How America's CORN-UCOPIA Is Making Us Fat

by Edward Bauman, M.Ed., Ph.D. and Jodi Friedlander, M.S.

This country is experiencing a very serious health problem, an epidemic of obesity. Pollution in our environment, the toxicity of our food supply, our propensity for couch-potatoing and large food portions all play a part in the super-sizing of our population.

When we take a closer look at the contributing causes to our weight gain, we discover a common denominator underlying all of this: lots of cheap food. And of all the cheap foods available, none is in as great supply as CORN. We're not referring to sweet summer corn on the cob, and not corn tortillas or most other forms that are recognizable as corn to us, but corn in all its industrial permutations: sweeteners, corn-fed beef, and an array of processed foods. So pervasive is it in our food supply, that if you eat fast food or packaged food at all, chances are you're eating corn.

According to author Michael Pollan's research (*The Omnivore's Dilemma*), there have been two periods of epidemic bingeing in America's history. The first occurred at the turn of the 19th century, as a wave of cheap liquor washed over the country, and alcohol abuse prevailed, along with its attendant social and health problems. The second era of bingeing, and far more serious, is now, as we eat ourselves literally sick and to death on energy-dense foods that are sadly lacking vital nutrients necessary for health. What both of these eras have in common is an overabundance of corn, our single largest crop. This overabundance brings down prices, creating plentiful food at dirt cheap prices. In the early 1800's there were two things you could do with too much corn: feed it to the hogs, and distill it into hard liquor. Today we rely on the genius of food technologists to devise a-maize-ing ways to fashion our current surplus into various kinds of profitable "foodstuffs", in ever-larger serving sizes, on which we grow fat.

It is well-known that high-fructose corn syrup (HFCS), an inexpensive, highly concentrated product synthesized from cornstarch, is widely used in the food industry, most notably as the primary sweetener in soft drinks and baked goods. What is less well known is that its usage increased 1000% between 1970, when it entered our food supply, and 1990. This vast increase in usage far surpasses changes in the intake of any other food or food group and is in large part due to its incredibly low price. But instead of passing the savings on to consumers, which would only eat into their profits, food manufacturers add increasing amounts of it into products, in ever increasing portion sizes. Instead of the once common 8-ounce soft drink, we are now more likely to find a 20-ounce (or bigger) size. High-fructose corn syrup currently represents 40% of sweeteners added to foods and beverages, or about 10-20% of daily caloric intake.

When populations are faced with plentiful and cheap food, they will eat it. Since 1977, the average American's daily intake of calories has jumped by more than 10%. Two-thirds of America's adults and as many as 30% of our children are now overweight or obese.
High-fructose corn syrup's increased usage mirrors our nation's rapid increase in obesity. Here's why. Bray et al's 2004 study, published in the American Journal of Clinical Nutrition, reported that HFCS, and fructose in general, metabolizes differently than glucose and sucrose. This study revealed that fructose does not elicit a response from insulin, does not increase leptin production, and does not suppress ghrelin production, the hormones that signal satiation and help regulate food intake and body weight.

Our bodies tend to send fructose directly to the liver, instead of through the intermediary breakdown steps that sucrose goes through. The liver's response to the fructose is to generate new fat cells, which it then dumps into the bloodstream as triglycerides. Another study (Critser, 2004), coming to the same conclusion, has found that a diet high in fructose elevates triglyceride levels shortly after eating far more significantly than a diet high in sucrose, particularly in men. Muscles, bombarded by these fatty acids, will develop insulin resistance and will do so rather quickly. Overall, these studies, and others, have found that high fructose intake changes the way we metabolize fats, causing us to store fat and burn sugar.

Additionally, it is likely that people who drink calorically sweetened drinks like soda take in too many calories overall, and it's not hard to see why the pounds are adding up. Fructose is also the main sugar found in fruit juices, which, while natural, does not have the accompanying fruit fiber to slow its digestion. Add this to our HFCS consumption and one can see the important role fructose may play in increased energy intake and weight gain.

There are also many other sweeteners that are made from corn: maltose, maltodextrin, dextrose, glucose, and crystalline fructose. The list of corn-derived products also includes monosodium glutamate, mono- and di-glycerides, citric and lactic acids, cornstarch and other starches, and...
How America's Cornucopia Is Making Us Fat

vegetable oils, margarines and shortenings. Thousands of supermarket staples contain products made from corn, mostly in the form of starches. Corn, along with soy, is ubiquitous in the marketplace: though our processed foods have the semblance of diversity, corn and soy permeate them all. When not organically produced, both crops require large quantities of pesticides and herbicides to survive. If toxins do indeed contribute to weight gain, then these two crops that so dominate the food supply must be suspect.

But there's more. We feed a lot of corn (and soy)—much of it genetically modified—to cattle, both those we eat and those from which we get milk. While little is known about how this affects milk, studies have shown that the fat content of our meat differs radically from that of cattle fed entirely on pasture. Grass-fed beef is significantly lower in overall fat content, lower in saturated fat content, and higher in polyunsaturated fat content.

Cattle are not fed grain because it's a healthful part of their diet (grain is actually too high in protein and makes them ill) but because it makes them gain weight, and quickly. So once again we're consuming a highly refined corn product. The same holds true for commercial chickens, except that chickens don't become sick from this diet.

Corn and soy are now also being fed to our farm-raised fish and for the very same reason: it makes them grow big and fat very quickly. It also skews their fat ratios, completely negating the reason we've all started eating cold water fish in the first place—for their Omega-3 fatty acids.

Overall, it's a corny country we inhabit. Our "amber waves of grain," once known as the fat of the land, now contribute greatly to the land of the fat. Our large food manufacturers and meat producers, under the guise of producing appealing and diverse foods, are in reality merely processing and refining plants for corn and other energy-dense commodity foods. To change this would mean the undoing of governmental laws regulating food subsidies and the political favoring of large corporations.

On an individual level is where we all have some power. We must learn to be more conscious of where our foods come from so we can make wise choices for both physical and political reasons. By adopting a whole foods, predominantly organic diet, we never have to worry about overly refined commodity foods making us fat, or about the toxins so pervasive within them. We will be eating a far more diversified and healthful diet.

Edward Bauman, M.Ed., Ph.D. is the director of Bauman College: Holistic Nutrition and Culinary Arts, with 3 campuses in Northern California and an innovative distance learning program. Ed is committed to bringing the message of Eating for Health to a wider audience to reverse the tendencies toward mindless over-consumption of sickening foods. He can be reached at edb@baumancollege.org or visit the Bauman College website at www.baumancollege.org.
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