

Br J Sports Med. 2009 Oct;43(11):832-5. Epub 2008 Nov 3.

The effects of inhaled L-methamphetamine on athletic performance while riding a stationary bike: a randomised placebo-controlled trial.

Dufka F, Galloway G, Baggott M, Mendelson J.

Addiction Pharmacology Lab, California Pacific Medical Center Research Institute, 3555 Cesar Chavez, San Francisco, CA 94110, USA. john.mendelson@cpmcri.org.

OBJECTIVE:

L-methamphetamine (the non-abused isomer of methamphetamine) is banned in athletic competition because it may improve athletic performance, but there are no studies assessing its effects on performance. In the United States L-methamphetamine is formulated in the non-prescription Vick's Vapor Inhaler (VVI) nasal decongestant. VVIs sold elsewhere (we used ones from the UK) contain similar inactive ingredients (menthol, camphor and Siberian pine oil) but no L-methamphetamine. This study tested the effects of inhaled L-methamphetamine delivered from a widely available non-prescription product on athletic performance.

DESIGN:

In a 2-session double-blind placebo-controlled study 12 participants (ages 14-17) were dosed with 4 (session 1) and 12 (session 2) inhalations from VVIs with (USA) or without (UK) L-methamphetamine and then performed two 20 minute rides on a stationary bike with rides separated by a 30 minute rest.

OUTCOME MEASURE:

The main outcome measure was miles travelled during each 20 minute ride. Secondary outcome measures included postride urine toxicology; heart rate and blood pressure before, 1, 5 and 10 minutes postride; energy, performance, endurance, and ability to breathe; and VVI preference. Data were analysed using Excel statistical macros.

RESULTS:

After approximately 16 microg L-methamphetamine distance travelled was 5.26 (SD 0.53) miles vs 5.30 (0.55) with placebo; $p = 0.81$. After approximately 48 microg L-methamphetamine distance travelled was 5.30 (0.51) vs 5.35 (0.43) with placebo; $p = 0.85$. The approximately 16 microg dose increased systolic blood pressure from 72.6 (4.3) to 79.6 (6.6) mm Hg ($p = 0.03$) at 5 minutes postride but there were no other differences in outcomes.

CONCLUSIONS:

Modest doses of inhaled L-methamphetamine probably do not improve athletic performance but do minimally raise diastolic blood pressure.

PMID: 18981044 [PubMed - indexed for MEDLINE]