

Preventing and Reversing Heart Disease

Are there aspects of your health you would like to change? Perhaps you might like to lose a few pounds, bring your cholesterol down, or get away from medicines.

I am here today to talk about some surprising ways to keep a healthy heart—not through prescriptions or bypass surgery, but through simple changes to the menu.

If all the parts of your circulatory system—the veins, arteries and capillaries—were placed end to end, they would stretch for more than 60,000 miles. That's more than two times around the earth! But one tiny blockage could bring all 60,000 miles to a halt. Doctors use many medicines and surgical procedures to keep the system running.

But back in 1990, a major shift began in medical practice. That was the year that a young doctor in California published a study that set out to test whether heart disease could not simply be *prevented*, but might actually be *reversed*. And he wanted to see if it could be done, not with surgery or drugs, but with diet and lifestyle changes alone.¹ This notion was inconceivable to some. After all, heart disease was a one-way street unless it was treated with cholesterol-lowering drugs, heart pills, and when needed, open-heart surgery.

Dr. Dean Ornish, a Harvard-trained physician, studied 47 patients in the San Francisco Bay Area, all of whom had significant heart disease. That is, the coronary arteries that brought blood and oxygen to their hearts were starting to narrow, pinching off blood flow and threatening the viability of the heart. Some had already had heart attacks. He assigned half of the patients to a control group that received the standard care that doctors usually prescribe, meaning a diet centered on “lean” meat, poultry, and fish, along with various medications and the usual advice not to smoke.

The remaining patients were assigned to a very different program. They were asked to follow four steps:

- A low-fat, vegetarian diet
- Brisk walking for a half-hour per day or an hour three times per week
- No smoking
- Stress management exercises

He used a vegetarian diet, because cholesterol and saturated fat are found mainly in animal products. So the prescribed diet excluded red meat, poultry, and fish, virtually eliminating cholesterol and animal fat. It reduced all sources of fat, including vegetable oils. But Dr. Ornish used no drugs at all—not even cholesterol-lowering drugs. The program consisted only of simple diet and lifestyle changes.

One year later, all patients had an angiogram—a special x-ray that reveals the blockages in the coronary arteries, and the results were compared to the same sort of test done at the beginning of the study. The results made medical history. The control-group patients, who had been following the more traditional medical routine, had not generally improved. In fact, the blockages in their coronary arteries were worse, on average, than at the beginning of the study. They still had chest pain and still needed medications. That was not news. Despite typical heart treatments, heart disease usually worsens as time goes on.

For the patients in the experimental group, however, the story was very different. Chest pain began to disappear within weeks. Their cholesterol levels dropped dramatically. And their coronary arteries,

which had been gradually closing off, year after year, were actually starting to reopen. In fact, the effect was so great that angiograms showed clear evidence of reopening in 80% of patients in the first year.

These results were published in *The Lancet* in 1990 and gave doctors a new tool for reversing heart disease. The program cost much less than surgery, was surprisingly easy to follow, and could help keep patients healthy over the long run. The only “side effects” were good ones: the average patient lost 22 pounds in the first year!

A Cleveland Clinic surgeon, named Caldwell Esselstyn, used the same type of diet for severely ill heart patients. Some of the patients had been told they had less than a year to live. But of the 17 patients who stuck to the program, there was not a single cardiac event over the next 12 years! They were alive and well—and had reversed their disease.

Think of what this means.

Three-thousand Americans have heart attacks every day,² 40 percent of which are fatal. Those who survive often go on to have another heart attack later on.

Every day, nearly 2,600 Americans die of some type of cardiovascular disease, including heart attacks, strokes, and kidney disease caused by blockages in the arteries to the kidney. This means one death every 34 seconds.³

But this need not happen. In fact, a quick survey of cultures around the world shows that heart disease is not inevitable. It can be prevented and, as we have learned, even reversed.

But first, what is heart disease?

Common heart disease is the growth of small raised areas – little bumps, if you will--on the inside of arteries. These bumps are called plaques and are composed of cholesterol, fat, and cells overgrowing from the artery’s muscle layer. These plaques start forming in young adulthood—sometimes even in childhood. It takes major changes to make them retreat. But it can indeed be done.

By now you might be asking, “Is this happening to me?” Well, let me walk you through how to size up your risk of a heart attack.

