

## Depression Common in Borderline Testosterone

Miriam E Tucker March 07, 2015

SAN DIEGO, California — More than half of men referred for borderline low testosterone levels have depressive symptoms or overt depression, a new study finds.

The results were presented on March 6 here at the annual meeting of the Endocrine Society, [ENDO 2015](#), by Michael S Irwig, MD, associate professor of medicine and director of the Center for Andrology in the Division of Endocrinology, George Washington University, Washington, DC.

"Men who seek care for borderline testosterone levels have very high rates of depressive symptoms or depression. They also have very high rates of obesity and sedentary lifestyle," Dr Irwig told *Medscape Medical News*.

He added, "Patients don't want to acknowledge this. There's a lot of denial of it. So I recommend a validated [depression screening] instrument that would draw it out."

The study specifically looked at men with borderline low testosterone levels, rather than those with overt deficiency. "If they're clearly hypogonadal, we would treat with testosterone, but for these borderline men...I often try to manage their comorbidities, including depression and obesity," he said.

Evidence is mixed as to whether treating hypogonadal men with testosterone alleviates depression. "The borderline is really a vague gray zone where nobody really knows what to do with these men or whether the testosterone is linked to their symptoms, but there are tons of these men coming in with these borderline levels...seeking some therapy," Dr Irwig noted.

Asked to comment, Cynthia A Stuenkel, MD, clinical professor of medicine at the University of California, San Diego, School of Medicine, told *Medscape Medical News*, "Certainly, when counseling an obese patient found to have low T, doing an appropriate depression inventory — as the instrument was used in the study — might be an important added thing to consider."

### Depression, Obesity, Erectile Dysfunction Common in "Borderline" T

The study participants were 200 adult men aged 20 to 77 years who had been referred for management of borderline low testosterone, defined as levels of 200-350 ng/dL. All underwent repeat measurements of total testosterone and were assessed for depression using the [Patient Health Questionnaire-9](#) and/or already had an established diagnosis of depression or were currently using an antidepressant.

A total of 56% of the men had either a PHQ-9 score of 10 or greater, a known depression diagnosis, or were using an antidepressant. The cutoff score of 10 or greater on the PHQ-9 identified depressive symptoms in 7% of the men who had not reported having depressive issues.

By comparison, rates of depressive symptoms (PHQ score of 10 or greater) in the general population ranged from 15% to 22% in an ethnically diverse, primary-care population, whereas the rate was 5.6% among overweight and obese adults in the 2005–2006 National Health and Nutrition Examination Survey.

Only 18% of the men in the current study were of normal weight or below normal weight, whereas 39% were overweight and 43% were obese. Half (51%) reported exercising less than once a week, 27% exercised one to three times per week, and just 22% exercised four or more times a week.

The men were also found to have numerous related health problems: 89% reported erectile dysfunction; 69%, low libido; 52%, low energy; 42%, sleep disturbance; and 27%, diminished concentration.

Dr Irwig cautioned that these patients had been referred for their borderline testosterone levels and that the findings may not extend to other clinical populations. Nonetheless, for such patients found to have depressive symptoms and/or obesity, both problems need to be addressed and may require referral, he advised.

Dr Stuenkel noted that many women going through menopause have depressive symptoms "but wouldn't merit a diagnosis of major depression, whereas these men seem to have a fairly high incidence. So my bottom line from [Dr Irwig's presentation] is that this needs to be looked at in more detail, both from the standpoint of the relationship of obesity and low T, which I think is better understood, and this new added dimension of depression, which I think is very interesting."

She added that the high rate of erectile dysfunction in these men also raises concern about cardiovascular disease.

"I would have liked to have seen where they were clustering by age. Erectile dysfunction to me is a cardiovascular-disease equivalent until proven otherwise. Low T can contribute, as can obesity. I would worry these men have other cardiovascular risk issues. Often there's more than initially meets the eye."

Indeed, professionals who treat and study hypoandrogenism in men might benefit from looking at data on menopause in women, Dr Stuenkel suggested.

"I love looking at this with the lens of what we've learned in women. We've learned to give hormones to young, healthy women, we withhold from those at high risk, we age-focus, and focus on symptoms. I think the clinicians dealing with men would do well to step back and certainly get more data but also observe these parallels, because I think there's more to be learned."

*Dr Irwig and coauthors as well as Dr Stuenkel have disclosed no relevant financial relationships.*

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