

[IMAGE]

## **Start With a Super Breakfast**

### **Balance Your Blood Sugar All Day Long**

By Dr. John Maher

Breakfast is the most important meal of the day for a reason: A balanced, healthy breakfast gives your body the sustained energy it needs to move, think and survive the huge mental and physical demands placed on it. Unfortunately, too many people eat an unhealthy, inadequate breakfast or skip it altogether. Here's why that's a bad idea.

What is health? Health may be best defined as the ability to maintain a condition of *homeostasis*, which is the ability of a body to regulate its internal conditions, such as the chemical composition of body fluids, so as to maintain health and functioning, regardless of outside conditions. A common way many of us begin to lose our health is by losing our ability to maintain a healthy level of sugar in our blood. In fact, some experts have said that dysglycemias (blood sugar imbalances) have become an epidemic.

Low blood sugar, also known as hypoglycemia, occurs when we are not able to keep enough sugar in our blood. When this happens, our nervous system starts to dysfunction, leading to irritability, fatigue, loss of focus and cravings for sweets and stimulants like caffeine. Hypoglycemia can be caused by not eating or, paradoxically, by eating too many low-fiber carbohydrates and sweets. Consuming the latter causes our blood sugar to spike up and then crash down. This phenomenon is often easily apparent in children, but it happens to adults just as often.

This "spike up, then crash down" pattern is caused by the hormone *insulin*. Insulin's main job is to get sugar from the blood to the cells. When large amount of low-fiber, simple sugars are ingested, a large amount of insulin is released in response. The large influx of insulin works so well in clearing the sugar of blood into the cells that low blood sugar results.

#### **Blood Sugar and Insulin Resistance**

Cereal and orange juice - Copyright â Stock Photo / Register Mark Long-term continued overeating of sweets and low-fiber carbohydrates eventually "burns out" the insulin receptors on the cells that assist

getting sugar from the blood into the cells. This loss of cell-receptor sensitivity is known as insulin resistance. Such "burnout" is quickened by lack of exercise. In an effort to overcome this, our bodies may make more insulin, leading to hyperinsulinemia (excess insulin production). This can eventually lead to a cluster of symptoms related to the upset of blood sugar homeostasis called metabolic syndrome, which is often a precursor to heart disease and diabetes.

The common findings indicative of metabolic syndrome are blood pressure above 130/90 (either number), high triglycerides, a suboptimal good/bad cholesterol (HDL/LDL) ratio, and central adiposity, perhaps most easily defined as a waist size more than half your height. It is important to realize that blood sugar tests will usually still read normal with metabolic syndrome, although often on the high side of normal. (However, it is now possible to measure blood insulin along with blood sugar when doing a two- or four-hour glucose tolerance test.)

Eventually, insulin resistance reaches such a magnitude that even fasting blood sugar becomes abnormally high, also known as diabetes. As it gets higher, sugar will begin to appear in the urine. Relatively minor symptoms appear first, such as frequent urination, excessive thirst, extreme hunger, increased fatigue and irritability. Eventually cardiovascular and kidney disease, blurry vision leading to blindness, peripheral neuropathy, and wounds and ulcers that will not heal come with advanced diabetes.

### **Balanced Eating: Key to Preventing Blood Sugar Disorders**

The key to preventing hypoglycemia, metabolic syndrome and diabetes is balanced eating, regular exercise, and proper rest and recreation. Balanced eating means eating meals with healthy fats, high-fiber carbs and protein. Mediterranean, South Beach, Zone and 40-30-30 diets are some of the more common diets that try to balance these three elements. Regardless of the diet strategy, by far the most important meal of the day for maintaining healthy blood sugar and weight is breakfast. A good breakfast is also associated with less heart disease and cancer.

There are some foods and spices that are particularly good for balancing blood sugar. The minerals chromium and magnesium are both essential for maintaining healthy blood sugar levels. Good sources are organic black-strap molasses, toasted wheat germ, and brewer's yeast (*Saccharomyces cerevisiae*). Foods rich in zinc are also important. Good zinc sources aside from meats are dairy products, brewer's yeast, wheat germ and omega-3-rich pumpkin seeds.

