Ads for low-testosterone treatments benefit sales but not necessarily health

March 21 2017

Direct-to-consumer advertising for drugs to treat testosterone deficiency—or "low T"—increases prescriptions to men for hormone-replacement therapies but may not improve their health, UC Davis physician Richard Kravitz said in an editorial published in the March 21 issue of the *Journal of the American Medical Association*.

Kravitz, a professor of internal medicine and researcher on improving communications between patients and their physicians, said an increase in ads and prescriptions for hormone-replacement therapies beginning around 2000 preceded professional guidelines for physicians and product-safety research and led to unnecessary treatments for low testosterone, or age-related hypogonadism.

"Between 2000 and 2011, testosterone use increased at least 3-fold in the United States," Kravitz wrote. "Many men who were treated with these products did not undergo appropriate testing for testosterone deficiency or meet diagnostic criteria for hypogonadism."

The likelihood of hypogonadism increases with age and can cause symptoms such as low libido, reduced strength, fatigue and depression. It is diagnosed with a blood test together with clinical symptoms and signs, and it is treated with products that increase levels of male-reproductive hormones known as androgens, most often testosterone, through injections, gels, transdermal patches or subcutaneous pellets.

In his editorial, Kravitz referenced a study in the same issue of the

journal estimating that "1 additional exposure to an androgen replacement therapy television advertisement was associated with 14 new tests, 5 new initiations, and 2 initiations without testing per million men exposed," suggesting that "patients respond to [direct-to-consumer-advertising] and physicians respond to patients."

When medical research began to link androgen replacement therapy with cardiovascular disease, the number of ads for these products declined starting in 2014, likely due to U.S. Food and Drug Administration requirements for informing consumers in drug advertising about potential risks, according to Kravitz.

"But with revenue from topical testosterone products topping $2.2 billion the year before, the market for androgen replacement therapy was still substantial," he wrote.

While restrictions on direct-to-consumer medication ads—such as limits on timing and content—have been proposed, Kravitz wrote that a complete ban is unlikely given free speech protections. He recommended continued research on the topic, since direct-to-consumer advertising, "while a potentially powerful tool in motivating patient behavior and perhaps even physician prescribing, does not necessarily serve to improve the health of patients or the public."

More information: *Journal of the American Medical Association*, DOI: 10.1001/jama.2017.1364

Provided by UC Davis

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