

Microalbumin

Know your risk™ for endothelial dysfunction.



What do my kidneys do?

Your kidneys have an important role in keeping you alive and well. Their main function is to get rid of waste and extra water from your body. This is done by the endothelium, or the thin layer of cells that line the blood vessels in the kidney, which act like a coffee filter. The kidney endothelium filters your blood to get rid of waste by making urine. Your kidneys also do other important things, such as help control your blood pressure.

What is microalbumin?

Albumin is a protein that is normally found in your blood and not normally found in your urine. The microalbumin test is able to measure very small amounts (micro-) of albumin that can leak into the urine.

What causes increased microalbumin?

If albumin is in the urine, even in small amounts, then you may have kidney damage. You can think of kidney damage as a ripped coffee filter which allows coffee grounds into your coffee. This damage may be caused by high blood pressure or high blood sugar levels, both of which can cause damage to the endothelium of the kidney. Albumin can sneak through this damage in the endothelium and end up in the urine, where it can be measured.

Why should I get my microalbumin levels checked?

If your medical provider finds out that albumin is leaking into your urine, this may be a sign that there is damage to other tissues in your body including your arteries. The things that are damaging the endothelium in your kidneys, such as having high blood pressure or high blood sugar, are probably also damaging the endothelium in your arteries. When the endothelium in the arteries becomes damaged, cholesterol can accumulate there, setting off a chain of events that may result in the development of plaque. Increased levels of microalbuminuria may also identify the presence of diabetes or heart disease.

When should my microalbumin levels be checked?

Your microalbumin levels should be checked at the same time your medical provider runs other tests, such as a cholesterol test. If your level is high, your medical provider may want to repeat the test. High microalbumin levels may be seen in pregnancy, following exercise, or in people with high blood sugar levels, fever or urinary tract infections.

How should I prepare for the microalbumin test?

The microalbumin test does not require any special preparation. You do not need to be fasting, and can be taking medications. It is best if you have the microalbumin test done in the morning.

What can I do to help lower my microalbumin levels?

Two major factors that contribute to high microalbumin levels are high blood pressure and high blood sugar levels. Therefore, it is important that you work with your medical provider to develop a plan to lower these.

- Lifestyle changes, including increasing the amount of fruits, vegetables, and whole grain products and reducing the amount of salty or sugary foods you eat may help to reduce your blood pressure and blood sugar.
 - Exercising regularly can also help you regulate your blood pressure and blood sugar.
 - There are medications which your medical provider can prescribe if lifestyle changes are not working well enough for you.
- Talk with your medical provider to develop a plan that works the best for you.



RELATIVE RISK

Microalbumin
(mg/g creatinine)

Women	Men
<7.5 Low	<3.9 Low
≥7.5 High	≥3.9 High