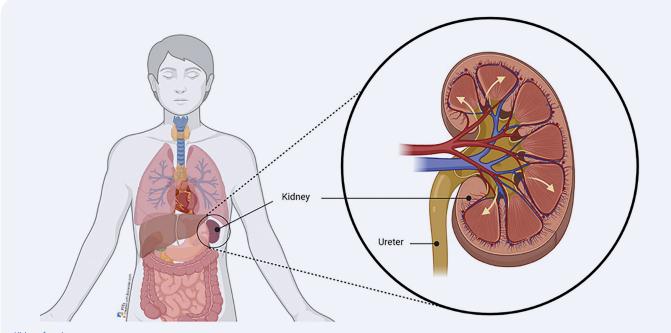


# WHAT YOU SHOULD KNOW ABOUT THE PROTEIN TEST FOR KIDNEY DISEASE

Albumin is a protein that is found in large amounts in the blood. When your kidneys are working properly only a tiny amount of albumin leaks into your urine. Damaged kidneys let albumin pass into the urine and the more your kidneys are damaged the more albumin in your urine.

The albumin creatine ratio (ACR) is a urine test used to screen for kidney disease. It can measure very small amounts of albumin which means it can pick up early kidney damage. Even very small increases in albumin can indicate impaired kidney health. Increased amounts of albumin in the urine are known as albuminuria.



Kidney function



## Your kidneys

People who have diabetes, high blood pressure, heart disease, certain autoimmune disorders or a family history of kidney failure are at risk of kidney disease. The urine ACR test is most often used when someone has been diagnosed with diabetes. It can help establish a baseline level so that kidney function can be monitored over time and see how it responds to treatment.

The test is usually done about once a year but if the albumin levels rise significantly, it may be done more often. A urine albumin level that stays the same or goes down means that treatments are working.



## Giving a urine sample

The ACR test should be performed on the first specimen of urine passed after getting up in the morning. If this is not possible a random urine specimen is acceptable. A diagnosis of albuminuria is made if two out of three ACR results are positive.

# What can your results tell you?

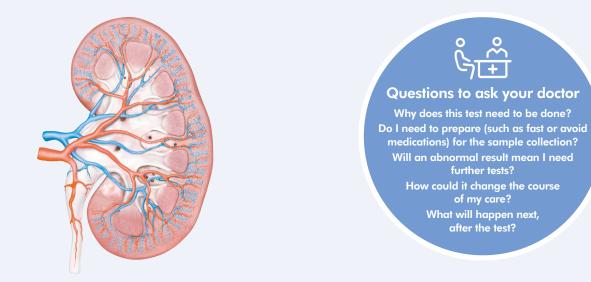
- A moderately increased ACR indicates an early phase of developing kidney disease.
- Low levels show that kidney function is normal if other kidney test results are normal.
- Moderate to high and persistently elevated levels of albuminuria over at least three months is a requirement for establishing a diagnosis of kidney damage.

Urine ACR	Normal	Mildly elevated	Markedly elevated
mg/mmol level	Male: less than or equal to 2.5 Female: less than or equal to 3.5	Male: 2.6-25 Female: 3.6-35	Male: more than 25 Female: more than 35
Interpretation	No kidney disease unless other tests indicate there is.	Early detection of declining kidney function. Further investigations are needed to find out cause.	Markedly increased levels of albuminuria have a high predictive value of renal disease progression. Investigations are needed to find the underlying cause. Treatment is needed to reduce the progression of kidney disease.

Referral to a kidney specialist is recommended when the ACR is greater than or equal to 30 mg/mmol.

Urine albumin levels can also be temporarily raised by conditions such as high blood pressure, fever, urinary tract infection, high dietary protein, congestive heart failure, intensive exercise within 24 hours, menstruation, genital discharge or infection and some drugs.

If you have recently done any intensive exercise you should wait for 24 hours before collecting a urine sample. Similarly, if you have an illness with a high temperature or a urinary tract infection it is best that you wait until you are well before giving a sample.



For more detailed information on these and many other tests go to pathologytestsexplained.org.au



#### www.pathologytestsexplained.org.au

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