

Appendix 4: How the Obesity Epidemic Got Started, and How We Can End It

Story at-a-glance

- “Fed Up,” narrated by Katie Couric, investigates the misinformation touted by the processed food industry, and how these fallacies have created (and continue to drive) the global obesity epidemic.
- One widely held belief is that all you have to do to normalize your weight is to eat less and exercise more. But just as the fitness craze exploded across the U.S., so did our waists. Between 1980 and 2000, memberships to fitness clubs doubled, and so did the national obesity rate
- The conventional low-fat, high-carb recommendation created the obesity epidemic. If you struggle with excess weight, stop counting calories, eat real food, increase your dietary fat intake and reduce your net carbs.

[Increasing your dietary fat? Is he nuts? Not really. Still, the focus needs to be on “real” foods. Much of the Standard American Diet is, sadly, not “real” food. It’s food-like but it carries a lot of chemical crap in the mixture. The bottom line is that the closer you get to a vegan diet of fruits, vegetables, nuts, sprouts and seeds that the better off you’ll be. Continuing Dr. Mercola’s discussion.]



“Fed Up,” narrated by Katie Couric, investigates the misinformation touted by the processed food industry, and how these fallacies have created (and continue to drive) the global obesity epidemic. This includes the lies you’ve been told about calories and diet versus exercise, government subsidies that support the junk food industry, and government policies that prop up the processed food industry even though they’re harming public health.

As noted by Couric, obesity has been a topic of discussion for the last 30 years. Entire industries have grown around it. All sorts of diets and exercise programs have promised lasting results. Yet the problem has continued to balloon, seemingly out of control. In 2014, the obesity rate among American adults hit 38%—a 3% increase from 2012.¹ Researchers looking at obesity rates around the world note that for the first time in history, obese people now outnumber those who are underweight.

One in 5 American deaths is now associated with obesity, and the younger you are, the greater obesity’s influence on your mortality. Considering one-third of American children between the ages of 2 and 19 are now overweight or obese, chronic disease and mortality rates will likely climb dramatically in coming decades.

The Energy Balance Myth

While the struggles of obesity were initially featured mostly in magazines and on talk shows, today, obesity has become a genre of entertainment, with reality TV programs de-

tailoring the lives and weight loss struggles of the obese. "We get new solutions every day," Couric says. "Everything in the grocery store is made with less fat and fewer calories, yet our kids keep getting bigger and sicker."

Could there be a link between the ever-growing obesity problem and the government's dietary guidelines? The film asks. "That got me thinking. What if the solutions weren't really solutions at all?" Couric says. "What if they were actually making things worse? What if our approach toward this epidemic has been dead wrong?"

One of the most widely held beliefs is that all you have to do to normalize your weight is to eat less and exercise more. This energy balance, "calories in, calories out" theory, originated with a simple observation involving mice, in 1953. Up until that point, exercise was strongly discouraged. Doctors warned it would cause heart attacks and lower sex drive.

In his laboratory, the late nutritionist Jean Mayer noticed that fat mice ate the same amount of food as skinny mice. The difference was their activity level. The fat mice were not nearly as active as the thin ones. The logical conclusion Mayer drew from this observation was that lack of physical activity must be the cause of weight gain. "His finding sparked a fitness revolution," Couric notes.

Ironically, just as the fitness craze exploded across the U.S., so did our waistlines! Between 1980 and 2000, memberships to fitness clubs doubled. In that same span of time, the national obesity rate also doubled. One decade later, 2 in 3 Americans were either overweight or obese. The same parallel trend is seen in other parts of the world.

So, how is it that the more people exercise, the worse the obesity rates get? In recent years, we've also seen a trend of obese toddlers. Seeing how a 6-month-old child cannot exercise (or diet, for that matter), how does one explain this phenomenon? Clearly, something doesn't add up.

