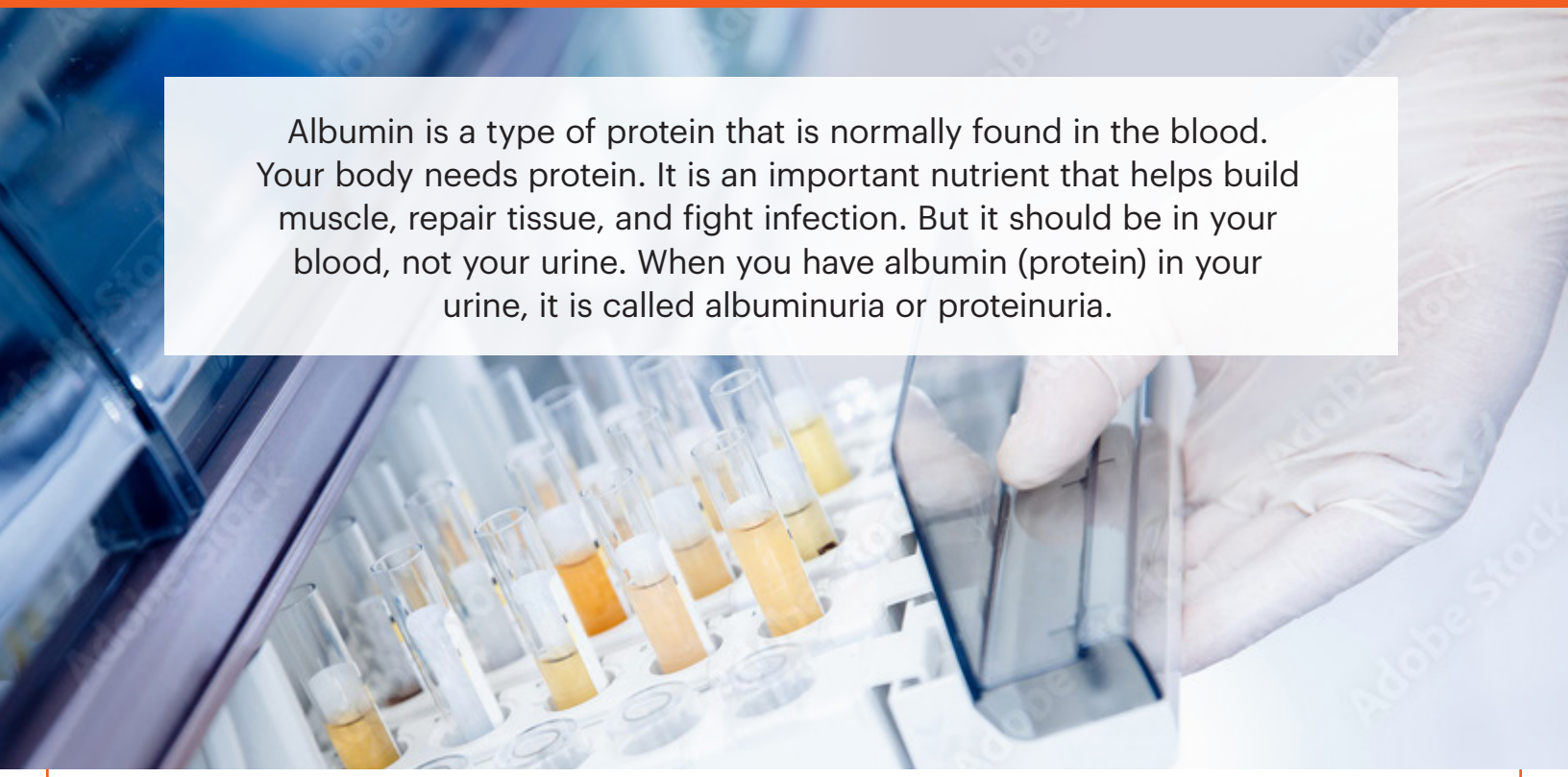
NATIONAL KIDNEY FOUNDATION®

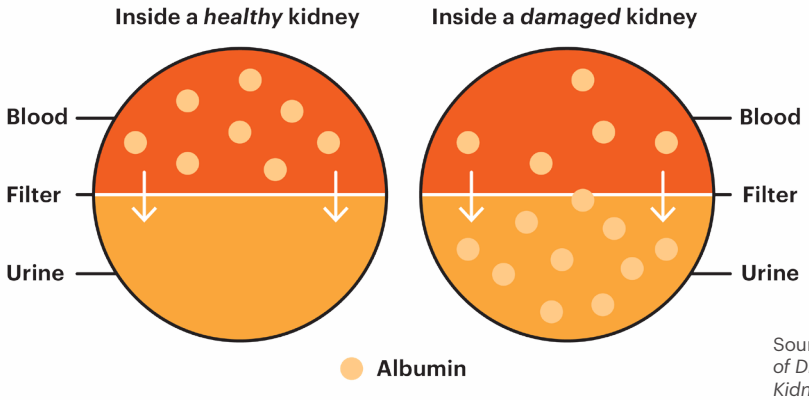
KIDNEY DISEASE AND ALBUMINURIA/PROTEINURIA



