weight gain due to elevated cortisol levels. Additionally, lean muscle is regenerated in the final couple of hours of sleep each night, which makes getting ample sleep even more important!

## Stress

Everyone experiences stress to some extent on a daily basis – and some stress (such as exercise) is actually productive. However, most stress is detrimental to our health and can actually cause weight gain (particularly around the tummy) because physical and emotional stress activates the release of cortisol, a steroid hormone that slows metabolism.

## Lifestyle changes you can make

**Ditch the sugar** – Many common foods are loaded with added sugars and refined grains. When you bombard the body with refined sugars you throw your metabolic switch into fat storage mode. Instead focus on eating a predominately plant based diet - meaning foods that, unlike processed foods, are full of nutrition and broken down gradually to help maintain an even blood-sugar level.

**Eat a primarily plant based diet** - You don't have to become a vegetarian, but focus on incorporating more plant based foods into your meals.

**Eat a healthy balance of Omega-3 fatty acids** - Omega-3 essential fatty acids are very powerful anti-inflammatory agents and impact inflammation in a "positive" way. They also help maintain healthy hormone balance in the body. They are found in cold water oily fish, walnuts, flax seeds, canola oil and pumpkin seeds. Adding omega-3 fatty acid supplements from flax oil or fish oil may also help reduce inflammation

## Lifestyle changes you can make

**Maintain a healthy weight** – extra fat fuels the inflammatory process and carrying too much body fat (especially belly fat) increases risk factors for diseases. Increased fat tissue also raises circulating estrogen levels, which increases breast cancer risk.

**Be active** – aim for 30 minutes of exercise each day to help control your weight. Exercise helps reduce silent inflammation by alleviating insulin resistance, which in turn helps reduce visceral fat, the dangerous kind that collects on vital organs in your abdomen. Exercise also acts directly on body chemistry to lower levels of circulating insulin and estrogen. In a review of six studies involving 12,000 breast cancer patients, researchers found that regular exercise could reduce disease recurrence by 24 percent, breast cancer deaths by 34 percent, and overall deaths by 41 percent.

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## *Good Mood Foods*

When stress builds up, many of us turn to comfort foods. And unfortunately many of these foods - think macaroni and cheese, cookies, pastries and other sweets, potato chips and ice cream - are high in calories, saturated fats, and pro-inflammatory ingredients. We often turn to these so-called "comfort foods" because they remind us of our childhood or of a time when our lives were much less complicated. And in the short run, these comfort foods may make us feel better. But in the long run, they can be unhealthy. There are many healthier alternatives to traditional comfort foods that actually contribute to good health while reducing stress and helping to balance hormones too! The foods listed below contain vitamins and nutrients that some studies suggest can help relieve stress and promote healthy hormone levels. These foods may counteract the internal damage that a highly processed diet and chronic stress does to your body - So to be sure to include them in your health promoting eating plan.

**A few creamy bites of guacamole** - Avocados are loaded with B vitamins, which stress quickly depletes and which your body needs in order to maintain healthy nerves and brain cells. Plus, this green wonder's double whammy of monounsaturated fat and potassium can lower blood pressure too. And according to the National Heart, Lung, and Blood Institute, one of the best ways to reduce high blood pressure is to get enough potassium -- and just half an avocado offers 487 milligrams, more than you'll get from a medium-size banana.

**A handful of unsalted mixed nuts** - Walnuts help replace those stress-depleted B vitamins, Brazil nuts hop you up on zinc (which is also drained by high anxiety), almonds boost your E (which helps fight cellular damage linked to chronic stress), and pistachios can soften the impact stress hormones have on the body. They also contain antioxidants and good heart-healthy fats too. A small handful each day is all you need to yield health benefits.

**A plate of roasted asparagus** - Each tender stalk is a source of folic acid, a natural mood lightener. Broccoli, green beans and bok choy are great sources too!

**A spinach salad (and other dark leafy greens)** - These leafy greens are packed with magnesium, which helps regulate your body's level of cortisol, which tends to get depleted when we're under pressure. They also contain high levels of B vitamins which can help calm anxiety and depression. Other leafy greens to include in your diet include kale, chard, and collard greens.

