

Study calls for standardization in measuring testosterone levels

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(Medical Xpress)—While the number of men in the United States diagnosed with low testosterone has increased considerably over the last decade, a team of experts, led by Dr. Darius A. Paduch from NewYork-Presbyterian/Weill Cornell Medical Center, has found that relying on a blood test alone is an insufficient method of diagnosing the condition.

The largest review and analysis of its kind—on published data from more than 10,000 patients—appears online today [here](#) and will be in the May issue of Urology. The initiative was spearheaded by the American Urological Association (AUA) and was conducted by a panel of physicians representing six major U.S. institutions.

Despite advances in technology, inconsistent laboratory practices, among other issues, leads to unreliable blood [test results](#). "In some cases, [testosterone](#) (T) levels, tested on the same day from a blood sample taken from a single patient, differed by as much 30 percent from one lab to the next," says the study's lead author, Dr. Paduch, a urologist and male sexual medicine specialist at NewYork-Presbyterian/Weill Cornell Medical Center and associate professor of urology and reproductive medicine at Weill Cornell Medical College.

Given the result of the review, Dr. Paduch notes that a stringent reliance on blood test results alone can lead to both under- and overtreatment of [low testosterone levels](#) in men, also known as hypogonadism. Instead, he notes, the data demonstrate that "it's critical to primarily focus on treating the patient and his symptoms, while using the T level from a

blood test as a secondary guideline." Symptoms may include fatigue, loss of libido, and erectile dysfunction.

Low testosterone has often been thought of as a condition affecting men age 65 and older. But the incidence of diabetes and obesity in younger men, conditions that are also associated with low testosterone, has led to an increase in its diagnosis. Of note, [testosterone therapy](#) may help with diabetes and weight control for some men.

The medical community has long questioned the reliability of blood tests to diagnose hypogonadism. What makes these latest findings significant are the stringent criteria used for the study, which included an exhaustive review of hundreds of papers, as well as input from a large multidisciplinary team of medical professional societies and clinical experts from diverse fields and representatives from government agencies and medical equipment manufacturers.

Although variable [blood test](#) results can be attributed to a host of factors, one of the biggest problems the study uncovered is a lack of consistency in laboratory practices—from collecting and storing blood samples to using different methods to analyze the results. To address these concerns, Dr. Paduch advises doctors and other health care providers to insist on labs that follow standardized guidelines for testosterone testing issued by the Centers for Disease Control (CDC). Dr. Paduch and his colleagues would also like to see testing standards for testosterone that are comparable to those for the hemoglobin A1C test, which provides information about a person's average levels of blood glucose to diagnose diabetes. "Since the A1C test has been standardized throughout the U.S. and Europe, the same result can be easily replicated," says Dr. Paduch.

Dr. Paduch and his colleagues are working with the CDC to establish evidence-based T-level norms, another challenge associated with diagnosing low testosterone.

Provided by Weill Cornell Medical College

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