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Testosterone and Your Heart

What the TRAVERSE trial showed about heart attacks and strokes, and the lab checks that keep treatment safe.

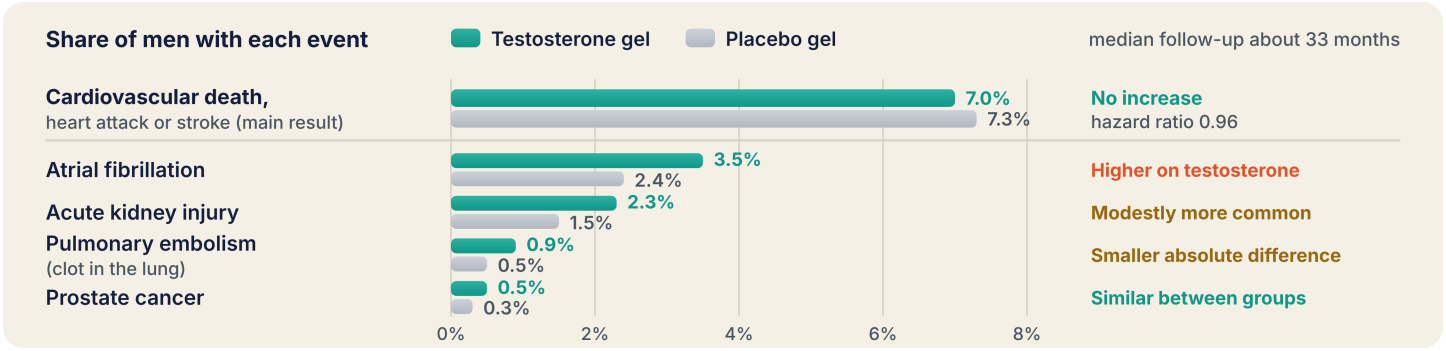
5,246
men aged 45 to 80 with low testosterone studied in TRAVERSE

7.0%
cardiovascular deaths, heart attacks or strokes on testosterone, vs 7.3% placebo

54%
a hematocrit above this on treatment means changing the plan

THE TRAVERSE TRIAL, 2023

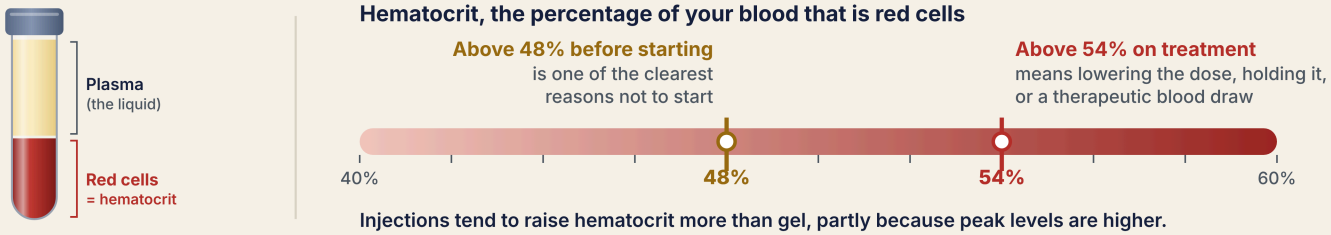
No rise in heart attacks or strokes



TRAVERSE randomly assigned men with symptoms, two morning testosterone readings under 300 ng/dL and heart disease or high heart risk to a testosterone gel or a placebo. Testosterone replacement therapy (TRT) did not raise major heart events in these men. Observational studies in 2013 and 2014 had led to a 2015 FDA heart warning, replaced in 2025 by a blood pressure warning.

THICKER BLOOD

The lab number you'll hear about most



Testosterone makes the body build more red blood cells, which can thicken the blood and raise clotting risk. If TRT is working, a rising hematocrit rarely means giving it up. A dose change, a different formulation or a periodic therapeutic blood draw (a blood donation done for medical reasons) is the usual answer.

Treatment, not anti-aging

TRT treats a defined medical condition called hypogonadism. It isn't muscle enhancement for healthy men with normal levels. Whoever prescribes it, please make sure your cardiologist is in the loop.

WHO SHOULD START, WHO SHOULDN'T AND LAB CHECKS ARE ON THE BACK

BEFORE AND DURING TREATMENT

Who should start, who shouldn't and what to check

CONFIRMING LOW TESTOSTERONE

the gate before any prescription

Symptoms	Low libido, fatigue, mood changes, loss of muscle, more body fat, erectile dysfunction, and sometimes hot flashes or a drop in bone density.
Two morning blood tests	Both showing total testosterone below 300 ng/dL. One low value doesn't make a diagnosis, since levels move with sleep, illness, stress and time of day.
Other causes first	Depression, sleep apnea, untreated diabetes and thyroid disease each have their own treatment, and TRT won't fix any of them. A low level with no symptoms is not treated.

CLEAREST REASONS NOT TO START

Prostate, urinary, breast	Active or untreated prostate cancer, an unevaluated prostate nodule, an unexplained PSA above 4 (or above 3 in higher-risk men), severe lower urinary tract symptoms, or male breast cancer.
Blood, heart and sleep	A hematocrit above 48 percent at baseline, uncontrolled heart failure, a heart attack or stroke in the past three to six months, or untreated severe sleep apnea.
Wanting children	TRT suppresses sperm production, and many men become functionally infertile on it, sometimes permanently. Alternatives such as clomiphene or hCG are talked through before starting.

MONITORING SCHEDULE

3 to 6 months	Total testosterone, hematocrit, PSA and a check-in on symptoms.
12 months	The same labs, plus a digital rectal exam if appropriate for your age and risk.
Every year after	Testosterone, hematocrit, PSA, blood pressure and a symptom review. Bone density studies are sometimes added.

IF YOU ALREADY HAVE

Sleep apnea	TRT can worsen it. Get it diagnosed and treated, usually with CPAP, before starting. Snoring, daytime sleepiness or breathing pauses call for a sleep study first.
AFib	The modest added AFib risk is weighed against the symptom benefits, the alternatives and your stroke risk score. For some men with controlled AFib, TRT is still reasonable.
Heart failure	TRT can cause fluid retention. In stable heart failure this is usually manageable, and your heart failure team is involved before starting.

CALL 911

Stroke or lung clot signs	Stroke signs (BE-FAST) or sudden chest pain or breathlessness. Same day for one swollen or painful leg.

NEW PALPITATIONS?

If you develop new palpitations or an irregular pulse on TRT, mention it. AFib can be silent, and given the trial signal, there is a low threshold to check an EKG or get a heart monitor.

READ THE FULL ARTICLE

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testosterone-cv-risks

For education only, and not a substitute for advice from your own physician. Sources include the TRAVERSE trial (Lincoff et al., NEJM 2023), the 2018 Endocrine Society and 2024 AUA testosterone guidelines, Vigen et al. (JAMA 2013), Finkle et al. (PLOS ONE 2014) and FDA drug safety communications from 2015 and 2025.

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