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Foods That Make You Fat

Analysis by Sally Fallon Morell | March 13, 2024

STORY AT-A-GLANCE

- MSG in food is linked to weight gain, challenging mainstream views that label it safe
- Diet sodas, linked to overeating and metabolic issues, may contribute to weight gain
- Industrial seed oils can lead to weight gain and metabolic dysfunction, whereas saturated fats like butter and lard support weight loss and metabolic health
- Full-fat dairy products have been linked to less weight gain and better health outcomes
- Low-salt food alternatives can disrupt normal body functions and contribute to weight gain

We know that excess carbs like sugar and white flour can make us gain weight, but there are other culprits lurking in the food supply.

MSG

Recently the Washington Post published a puff piece on monosodium glutamate (MSG), claiming that we have nothing to fear from the artificial flavoring that adds umami "spark" to many dishes. The author, Aaron Hutchinson, marginalizes headaches and allergic reactions as minor symptom in a few hypersensitive people. Says Hutchinson:

> *"In addition to soup and eggs, MSG can be added to salad dressings, bread, tomato sauce, meats, popcorn, 'an absolutely filthy martini,' you name it. MSG is*

a great way to add flavor to just about anything except sweets. It's particularly great with vegetables, too."

He makes no mention of the real problem with MSG: weight gain. If you search "msg-induced obesity" at PubMed, you will come up with almost one hundred citations. It's hard to get research animals to overeat and become obese — in order to study obesity — so scientists feed the rats, mice and hamsters MSG to make them eat more and put on weight.

Most of the citations are animal studies, not human trials, and the food industry has argued that the amount of MSG given to the animals is way more, as a function of body weight, than humans would ever eat. Or, they say, the association with weight gain and MSG is really an association of weight gain and processed foods, since MSG is in almost all processed foods.

What happens when we consume small amounts of MSG as a flavoring day after day? A 2008 study[1] published in the journal Obesity provides confirmation that MSG indeed causes weight gain in humans, and not because of its inclusion in processed foods.

In this well-designed trial, researchers at the University of North Carolina at Chapel Hill studied 750 Chinese men and women, ages 40-59, living in three rural Chinese villages. Most of the study subjects prepared their meals at home without commercial processed foods and about 82% used MSG.

Those participants who used the highest amounts of MSG had nearly three times the incidence of overweight as those who did not use MSG, even when physical activity and caloric intake were accounted for.

MSG Is Not Metabolized in the Same Way as Glutamic Acid

What about the argument that the glutamic acid in MSG is the same as the essential amino acid glutamic acid that we get from protein foods? According to the Washington Post article, "The glutamate in MSG is chemically indistinguishable from glutamate

present in food proteins. Our bodies ultimately metabolize both sources of glutamate in the same way." The first sentence is true but the second sentence is false.

The glutamic acid in foods like meat is attached to various peptides and other compounds that release it when required and prevent it from overstimulating the nervous and endocrine systems; while the glutamic acid in MSG is "naked," highly reactive and unmitigated by its milieu.

Americans consumed about one million pounds of MSG in 1950; today that number is three-hundred million pounds. Almost all processed and fast food contains MSG[2] (usually not labeled), and the food industry certainly knows that the additive they use to make their food taste good is a major cause of the current obesity epidemic. The message to consumers is clear: to lose weight, it's important to avoid all processed food, and certainly not add it to the foods you prepare at home.

Diet Sodas

As I have never met a diet soda-drinker who is slim, the results of a review study by Susie Swithers, Purdue University professor of psychological sciences and a behavioral neuroscientist, do not surprise me. Swithers found that consumption of diet soft drinks increases the likelihood of overeating.

One large study found that people who drink artificially sweetened sodas are more likely to experience weight gain than those who drink non-diet sodas. Other studies[3] found that those who drink diet sodas have twice the risk of developing metabolic syndrome, often a precursor to cardiovascular disease, than those who abstained.

Use of diet sodas, sweetened with non-caloric sweeteners such as aspartame, sucralose and saccharin, has increased enormously over the last twenty-five years, as consumers try to steer clear of sugar and high fructose corn syrup. About 30% of American adults regularly consume these artificial sweeteners. What to drink if you need to watch your weight?

Try sour kombucha made with organic cane sugar — look for kombucha with less than 5 grams of sugar per serving. Or, make your own, letting it brew a long time (see my blog post "Kombucha Like Fine Champagne"[4]). Sparkling water with a squeeze of lemon and pinch of unrefined salt makes a refreshing and healthy soft drink. Herbal tea and bone broth are additional choices.

Industrial Seed Oils

When it comes to weight loss, not all fats and oils are the same. Many studies have shown that saturated animal fats are far less likely to cause weight gain than polyunsaturated vegetable oils.