**A bowl of oatmeal** – This health promoting carbohydrate prompts the brain to make more serotonin, which is a feel-good chemical. Complex carbs also help you feel balanced by stabilizing blood sugar levels.

**Good-for-you fish** - Omega-3 fatty acids, found in fish such as salmon and trout, can protect your heart from surges in stress hormones. Aim to eat 4 ounces of fatty fish at least 3 times a week and consider adding an Omega 3 supplement.

**Citrus Fruit and berries** - Fruits like oranges, grapefruit, kiwis, and strawberries are all excellent sources of Vitamin C - a potent stress-busting vitamin. Plus, the Vitamin C found in citrus fruits is involved in the production of collagen, which helps keep your skin firm and reduces wrinkling, to help you hide the effects of stress you've already lived through.

**Butternut squash** - Butternut squash and other winter squashes are packed with "pro-vitamin A" compounds, antioxidants, and other anti-inflammatory agents. It is also one of the most concentrated plant sources of alpha-linolenic acid (ALA) – an omega 3 essential fatty acid that is very good for promoting "feel good" hormones.

**Tea (black/green/white)** - A warm drink can help soothe frazzled nerves, especially on a cold day. Instead of sipping coffee, which is packed with agitating caffeine, opt for green, white, or black tea instead. They contain half as much caffeine as coffee, and are loaded with beneficial polyphenols and flavonoid compounds which can help alleviate symptoms of stress. Be sure to brew your tea for at least 3 - 5 minutes to bring out these beneficial compounds, and skip the cream and sugar to make your cup of relaxation calorie-free.

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# Curried Butternut Squash & Apple Soup

## Ingredients:

- 1 medium shallot, minced
- 1 garlic clove, minced
- 2 Tablespoons extra virgin olive oil
- 3 cups peeled, seeded, and cubed butternut squash (about 1 pound)
- 1 cup vegetable or chicken stock
- 2 cups apple cider
- 1 cup coconut milk
- 1 teaspoon curry powder
- Pinch of cinnamon
- Sea salt and fresh ground black pepper (to taste)

## Directions:

- 1) In a medium sized pot sauté shallots and garlic with oil over medium - low heat until soft.
- 2) Add the squash, stock, apple cider, coconut milk and seasonings and cook until squash is soft enough to blend.
- 3) Puree the soup with an immersion blender until smooth.
- 4) Adjust seasonings to taste, and serve.

Serves four.

**\*\*If using a traditional blender – allow the soup to cool for about 10 to 15 minutes before pureeing\*\***



# Spinach Salad w/Pomegranate & Avocado

*The sunflower seeds and spinach provide good sources of magnesium, which enables the body to create dopamine and the avocado's vitamin B6 produces serotonin, a calming neurotransmitter.*

## Ingredients:

- 1 pomegranate
- ¼ cup fresh lemon juice
- 1 t. Dijon mustard
- 2 T. olive oil
- Coarse salt and ground pepper
- 2 bunches flat leaf spinach, stems trimmed, well washed and dried
- 2 T. roasted, hulled sunflower seeds
- 1 Hass Avocado

## Directions:

Halve pomegranate lengthwise and seed. Working in a bowl of cold water, use your hands to separate seeds from membrane. Membrane will float to the top; discard. Scoop out pomegranate seeds and pat dry.

In a large bowl, whisk together 3 tablespoons lemon juice, mustard, and oil; season with salt and pepper. Toss spinach, sunflower seeds, and pomegranate seeds with dressing in bowl. Transfer to a serving platter.

Halve avocado and remove pit. Scoop out flesh and thinly slice lengthwise; drizzle with remaining lemon juice. Transfer to plate and arrange salad on top.

Serve immediately.



## Bruschetta

### Ingredients:

- 5 large organic ripe tomatoes – diced
- 2 cloves of minced garlic
- 2 tbsp of chopped fresh basil
- 1 tbsp of olive oil
- Juice from 1 lemon
- ½ cup of finely chopped red onion (optional)
- Salt and pepper to taste

### Directions:

\*\* Mix ingredients prior to serving and then place on toasted whole wheat baguette or whole wheat flatbread. It is also excellent with pasta or over eggs.