stored energy pt. 2

fat

SEPTEMBER 2013
ALIVE!

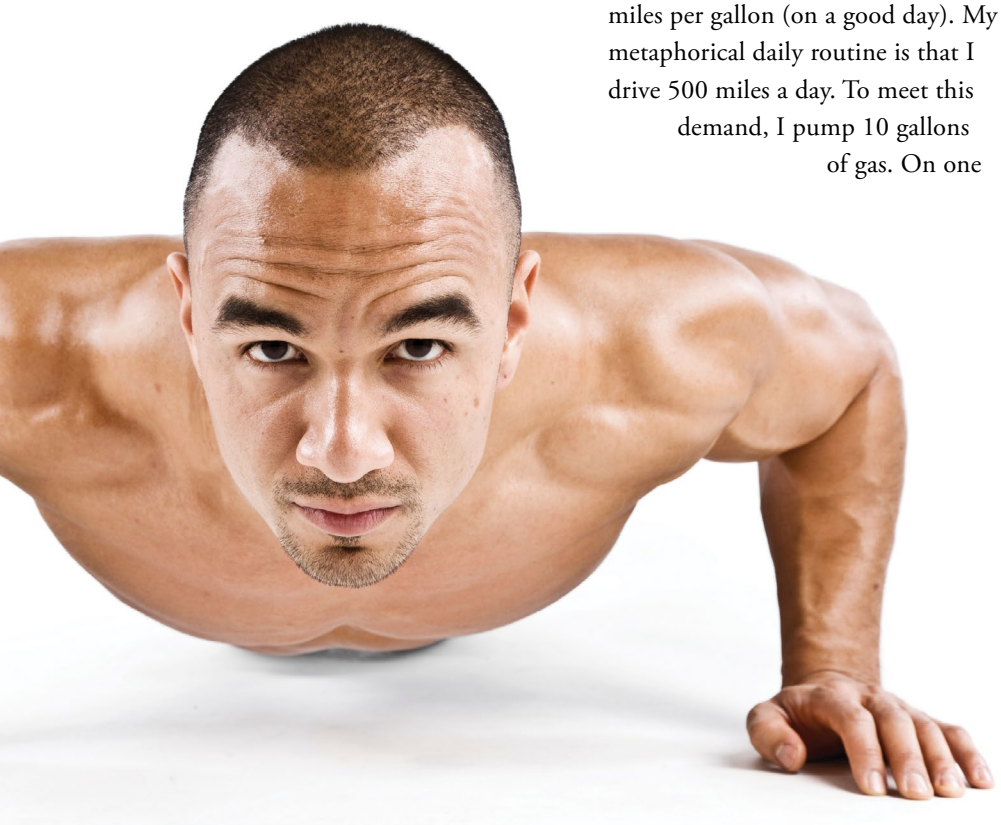
HAVE YOU ever noticed the invisible sentimental tags we have attached to certain foods? These tags do not read with typical scientific style: "high in vitamin C," "beneficial to the heart," "180 calories," etc. We do not merely receive a full stomach, vitamins, or energy for the next physical demand from food. Beyond survival, food has become Prozac on a plate, Valium-like victuals, rations of reward, celebratory cuisine, our Starbucks stimulation, snacks that soothe, and fodder for fun. Do you know what I mean? When anxious, something popped into the mouth will surely calm us down. As soon as one has accomplished something worthy of commendation, food is present to applaud. Relational breakups are typically followed with tears, a couch, and a quart of ice cream. We turn to the fridge to get tanked up in more than one way.

The quandary that food is more to us than simply fuel and yet provides nothing short of calories is a factor in America's weight problem. When food is consumed to meet something beyond the body's physical needs, it typically gets stored. Last month we examined the storage area of glycogen, found in the liver and muscles. The body's other storage area is fat.

BEYOND SURVIVAL, FOOD HAS BECOME PROZAC ON A PLATE, VALIUM-LIKE VICTUALS, RATIONS OF REWARD, CELEBRATORY CUISINE . . .

