

Nutritional sports supplements sold in Australia test positive for banned androgens

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Some nutritional sports supplements marketed to athletes—claiming to help them build lean muscle, reduce body fat and enhance endurance—are secretly fortified with androgens, which are banned from use in sports, a new study from Australia finds. The results will be presented in a poster Sunday, June 22, at ICE/ENDO 2014, the joint meeting of the International Society of Endocrinology and the Endocrine Society in Chicago.

"The point is that 'you can't judge a book by its cover.' The [nutritional supplement](#) label may not disclose all ingredients, and sometimes these additions are not declared on the product label. Athletes risk testing positive for a banned substance and the general public risks being inadvertently exposed to [androgens](#), which have recognized health risks," said principal investigator Alison Heather, PhD, professor in the Department of Physiology of the School of Medical Sciences at the University of Otago in Dunedin, New Zealand.

"The presence of androgens in the supplements is concerning, given that the products do not declare their addition. We need to investigate further just what the androgens in these supplements are so we can better understand the implications for health and sports doping," she said.

The worldwide dietary supplement market is worth an estimated \$142.1 billion and by 2017 is expected to reach \$204.8 billion, and most androgen-containing supplements state their contents on the label. Yet, the scientific literature contains reports of unlabeled androgen-

containing supplements, and lacking good manufacturing practice and regulation, companies can covertly add androgens to their nutritional supplements to better satisfy their advertised claims.

To investigate the availability of unlisted androgens in over-the-counter nutritional sports supplements, Professor Heather and her co-authors purchased 79 nutritional supplements randomly from Sydney-based stores, including protein powders, amino acids, creatines, fat metabolizers, "testosterone-boosters," carbohydrates and stimulant/nitric oxide "pre-workout"-based supplements.

Of the 74 samples they tested by bioassay, 6 were androgen-positive but did not list them on the label, and 1 was positive but listed an androgen on the label.

Professor Heather cautioned that, although only 10% of their [supplements](#) tested positive for androgens, the nutritional sports supplement industry is not very transparent about revealing all the ingredients in their products. She recommended more stringent legislation to enable the public to be fully aware of what they are putting into their bodies.

Provided by The Endocrine Society

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