

# Cardio IQ® Myeloperoxidase (MPO)

Myeloperoxidase, or MPO, is an enzyme that is released by white blood cells called macrophages that measures your body's response to damaged artery walls that have become thin, cracked, and ultimately unstable due to cholesterol accumulation and inflammation. Whether you have traditional risk factors for heart or vascular disease, such as abnormal cholesterol levels or high blood pressure, or known heart disease, the MPO test can help indicate if you have inflammation in your arteries that can add to your risk for a heart attack.

## Why should I check my MPO levels?

When the walls of your arteries become damaged, cholesterol can enter and build up. Your body tries to remove the cholesterol by sending in immune cells. These cells wrongly think the cholesterol particles are bacteria or viruses that have invaded the body, and try to kill them by releasing MPO which acts like bleach. Instead of killing the cholesterol, MPO damages the cholesterol and contributes to the formation of foam cells, a name for cholesterol-filled immune cells. Instead of removing the cholesterol, these foam cells get stuck in the artery wall and contribute to chronic inflammation. Over time, the artery wall gets filled with plaque - a mixture of cholesterol, immune cells and foam cells.

Plaque buildup inside the artery wall can become inflamed and burst through the wall of the artery to where the blood flows. When the plaque ruptures into the blood, the body responds to this injury by forming a clot. If the clot causes a complete blockage of blood flow, this can cause a heart attack.

Whether you have traditional risk factors for heart or vascular disease, such as abnormal cholesterol levels or high blood pressure, or known heart disease, the MPO test can help find out if you have inflammation in your arteries that can add to your risk for a heart attack.

## What should I do if my results are abnormal or out of range?

It is always recommended you meet with a healthcare provider to determine what your laboratory test results mean to you. Your healthcare provider will review all of your test results and, combined with your health history, will be able to provide an accurate picture of your health status.

**If your results were in the moderate risk to high risk range:** Individuals who have elevated MPO levels are more than 2x as likely to experience cardiovascular mortality. You should share the test results with your healthcare provider who may order additional testing to help develop a treatment plan with medications, as well as initiate lifestyle changes to your diet, exercise habits, and smoking cessation if you are a smoker.

## What other resources are available to learn more about my health and laboratory tests?

- Centers for Disease Control and Prevention: [cdc.gov](https://www.cdc.gov)
- American Heart Association: [heart.org](https://www.heart.org)
- Cleveland HeartLab: [clevelandheartlab.com](https://www.clevelandheartlab.com)

*DLO Direct offers direct access to laboratory testing for informational purposes. A DLO Direct lab test result is not a medical diagnosis and is not intended as medical advice. Only a healthcare provider can interpret lab results and diagnose a medical condition or disease.*

*Because tests have not been ordered by a healthcare provider, third party entities, including Medicare and Medicaid, will not reimburse for these tests.*



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