Returning to the car analogy, we will compare mealtime with stopping at the gas station to refuel. The energy I use on a daily basis to survive and support my activity level will be likened to the gas that is burned up. Remember that I get 50 miles per gallon (on a good day). My metaphorical daily routine is that I drive 500 miles a day. To meet this demand, I pump 10 gallons of gas. On one particular day my trip is shortened to 450 miles. Habit drives me to continue putting in 10 gallons of gas, which leaves me with a gallon left unused. The extra fuel does not just hang out in my digestive tract. It automatically gets stored. Fat storage will be likened to gas being stored in containers in my trunk. Carrying around an extra gallon of gas is no big deal. I don't mind having a little reserve just in case I need it. I've done this before and it all evens out. However, this becomes a new pattern and in one week I have stored seven extra gallons.

The next day is a holiday. I squeeze 12 gallons into my tank, two more than my customary 10, but I only drive 300 miles. I have six extra gallons of gas that I did not use. It gets stored in my trunk along with the seven gallons from last week. To use that extra 13 gallons I would have to drive 650 extra miles on top of the normal 500. That is way too much driving for me. If I carried this on for a while, putting in my customary amount of daily gas, I'd have enough extra fuel to drive across America! I wouldn't have to stop to refuel at a gas station once! How much fuel can we store as fat? How many extra pounds are we capable of carrying



around? The human body's fat stores are said to be limitless. This does not mean that our heart or other organs will give out and say I can't handle any more, but adipose tissue will make room for more.

Weight gain is relatively easy to accomplish for most people. The challenge is burning it off after it has become an established part of our body. Valiant efforts to lose weight can be jeopardized in several ways. The common approach to weight loss is to simply put less fuel in the tank. This is a good strategy. However, with less fuel, you may not feel like driving quite as vigorously or as far. I notice that when my gas tank is low I drive slower. As a result, I start getting much better gas mileage. I may get 53 miles to the gallon. The body also can adapt, enabling you to maintain life on fewer calories.

Skipping meals is another strategy. If you are used to having a full tank to run on most of the time your body may scream, "I'm tired and really hungry!" When the next meal comes around, you end up putting more fuel in the tank than you intended. We may put the wrong kind of fuel in the tank or, rather than filling up at one time, we make short quick stops throughout the day to fuel up.

Eating several small meals throughout the day is often recommended as a weight loss approach. However, understanding how fat storage and fat loss occurs can help us see that while snacking may be helpful in reeducating the mind to get used to eating less at one time, it is not going to be effective in the long run.

Fat storage and fat loss is determined by the balance between lipogenesis and lipolysis. Succinctly, lipogenesis is the creation of fat whereas lipolysis is the breaking down of fat for it to be used as a fuel source. The body's primary fuel source is carbohydrates. Carbohydrates are a natural part of plant-based foods. Digestion breaks carbohydrates down into glucose. Glucose will be used in the brain and body cells to produce energy IF insulin is present. Insulin enables glucose to enter cells and enter the pathway of energy production. While insulin is a good thing, it inhibits lipolysis. In other words, every time you eat food, your body will use what you've just put in the tank for fuel rather than burning what has been previously stored in the trunk. In addition to that, if supply exceeds physiological need or demand, which typically occurs when the sentimental tags are governing our eating, lipogenesis will occur.

WHILE SNACKING MAY BE HELPFUL IN REEDUCATING THE MIND TO GET USED TO EATING LESS AT ONE TIME, IT IS NOT GOING TO BE EFFECTIVE IN THE LONG RUN

Lipolysis occurs in the fasting state, such as between meals or through the night. In the fasting state, insulin levels are reduced. Lower insulin levels stimulate lipolysis. And lipolysis results in fat cells becoming smaller. Normally 2-3 hours after a meal the body will start burning fat stores to some degree. If your last meal is eaten a few hours before bedtime, you can be burning fat while you are sleeping! However, every time food enters your mouth that contains some carbohydrate, you are inhibiting fat breakdown. An imbalance between lipogenesis and lipolysis can occur when food is eaten throughout the day, inevitably inhibiting the emptying of those gas cans in the trunk.

I personally think that it is normal and in some cases appropriate to place our sentimental tags on various foods. I make pie when my son returns home and, trust me, more than ingredients go into making it. However, when it comes to tanking up and filling what feels on empty, our Prozac on the plate will not satisfy.

"Oh that men would give thanks to the Lord for His goodness, and for His wonderful works to the children of men! For He satisfies the longing soul, and fills the hungry soul with goodness" (Psalm 107:8, NKJV).

Risë has been writing on various health subjects for over 20 years. She has inspired many through her research and down-to-earth writing and speaking style. She believes that healthy living is intimately tied to happiness and wholeness.