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### Controlling Your Hunger, How?

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Your Life Your Health

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The most common reason given by people for overeating is, "I'm always hungry." Anyone who has struggled with weight management recognizes the vicious cycle of uncontrolled eating. You can hear yourself, or others say, "I am hungry all of the time and I am gaining weight." Yet, the reality doesn't seem to register. Eating more doesn't solve the problem of hunger.

Try this simple experiment. Eat a large meal in the evening; including potatoes, high caloric drinks such as coca cola, and a large, sugar-filled desert. Invariably, the next morning, you will wake up hungry. The solution to hunger in the morning is what you ate for dinner the night before. If you moderate your caloric intake, changing the content of your meal, balancing an adequate portion of protein with high-fiber carbohydrates such as vegetables and/or fibrous whole fruits, eliminating sugar and desert and add a small amount of "good fat" such as olive oil, you'll discover that even though you have eaten less, you are not as hungry the next day.

**In fact, the solution to hunger, except in cases of malnutrition from starvation, is not to eat more, but to eat differently and most often to eat less.** Of course, everyone knows that when you're hungry you should eat. Therefore if instead of decreasing what you have for dinner, you continue to wake up famished and consequently eat a big breakfast of pancakes, syrup, sausages, and a very large glass – actually two – of re-constituted orange juice, you'll be hungry again before noon. Of course, because you're hungry, you eat a midmorning snack and then another large meal. Before long, you've gained 20-30 pounds and can't stand yourself.

In order to compensate for your sadness over your weight gain, you "reward" yourself with ice cream and cookies after dinner, but then you wake up very hungry the next day. The cycle continues and before you know it, you've gain 50-60 pounds and can hardly walk across the parking lot of your workplace.

Now, you decide to go on a diet!!! But is this the right choice? Will "going on a diet" change the cycle described above? It will for a short while. With enthusiasm, you'll "starve yourself," loose some weight and then start the cycle all over again. Here is how it typically happens. You discipline yourself for a while, maybe even for three years. Then you go on vacation, or you go to a party, or you visit family for a holiday. You overeat, wake up hungry, eat more, and .... Then, here come the pounds.

Once again, "dieting" often focuses on the superficial – appearance – rather than on the health or ill-health of the entire body. The problem with excess body weight – with fat – is much more serious than how you appear to others. If you are a male and your waist

size is greater than 40, or if you are a female and your waist size is greater than 36, you have multi-fold higher incidence of a host of diseases than those who are not overweight.

### Living to eat or eating to live

We often try to lose weight without fully understanding the interacting factors and drives which determine hunger, food intake, and body weight. Several biological mechanisms for the hunger drive are the:

- mouth,
- stomach,
- hypothalamus – a part of the brain
- duodenum – a part of the intestines which is just beyond the stomach

The mouth, stomach, and duodenum are short-term mechanisms of hunger control whereas the hypothalamus is long term.

One test studying how the **mouth** affects hunger involved an operation on rats, where the esophagus was redirected out of the rat's body instead of connecting with the stomach. The results were that the rats stopped feeding after chewing and swallowed larger than normal meals, but they soon became hungry again and ate. This clearly shows that the mouth is only a short-term sensory receptor.

One major scientific experiment on how the **stomach** affects hunger, food intake and body weight was done by placing a balloon in the stomach so that contractions could be measured. From this a correlation was found between contractions and hunger. However, people whose stomachs have been surgically removed still get hungry. Even if you cut the nerve pathways from the stomach to the brain, they get hungry. This suggests that the stomach isn't the main way the body regulates hunger and food intake.

In the body, another short-term mechanism is the **duodenum**. The duodenum releases a hormone, cholecystekinin (CCK), in response to fatty acids in the intestine. This activates the vagus nerve, which activates mechanisms in the brain that produce the sense of satiety that brings one to stop eating. In one test, where CCK was injected into hungry rats, the rats' appetite decreased.