Why Calorie Counting Doesn't Work

As noted by several obesity experts in this film, calorie counting does not work. The entire premise that losing weight is a matter of expending more calories than you put in is flawed in more than one way. First of all, the average person simply cannot exercise long and hard enough to burn up the calories they eat in a given day.

To offset a single 20-ounce soda, a child would have to bike ride for an hour and 15 minutes. To burn off a single chocolate chip cookie, you're looking at a 20-minute jog; a medium French fry would require just over an hour and 10 minutes of swimming.

There's simply not enough time in the day to burn off the calories consumed, let alone burn more than you're putting in. Modern research has also shown that all calories are not made equal. Some calories are burned far easier than others, and some will stubbornly lodge themselves on your frame in the form of fat. A crucial point that must be understood is that the metabolic effects of nutrients (fats, carbs and proteins) differ.

As an example, when you eat 160 calories' worth of almonds, the fiber in the nuts slows down absorption, resulting in a slower blood sugar rise and lower insulin release. Contrast that to a glass of soda: Because it has no fiber and contains processed fructose, your liver gets a large, sudden hit of sugar, causing a dramatic rise in blood sugar and insulin, which is a very potent fat regulator.

Moreover, because fructose is metabolized entirely by your liver, nearly all of those calories are turned directly into body fat, opposed to being used up as fuel for energy. [This is an extremely important point. Beverages such as soft drinks and beer, and foods high in processed sugar are very quickly converted directly into triglycerides.] After fructose, other sugars and grains are among the most excessively consumed foods that promote weight gain and chronic disease.

Yet the food industry, and especially the soda industry, keeps telling us that "all calories

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count, no matter where they come from.” This simply isn’t true, and the science is quite clear on this.

Yet another part of the problem is a fundamental error in the understanding of the law of thermodynamics. Energy is actually used up in making nutrients available in your body. In addition to that, your body also self-regulates the amount of activity you engage in, based on the available energy. Zoe Harcombe’s book, “The Obesity Epidemic,” explains this beautifully.

Food Industry Lies

Obesity is rooted in inappropriate food choices, not [a] lack of exercise. Unfortunately, the food industry has been permitted to confuse the issue by shifting the focus and discussion to exercise, completely omitting the importance of your specific food choices.

As you can clearly see in this film [that Dr. Mercola is referring to], every single family struggling with obesity is eating precisely what they shouldn’t—lots of cereal, for example, and low-fat or “diet” foods—thinking they’re doing the right thing. Despite following conventional advice, they just keep getting fatter and, no wonder, because conventional advice is in fact dead wrong.

Whole grains are supposed to help you lose weight. They don’t. Whole grains are just as fattening as other grains. Grains and starches are rapidly converted into glucose (sugar) in your digestive tract, and are among the foods you should eat as little of as possible, if you’re struggling with excess weight.

Low-fat foods are also supposed to help you lose weight.

They don’t. Low-fat foods are typically very high in sugar, and sugar is what makes you pack on excess weight, and prevents your body from burning body fat. Additionally, nearly all grains, especially whole grains, are high in lectins, which can have very serious adverse metabolic consequences by increasing inflammation and autoimmune conditions.

[It’s quite involved but essentially] lectins’ stickiness allows them to bind with the lining, particularly the villi, of the small intestine. The result? Intestinal damage (with impaired cellular repair potential), cellular death as well as compromised intestinal villi, which means reduced absorption of other nutrients, including minerals and protein. Add to this altered gut flora, which can allow certain harmful bacterial strains like E. Coli to run rampant. Furthermore, because the body is now responding full-time to the needs of the injured gut lining, proteins and other resources are redirected from other basic growth and repair processes. Furthermore, lectins have been associated with leptin resistance, a pre-diabetic condition linked to obesity.^{1}

The ramifications of this high-sugar, low-fat trend are dire. We are now seeing heart attacks and strokes in children as young as 8. We’re seeing 30-year-olds on kidney dialysis after suffering kidney failure. According to the film, the number of cases of type 2 diabetes among American adolescents in 1980 was zero. Indeed, type 2 diabetes was referred to as adult-onset diabetes and was historically unheard of in children and young adults. In 2010, nearly 57,640 American adolescents were diagnosed with type 2 diabetes.

