

## **AUTHOR APPROVED PRESS RELEASE**

### **Anabolic-androgenic Steroid Abuse Linked To Long-Term Health Consequences**

The problem of anabolic-androgenic steroid (AAS) abuse has recently generated widespread public and media attention. Most AAS abusers, however, are not elite athletes like those portrayed in the media, and many are not competitive athletes at all. This much larger but less visible population of ordinary AAS users began to emerge in about 1980. In an article published in the current issue of "*Drug and Alcohol Dependence*," researchers report that the senior members of this population are only now entering middle age; they represent the leading wave of a new type of aging former substance abusers with specific medical and psychiatric risks.

Harrison G. Pope, Jr., MD, director of the Biological Psychiatry Laboratory at Harvard Medical School affiliate McLean Hospital, and colleagues reviewed the evolving literature on long-term psychiatric and medical consequences of AAS abuse. In their study, the authors report that long-term use of high doses of AAS may cause potentially irreversible cardiovascular toxicity, including damage to the heart muscle (myocardiopathy) and hardening of the arteries (atherosclerosis). In other organ systems, evidence of persistent toxicity is more modest, and these authors found little evidence for an increased risk of prostate cancer. High concentrations of AAS, comparable to those likely sustained by many AAS abusers, may produce cell death in various cell types, including neuronal cells which raises the possibility of irreversible neuropsychiatric toxicity. Finally, AAS abuse appears to be associated with a range of potentially prolonged psychiatric effects, including dependence syndromes, mood syndromes, and progression to other forms of substance abuse. However, the prevalence and severity of these various effects remains poorly understood. The authors report that as the first large wave of former AAS users now moves into middle age, these findings demonstrate that it is important to obtain more systematic data on the long-term psychiatric and medical consequences of this form of substance abuse.

"Imagine, for a moment, that cigarette smoking did not become widely prevalent until the 1980s, and that the great majority of cigarette smokers were currently still under the age of 50," said Pope. "In that scenario, we would have only scattered case reports and preliminary studies of the effects of tobacco and we could not easily estimate the long-term prevalence of these effects. An analogous situation may now exist with AAS. The preliminary studies are worrisome, but the jury is still out; over the next 10 years or so, the situation may prove to be better – or worse – than we know today."

Drug and Alcohol Dependence is the official journal of the College on Problems of Drug Dependence ([www.cpdd.org](http://www.cpdd.org)), the largest and oldest organization for the scientific study of drug dependence. The peer-reviewed Drug and Alcohol Dependence ([www.elsevier.com/locate/drugalcdep](http://www.elsevier.com/locate/drugalcdep)) is published by Elsevier Science Inc., a leading publisher of scientific, technical, and medical journals, books, and reference works. Elsevier Science is a member of the Reed Elsevier PLC group ([www.reedelsevier.com](http://www.reedelsevier.com)), a leading publishing and information business.

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