

Anabolic steroid abuse is associated with increased systolic hypertension risk

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Anabolic androgenic steroid (AAS) abuse is associated with severe blood pressure (BP) increase and hypertension, new research reports. The results of the study will be presented in a poster Saturday, April 2, at ENDO 2016, the annual meeting of the Endocrine Society, in Boston.

Daytime and nighttime blood pressures were considerably higher among ongoing AAS abusers than among former abusers and non-users, and most ongoing abusers had hypertension during the night.

"The results provide scientific evidence that [anabolic steroids](#) cause [systolic blood pressure](#) increase and hypertension that may be associated with increased risk of cardiovascular disease," said lead study author Jon Bjarke Rasmussen, MD, doctoral fellow in the Department of Internal Medicine of Copenhagen University Hospital in Denmark.

"Anabolic steroids are increasingly used in the broader population, and some studies suggest that approximately 20% of men who do recreational strength training have experience with anabolic steroids," he added.

To study the impact of AAS abuse on [blood pressure](#), Dr. Rasmussen and his colleagues divided men 50 years of age and younger who were taking part in recreational strength training into three study groups: 37 ongoing AAS abusers, 33 former AAS abusers and 30 controls who had never used anabolic steroids.

In contrast to previous research that measured blood pressure by conventional sphygmomanometry and yielded conflicting results, the authors of this study used 24-hour ambulatory BP measurement (ABPM), considered to be a superior method to diagnose hypertension.

They measured the men's 24-hour ABPM every 20 minutes during the day and every 60 minutes through the night. Compared with the former abusers and the controls, the ongoing abusers' average day and night BPs were significantly ? roughly 8 to 10 millimeters of mercury (mmHg) ? higher.

Mean daytime systolic BP was higher among both the ongoing and former AAS abusers than among the controls, and nighttime systolic BP was higher among the ongoing AAS abusers compared with the controls.

The researchers considered daytime hypertension to be 135/85 mmHg or higher and nighttime hypertension to be 120/75 mmHg or higher. Nighttime systolic [hypertension](#) was more frequent among the ongoing AAS abusers than among the former AAS abusers and the controls, but diastolic BP was similar in all groups.

"Hopefully, our findings will contribute to increasing the awareness of the cardiovascular risk associated with anabolic steroid abuse and to the development of prevention strategies," Dr. Rasmussen said.

The authors recommend further related research to explore the association between AAS abuse and increased cardiovascular disease risk.

Provided by The Endocrine Society

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