# How Diet Affects Cardiovascular Health

## Summary and Comparison

Food is the fuel we fill our bodies with. Like gasoline in a car, the quality of the fuel will affect the health of your engine. The engine of your body is your heart. The valves and fuel lines are the veins and arteries in your body.

Ethanol when left to sit especially in cold weather, will congeal and clog various parts in the engine. Just how low-quality food can cause cholesterol and plaque to form clots in your blood vessels and heart.

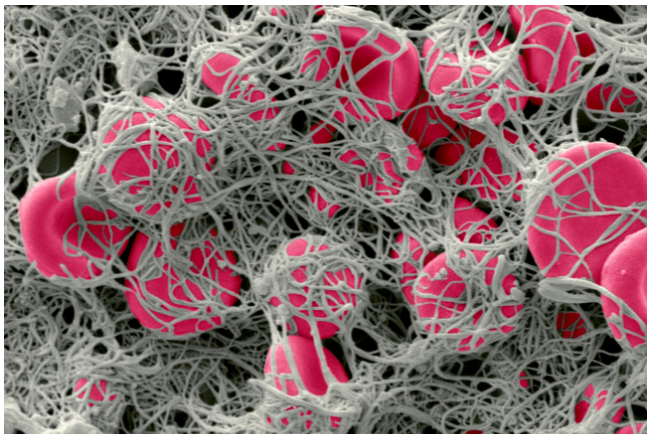
The food we eat affects many major cardiovascular disease risk factors within control. Including Cholesterol Levels, Blood Pressure, Body Weight, and Diabetes.

**Fats and Cholesterol**

Cholesterol is a fat that is crucial to many metabolic functions and is essential to all of the body's cell membranes. Cholesterol is produced in the liver and is made from the food we eat.

Lipids in the blood (fats) that contain unsaturated fat low-density lipoprotein, can cause plaque to form clots in the arteries. While saturated fat, high-density lipoprotein, helps remove bad fat (cholesterol) from the body, and makes it harder for plaque to form clots in the arteries.

Full-fat dairy foods such as milk contain saturated fat, which is known to help remove bad unsaturated fat from the body.



Eggs which contain naturally occurring cholesterol were once thought to be bad for heart health. However, one large egg containing 1.5 grams of saturated (good) fat and 195mg of cholesterol seems to be balanced enough to still be beneficial to cardiovascular health.

Trans Fats can both increase and decrease low-density lipoproteins (bad) cholesterol, and high-density lipoproteins (good) cholesterol, making them the most damaging to cardiovascular health. Trans Fats are a major risk to cardiovascular diseases such as heart disease and stroke.

Trans fats are formed when monounsaturated or polyunsaturated vegetable oils are hydrogenated and hardened to form margarines oils and shortening products.

These fats are used by the food industry in foods like cakes, biscuits, and fried food.

Some trans fats also are found naturally in red meat, butter, and dairy products.

To reduce the risk of heart disease, replace saturated and trans (bad) fats with unsaturated (good) fat.

Substitute butter and palm oil with oils made from plants such as olive, avocado, sunflower, canola, peanut, or sesame oil.

Avocados are a great source of unsaturated (good) fat.

**Salt Sodium and Blood Pressure**

High salt intake is linked to hypertension (high blood pressure), which can increase your risk of heart disease and stroke. The average person consumes more than ten times the amount of salt our body requires.

Most of the salt in our diet is not added from table salt but from packaged and processed foods. Even sweet foods that don't taste salty can contain much more salt (sodium) than you would expect from the flavor.

**Help the Heart with a Healthy Diet**

Eating a variety of healthy foods is beneficial to cardiovascular health, general health, and can reduce the risk of disease, and cardiovascular disease. Try to eat a variety of foods from each of the five food groups in the amounts recommended. This will not only help you maintain a healthy and interesting diet, but provides the -

essential nutrients needed by the body and cardiovascular system.

The recommended foods are vegetables, fruits, and whole-grain breads. A variety of healthy proteins such as seafood and nuts as well as low amounts of eggs and lean poultry. Red meat should be lean and intake limited to 1-3 times a week. Unsweetened milk, yogurt, and cheese are good choices of dairy. Those with already existing high blood cholesterol should choose reduced-fat varieties of dairy products. Nuts, avocados, olives, and their oils are good to be added to foods and used for cooking. Spices and Herbs can be added to flavor food instead of adding salt.