Fiber content is the major difference between simple and complex carbohydrates. Fiber is an indigestible carbohydrate, so it does not add to net calorie intake. Insoluble fiber, commonly called roughage, promotes bowel movement. Soluble fiber slows down the absorption of sugar into the bloodstream. It also absorbs cholesterol and its precursors (bile). The bran and germ of wheat, rice, oats and corn are very high in fiber, as is flaxseed. The latter is a good source of healthy omega-3 fats, along with fair amounts of magnesium, manganese and some zinc. Omega-3s, including alpha linolenic acid (ALA), can also have a positive effect in diabetes, as they have been shown to support healthy insulin sensitivity at the cell wall.

A little-known fact is that fenugreek seeds help control cholesterol and regulate blood glucose. Fenugreek seed lowers overall serum cholesterol, and reduces triglycerides. In one human study, 2.5 g of fenugreek per day for three months significantly reduced these cardiac risk factors. These activities are linked to a group of soluble fibers, most notably galactomannans. Cinnamon may also help lower insulin resistance in doses as little as 1 gram. Finally, the best sweetener for blood sugar balance appears to be stevia, which has good evidence for supporting healthy blood sugar and blood pressure.

### **Balancing Your Blood Sugar: Start With a Super Breakfast**

Based on this data, making a variety of "super breakfast for blood sugar balance" meals is both easy and delicious. Breakfast menus that support healthy blood sugar include (but are certainly not limited to) one or two omega-3-enriched eggs with high fiber, whole-grain toast with a touch of fruit jam and green tea, perhaps preceded with half an orange or grapefruit; or whole-grain cereals with low-fat dairy/soy milk, or soy or whey protein, sprinkled with nuts, seeds and/or berries. Talk to your doctor for more ideas on how to start your day right and keep your blood sugar balanced all day long!

### **Healthy Breakfast 101**

How can you start your day right? Here are some of the best things to include in a healthy breakfast designed to maintain blood sugar balance and provide lasting energy:

- Healthy fats; for example, omega-3 enriched eggs
- High-fiber carbohydrates, such as whole-grain toast, whole-grain cereals, flaxseed
- Protein (eggs, soy, low-fat, sugar-free yogurt or cottage cheese)
- Minerals such as chromium and magnesium, found in black-strap molasses, toasted wheat germ, brewer's yeast, etc.

- Cinnamon, which is the perfect topping for oatmeal and toast
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### **Insulin Resistance Leading to Blood Sugar Imbalance - and Worse**

The primary function of the hormone insulin is to carry sugar from the blood into your cells. Excess consumption of high-sugar foods causes a large amount of insulin to be released and too much sugar to be removed to the cells too quickly, resulting in low blood sugar. Over time, excess consumption of sweets and low-fiber carbohydrates can lead to insulin resistance, which means insulin is ineffective at removing sugar from the blood in a timely manner, if it all. A host of potential health complications can result, not the least of which is diabetes.

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### **Balanced Breakfasts: Try One Today!**

Super breakfast - Copyright © Stock Photo / Register Mark Many people need to prepare breakfast quickly and even eat on the run. Too often, that leads to skipping the most important meal of the day or settling for a high-sugar, high-carb option, neither of which will help balance your blood sugar. What's the solution? Here are three easy options:

#### *Healthy Breakfast #1*

- Omega-3-enriched eggs
- High fiber, whole-grain toast with a touch of fruit jam
- Green tea
- Half an orange or grapefruit

#### *Healthy Breakfast #2*

- Low-fat, low-sugar whole-grain cereal
- Low-fat dairy or soy milk
- Sprinkle with nuts, seeds and/or berries

#### *Healthy Breakfast #3: A Healthy Breakfast Shake*

- 1/2 cup plain yogurt
  - 1 cup water or green tea
  - 1 heaping tbsp toasted wheat germ, flax, pumpkin or fenugreek seed, freshly fine-ground
  - 1 tbsp whey protein, vanilla flavored, sweetened with stevia (a natural sweetener)
  - 1/4 cup fresh or frozen berries
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