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Acute Renal Failure; JAMA Patient Page

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Guided Medication Dosing for Inpatients With Renal Insufficiency

Glenn M. Chertow et al. *JAMA*. 2001;286(22):2839.

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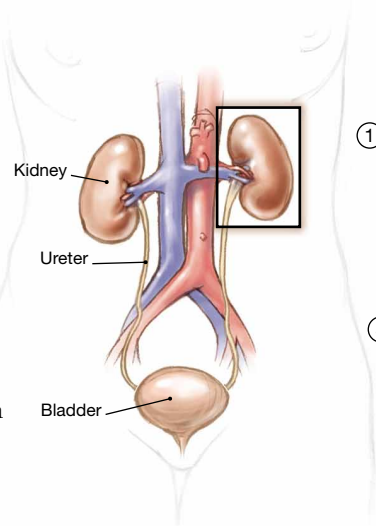
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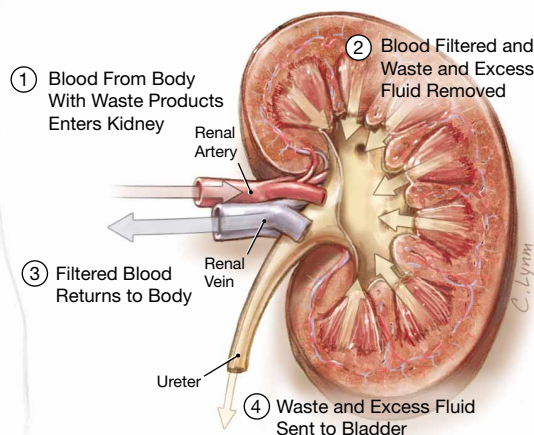
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Kidney Failure

Your kidneys are 2 bean-shaped organs, each about the size of a fist, located near the middle of the back below the ribcage. Kidneys filter the blood, keeping fluids and substances that are useful and removing waste and excess fluid, and help regulate blood pressure and the number of red blood cells. Every 30 minutes, your kidneys filter all the blood in your body. The December 12, 2001, issue of *JAMA* contains an article about medication dosing for patients with decreased kidney function.



CROSS-SECTION OF KIDNEY



TYPES OF KIDNEY FAILURE

Kidney failure occurs when the kidneys cannot properly remove wastes, causing buildup of toxins and fluid in the body. By checking blood and urine tests, your doctor can determine if you have kidney failure.

- **Acute kidney failure** develops suddenly, sometimes due to severe infection, drugs or other chemical agents, or physical trauma. If the underlying problem can be successfully treated, complete recovery of the kidneys is possible.
- **Chronic kidney failure** develops gradually over years and may cause weight loss, **anemia** (low red blood cell count), nausea or vomiting, tiredness, headaches, decreased mental sharpness, muscle twitches and cramps, yellowish-brown skin color, unusual itching, and trouble sleeping.
- **End-stage kidney disease** causes anemia, high blood pressure, bone disease, heart failure, and poor mental functioning.

TREATING KIDNEY FAILURE

- **Dialysis** is the treatment used when your kidneys stop working altogether. In **hemodialysis**, your blood is sent through a machine that filters away the waste products and returns the filtered blood to your body. In **peritoneal dialysis**, a fluid called **dialysate** is introduced into the abdomen that captures waste products from the blood and is drained away.
- **Transplantation** is the use of a kidney from a donor to replace damaged kidneys. Transplantation involves major surgery and usually requires treatment to prevent rejection of the donor organ.

See a doctor if you have pain or burning when you urinate, frequent urges to urinate, urine that is cloudy or dark, fever or a feeling of shakiness, or pain in your back or side below your ribs that does not go away. Treatment of high blood pressure and diabetes can help prevent kidney disease.

Sources: American Kidney Fund, American Society of Nephrology, Mayo Clinic Foundation, National Institute of Diabetes and Digestive and Kidney Diseases, National Kidney Foundation, UK National Kidney Federation

FOR MORE INFORMATION

- National Institute of Diabetes and Digestive and Kidney Diseases
800/891-5390
www.niddk.nih.gov
- National Kidney Foundation
800/622-9010
www.kidney.org
- American Kidney Fund
800/638-8299
www.akfinc.org
- UK National Kidney Federation
www.kidney.org.uk

INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page Index on *JAMA's* Web site at www.jama.com. A Patient Page on transplantation was published in the May 10, 2000, issue and one on organ donation was published in the July 4, 2001, issue.

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