Why Low-Fat ‘Diet’ Foods Make You Gain Weight

What happened in the 1980s, food-wise to precipitate this rapid increase in type 2 diabetes and obesity? As detailed in the film, the 1977 McGovern Report, which warned [that] the U.S. was facing an avalanche of obesity and ill health thanks to excessive consumption of animal fats, cholesterol and sugar, was firmly rejected by food industry lobbyists. And, while the first-ever dietary goals for the U.S. were published, the recommendation to reduce consumption of specific foods were omitted.

Instead, Americans were encouraged to buy leaner meats and foods lower in saturated fats and cholesterol. This spawned a whole new industry of low-fat, “diet” foods. Alas, as

fat was removed, sugar was added. Between 1977 and 2000, Americans doubled their daily sugar intake, and sugar—not saturated fat and cholesterol—is the primary culprit causing weight gain. Eating fat does not make you fat. Eating sugar does.

According to Dr. Robert Lustig, who is featured in the film, sugar is a chronic, dose-dependent liver toxin. Today, of the 600,000 food items sold in grocery stores, 80% of them contain added sugar. So, far from being relegated to sweet desserts, most everything you eat is loaded with sugar if you're eating processed foods. A jar of spaghetti sauce, for example, contains 5.5 teaspoons more sugar than a snack-sized pack of M and Ms.

Most all commercial yogurts are also notoriously high in sugar, with some containing upward of 35 grams of sugar in a single-serving—10 grams over the daily recommended limit for good health.

Sugar also hides under several dozen different names. Some food manufacturers will hide their sugar content even more by listing several different kinds of sugar separately on the list of ingredients. Since ingredients are listed in order of its ratio to the total amount of a serving, this little trick makes it look as though there's far less sugar in it. Were they to lump all the different sugars together, it might have had to be listed as the No. 1 ingredient.

Many also make the mistake of switching to artificially sweetened "diet" foods and drinks to avoid unnecessary calories. Alas, research has conclusively shown artificial sweeteners add to the obesity problem, and perhaps more so than regular sugar.

[As discussed in chapter 35 artificial sweeteners such as aspartame have devastating side effects. Promoting weight gain is but one of many of its issues.]

Food Addiction Is Real

The film also addresses the very real issue of food addiction, and sugar addiction in particular. Studies have demonstrated that sugar is eight times more addictive than cocaine. The biological mechanisms behind food addiction were clearly spelled out in a previous interview with Dr. Pamela Peeke, author of "The Hunger Fix."

When babies are fed high-sugar foods from day one, they rapidly grow addicted to sugar. Few parents would consider doing this on purpose. They simply fail to realize that many infant formulas are absolutely loaded with sugar. They're basically feeding their infant the equivalent of soda, several times a day.

Many also give their children [processed] fruit juice rather than water, thinking it's a healthy drink loaded with vitamins, again failing to realize a glass of fruit juice has as much sugar as a glass of soda. And, as noted in the film, the notion that all you need is the willpower to resist simply doesn't work when you're addicted.

The other variable that is rarely if ever addressed in these discussions is the timing of your food. You can eat the same amount of calories but if you eat them in a time-restricted window, as one does in intermittent fasting, then you can help your body to burn fat for fuel and not suffer the metabolic consequences. I have recently increased my daily fast up to 18 to 20 hours and exercise fasting, as I believe that provides me with superior metabolic results.

I've found intermittent fasting to be a highly effective tool that helps your body to shift from burning sugar to burning fat as its primary fuel, and with that change, food cravings tend to simply vanish. While intermittent fasting has not been tested specifically for people meeting the criteria of food addiction, if you're struggling with sugar cravings, I believe it would be worthwhile to give it a try.