Mindful portioning of food is also important. Portions have increased in size over time, and the average person is eating much more than needed, leading to obesity and an increased risk of cardiovascular disease.

A healthy meal should include ¼ plate of protein, ¼ plate of whole-grain carbohydrates, and ½ plate of vegetables. Meal sizes can vary depending on age, gender, and nutritional needs.

**Foods Important for the Heart**

Healthy Foods important for Cardiovascular Health include fish such as tuna and salmon, which contain omega-3 fatty acids. This fat has been known to decrease triglycerides (a type of fat) and increase good cholesterol, improving blood vessel elasticity and blood

health, making it harder for clots to form and restrict blood flow.

Vegetables such as corn containing omega-6 fatty acids, and oils such as olive oil containing omega-3 fatty acids, can help to lower bad cholesterol, and can be used instead of saturated fats such as butter.

Fruits and vegetables contain fiber, potassium, and other micronutrients such as antioxidants, protect against and decrease the risk of cardiovascular diseases. They are also an important source of folate, which helps low amino acid homocysteine in the blood, which appears to be linked to the risk of cardiovascular disease.

Whole Grain carbohydrates high in fiber are linked to reduced bad cholesterol and reduced risk of cardiovascular disease. Foods with high levels of soluble fiber such as oats are known to be great for lowering total cholesterol levels in the blood.

Nuts and Seeds are a good source of plant proteins, fiber, healthy fats, and

micronutrients which all help to lower the risk of cardiovascular disease.

Some research suggests that tea containing antioxidants can help prevent the build-up of fatty deposits in the arteries, act as an anti-clotting agent, and improve blood vessel dilation which increases blood flow.

Vitamin E has been indicated in studies to act as an antioxidant helping to protect against bad cholesterol in the blood. Sources of Vitamin E include avocados, dark green vegetables, vegetable oils, and wholegrain foods. Foods containing Vitamin E have been shown to be the only effective source, while Vitamin E supplements have not been shown to have the same protective effects.

Garlic containing allicin has been found to lower total and bad cholesterol levels in the blood, decreasing the risk of cardiovascular disease.

Foods enriched with plant sterols can also help lower bad cholesterol levels.

However, there is no supplement for healthy natural foods while fighting against cardiovascular disease(s).

**How to Reduce The Risk of Heart Disease with Healthy Eating**

To reduce the risk of developing heart disease within diet: Limit fried fast and processed foods. Replace saturated fats from butter with unsaturated fats from olive oil. Intake healthy fats from plants and nuts. Increase the number of vegetables, fruits, and whole-grain carbohydrates. Reduce the intake of refined sources of carbohydrates with high glycemic indices, such as foods with high amounts of added sugars. Limit red meats such as beef and only intake up to 350g a week. Avoid processed meats such as sausage and ham. Trim all visible fat from meat and remove the skin from poultry. Eat beans, lentils, or tofu often. Snack on unsalted raw nuts on most days of the week (best-being almonds and walnuts). Eat fish at least once a week. Reduce intake of salty packaged processed and fast foods. Replace salt with herbs and spices to add flavor. Always check sodium levels in foods and choose the product with the lowest sodium level.

If you already have high or elevated blood cholesterol, switch to low or nonfat dairy products and have no more than seven eggs a week.

Alcohol intake is known to increase blood pressure and can increase triglycerides in the blood. Alcohol should be reduced to no more than two standard drinks a day or ideally removed completely.

A person can find dietary and cardiovascular help from a Doctor, preferably a Cardiologist.

**Exercise and the Link to a Healthy Diet**

Physical Activity (Exercise) heavily coincides with cardiovascular health.

Your heart is a muscle. It is known that exercise strengthens muscle, and cardiovascular (Endurance) exercise, in particular, strengthens the heart.

When a heart is healthy, it is able to pump more blood more efficiently. Exercise is known to improve cholesterol levels by increasing healthy cholesterol (HDL) and lowering bad cholesterol (LDL). Linking exercise to similar improvements of a healthy diet.

Exercise improves blood flow by allowing the heart to achieve better blood flow in the smaller blood vessels surrounding it. Over time clots can form within those blood vessels from fatty deposits of cholesterol sticking to the blood vessel walls, and cardiovascular health makes it harder for those clots to form and cause damage to the rest of the cardiovascular system.