The **hypothalamus** which is part of the brain is thought to be an important part in regulating hunger, food consumption and body weight. Different areas of the hypothalamus are thought to be involved in different aspects of feeding behavior. One area is thought to act as a satiety center, whereas another is thought to initiate eating behavior when food intake is required.

### Seeing or smelling a food can stimulate hunger

Hunger can also be caused from external cues. Seeing a type of food you love can make you feel the need to consume it, as well as other food around. When you see food you

like, your insulin level increases. The increased insulin then increases hunger and if the food is consumed during this time, the food is most likely to be stored as fat. You have heard it said, I can gain weight just by smelling food? It is partially true if you succumb to eating when you don't need the food for energy.

Anxiety can play a big part in this. If you go to a rather large social gathering, you may notice many people eat more food than normal. The anxiety caused from being around people that you may not know, as well as other anxiety causing factors in such a situation, can cause you to become more responsive to external stimuli. Because of this type of external cueing, people need not only to watch their consumption, but also their eating environment.

### **How to Control Hunger**

Dr. Barry Sears in his books on "The Zone," has popularized some very important principles about nutrition. The following concepts come from his work. If you eat a balanced meal, you should not be hungry for the next four to six hours. This is principally because you will maintain your blood sugar levels for that period of time. If you get hungry before 4-6 hours, generally your blood sugar has dropped either because you:

- produced too much insulin by eating too many carbohydrates in your last meal, or
- did not eat enough carbohydrates with your last meal.

Here's how to distinguish between the two:

1. If you have produced too much insulin, your blood sugar will be driven down and your mental alertness drops. You get a loopy feeling.
2. If your insulin levels are too low, there is not enough insulin crossing the blood-brain barrier to interact with the hypothalamus to prevent the synthesis of neuropeptide Y, probably the most potent stimulator of appetite. Even though your brain is getting enough sugar, as evidenced by your mental alertness, you have a growing hunger due to the increase in neuropeptide Y levels in the brain.

If you feel hungry and "loopy" you have eaten too many carbohydrates relative to the amount of protein. If you are hungry but maintain good mental acuity, you have pushed insulin levels too low and you need to increase the carbohydrates in your meals, relative to the amount of protein.

### **To control your hunger:**

1. Drink at least 64 ounces of water per day.
2. Eat more fruits and vegetables, and less pasta, breads, grains and starches during the day. These latter foods increase your insulin levels and will cause you to be hungry before the next meal.
3. Eat more frequent meals with fewer calories.

4. Eat small amounts of low-fat protein at every meal and snack.
5. Have some “good fats,” monosaturated fats, such as almonds, walnuts, olive oil, with each meal and snack.

With this plan, you will stop gaining excess body fat.

### **To stop gaining weight:**

1. Determine how much protein you require per day and consume that amount. At SETMA, we calculate your daily protein need every time you come to the clinic. Ask for it and use that information to guide your eating.
2. Use the eyeball method to control your ratio of protein to carbohydrate at every meal. Your plate should be organized into thirds – one third protein (about the amount which will fit into the palm of your hand); two thirds fruits and vegetables.
3. Add some extra monosaturated fat to every meal.
4. Drink 8 ounces of water thirty minutes before a meal.

Following this plan will result in your starting to lose excess body fat.

### **When to eat to control hunger and weight gain**

1. Make sure most of your carbohydrates come from fruits and vegetables, and use grains, starches, pasta and breads as condiments. Try to keep grains, starches, pasta and bread to no more than 25% of the total carbohydrates consumed at a meal.
2. Never let more than five hours go by without eating a meal or snack.
3. Always eat breakfast within one hour of rising.
4. Always have a small snack before you go to bed.
5. Always have a small snack thirty minutes before you exercise.

Following this plan, will make it possible for you to achieve your ideal body weight and to attain excellent health.

You can control you hunger by eating both the right things and at the right time. Remember, it is your life and it is your health.