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Health

A quarter of male soldiers in the US could have low testosterone

Newly introduced testosterone screening in the US Army could find more than 100,000 male soldiers with low testosterone

By Alice Klein

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US service members are required to undergo testosterone screening
U.S. Army, Spc. Annie Riley

A quarter of active-duty male soldiers in the US Army have low testosterone, according to a study of nearly 500 personnel. This has implications for the recent

ruling that all US service members aged 30 and older must undergo annual testosterone screening and be offered voluntary replacement therapy if they have low levels.

"For soldiers with genuine, symptomatic testosterone deficiency, appropriate treatment can improve symptoms and important aspects of physical health, including sexual function, body composition, muscle mass and bone health," says Darren Katz at the University of Melbourne, who wasn't involved in the research. "However, there is currently insufficient evidence that [it] will improve military readiness, operational performance or fighting capacity."

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Stephen Hennigar at Pennington Biomedical Research Center in Louisiana and his colleagues analysed data from the Military Health and Nutrition Examination Study, which measured testosterone levels and other health markers in active-duty personnel at five military centres across the US between 2024 and 2026.

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Among the 479 male personnel tested, 26 per cent had testosterone levels below 300 nanograms per decilitre, classified as low by the American Urological Association. Based on this, the researchers estimate that 100,691 male soldiers in the US Army could have low testosterone readings.

Older male personnel were more likely to have low testosterone, with 33 per cent of those aged 30 and older being classified in this group. Female personnel weren't included in the analysis because their testosterone levels were often below the limits of detection.

