Hunger is a bodily sensation that usually is unpleasant, and associated with negative emotions. Pain has the same definition, and therefore, hunger is a form of pain. The main difference between hunger and all other pains is that the (short-term) solution, food, is readily available and doesn’t require a prescription. In working with pain, it is important to distinguish the sensation from the emotion, and here too, hunger is usually paired with emotion and even more importantly, a behavior, eating. In addition, there are fluctuations that occur over the day and month, and triggers that have various intensities and durations.

Some scientists distinguish “true” hunger from “emotional” hunger. This distinction may not be helpful because the physiology to handle hunger, like stress, evolved over millions of years and is not equipped to handle modern toxins, deficiencies, and stressors (such as sleep deprivation, infection, etc.)

Hunger is a phenomenon of the brain—it is ultimately a neurological process. The center of hunger is the hypothalamus, a deep part of the brain that coordinates emotion, sleep-wake cycles, hormones (it controls the pituitary gland), and the autonomic nervous system (blood pressure, heart rate, blood flow, sweating, digestion, etc.)

In addition, the hypothalamus is where the pain-pleasure axis occurs, as well as addictions. The hypothalamus communicates with every cell of our body (including genes and mitochondria), via both nerves (like email) and neurohormones (like snail mail).

Molecules that affect the hypothalamus include leptin from abdominal (white) fat, ghrelin from the stomach, serotonin from the intestines, cortisol from the adrenal glands, dopamine from the brain itself and many others from the immune system.

There is an explosion of research on the physiology of fat, prompted by our worldwide epidemics of obesity and diabetes, even affecting kids, and the quest by big pharma for a blockbuster fat buster. So far, no luck finding gold in fat, because hunger is influenced by at least twenty (and still counting) agents, which come from multiple sources and interact in a highly complex manner.

It makes sense that this is a multi-dimensional system, since evolution required that the finding, storing and utilizing of food-energy had huge importance for survival; the only things more important being air and water. Even sex is less important, because if you can’t find food and manage your energy during the winter, you don’t get to survive and procreate (at least the case 100,000 years ago). Food not only provides nutrients but turns genes on and off through epigenes, affecting our progeny.

Hunger and its opposite, Satiety, are supposed to represent Need. However, these signals clearly don’t work today. Hunger is so powerful that our Willpower can not win. The hypothalamus, limbic system and brain centers involved in hunger and emotion are older and deeper than thought and language, so they take control. Haven’t we all had the experience that the more we tell ourselves NOT to eat that CHOCOLATE cake, the worse our hunger gets? We literally have several brains working at the same time, but the older, deeper, more powerful one wins.

As shown in the figure, we are learning how to manage hunger naturally. Techniques such as gastric bypass may temporarily improve some hormones involved with hunger and diabetes, but there are serious long-term consequences that are becoming clearer. Natural techniques based on solid science will ultimately prove more successful in the long-term. Special testing for nutritional deficiencies, toxicities, yeast and hormones, as well as observing and logging hunger as an indicator of imbalance can often launch a change of lifestyle that successfully “re-sets” these mechanisms that become dysfunctional we “age”.

IMPORTANT NOTE: This general information should not be used to make decisions about medical care without the involvement of an experienced practitioner. The contents of this article are copyright 2006-2012 by Michael Cheikin MD and may not be reproduced without express written permission.

References and Reading Materials
1. www.cheikin.com has references for this article as well as others.
2. Epigenes are software molecules that program our genetic hardware

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