For example, one study[5] found that mice fed excessive corn oil had increased caloric intake and obesity. In another,[6] rats were divided into different groups receiving diets with identical proportions of calories from fat, protein, and carbohydrate but different types of fats.

The rats in the group receiving fat from safflower oil had a 12.3% increase in total body weight compared to the rats eating traditional fats. Weight gain was lower in the rats fed a higher proportion of saturated fats. For the average human, a 12.3% increase in total body weight translates into 23 pounds.

Vegetable oils that have been heated are even more obesogenic. In a randomized trial on rabbits,[7] three groups of rabbits were given access to identical foods, with only one difference: the first group of rabbits was fed unheated vegetable oil, the second group was fed vegetable oil that had been heated once, and the third group was fed vegetable oil that had been repeatedly heated multiple times — as happens in deep friers. Everything else about their diets was kept the same.

The surprising outcome was that compared to the group of rabbits eating unheated oil, the group eating single heated oil gained 6% more weight, and the group eating repeatedly heated oil gained 45% more weight — even though the rabbits eating heated oil actually consumed a slightly lower level of calories. It seems that foods fried in

vegetable oil are dieters' worst enemy. Why would polyunsaturated vegetable oils cause weight gain? As explained by Jeff Nobbs:[8]

> *"When we eat a diet high in polyunsaturated fatty acids, omega-6s and or linoleic acid, over time, this leads to mitochondrial dysfunction, primarily with our electron transport chain. And the ETC is a very important process that creates ATP or energy ... if these processes become dysfunctional, this is really bad, because what happens is we can't effectively or properly burn fat as fuel.*
>
> *Another thing that we start to see is reduced fatty acid beta oxidation which also means that we become less efficient at using fat as fuel and as a result we begin to prioritize carbohydrates as fuel ... we are consuming high amounts of vegetable oils, we become less efficient at using fat as energy, while also making our fat cells bigger and grow in size, which is exactly what we don't want and this could be a huge reason why we're gaining weight and why it's so difficult for us to lose weight!"*

Butter and Lard Are a Dieter's Friend

Dieters are often reluctant to embrace saturated animal fats, believing the propaganda that butter and lard will make you fat. But the science suggests otherwise. For example, a study[9] by Temple University School of Medicine provides welcome vindication for Atkins and other practitioners who insist that the best way to lose weight is to eat a lot of fat — animal fat.

The study took place in a clinical research center where every calorie eaten and spent was measured. After a week of typical eating, 10 obese patients with Type 2 diabetes followed a diet that limited carbohydrates to 20 grams per day but allowed unlimited protein and fat.

With carbs out of the diet, the patients spontaneously reduced their daily energy consumption by 1,000 calories per day. "When carbohydrates were restricted," said lead researcher Guenther Boden, MD, "the subjects spontaneously reduced their caloric

intake to a level appropriate for their height, did not compensate by eating more protein or fat, and lost weight. We concluded that excessive overeating had been fueled by carbohydrates."

In addition to calorie reduction and weight loss, subjects experienced markedly improved glucose levels and insulin sensitivity as well as lower triglycerides and cholesterol. The interesting thing about this study was that the subjects did not consciously try to restrict calories or lose weight, showing that restricting carbs and increasing fat in the diet works better than will power.

Full-Fat Dairy Linked to Weight Loss

In yet another defeat for the low fat, you-must-suffer-to-lose-weight school of thought, a Swedish study[10] has found that women who regularly consume at least one serving of full-fat dairy every day gained about 30% less weight than women who didn't.

The researchers, from the Karolinska Institute in Stockholm, looked at the intake of whole, sour, medium- and low-fat milk, as well as cheese and butter for almost twenty-thousand Swedish women aged 40-55 years old — the age when most women should and do gain weight ... but not too much.

The researchers reported that a regular and constant intake of whole milk, sour milk and cheese was significantly and inversely associated with weight gain (that is, those consuming whole-milk products did not gain much weight), compared to the other groups.

A constant intake of at least one daily serving of whole and sour milk was associated with 15% less weight gain, while cheese was associated with 30% less weight gain.

Two other studies have concluded that the consumption of whole fat dairy products is linked to reduced body fat. In one paper,[11] middle aged men who consumed high-fat milk, butter and cream were significantly less likely to become obese over a period of 12 years compared to men who never or rarely ate high-fat dairy.

The second study[12] is a meta-analysis of sixteen observational studies aimed at exploring the hypothesis that high-fat dairy foods contribute to obesity and heart disease risk. The researchers concluded that the evidence does not support this hypothesis; in fact, the reviewers found that in most of the studies, high-fat dairy consumption was associated with a lower risk of obesity.

