Ephedra

url: https://www.nccih.nih.gov/health/ephedra  
  
  
Ephedra  
Common Names: ephedra, Chinese ephedra, ma huang  
  
Latin Names: Ephedra sinica  
  
Background  
Ephedra is a low evergreen shrub with small scaly leaves. It has a long history of medicinal use in China and India to treat colds, fever, headaches, coughing, wheezing, and other conditions.  
The U.S. Food and Drug Administration (FDA) banned the sale of dietary supplements containing ephedrine alkaloids (stimulant compounds found in Ephedra sinica and some other plants) in the United States in 2004. Prior to the ban, ephedra was an ingredient in some dietary supplements promoted for weight loss, increased energy, and enhanced athletic performance.  
How Much Do We Know?  
Almost no new research on ephedra has been performed in the years since its use in dietary supplements was banned in the United States. Prior to the ban, substantial research had been done on ephedra s short-term effects on weight loss and its harmful effects.  
What Have We Learned?  
Prior to the ban, research showed that dietary supplements containing ephedra/ephedrine (usually in combination with caffeine) had modest short-term effects on weight loss. However, this benefit was considered insufficient to outweigh the serious risks of these supplements. No studies had assessed long-term effects on weight. The evidence regarding athletic performance was insufficient to allow any conclusions to be reached.  
What Do We Know About Safety?  
The FDA banned dietary supplements containing ephedrine alkaloids because of their serious safety risks. The supplements were associated with cases of heart attack, seizure, stroke, and sudden death. People with a history of cardiovascular disease, those taking high doses of ephedra, and those taking it in combination with other stimulants such as caffeine would be expected to be at increased risk, but some of the severe events occurred in people with no preexisting medical problems, people taking relatively low doses of ephedra, or people taking ephedra alone.  
Taking ephedra may also cause anxiety, dizziness, dry mouth, headache, irritability, nausea, personality changes, insomnia, and other symptoms.  
Because of ephedra s serious risks, it is considered unsafe for use during pregnancy or while breastfeeding.  
Keep in Mind  
Take charge of your health talk with your health care providers about any complementary health approaches you use. Together, you can make shared, well-informed decisions.  
For More Information  
Using Dietary Supplements Wisely  
Know the Science: How Medications and Supplements Can Interact  
Know the Science: How To Make Sense of a Scientific Journal Article  
NCCIH Clearinghouse  
The NCCIH Clearinghouse provides information on NCCIH and complementary and integrative health approaches, including publications and searches of Federal databases of scientific and medical literature. The Clearinghouse does not provide medical advice, treatment recommendations, or referrals to practitioners.  
  
Toll-free in the U.S.: 1-888-644-6226  
  
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Office of Dietary Supplements (ODS), National Institutes of Health (NIH)  
ODS seeks to strengthen knowledge and understanding of dietary supplements by evaluating scientific information, supporting research, sharing research results, and educating the public. Its resources include publications (such as Dietary Supplements: What You Need To Know) and fact sheets on a variety of specific supplement ingredients and products (such as vitamin D and multivitamin/mineral supplements).  
  
Website: https://ods.od.nih.gov  
  
Email: ods@nih.gov(link sends email)  
  
Key References  
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Thurn AL, Betz JM. Ephedra. In: Coates P, Betz JM, Blackman MR, et al., eds. