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## The effect of testosterone supplementation on depression symptoms in hypogonadal men from the Testim Registry in the US (TRiUS).

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## **Abstract**

**OBJECTIVE:** To determine the effect of long-term testosterone replacement therapy (TRT) on depression symptoms in hypogonadal men.

**METHODS:** Data were from TRiUS, a multicenter, 12-month observational registry (N = 849) of hypogonadal men prescribed 1% testosterone gel. Measures including total testosterone (TT) were assessed at baseline and months 3, 6, and 12. Depression symptoms were measured with Patient Health Questionnaire-9 (PHQ-9), a validated self-report questionnaire. A PHQ-9 score decrease of ≥5 represents clinical improvement.

**RESULTS:** PHQ-9 scores were available for 762/849 TRiUS participants at baseline. Overall, 92.4% (704/762) demonstrated some level of depressive symptoms, with 17.3% (132/762) having moderately severe (score 15-19) to severe (score 20-27) symptoms. Subcohorts with significantly (p  $\leq$  0.03) more moderately severe to severe symptoms were: <60 years old, TT levels <250 ng/dl (<8.68 nmol/l), HIV/AIDS-positive, or used antidepressants or opioids. TT levels and PHQ-9 scores improved significantly (p < 0.01) by 3 months of TRT. At 12 months PHQ-9 scores showed a clinically meaningful mean improvement of 5.62 points, patients with moderately severe to severe symptoms decreased from 17.3% to 2.1% (5/233), and subcohorts, including those defined by age (<60 years) and antidepressant use, had improved PHQ-9 scores  $\geq$ 5.

**CONCLUSION:** TRT may reduce depression symptoms in hypogonadal men, including middle -aged men and those using antidepressants.

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**Publication Types, MeSH Terms, Substances** 

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