Men’s and Women’s Kidneys Are Different. Here’s How to Care for Them

5 MIN READ

JUN. 22, 2026

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Your sex at birth makes a big difference in how your kidneys work and research is finally starting to catch up.

Your kidneys do the important work of removing waste from your body. In fact, every day, they filter **50 gallons of fluid**, reusing the vast majority, and disposing of the rest.

But incredibly, that's not the only role your kidneys play in your overall health. According to the **National Institute of Diabetes and Digestive and Kidney Diseases**, these two bean-shaped organs also influence your balance, nerves, muscles, and other tissues, and make hormones that control blood pressure, make red blood cells, and promote bone health. Even **your brain** relies on proper kidney function for optimal performance.

That's why it's so important that we get kidney care *right*: their reach stretches to just about every other organ in the human body.

Health advice generally treats male- and female-bodied people the same. That's an oversimplification, and it could be a costly one. **Recent research** on kidney disease and maintenance makes it clear that, when it comes to kidney health, sex makes a big difference.

Let's take a quick look at the differences, then get into what that actually means when it comes to keeping your kidneys healthy for the long haul.

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How Do Male and Female Kidneys Differ?

Male and female kidneys have both structural and functional differences, says Dr. **Jennifer Lees**, PhD, MBChB, senior clinical research fellow at the University of Glasgow and author of the aforementioned study. Those differences are relevant to people who want to maintain kidney health as long as possible.

“Female kidneys are structurally smaller, filter blood differently, and handle salt, hormones, and medications in ways that are distinct from male kidneys,” Lees tells Super Age. “It is important to realise that these aren’t flaws — they’re just adaptations that have evolved to support pregnancy and reproduction.”

Studies show that’s just the beginning. There are a whole host of relevant differences, including:

- Male-bodied people have more nephrons, the functional unit of the kidney that filters waste
- Sex modulates the regulation of water balance, sodium absorption, and glucose processing
- Blood pressure mechanisms vary by sex
- Rates and mortality of kidney disease varies by both sex and age, with disease timelines varying between male- and female-bodied people

All of these are perfectly natural differences. But understanding them is crucial, because, according to Dr. Lees, “they do have real consequences for how kidney

disease develops and progresses across a lifetime.”

Sex Differences Affect Risk Levels and Outcomes

The structural and functional sex differences in kidneys have real effects on renal health, most notably that women are more likely to develop kidney disease, but men tend to have worse outcomes.

According to the **National Kidney Foundation**, the reasons for this divide are not clearly understood, but experts do have several working theories. For one, women are more likely to develop urinary tract infections, which can cause kidney damage over time. Pregnancy can also affect kidney health, especially if there are complications such as hypertension or eclampsia.

Meanwhile, men’s higher testosterone levels and lower estrogen levels may account for some of their worse outcomes and higher rates of kidney failure. “Overall, men may have unhealthier lifestyles, thereby leading to a higher risk for kidney failure,” NKF experts add. They note that high levels of alcohol consumption — more common in men than women — can also cause severe damage.

How Age Plays a Role In Kidney Health

As we age, these sex differences can become especially pronounced. In women, for example, Dr. Lees says that “one of the most important things for longevity is what happens around menopause. Estrogen appears to have a protective effect on the kidneys. After menopause, the rate at which kidney function naturally declines accelerates in women.”

Rates of kidney disease in male-bodied people also increase around middle age, but

because **women's rates tend to rise faster**, it's important for women to start testing their kidney function earlier.

"So," continues Dr. Lees, "both sexes face kidney health challenges as they get older, just at different times and for different biological reasons. This all matters for healthspan because kidneys don't just filter waste. Declining kidney function is tightly linked to a wide range of health problems, particularly cardiovascular disease, infections, higher likelihood of needing hospital admission and overall resilience."

She adds: "We do still need a much better understanding of the sex-specific picture."

Let's take a look at some of those differences as well as how you can make sure you're getting the right type of tests and care for your body.

3 Steps Toward Better Kidney Testing

"Keeping your kidneys healthy is one of the most powerful things you can do to stay well into older age," says Lees. Regular testing is a big part of that process, and the interpretations of those tests may differ between male- and female-bodied people.

Creatinine, for example, is a common blood test used to assess kidney function. But the amount of creatinine in your blood is affected by the amount of muscle mass you have, so male-bodied people will generally test higher, regardless of kidney function.

Women who strength train and carry significantly more muscle mass than average will also tend to have higher serum creatinine levels than sedentary women. This can push their values into ranges that, on standard reference intervals, might look borderline or even slightly elevated

Cystatin C is a more sex-balanced test, as well as a more informative marker of future disease risk, including heart disease. Research suggests that **cystatin C testing can lead to better long-term outcomes**.

But there are differences here, too. According to Dr. Lees, "even when small

abnormalities in eGFR calculated from cystatin appear in a woman, they may carry even more weight than the same readings would in a man."

