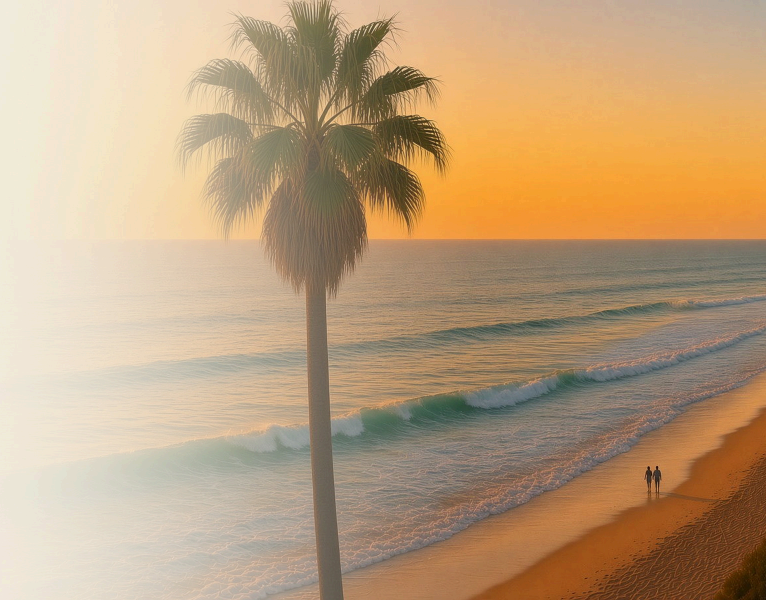
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Blood Pressure and Your Kidneys

High blood pressure damages the kidneys quietly, over years. Two simple tests catch it early, and treatment can slow it.

2nd

leading cause of kidney failure in the US is high blood pressure, behind diabetes

1 in 10

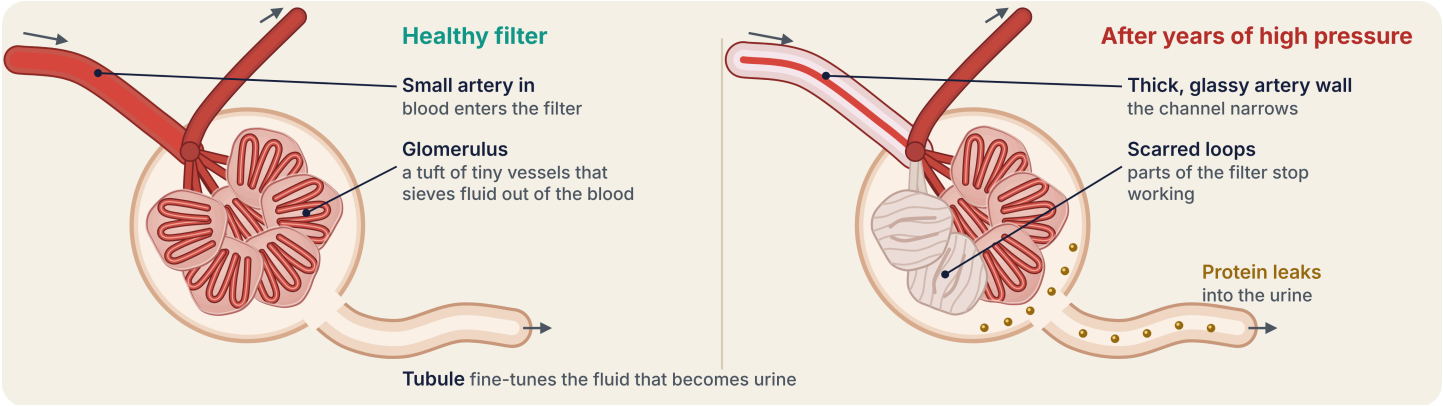
is about how many US adults with high blood pressure already have stage 3 or worse kidney disease. Most don't know it.