This reduces blood pressure and stress on the heart and surrounding blood vessels.

Exercise is known to reduce blood pressure in people with high blood pressure, and prevent high blood pressure in people who do not have high blood pressure.

High blood pressure is known to cause cardiovascular disease.

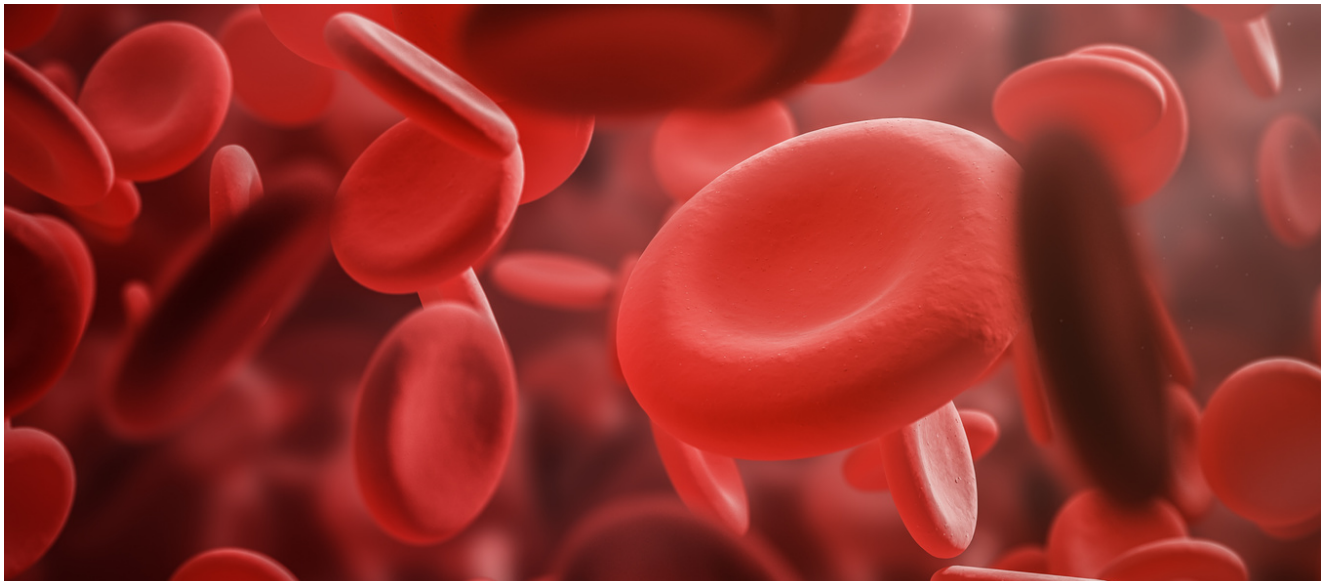
Exercise makes physical activity easier. Physical activity may leave muscles sore, though as the body and heart adapt to the activity level change, the body becomes more efficient at repairing damaged muscle tissue, making muscular recovery time quicker.

Fitness caused by regular exercise is known to reduce the risk of coronary heart disease as much as 29% and decrease the risk of stroke by up to 20%. Regular exercise also helps lower the risk of pre and type 2 diabetes.

Physical activity is known to reduce the possibility of heart arrhythmia like atrial fibrillation. The American Medical Association reported that weight loss, diet, and exercise resulted in lowered rates of AFib and other diseases. Specifically, they reported that patients who exercised regularly with short-term, high-intensity interval training, the incidence of AFib was reduced by 50%.

Doctors should always be involved in choosing an exercise plan. An ECG will show information that will help identify the current cardiovascular state of a patient, and affect what diet and/or exercise program may be recommended.

If your heart is like the engine of a car, what fuel will you put in your executive company vehicle? It is the only one you have.



## Resources


**Diet and Heart Disease Risk**
https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/heart-disease-and-food

**7 Ways Your Heart Benefits from Exercise**
https://www.eehealth.org/blog/2018/05/how-your-heart-benefits-from-exercise/

**Exercise and the Cardiovascular System**
https://www.ahajournals.org/doi/10.1161/circresaha.117.305205