Here's how Dr. Lees recommends using this information to assess your own kidney health:

1. **Seek out the most accurate tests for your body.** That means creatinine/eGFR for routine screening, and cystatin C when body composition is atypical or results feel off (muscular women and frail elderly women are both poorly served by creatinine alone). Add uACR for early damage detection, and go to 24-hour urine when you need precision. For anyone with diabetes, hypertension, a family history of kidney disease, or cardiovascular risk factors, uACR should be part of the **annual workup** regardless of what the creatinine looks like.
2. **Note how sex may influence the test's interpretation and thresholds.** While you can generally use the same tests to evaluate the male and female kidneys, remember that your doctor may need to interpret those results differently. Especially if you have a chronic kidney condition, ask your care team whether they've adjusted for sex-specific thresholds. The more people ask their providers about sex-specific differences, says Dr. Lees, "the more clinical culture shifts. We believe that progress in this area genuinely depends on better awareness, education, and action."
3. **Follow up on your test results.** If a test for protein in the urine or a kidney function test comes back abnormal, don't ignore it. At a minimum, you should have a follow up test in around 3 months. If the problem still exists, you may qualify for extra care or a specialist referral.

Caring For Your Kidneys — Not Someone Else's

Regardless of your biological sex, much of your kidney care will be the same. You'll want to stay well hydrated, manage your blood pressure and blood sugar, avoid nephrotoxic drugs such as NSAIDs, skip tobacco, and limit excessive protein and

sodium in your diet.

That said, there are also some meaningful differences in how you should care for male and female kidneys.

For Women:

1. **Treat pregnancy complications as a long-term kidney signal.** If you've had **gestational hypertension**, **preeclampsia, or eclampsia**, don't let kidney monitoring stop at the postpartum visit. These conditions are associated with lasting vascular damage to the kidneys and elevated lifetime CKD risk. Ask your doctor to include uACR and cystatin C in your annual bloodwork going forward.
2. **Take recurrent UTIs seriously, not just symptomatically.** Women get UTIs at dramatically higher rates than men, and while most are bladder infections that clear cleanly, **repeated or inadequately treated infections** that ascend to the kidneys can cause scarring over time. If you're having more than two or three a year, that pattern warrants investigation, not just another course of antibiotics.
3. **Know your autoimmune status and its kidney implications.** Lupus, Sjögren's, and other autoimmune conditions that skew female can involve the kidneys, sometimes before other symptoms are obvious. If you have a diagnosed **autoimmune condition**, kidney function monitoring should be a routine part of your care, not an afterthought.
4. **Don't accept a borderline creatinine without context.** If you strength train or carry more muscle than average, push for cystatin C rather than letting a flagged creatinine number trigger unnecessary anxiety or workup based on the wrong baseline.

For Men:

1. **Monitor urinary symptoms before they become a kidney problem.** **Prostate enlargement** causes urinary obstruction that can silently back pressure into the kidneys over years. Hesitancy, weak stream, frequent nighttime urination — these aren't just inconveniences, they're early warning signs worth addressing proactively rather than waiting until kidney function is already affected.

2 **Be more aggressive about kidney disease screening.** Men progress to kidney failure faster than women, in part to **testosterone's pro-fibrotic effects** on kidney tissue. Combined with the fact that muscular men can have elevated creatinine that masks as normal variation, it's important not to be passive about annual monitoring. Especially true if you have any risk factors, such as hypertension, diabetes, family history, or cardiovascular disease.

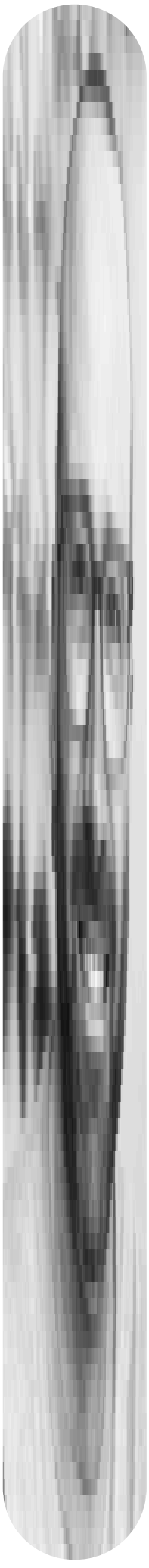
3. 3 **Take kidney stones seriously as cumulative damage, not isolated events.** Men get kidney stones at roughly **twice the rate of women**. A single stone is painful but usually not dangerous to long-term kidney health. Recurrent stones are different — they cause scarring, obstruction, and progressive damage. If you've had more than one, metabolic workup and dietary intervention are warranted, not just waiting for the next one.

4. 4 **Consider your lifestyle habits.** Tobacco and alcohol are harmful to all kidneys. Full stop. But it's worth noting that men tend to **drink** and **smoke** at much higher rates and in greater volume than women. This can accelerate and exacerbate kidney conditions.

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