

Know Your Risk

for Heart and Blood Vessel Disease.

F₂-Isoprostanes (F₂-IsoPs)

What are F₂-IsoPs?

F₂-IsoPs are formed from a type of fatty acid that your body makes on its own. Many substances in your body, such as fatty acids, work together to keep you healthy and are affected by your lifestyle. Too much of this fatty acid, from poor lifestyle choices, can cause your body to make even more F₂-IsoPs, which can be harmful.

Why check my F₂-IsoPs?

Just as lightning can be a sign of a storm, urinary F₂-IsoPs can be a sign of oxidative stress. Poor lifestyle choices (such as smoking, an unhealthy diet, and lack of exercise) can create a “storm cloud” of oxidative stress. As the cloud builds, it can produce a “lightning bolt” of F₂-IsoPs. The more lightning there is, the higher the chance it can damage important structures, like blood vessels.

High levels of F₂-IsoPs may cause blood vessels to narrow, leading to higher blood pressure, and they can promote blood clotting – all of which, may increase risk for a heart attack or stroke. Since F₂-IsoP levels may be elevated at the beginning stages of disease, they can provide an early warning sign for your risk for developing diseases, such as heart disease, diabetes, and/or cancer.

Your doctor may want to check your levels if you don't have healthy eating or lifestyle habits, or if you have risk factors for heart attacks, such as smoking, high blood pressure, high blood sugar, or high cholesterol levels. Ask your doctor if this test is right for you.

What can I do to improve my F₂-IsoP levels?

There are a number of things you can do help keep your blood vessels healthy and lower your risk of heart disease, as well as your F₂-IsoPs.

- **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. Reduce the amount of red meat (beef, pork, ham, and processed meats) and egg yolks that you eat, as these also increase F₂-IsoPs.

- **Exercise more.** Talk with your doctor about exercises that would be safe for you to do.
- **If you smoke, you should quit.** Smoking increases F₂-IsoPs, 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.

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 F₂-IsoP test can be done at the same time you have your standard cholesterol test. When getting ready for the F₂-IsoP test:

- Keep taking your medications as directed.
- Fasting is not required.
- Drink a normal amount of water. Too little or too much water can affect the results of your urine test.

Reference Range

What do my results mean?

<0.86
Low

Your result in the desirable range, suggesting that the levels of oxidation in your body are low.

≥0.86
Moderate/
High

You have high levels of F₂-IsoPs, suggesting that your diet and/or lifestyle may be stressing your body by increasing oxidation, which can increase your risk for developing diseases.

