

### **An investigation into the uses and effects of Ephedrine**

Ephedrine, in fixed-combination with expectorants, bronchodilators, or sedatives, is used orally as a bronchodilator in the symptomatic treatment of mild bronchial asthma and reversible bronchospasm which may occur in association with chronic bronchitis, emphysema, and chronic obstructive pulmonary disease (COPD). However, in moderate to severe, acute asthma attacks or anaphylactic reactions including anaphylactic shock, subcutaneously administered epinephrine is the drug of choice. Ephedrine may be administered orally in mild cases of acute asthma and as an adjunct in chronic cases of pulmonary disease requiring continued medication. Ephedrine is also the main ingredient in many popular decongestant cold remedies, it is banned from the competitive arena by the IOC, the IAAF, the USOC, the NCAA, and the Boy and Girl Scouts of America, and several well-known athletes have been suspended from competition because Ephedrine occupied their urine. Despite these banishments, athletes such as Ice-hockey players, weight lifters and runners continue to use the drug before games, workouts and before interval sessions - a variety of different athletes and non-athletes also ingest Ephedrine in hopes of losing weight.

Ephedrine has sickened or killed eight hundred users. It originated from an Asiatic shrub, and contains ephedrine, a stimulant that acts on the central nervous system. The Food and Drug Administration (FDA) in the United States believes that Ephedrine may be the cause of more than fifty deaths. Most of the serious injuries involve high blood pressure that can cause bleeding in the brain, a stroke or a heart attack. Research has also been carried out into the effects of the drug. Scientists at the Defence and Civil Institute of Environmental Medicine (DCIEM) in North York, Canada asked twelve male cyclists to take part in a rugged, exercise-cycle workout that was designed to produce complete exhaustion in about twelve to thirteen minutes. The subjects attempted this workout 90 minutes after ingesting 1mg of Ephedrine per kilogram of body weight. On another day, the athletes hit the session 90 minutes after swallowing 5 mg of caffeine per kilo of body weight. In another situation, the athletes took both the Ephedrine and caffeine before stepping on to their bikes. And they also tried the red-hot session after taking in only a placebo. When taken alone Ephedrine failed to increase performance time compared to placebo.

For an independent, comprehensive and up-to-date outline of Ephedrine, its benefits, risks and side effects, refer to the American Botanical Council's monograph.

#### **'References'**

1. <http://www.ephedrine-ephedra.com/>
2. <http://www.medscape.com/druginfo/Druginf?id=1-2083&name=EPHEDRINE+HCL+ORAL&DrugType=1&MenuID=USEDOS&lassID=N&GeneralStatement=N>
3. <http://www.pponline.co.uk/encyc/0054.htm>
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