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Glomerular filtration rate

Glomerular filtration rate (GFR) is a test used to check how well the kidneys are working. Specifically, it estimates how much blood passes through the glomeruli each minute. Glomeruli are the tiny filters in the kidneys that filter waste from the blood.

How the Test is Performed

A blood sample is needed.

The blood sample is sent to a lab. There, the creatinine level in the blood sample is tested. The lab specialist combines your creatinine level with several other factors to estimate your GFR. Different formulas are used for adults and children. The formula includes some or all of the following:

- Age
- Blood creatinine measurement
- Ethnicity
- Gender
- Height
- Weight

The creatinine clearance test, which involves a 24-hour urine collection, can also provide an estimate of kidney function.

How to Prepare for the Test

Your health care provider may ask you to temporarily stop any medicines that may affect the test results. These include antibiotics and stomach acid medicines.

Be sure to tell your provider about all the medicines you take. Do not stop taking any medicine before talking to your doctor.

Tell your doctor if you are pregnant or think you might be. GFR is affected by pregnancy.

How the Test will Feel

When the needle is inserted to draw blood, some people feel moderate pain. Others feel only a prick or stinging. Afterward, there might be some throbbing or a slight bruise. This soon goes away.

Why the Test is Performed

The GFR test measures how well your kidneys are filtering the blood. Your doctor may order this test if there are signs that your kidneys are not working well. It may also be done to see how far kidney disease has progressed.

The GFR test is recommended for people with chronic kidney disease. It is also recommended for persons who may get kidney disease due to:

- Diabetes
- Family history of kidney disease
- Frequent urinary tract infections
- Heart disease
- High blood pressure
- Urinary blockage

Normal Results

According to the National Kidney Foundation, normal results range from 90 to 120 mL/min/1.73 m². Older people will have lower than normal GFR levels, because GFR decreases with age.

Normal value ranges may vary slightly among different laboratories. Some labs use different measurements or test different samples. Talk to your doctor about the meaning of your specific test results.

What Abnormal Results Mean

Levels below 60 mL/min/1.73 m² for 3 or more months are a sign of chronic kidney disease. A GFR lower than 15 mL/min/1.73 m² is a sign of kidney failure and requires immediate medical attention.

Risks

Veins and arteries vary in size from one patient to another and from one side of the body to the other. Obtaining a blood sample from some people may be more difficult than from others.

Other risks associated with having blood drawn are slight, but can include:

- Excessive bleeding
- Fainting or feeling lightheaded
- Hematoma (blood accumulating under the skin)
- Infection (a slight risk any time the skin is broken)

Alternative Names

GFR; Estimated GFR; eGFR

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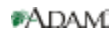
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