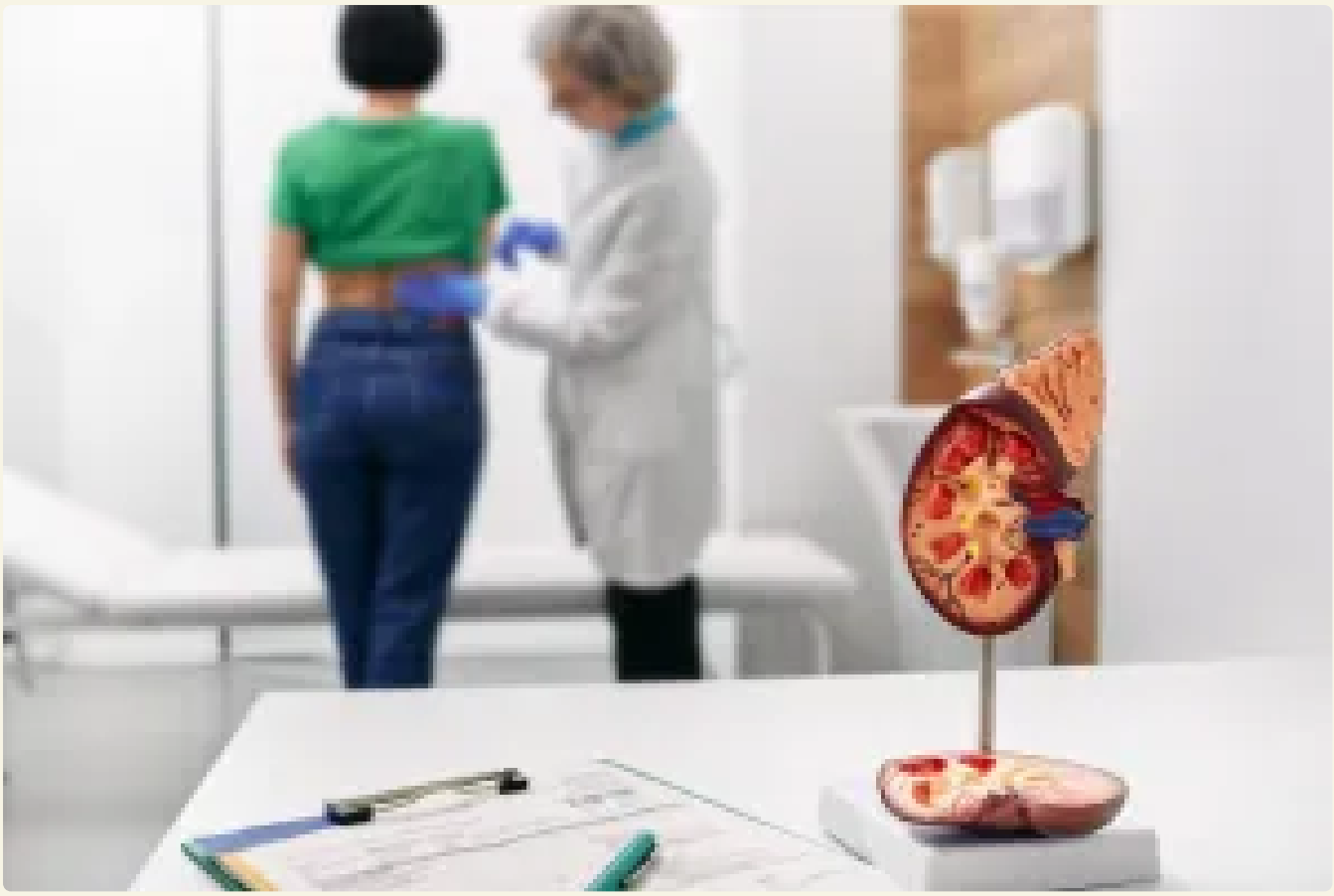




When announcing the testosterone-boosting initiative in July, Pete Hegseth, the US defence secretary, noted that testosterone levels naturally decline with age and said the decision to offer replacement therapy to soldiers with low levels was "about restoring and optimising your natural capabilities, protecting your longevity, ensuring you have the biological foundation required to sustain the fight". There are no ramifications for choosing not to have the therapy, he said, adding that personnel under the age of 30 will also be able to opt for testosterone screening.

But a single testosterone test isn't a reliable measure of deficiency, says Katz. "Testosterone levels can fluctuate considerably, even within the same individual, and may be influenced by numerous factors, including the time of day blood is collected, recent food intake, inadequate sleep, obesity, acute illness and excessive physical or psychological stress," he says.

Even if testosterone levels are consistently low in blood tests, that doesn't necessarily mean someone has a deficiency, says Katz. The American Urological Association recommends that a clinical diagnosis be made only if an individual also has related symptoms, such as reduced energy, motivation, libido and erectile function.



Low testosterone levels may protect women from kidney injury

Men get acute kidney injury – where kidney performance suddenly declines – at a higher rate than women. An experiment with mice suggests that this could be related to having higher levels of testosterone

"Testosterone should be prescribed to treat a medical condition, not simply to achieve a higher number on a blood test or as a general strategy to enhance the performance of otherwise healthy soldiers," says Katz. "I would favour a more targeted approach [to diagnosing and treating testosterone deficiency] based on symptoms, clinical findings and relevant risk factors rather than automatically screening every man over the age of 30."

Some of the side effects of testosterone replacement therapy include acne, testicle shrinkage and reduced sperm production and fertility. It also increases the risk of bone fractures and pulmonary embolism (blood clots in the lungs) in older men.

Timothy Piatkowski at the University of Queensland in Australia says there is a risk that high testosterone levels will be conflated with being a good soldier. "Testosterone is already increasingly being used as an oversimplified proxy for masculinity and virility," he says.

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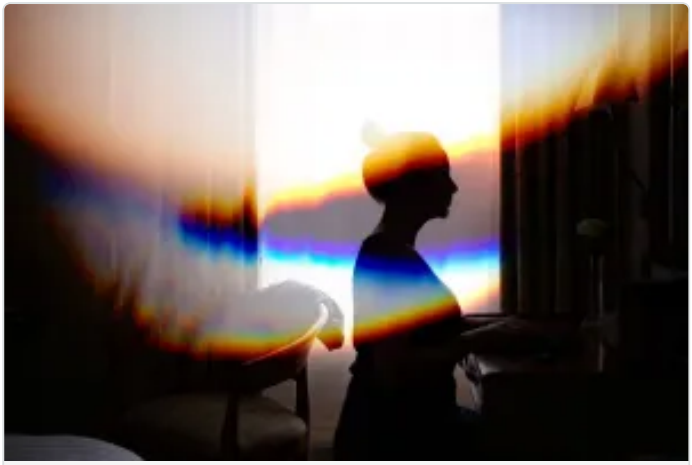

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