Hunger, Appetite and Satiety: Feel Full without Overeating

What we eat, why we eat, and how much we eat is a complex dance between three factors: hunger, appetite and satiety. Understanding these three factors helps us enjoy our food, and feel full without overeating. Worldwide, populations with the highest consumption of starchy, fibrous plant foods, like potatoes and whole grains, are also some of the fittest and healthiest. Across the regions of African heritage, we find potatoes, yams, breadfruit, cassava, and other fibrous vegetables at the center of healthy, balanced traditional diets. These foods satisfy our food needs without excess calories. Here’s how:

NEED TO EAT VS. WANT TO EAT
Hunger is our body’s need for food. Several bodily cues tell us we are hungry, such as an empty or growling stomach, or low energy. Appetite is the psychological desire to eat, brought on by sensory cues such as the sight and smell of food, and by emotional cues, social situations, and cultural conventions. Hunger acts as the more basic drive, while appetite is more of a reflection of eating habits. At times we are not hungry but have an appetite (such as seeing a tempting desert after eating a full meal) or may be hungry but have no appetite (such as when we are sick). Both hunger and appetite determine what, when, and why we eat (1).

SATIETY: A “GUT CHECK” ON FULLNESS
The other side of hunger and appetite is satiety (suh-TIE-a-tee), which is the physical and emotional experience of “fullness” that comes after eating and/or drinking. A number of factors also impact satiety, including the stretching in your stomach, and changes in blood sugar and hunger hormones in your body.

FOSTERING A FULL FEELING
Generally speaking, feeling full depends on the amount of food we eat; it typically takes a whole sandwich, not just a bite, to promote satiety. However, sometimes it’s not just the amount of foods eaten, but the characteristics of those foods that lead to fullness. This is because our bodies look for weight and bulk in our food. When foods are lower in fat and calories, you can eat a larger amount of them and easily feel full without overeating. That’s why the water and fiber content of the foods we eat influence satiety, like this:

Water: Foods high in water content promote a feeling of fullness. This is because water adds volume but has no calories, lowering the overall calorie content of foods. Put more scientifically, we can say that “water lowers a food’s energy density.” Foods with a high water content (and low energy density) include potatoes and other tuberous root vegetables, fruits, vegetables, low-fat milk, cooked grains, lean.
meats, fish, poultry and beans. Dishes like soups, stews, and some pasta dishes are high in water content and may have low energy density depending on their preparation. Eating foods of low energy density is a smart step for maintaining a healthy body weight. Don’t worry: “Low energy density” doesn’t mean that the food will leave you without energy to get through your day; it basically means that you get a large amount of food for a small amount of calories.

**Fiber:** Like water, fiber has no calories but does add weight to foods, so it may promote a feeling of fullness. Fiber is not digested but needs water to be eliminated; in this process, fiber helps to soften and add bulk to waste in the intestines. Fiber is what gives “bulk” to natural foods like fruits and vegetables, and foods high in fiber tend to be very filling. Water and fiber-filled tubers, like potatoes, yams, or sweet potatoes, bring satisfaction to our meals without excess calories.

**RATING A FOOD’S FULLNESS EFFECT: THE SATIETY INDEX**

In an attempt to determine which foods promote fullness, researchers in Australia developed a satiety rating scale that they called the “satiety index” (2). Two hundred forty calorie portions of 38 different foods representing all the basic food groups were fed to groups of subjects who then rated the foods based on the degree of fullness they felt after eating each food. Foods ranking highest on this Satiety Index (SI) tended to be high in water or fiber content as well as lower in fat content. Fruits and vegetables were at the top of the SI list of foods. In fact, the highest SI score was produced by potatoes, which was more than three times the SI of white bread. Other foods ranking high in satiety after potatoes were fish, oatmeal, oranges, apples, wheat pasta, steak and baked beans (2).

**SATIETY AND WEIGHT MANAGEMENT**

Choosing foods based on SI may help with weight management. Unfortunately, you won’t find SI rankings on food packages, but you will find that a large portion of the foods found in traditional diets, like Oldways’ African Heritage Diet, have high SI rankings. Along with adopting an eating pattern like the African Heritage Diet, based on fibrous vegetables and tubers, whole grains, fruits, and beans, here are a few rules of thumb for choosing foods that will help fill your body up without filling it out:

- Prepare healthy dishes that have a high water content, like soups, stews, and pasta dishes (using tomato-based vs. cream-based sauces).
- Fill up on fruits, vegetables, low-fat or nonfat dairy products, and whole grains.
- Seek out unprocessed foods, which tend to have a low energy density or few calories per weight.
- Get more fiber by eating vegetables, fruits, whole grains and beans.
- Choose lean protein sources like fish, poultry, lean meats, and beans.
- Take note of which foods make you feel particularly full and satisfied.
- Slow down when you eat to allow your stomach time to give a proper “gut check” report to the brain so it can register that you are full.


For healthy recipes and nutrition information, go to: www.potatogoodness.com