GB HealthWatch

Eating for pleasure? It's in your hedonic genes

The term “eating your feelings” is familiar to most of us. We often find ourselves reaching for food during times of distress, sadness, anxiety, boredom, and even happiness. This behavior, aptly called emotional eating is driven by pleasure rather than hunger.

Eating makes us happy. There are two body systems controlling our eating behavior: homeostatic and hedonic. The hedonic system, also known as the brain’s reward system, is what makes us happy when we gain love, money, drugs, and of course, food.
See our Body Weight, Appetite, and Satiety article for more information on these two body systems:
http://www.gbhealthwatch.com/Science-BodyWeight-Appetite-Satiety.php

The hedonic system is composed of a network of neuronal circuits. Two genes involved in the development and function of these circuits, DRD2 and OPRM1, have been extensively studied in relation to substance abuse and eating. Both genes directly affect the brain’s dopamine functions. Because dopamine is the “feel-good” hormone, these genes are called our hedonic genes.

One variant of DRD2 reduces dopamine function in the brain which increases risk for drug addiction and obesity, presumably because carriers overindulge to compensate for the decreased hormone activity. This variant is found in about 18% of Caucasians, 38% of Africans, and 39% of Asians.

One variant of OPRM1 has the converse effect. It increases sensitivity towards the same stimuli which increases risk for drug addiction and sensitivity to pain. Carriers generally prefer high-fat and sweet foods but are less likely to become obese due to their heightened satisfaction from food. This variant is found in about 16% of Caucasians, 1% of Africans, and 38% of Asians.

One specific combination of DRD2 and OPRM1 variants dramatically increases risk for binge eating disorder in its carriers. This combination is carried by about 11% of Caucasians and 14% of Asians.

These risk variants were once advantageous to our ancestors. It allowed them to eat more and accumulate fat to support themselves during food shortages. Today, there is an abundance of food rendering these genes a liability.

If you carry one of these variants or a combination of them, GB Healthwatch can help you manage your weight. Our scientists have analyzed each of these variants and their associated behaviors and have developed specialized strategies for handling emotional eating. Log in now to see tips designed to help you better cope with emotional eating.
http://www.gbhealthwatch.com/login.php