Half

of your kidney filters can be lost while you still feel completely fine

HOW HIGH BLOOD PRESSURE HURTS THE KIDNEYS

Pressure damages the kidney's tiny filters



Each kidney holds about a million filtering units called nephrons. Over years of high pressure, some of the small arteries feeding them thicken and close, starving their filters. Others let the high pressure straight through, which damages the filter so it leaks protein.

WHY YOU DON'T FEEL IT

Two tests find it years before symptoms

eGFR, a blood test

Estimates how well your kidneys filter, using creatinine (a muscle waste product), your age and sex.

UACR, a urine test

Measures albumin, a protein leaking into the urine. It's often abnormal years before eGFR starts to fall.

Symptoms such as fatigue, leg swelling and getting up at night to urinate usually appear only when kidney function has dropped below about 30 percent of normal. Everyone with high blood pressure should have both tests at least once a year.

Don't wait for symptoms

Kidney damage from high blood pressure can be prevented and slowed. Get tested every year, get your blood pressure to target and take your medications consistently.

YOUR KIDNEY NUMBERS AND YOUR PLAN

Reading your results and protecting your kidneys

90+	60 to 89	45 to 59	30 to 44	15 to 29	Under 15
Stage 1	**Stage 2**	**Stage 3a**	**Stage 3b**	**Stage 4**	**Stage 5**
normal filtering, with signs of damage	mildly reduced, with signs of damage	mild to moderately reduced	moderately to severely reduced	severely reduced	kidney failure, often needing dialysis or transplant

eGFR in mL/min/1.73 m². Stages 1 and 2 also need evidence of damage, such as protein in the urine. eGFR is an estimate, and the trend over several tests tells more than any single value.

Under 30	30 to 300	Over 300
Normal	**Moderately increased**	**Severely increased**
no real protein leak	early kidney damage	established protein-leaking kidney disease

UACR in mg/g (milligrams of albumin per gram of urine creatinine).

WHAT PROTECTS THE KIDNEYS

most people need 2 to 4 medicines

Blood pressure target	Under 130/80, the 2025 AHA/ACC goal, with a top number under 120 encouraged at higher risk. Older people, or those who get lightheaded on standing, need an individual target.
ACE inhibitor or ARB	The cornerstone, for example lisinopril or losartan. Never take both together.
SGLT2 inhibitor	Empagliflozin (Jardiance), dapagliflozin (Farxiga) or canagliflozin (Invokana), now standard for many people, with or without diabetes.
Finerenone (Kerendia)	Adds protection in diabetic kidney disease with ongoing protein leak. Potassium needs monitoring.
Semaglutide (Ozempic)	Slows kidney decline and lowers kidney failure and heart death in type 2 diabetes with kidney disease.
Daily habits	Sodium under 2,300 mg a day, ideally under 1,500 (2025 AHA/ACC), or under 2,000 mg with kidney disease (KDIGO 2021). Also the DASH diet, weight loss if overweight, regular aerobic exercise, less alcohol and no smoking.

CALL THE OFFICE OR CALL 911

Call the office	Readings above your target for more than 3 days, or above 180/120 with no symptoms after resting 5 minutes, more leg swelling, new shortness of breath, new foamy urine, newly getting up 3 or more times a night to urinate, lightheadedness or fainting on standing, or new muscle cramps or weakness.
Call 911	Above 180/120 with chest pain, shortness of breath, weakness or numbness, vision changes, confusion or a severe headache. Also severe shortness of breath, being unable to urinate, or severe lightheadedness or fainting.

CAREFUL WITH NSAIDS

Pain relievers such as ibuprofen and naproxen can damage the kidney, especially combined with an ACE inhibitor or ARB and a diuretic. Acetaminophen is safer for routine pain if you have kidney disease.

READ THE FULL ARTICLE

damianrasch.com/bp-kidney-damage

For education only, and not a substitute for advice from your own physician. Sources include the 2025 AHA/ACC blood pressure guideline, the KDIGO 2021 blood pressure and 2024 kidney disease guidelines and the SPRINT, CREDENCE, DAPA-CKD, EMPA-KIDNEY, FIDELIO-DKD, FLOW and PATHWAY-2 trials.

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