Here are the major risk factors:

- **High cholesterol levels.** Do you have a total cholesterol level above 200? If so, you are at risk. But, as we’ll see in a minute, we will set an even stricter cholesterol goal—around 150. We’ll talk more about these numbers in a bit.
- **High blood pressure.** Ideally, your blood pressure should be less than 120 over 80.
- **Excess weight.** Sixty-five percent of the American adult population is overweight or obese. Extra weight increases the risk of heart disease, as well as high blood pressure, high cholesterol, and type 2 diabetes.
- **Diabetes.** Both type 1 and type 2 diabetes heighten your risk.
- **Smoking.** Do you smoke? Smoking wreaks havoc on your blood vessels and heart, making heart disease that much more probable.
- **Sedentary lifestyle.** The American Heart Association classifies sedentary lifestyle as a major risk factor.
- **Family history of heart disease.** If heart disease runs in your family, it could mean that you share genes that increase the risk for heart problems. Or, it could also mean that you share *recipes* that increase your risks, too, if you catch my meaning.

There are other factors that are not necessarily as decisive as the ones I've just mentioned, but can be contributors as well:

- Chronic stress, and a so-called “type A” personality—that is, a person who is chronically impatient and bossy.
- Age: Men 45 years and older and women 55 years and older are at higher risk. However, the risk may have nothing to do with age, but with a longer time following a bad diet, smoking, or other unhealthy habits.
- Gender: Men are more likely to have heart disease than women early in life. However, women catch up after menopause. Cardiovascular disease is the leading cause of death for *both* men and women in the United States.

If you have more than one of these risk factors, this is the perfect time to consider making some changes. And that's why I'm here today – to show you how.

Okay, I know my risks. What do I do? How do I select foods that bring my cholesterol down and get my heart into shape?

Let's focus on cholesterol for a moment.

In Framingham, Massachusetts, the Framingham Heart Study has spent many decades tracking who gets heart attacks and who doesn't. Among its key findings is that the lower your cholesterol, the lower your risk of heart problems. While some authorities consider 200 mg/dl to be the boundary between desirable levels and high levels, the Framingham Study showed that a level of 190 is actually better than 200. And 180 is better than 190. And your risk drops as your cholesterol drops, until you reach a cholesterol of about 150. In decades of research, not a single person in the Framingham Heart Study with a cholesterol level below 150 had a heart attack. So, ideally, our cholesterol levels would remain under 150, based on this research, as opposed to the arbitrary goal of 200.

The 200 goal for cholesterol was set because it is a nice round number that is very close to the American average. The problem is, about one-third of the heart attacks in the U.S. occur in people with cholesterol levels under 200. We need to set our sights on lower levels.

To bring your cholesterol down, the first step is to know where cholesterol is and to avoid it.

Now, cholesterol is not the same as the fat you see around the edge and running all through a raw piece of meat. If you had cholesterol on the tip of your finger it would look and feel like wax. It is a raw material made in the cells of all animals, including the human animal. It is used to make cell membranes and hormones, among other functions.

But particles of cholesterol are microscopic. It lurks in the cell membranes of the muscle cells that make up a chicken breast or salmon filet, and is not the same as the fat you see in raw meat. Surprisingly, it mainly resides in the *lean* portion of meats.

Cholesterol in the foods you eat raises your cholesterol level, and animal products are the only significant source of cholesterol in the diet.

But here is the thing to remember:

When you eat animal products, you are ingesting that animal's cholesterol—in the cell membranes of animal cells you are eating—which is then added to the cholesterol that you naturally produce. It's easy to know where cholesterol is found: All animal products contain cholesterol.

It's in chicken, fish, and, of course, burgers. Dr. William Castelli, the former director of the Framingham Heart Study, used to say, "When you see the Golden Arches, you're on the road to the Pearly Gates."

Cholesterol is different from fat. But fat is an even bigger problem. Saturated fat stimulates your body to make more cholesterol.

Saturated fats are sometimes called "bad fats." Their name comes from the fact that the fat molecule is completely covered with hydrogen atoms—that is, saturated with them. If it is not covered with hydrogens, it is called unsaturated. Saturated fats stimulate your liver to make more cholesterol, while unsaturated fats do not.