Interestingly, I just interviewed Dr. Dale Bredesen for his new book "The End of Alzheimer's," coming out August 22, and he shared that the dreaded ApoE 4 allele that is highly predictive of Alzheimer's is actually designed to give us metabolic flexibility to use fat for

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fuel and be able to go for long periods without food. So, if you have this gene, it means you MUST intermittently fast unless you want to lose your brain function as you age.

Sugar Industry Recommendations Are a Recipe for Heart Disease and Early Death

In 2002, the World Health Organization (WHO) published a technical report on diet and nutrition for the prevention of chronic disease, in which they specifically recommend limiting daily sugar consumption to a maximum of 10% of calories to prevent obesity and metabolic dysfunction. Not surprisingly, the report was strongly rejected by the sugar industry, which recommends getting 25% of your daily calories from sugar.

Two U.S. Senators, Larry Craig (R-Idaho) and John Breaux (D-La.), asked then Secretary of Health and Human Services, Tommy Thompson, to stop the publication of the report as it would devastate the sugar industry. Thompson complied. He flew to Geneva and told WHO that if this report was published, the U.S. would withhold \$406 million of funding. The extortion had the desired effect. Moving forward, the sugar recommendation was not included in WHO dietary reports.

What happens when you follow the sugar industry's recommendation to get 25% of your daily calories from sugar? A 2014 study gave us the answer. It found that 10% of Americans consume 25% or more of their daily calories in the form of added sugars, as recommended by the sugar industry.

Those who got 21% or more of their daily calories from sugar were TWICE as likely to die from heart disease compared to those who got 7% or less of their daily calories from added sugar. The risk was nearly TRIPLED among those who consumed 25% or more of their calories from sugar.

How [the Former] First Lady's Organic Garden Became a Junk Food Campaign

When Barack Obama became president, first lady Michelle Obama took a strong stance against the food industry, urging them to reformulate foods to reduce sugar and rethink their advertising toward children. The food industry quickly took control of the situation by offering to partner with her, thereby steering her entire wellness program away from concrete change toward a focus on physical exercise and teaching kids about the phony theory known as energy balance.

Her "Let's Move" campaign was a failure, in terms of making a dent in childhood obesity and related disease. In fact, research shows childhood obesity continued to worsen after the launch of this nationwide program in 2010, with severe obesity rising the most. This was entirely predictable, since the campaign didn't focus on the source of the problem (toxic, high-sugar, processed foods) and recommended solutions that don't work (just exercise more).

As noted in the film, the food industry has become expert at switching the conversation from talk about real food and cooking, to talk about reengineered processed foods that are lower in calories, and the need for more exercise—both of which obscure the real solution and perpetuate the problem.

Even the name of the campaign, "Let's Move," was co-opted and twisted to serve the processed food industry. Originally, the first lady said the name represented a call to action—we need to get moving on this issue of children's diets—but by the end, it became all about physical activity, and the issue of getting back to real food was lost altogether.

How to Reverse the Obesity Epidemic

The conventional low-fat, high-carb recommendation has without a doubt contributed to the obesity epidemic. If you or your child is struggling with excess weight, some key facts

you need to realize are:

- 1 Calorie counting does not work because the source of the calories is far more important than the amount, as they are not all metabolized equally. Calories from carbohydrates (think sugars and grains) raise your insulin level and turn to body fat, whereas dietary fats and protein have very little impact on your insulin, and dietary fats are a far more efficient fuel for your body than sugar
- 2 You cannot exercise your way out of a poor diet
- 3 A poor diet is one that is high in processed foods, added sugars (especially processed fructose), harmful fats (vegetable oils and trans fats, not saturated fats or cholesterol found in whole foods) and artificial ingredients

I am firmly convinced we can turn the obesity epidemic around, but it requires a new base of knowledge. First, **we need to return to a diet of real, minimally processed foods**. Second, **we need to educate people about the importance of eating healthy fats and avoid consistently eating large amounts of net carbs (carbohydrates minus the fiber)**. [Emphasis added.] Once we are burning fat for fuel we need to cycle healthy carbs back in to feed our gut microbes.

