

TRANSFATS

First, I am going to ask you a favor. I want all of you to show this to your parents. This is something they need to see. This month we are going to cover something you may have heard about from your parents, school, or on television. This article is going to be a bit more technical, but hang in there with me. Knowledge is power, and we are going to discuss something vital for your long term health. I want you to at least have a basic understanding of TRANSFATS. What's the big deal about them, and why should you avoid them? At the end of the article, I am going to take you with me to the operating room to show you how a poor diet can lead to blocked arteries and life saving surgery. Now, let's cover the basics.

Trans-fats are a type of unsaturated fat. An unsaturated fat is a fat where there is one or more double bond in the fatty acid chain. A fat is monounsaturated if it contains one double bond, and polyunsaturated if it contains more than one double bond. These fat molecules contain hydrogen. In the TRANS conformation, the hydrogen is on the opposite side of the double bond. Cis carbon, and H is hydrogen.



The reason why chemists made trans fat is because foods made with trans fat are less likely to spoil early and are more solid at room temperature. The process was termed partial hydrogenation, and this is why I showed you the conformation, above. At first, this was thought to be a good thing. It saved money and increased the time a product could be eaten. Only now are we beginning to realize how dangerous it is to eat foods that contain trans-fat.

I know all of you are young, but you must realize that what you put in your body at a young age can come back to hurt you even years later. Concerning trans-fats, the greatest dangers are heart disease, stroke, obesity, diabetes, and even cancer.

The National Academy of Sciences (NAS) is an organization that advises our government on nutritional science. They state two very important issues: there is no level of trans fat consumption that is safe. Also, trans-fats are not essential, which means the body has no use for them.

You may not be able to eliminate trans-fat totally from your diet, because they naturally occur in some food items (milk and body fat of cows and sheep). However, READ THE LABELS of the products at the grocery store! Do not eat products where you know they contain trans-fats. The US Government now requires food companies to list the amount of trans-fat in their products. When you see a product containing partially hydrogenated oils or trans-fats, do not buy them, as they mean the same thing. You should not eat foods with trans-fat, because they damage your body. This is why our Pro-Bites snacks do not contain trans-fat. Our goal is to help you build a lean, strong body.

Trans-fat may cause arterial damage. Arteries carry oxygenated blood to the organs of our body. In essence, arteries are muscular tubes consisting of multiple layers. Atherosclerosis or hardening of the arteries occurs due to multiple reasons, one of them being a poor, unhealthy diet. Trans-fat may contribute to this condition, and this is one reason you must not eat products containing them. I am going to show you in the next paragraph how poor eating can damage your arteries and cause many serious problems. On occasion, I will share my personal operating room (O.R.) cases with you in order to demonstrate how we diagnose, treat, and take care of patients who need surgery to get their bodies back to normal. My goal is to keep you out of the operating room, because surgery is a great option when needed, but it is a last resort. Please remember this: Many people live their lives thinking they can do whatever they want and never suffer the consequences of poor health habits. This is dangerous and not true. Eat healthy; stay healthy.

Let's go to the OR

Mr. A, was a 68 year old male. He was in his usual state of good health until one day he noticed he could not see well out of his right eye. It looked like a shade was pulled down over his eye. He also noticed some numbness in his left hand. We suspected he was experiencing something we call TIA. This stands for transient ischemic attack. It is a big term, and it means he has a blockage in his carotid artery. This is the main artery in the neck which supplies blood to the brain. You can feel your carotid pulse in your neck, and that's what you see people feel when someone is seriously hurt. They want to make sure the person is alive and getting blood to the brain. His brain was not getting enough blood and oxygen. The way his body showed us something was wrong by way of his eyesight and his numbness. We did an ultrasound of his artery, and sure enough, he had a big blockage present. This was caused by a poor diet in part that consisted of a large amount of fat consumption over the years. It took years to get here, so again, what you do to your body in the long term makes a difference.

He was taken to the operating room. We made an incision over the artery and dissected down to the artery itself. Normally, the artery is very soft. His was literally hard as a rock from the cholesterol and fat deposits in the arterial wall. This can lead to stroke, where the brain is permanently damaged and leaves people unable to speak or even paralyzed.

We clamped the artery and cut into it. It was difficult because of the disease. We peeled the blockage away from the arterial wall and removed the plaque. We then sewed the artery back together with sutures as thin as your hair. We had to do this surgery with magnifying glasses, because we don't want to leave any disease behind, because it can cause a stroke, too.

He did great from the operation, and his eyesight and hand were completely normal. He had a full recovery.

Remember: **SHOW THIS TO YOUR PARENTS, AND PLEASE READ THE LABELS ON THE FOOD YOU BUY.**
AVOID TRANS-FATS!