Luckily, you don't have to be a chemist to identify saturated fats. They are easy to spot because they are solid at room temperature. Unsaturated fats are liquids. To picture the difference, imagine a frying pan full of hot bacon grease. Pour it into a jar, and what happens? As it gradually cools down, it turns into a waxy solid. Vegetable oils, on the other hand, are liquid at room temperature, which is a sign that they contain less saturated fat. Animal products contain substantial amounts of fat, especially saturated fat. In contrast, nearly all fruits, vegetables, whole grains and beans are very low in fat overall, with little saturated fat.

Okay, let's compare some foods. It may surprise you to know that chicken has essentially the same cholesterol content as beef. Remember, cholesterol is mainly in the *lean* portion, and is not the same as fat.

But chicken's fat content is nothing to brag about either. Here are the numbers:

[Table of fat content]

The leanest beef is about 29 percent of calories from fat. Skinless chicken breast is not much lower, at 23 percent. Fish vary. Some are lower and some, such as salmon, are higher. Some salmon varieties come in at around 50 percent fat. All fish products contain significant amounts of cholesterol, too. Shellfish are among the highest, beating out both beef and chicken.

A single egg packs in about 213 mg of cholesterol—the most concentrated cholesterol in any common food.

So the best way to lower your cholesterol is to avoid foods animal products. And now it becomes clear why Dr. Ornish's study used a vegetarian diet to reverse heart disease. Plants contain essentially no cholesterol and no animal fat.

Some doctors still recommend "chicken and fish" diets. But these diets are not very effective. They lower the amount of "bad cholesterol" in your blood by about 5 percent. A vegetarian diet typically has about four times more power, lowering your "bad cholesterol" by a good 20 percent.

We now have the most powerful tools yet for gaining control over the health of our hearts. So let me show you how to translate this into meals you'll love—and that will love you back.

You can start by making some simple changes in your current favorite meals.

Let's start with breakfast. Maybe you enjoy a bowl of cereal with milk in the morning. Well, try a high fiber cereal such as old-fashioned oatmeal with soy milk or rice milk; add some cinnamon and raisins for extra flavor. Not only are you getting the cholesterol and animal fat out, but you are boosting your fiber intake as well. If bacon or sausage is your thing, check out the vegetarian versions next time you're at the grocery store. They pack in plenty of protein while bringing no animal fat to the table. And

of course, there's always an abundance of fruit available which offers up lots of fiber, vitamins and antioxidants.

How about lunch or dinner? Lentil soup, a vegetable stew, a sandwich made with a good bread, sliced tomatoes, lettuce, and vegetarian deli slices, which nowadays you'll find at any grocery store. You may think that eating out for lunch would be a challenge. But finding vegetarian dishes can be effortless. Every Italian restaurant would gladly make you spaghetti with tomato sauce. If you're going fast-food, skip the burger and have the veggie burger instead. At a Mexican restaurant, skip the meat taco, and try the bean burrito.

Let me give you five quick tips for making the change easy:

First, explore. Take a minute or two and see if you can come up with a day's worth of meals that are totally vegetarian, and that you would actually like to eat. Experiment a little. Check out the vegetarian cookbooks at the library or bookstore, and try some new recipes.

Second, stock your shelves with healthy foods, and eliminate temptation. The best way to not be tempted by bacon for breakfast or a chocolate cheesecake at dinner is not to have it at home.

Third, try transitional foods. Veggie hot dogs, veggie burgers, and vegetarian deli slices may not be the pinnacle of fine cuisine, but they are very handy. And they will help you as you make the transition into vegetarian foods.

Fourth, do a three-week test. After you've chosen some meals you know you'll like, pick out a three-week period in which every meal is one of the meals you know you like and that are entirely vegetarian. You'll experience what it is like to be on a totally healthy diet. Your taste buds will surprise you, too—you'll soon come to prefer the lighter taste.

Fifth, don't be the lone ranger. If you engage your friends and family in a diet experiment, the process of change is that much more fun. And they will benefit as much as you will.

The most powerful way to stay healthy is to put the right fuel in your body. That means a menu filled with high-fiber, low-fat, vegetarian foods. With some simple mealtime ideas and a few tips on how to jump into a healthier way of eating, you will be equipped, not only to save your own life, but to spread a lifesaving message that will help your loved ones as well.

REFERENCES

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