As a general rule, if the fat is found in a whole food, it's going to be good for you. This includes the fat found in meat, eggs, raw dairy, avocados, nuts, coconuts and more. [As I've mentioned in several places in my book, meat, eggs and dairy have their own issues. At best, they should be minimally consumed. Of raw dairy, it's unlikely that you'll be able to find it.] It's the fats found in processed foods you need to be leery of, along with vegetable oils for cooking, margarines and vegetable oil spreads.

Last but not least, it would be wise to limit your consumption of protein to just what your body needs, as excess protein also has health implications. [As covered in chapter 57, we need far less protein than most sources say. The meat, egg and dairy industries have good reason to push the need for consuming substantial amounts of protein. It's called a profit incentive. However, this opinion is highly biased and quite wrong. Moreover there are serious potential consequences to excessive protein consumption including the increased risk of osteoporosis and kidney stones.] (Not so much in terms of obesity per se, but certainly in terms of heart disease and cancer.) Most people eat far more protein than their body requires, and most of it is low-quality CAFO [Concentrated Animal Feeding Operation] beef, the nutritional composition of which is compromised by the unnatural way these animals are raised and fed.

In my view, the single most important driver of obesity is consuming over 50 grams of net carbs a day and excessive protein. Once you get net carbs below 50 grams, moderate your protein intake to 0.5 gram per pound of lean body weight, along with higher amounts of high quality fat, your body will start to regain its ability to burn fat as its primary fuel. Once you become an efficient fat burner, it will become virtually impossible to be overweight.

Regaining Your Health, One Meal at a Time

Many end up throwing their hands up in disgust when trying to clean up their diet, complaining that once they start to read labels, they realize there's "nothing safe to eat." If this sounds like you, you're probably still looking at processed foods, trying to figure out which ones are "good" for you, and that's the problem. If you're serious about losing weight [and being healthy in general], you really need to avoid all processed foods [period] and cook from scratch using whole ingredients.

The list of ingredients to avoid is just about endless, starting with all sorts of added sugars, and keeping track of it can be really discouraging. The answer is to create a list of healthy options instead, which is far shorter and easier to remember. The following short list of super-simple, easy-to-remember guidelines will not only improve your nutrition, it will also help you avoid countless chemical exposures that can affect your weight:

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- Eat REAL FOOD. Buy whole, ideally organic, foods and cook from scratch. First of all, this will automatically reduce your added sugar consumption, which is the root cause of insulin resistance and weight gain.

If you buy organic produce, you'll also cut your exposure to pesticides and genetically engineered ingredients, and in ditching processed foods, you'll automatically avoid artificial sweeteners and harmful processed fats.

- [If you really want to eat meat] opt for AGA [American Grassfed Association] certified grass fed meats to avoid genetically engineered ingredients, pesticides, hormones, antibiotics and other growth promoting drugs
- Opt for glass packaging and storage containers to avoid endocrine disrupting chemicals [from plastic]
- Reduce net [simple] carbs to under 50 grams a day and restrict protein to 0.5 gram-pound of lean body mass. The remaining calories come from high-quality fat sources like avocados, butter, coconut oil, macadamia and pecans

Once you've cleaned up your diet, if you're still struggling you may want to seriously reconsider the timing of your meals. Intermittently fasting [covered in chapter 14] can be very effective for helping your body shift from sugar- to fat-burning mode. Also consider increasing your daily physical activity.

Ideally, aim for 7,000 to 10,000 steps a day or even double that if you have the time. Later you can add on a more regimented workout routine, which will really help maximize all the other healthy lifestyle changes you've implemented. But for general health and longevity, staying active throughout each day and avoiding sitting takes precedence.^{2}