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### Excess Sugar Messes With Your Sex Hormones

A little sugar sweetens bitter tastes and creates yummy deserts. However it turns out that an excess of sugar can wreck havoc on your body's hormones, causing some nasty results.

As part of your sexual functioning, your body makes a hormone called *sex hormone binding globulin* (SHBG). While doing research on mice, scientists have discovered that too much consumption of the sugars fructose and glucose can deactivate one of our genes that controls the sex hormones in both men and women.

Their findings have been published in the medical literature piece, *The Journal of Clinical Investigation*.

#### Statistics in North America

Probably all of us are aware that people love to consume sugar. Statistics show that in North America, each person's average intake in one year is *74 pounds of table sugar* and *45 pounds of fructose corn syrup*! Since the 1970s, manufacturers have switched from sugar cane and beet sugar to using high fructose corn syrup because it is so cheap. (For more information on the epidemic use of high fructose corn syrup, see **Weight Control: Deadly Dangers of Fats and Sweets**.)

Table sugar is made of a combination of glucose and fructose and these simple sugars are metabolized by the liver. When more sugar is metabolized than can be used, the excess is stored as fat lipids (belly fat, thigh fat, etc.)

#### The New Discovery

In this new discovery, scientists now know that these excess fat lipids from the simple sugars negatively affect your SHBG gene, causing your body's levels of SHBG protein in the bloodstream to drop significantly. SHBG protein fine-tunes the levels of testosterone and estrogen circulating through the body.

Reduced levels of SHBG protein translates into *elevated testosterone and estrogen* amounts in the body, which increases the probability of acne, infertility, polycystic ovaries, uterine cancer and exposes women to more heart disease.

With this new insight, doctors can now regard SHBG as a biomarker for evaluating liver function well before disease symptoms become evident. (Previously, blood SHBG was used as a biomarker for type 2 diabetes and cardiovascular disease.)

For men and women, this new discovery means that over-consumption of sugars throws your sex hormone levels out of whack and opens up one to the dangers of sexual dysfunctions and other perils of hormonal imbalances.

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**Sources: Human Sex Hormone–Binding Globulin Variants Associated with Hyperandrogenism and Ovarian Dysfunction** *Journal of Clinical Investigation* 109(7): 973-981 (2002). doi:10.1172/JCI14060 **Sex Hormone Binding Globulin: Origin, Function and Clinical Significance** *Annals of Clinical Biochemistry* 1990 Nov;27 ( Pt 6):532-41 **Structure, Function, and Regulation of Androgen-Binding Protein/Sex Hormone-Binding Globulin** *Vitamins and Hormones* 1994;49:197-280