

HEALTH & DISEASE FAQ

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- Can you explain the [missing link](#) between diet and heart disease, a finding you published in the journal *Metabolism*? What are the types of fat abnormalities associated with heart disease?
- Please explain the different [heart disease indicators](#) we hear about in the doctor's office, such as total cholesterol, HDL cholesterol, and triglycerides.
- Doctors have found that the [ratio of total to HDL cholesterol](#) indicates the risk for heart disease. Can you give me some good and bad numbers?
- [How are these values affected by the EFs?](#)
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- What kinds of [health and habit misconceptions](#) do many victims and potential victims of cardiovascular disease have?
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Can you explain the missing link between diet and heart disease, a finding you published in the journal *Metabolism*? What are the types of fat abnormalities associated with heart disease?

I studied the fatty acid profiles of healthy people and patients with heart disease in the world-famous Framingham Heart Study. I found that patients with heart disease had low levels of the EFs in their blood. This was a new, unexpected finding. The news was so important that Boston University Medical Center called a press conference and the results were reported in the *New York Times*, the *Boston Herald*, *Time* magazine, *CNN*, and many newspapers, magazines and TV stations across the country. My research is so advanced that it is still debated at scientific conferences. Doctors are just beginning to learn about it. I lectured to many doctors' groups and the government of Canada on the effect of my research on nutrition policy and nutrition recommendations.

Please explain the different heart disease indicators we hear about in the doctor's office, such as TC, HDLC, and TG.

To measure the risk of heart disease, doctors measure the amounts of various fats in the body. One is total cholesterol. The higher this number, the higher the risk for heart disease. An ideal value for total cholesterol is about 150. Values over 200 indicate a high risk for heart disease. Cholesterol is found in many parts of the blood. Some cholesterol is found in particles called HDL. Doctors refer to the cholesterol in the HDL particles as "good" cholesterol.

Doctors have found that the TC/HDLC ratio indicates the risk for heart disease. Can you give me some good and bad numbers?

If your total cholesterol is 200 and your HDL cholesterol is 80, your ratio is 2.5, a good ratio. However, if your total cholesterol is 250 and your HDL cholesterol is only 50, your ratio is 5, a bad ratio. When the

ratio is over 2.5, your risk of heart disease is high. When the ratio is over 5, you have a very high risk of premature death.

Another fat measure is total triglycerides. When the value is under 100, your risk of heart disease is low. When the value is over 150, your risk of heart disease is high. The higher the triglycerides, the higher the risk.

How are these values affected by the EFs?

My research found that when you have low amounts of EFs in your body, your TC/HDLC ratio is high, and your TG level is high. However, when the amount of EFs in your body increases, your TC/HDLC and total TGs decrease. These findings were reported in the scientific journals *Metabolism* and *Lipids*.

Can I become deficient in any of these essential fats?

There are several different types of people who are deficient in EFs.

- Some people do not have enough body stores of EFs. This is usually found in slim adults who eat low fat diets (low in essential fats) for long periods of time, and in subjects with severe fat malabsorption treated with diets low in EFs. Examples are people with Crohn's disease, cystic fibrosis, and AIDS.
- Some people have so much saturated fat in their bodies that they cannot use the EFs they have. This situation occurs in overweight individuals and in those who eat too many carbohydrates.
- Some people deplete their body stores of EFs while fighting diseases such as burns, infections, intestinal diseases, frequent bleeding, or liver disease.
- Children are especially at risk, because their small bodies store few EFs, while they need more EFs than adults to build new cells and grow.
- Many adults with diabetes and other diseases cannot make enough EFA derivatives.

What kinds of health and habit misconceptions do many victims and potential victims of cardiovascular disease have?

- **Thinking they're THIN.** Most overweight people think they are of "average" weight or even thin. Even if you are only slightly above average by the charts, if your body is too big for your damaged heart, you are very overweight.
- **Convinced they eat very little,** and that food intake could not possibly be responsible for their being overweight. Many patients claim that they are fat because of the drugs they take or because of their "metabolism." But of course, they are overweight because they eat too much.
- **Maintaining that they *are* restricting their diet,** since they are restricting salt intake. Some patients believe that being on a low salt diet is the solution to their cardiovascular problems and high blood pressure. It is not. It merely tries to prevent the problems from getting worse.
- **Feeling virtuous for only smoking a few cigarettes per day.** While one cigarette is rarely fatal, countless repetitions of "just one cigarette" can kill you.
- **Feeling they get enough exercise.** It is common for people to overestimate how much exercise they get, because they have no idea what kinds of exercise make a healthy heart. For those suffering from cardiovascular disease, performing normal activities can be so fatiguing that sufferers feel as if they have exercised. Active exercise means running for over one hour per day, or its equivalent. Unless you are an athlete, you probably lead a comparatively sedentary life.
- **Thinking they eat plenty of vegetables.** A salad with dinner is not enough. Usually, fresh, uncooked, green vegetables are an almost negligible proportion of the *total calories* they eat.

How can I optimize my body's EF levels?

Eating a variety of natural foods is your best strategy. However, if you are old, have a history of poor eating or eating too few EFs, or if you already have a disease caused by not eating enough EFs, you need to have your blood analyzed to determine which fats you need.

[The fatty acid profile EFA-SR™](#) can diagnose EFA abnormalities and assist your health professional in planning an optimal diet for you. This test reveals which fatty acids you need more or less of. It shows the amounts of SFA, MUFA, EFs (w3+ w6), and TFAs in the blood. The blood test **EFA-SR™** can tell you whether you need to eat EFA derivatives, whether you need fish oils, how much of each one, and which other fatty acids to eat or avoid.

What should I do if I am ill and need an evaluation of my fatty acid status?

Your doctor will order the [fatty acid profile EFA-SR™](#). After obtaining fatty acid profiles at baseline, the first step is to eat a mixture of EFAs (such as soybean oil) for 2-6 months.

Then you get another blood test, to determine whether the EFA dose should be increased, decreased or changed, and whether you can form your own derivatives. Your diet might be modified based on these test results.

You continue the prescribed diet, with periodic monitoring, until your blood tests show ideal fat composition. You should then maintain a healthy diet throughout life.

These are general principles. In practice, everybody is so different that he/she requires a unique diet.

How soon will dietary changes affect my health?

Many factors influence the effects of fats and oils upon your health:

- If you have a lot of fat in your body, it will take a long time to change the composition of your fat.
- The composition of your body depends on the total and proportionate amounts that you eat of the different types of fats.
- If you exercise more or have a higher metabolism, you burn more of the extra fats you have, and you can eat more of the EFs without gaining weight.
- If you are in good health, your body can select the fats you need. However, if you are in poor health, you must help your body by eating more selective foods.
- If you have very few EFs, you will need to eat many more. If you have been eating low fat foods for many years, it can take several years before you recover the EFs that your body needs.



Portions of this section have been excerpted from the book "[EFAs in Health and Disease](#)" (how to order, table of contents, references, notes, excerpts).

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