Albumin is a type of protein that is normally found in the blood. Your body needs protein. It is an important nutrient that helps build muscle, repair tissue, and fight infection. But it should be in your blood, not your urine. When you have albumin (protein) in your urine, it is called albuminuria or proteinuria.

About kidney disease and albuminuria/proteinuria

One of the main jobs of your kidneys is to filter your blood. Your kidneys keep important things your body needs, like protein, in your blood. They also remove things your body doesn't need, like waste products and extra water.



Source: *National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)*

If your kidneys are healthy, you should have very little or no protein in your urine. But if your kidneys are damaged, protein can leak out of the kidneys into your urine. Having protein in your urine may be an early sign of kidney disease but it can also be due to other reasons.

Why test for albuminuria/proteinuria?

The urine albumin-creatinine ratio (uACR) is an important test for identifying kidney damage, in addition to the estimated glomerular filtration rate (eGFR) test. Albuminuria increases your risk of kidney failure and cardiovascular disease (heart attack and stroke). It can also decrease your life expectancy if left untreated. Kidney disease usually does not show any symptoms until the later stages of the disease – so it is important to have a uACR test done at least once a year if you have any of these risk factors:

- Diabetes
- Hypertension (high blood pressure)
- Cardiovascular disease (history of heart attack or stroke)
- Heart failure
- Family history of kidney disease, kidney failure, or dialysis
- Higher body weight (especially if your body mass index or BMI is over 30)
- Smoking or other use of tobacco products
- Over the age of 60

Testing for albuminuria/proteinuria

Testing for albuminuria is done with the urine albumin-creatinine ratio (uACR) test. This test measures the amount of two different substances in your urine - albumin (protein) and creatinine.

Albumin is an important protein normally found in the blood that serves many roles in the body. It is not usually found in the urine.

Creatinine is a waste product that comes from the digestion of protein in your food and the normal breakdown of muscle tissue. It is removed from the body through the kidneys and is expected to be found in the urine.

The uACR test is easy to do since only a simple urine test is needed (also known as a "spot" urine sample). You will be asked to pee into a clean cup called a specimen cup. Only a small amount of your urine is needed (about two tablespoons) to do the test.

Understanding your results

A lower number is better for this test, ideally lower than 30. A value of 30 or higher suggests you may be at a higher risk for complications. The higher your number, the higher your risk.

It is important to emphasize that this test often needs to be repeated one or more times to confirm the results. Decisions are rarely made based on the results of one test.

Having a confirmed result of 30 or higher twice in 6 months may mean you have kidney disease (even if your eGFR is above 60).

Treatments for albuminuria/proteinuria and kidney disease

If your uACR tests confirm that you have kidney disease, it's likely you will be given a treatment plan to follow. The main goal of treatment is to lower your overall risk for developing complications. This starts with addressing the most likely cause for your albuminuria. For most people, the initial focus will likely be on getting your blood pressure and blood sugar levels into their target ranges.

Your treatment plan will be based on many things, including the cause of your kidney disease, how much kidney function you have, and whether you have other health problems. It may include taking medicine, changing your diet, limiting salt, getting exercise, and more. A combination of lifestyle modifications and medication is generally the most effective approach for treating albuminuria and lowering your risk for complications.

If your uACR is 30 or higher at least twice in 6 months, extra tests may be recommended to get more information about what may be causing your albuminuria. These tests may include:

Imaging tests These tests include things like an ultrasound or CT scan. These produce a picture of your kidneys and urinary tract. They can help look for problems like kidney cancer, kidney stones, or structural problems within the kidney.

Kidney biopsy. This test can help find out what caused your kidney disease and how much damage to the kidneys has already happened.

Having a simple urine test can help find kidney disease and other health conditions early. Finding kidney disease early is important because treatment can help keep it from getting worse. It may even make some problems better. If you have questions or need more information about albuminuria/proteinuria, speak to your doctor or other healthcare professional.

For more information, contact the National Kidney Foundation

Toll-free help line: **855.NKF.CARES** or email: **nkfcares@kidney.org**

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