

Low T not just in males: Testosterone, atherosclerosis, obesity may be linked in females

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While testosterone replacement therapies may be controversial in males, new research in *The FASEB Journal* may extend this controversy to females too. That's because research involving mice, appearing in the April 2015 issue, suggests that there is an association between low levels of androgens (which includes testosterone), and atherosclerosis and obesity in females.

"We hope that our study will contribute to intensified research efforts on the definition of [androgen deficiency](#) in women (e.g. which levels of androgens in the blood should be considered too low?), the consequences androgen deficiency may have for women's health and ultimately, whether androgen deficient women may need androgen treatment for normalization of their [androgen levels](#) in order to maintain long-term cardiovascular and overall health," said Åsa Tivesten, M.D., Ph.D., a researcher involved in the work from the Wallenberg Laboratory for Cardiovascular and Metabolic Research at Sahlgrenska University Hospital in Göteborg, Sweden.

Tivesten and colleagues discovered this association by comparing female mice with and without the androgen receptor. They found that female mice without the [androgen receptor](#) developed obesity, high levels of fat in blood and increased atherosclerosis. They treated these [female mice](#) with androgens and body fat and atherosclerosis were reduced.

"The notion that there are 'male' and 'female' hormones is a bit too simplistic and this research really brings that to light," said Gerald Weissmann, M.D., Editor-in-Chief of *The FASEB Journal*. "Both men and women have androgen hormones—just at different levels. This report really raises the question of what levels of androgen hormones are optimal for the best health."

More information: The androgen receptor confers protection against diet-induced atherosclerosis, obesity, and dyslipidemia in female mice. *FASEB J.* April 2015 29:1540-1550; [DOI: 10.1096/fj.14-259234](#)

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