The tragic practice of feeding reduced-fat milk to growing children, even prohibiting full-fat milk in schools and day care centers, in order to prevent weight gain, has no basis in science, as shown in a study[13] from Canada.

Researchers followed over 2,700 children, ages 1 to 6. Children who got full-fat milk had a lower body mass index and also higher vitamin D status. Children who drank full-fat milk were less likely to end up hungry, and less likely to snack on high-calorie foods, suggested the researchers.

In U.S. schools, children have a choice of low-fat milk, which they hate, or chocolate milk made with skim milk powder and high fructose corn syrup — often containing almost as much sweetener as sodas! The message is clear: for weight loss, avoid all industrial seed oils and enjoy animal fats and full-fat dairy foods.

Low-Salt Foods

When you eat too much salt, you become thirsty and drink water so as to dilute the amount of sodium chloride in the bloodstream, keeping sodium at the proper levels and excreting the excess. This is the conventional view of the "salt equation."

But experiments with mice found that mice burned more calories when they got more salt, eating 25% more just to maintain their weight. It seems that salt stimulates the production of more glucocorticoid hormones, which break down fat and muscle in the body.

In addition, salt-detecting neurons in the mouth control the urge to drink, and more salt results in a lower sensation of thirst. "The work suggests that we really do not understand the effect of sodium chloride on the body," said a study author.[14] "These

effects may be far more complex and far-reaching than the relatively simple laws that dictate movement of fluid, based on pressures and particles."

These results suggest that increasing salt may be a useful strategy for weight loss, as long as the diet contains sufficient levels of fat to mitigate increased feelings of hunger. The results also show the folly of the recent FDA push[15] to get the food industry to lower salt content in processed foods.

The food industry isn't complaining because they now have an additive they can use to make low-salt foods taste saltier: it's called Senomyx. Senomyx and other flavor enhancers stimulate your taste buds without them actually tasting anything. Much like MSG, these flavor enhancers operate on the neurological level to produce these reactions.

Since they are not actually ingredients but rather "enhancers," FDA does not require manufacturers to list them in the ingredients panel except as "artificial flavors." Because very small amounts of the additives are used, Senomyx's chemicals have not undergone the FDA's usual safety approval process for food additives.

In fact, they are not flavors at all. They are chemicals that contain no flavor of their own, rather they activate or block taste receptors in your mouth. The chemicals can mimic or enhance the taste not only of salt, but also sugar and monosodium glutamate (MSG).

Already the industry is adding Senomyx to a huge number of products, from soups to coffee (for a salty taste) and from sodas to candies (for a sweet taste).[16] So what could possibly go wrong?

Here's one thing: your body has an absolute requirement for salt and if we don't get the salt we need in our food, we just might eat and eat and eat salty-tasting foods in order to get the salt we need. Sounds like a great recipe for weight gain.

Can Water Make You Fat?

Those who write about the worldwide obesity epidemic have focused almost exclusively on life style issues such as consumption of high-calorie junk food and decreases in exercise. These remain plausible interpretations and are certainly contributing factors.

But new research opens up an entirely new theory — the disruption of weight regulation by hormone-disrupting contaminants. Japanese researchers[17] have found that exposure to bisphenol A (BPA) in combination with insulin increases the number of fat cells in mouse cell tissue culture, and also causes the enlargement of fat cells.

Human exposure is widespread through consumption of water in plastic bottles. (Other sources are dental sealants, used on children's teeth to "prevent cavities," and foods packaged in plastic.)

Dr. Barry Durrant-Peatfield of the UK has also proposed the theory that even drinking water from the tap can make you fat — fluoridated water, that is. "There is no doubt that fluoride is enzyme disruptive and one thing it affects is thyroid hormones. As a result of this disruption, people can finish up with partial under-activity of the thyroid gland."

According to Dr. Durrant-Peatfield, fluorine can replace iodine in the body, leading to thyroid problems and weight gain. He believes that children may be particularly susceptible to obesity if their mothers drank fluoridated water while pregnant.

He notes that UK obesity levels are highest in the West Midlands, the only area in England now fluoridated (Sunday Mercury, July 11, 2004). Yes, lots of compounds that make us gain weight are lurking in the food supply! If you want to lose weight, the very first assignment is to avoid them like the plague.

About the Author

Sally Fallon Morell is author of the best-selling cookbook Nourishing Traditions and many other books on diet and health. She is the founding president of the Weston A. Price Foundation (**westonaprice.org**) and a founder of A Campaign for Real Milk (**realmilk.com**). Visit her blog at **nourishingtraditions.com**.

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