

Know Your Risk

for Heart Attack and Stroke.

Myeloperoxidase (MPO)

What is myeloperoxidase?

Myeloperoxidase (MPO), is a protein normally found inside your white blood cells that can kill germs, much like bleach. White blood cells, which are important for your body's immune system, may release MPO to help stop the harmful invaders in your body.

Why check my MPO levels?

When the inner wall of blood vessels is damaged, cholesterol can get inside, where it doesn't belong. This causes the blood vessel to form a protective cap over this cholesterol. If this cap is damaged and becomes thin, cholesterol can leak into the bloodstream. These harmful cholesterol invaders cause white blood cells, traveling in the blood, to respond and release MPO.

Think of this cap over cholesterol as a dam holding back water in a river. If the dam becomes leaky, the entire dam could break, allowing a rush of water through. MPO is a signal that the cap is leaking, and if it breaks, you could have a rush of cholesterol into the blood, that can lead to formation of a blood clot. If the clot is large enough to completely block the flow of blood through the vessel, it causes a heart attack or sudden death.

Your doctor may want to check your MPO levels if you don't have a healthy lifestyle, if you have poor dental health, or if you have risk factors for heart attacks, such as high cholesterol, high blood sugar, or if you have a history of heart disease. Ask your doctor if this test is right for you.

What can I do to improve my MPO levels?

There are a number of things you can do to help keep your blood vessels healthy and lower your risk of heart disease, as well as your MPO levels.

- **Eat a healthy diet.** A heart-healthy, Mediterranean diet - that is low in saturated fat and cholesterol, full of high-fiber foods (such as fresh fruits, vegetables, and whole grains), and has very little added salt and sugars - can help you control cholesterol levels, blood pressure, and blood sugar.

- **If you smoke, you should quit.** Smoking damages the walls of blood vessels and increases both heart attack and stroke risk, partly because smoking can also make clots form faster and bigger.
- **Be sure to see your dentist regularly,** as dental disease increases the risk of heart attacks.
- **Take your medications,** if told by your doctor, to lower your blood pressure, blood sugar, and/or blood cholesterol levels.

With heart disease being the #1 killer of Americans, it's important to develop a plan with your doctor to lower your risk of a heart attack or stroke *before* one happens.

Additional Need-to-Knows:

The MPO test can be done at the same time you have your standard cholesterol test. When getting ready for the MPO test:

- Keep taking your medications as directed.
- Fasting is not required.

Relative Risk

What do my results mean?

<470 Low	Your result is in the desirable range, suggesting that if you have cholesterol built up in your blood vessels, it is less likely to break open and leak cholesterol into your blood.
≥470 Moderate/ High	You have moderate/high levels of MPO, suggesting that you may have cholesterol built up in your blood vessels that has become damaged and unstable. This may cause cholesterol to leak into your blood and can lead to a heart attack.

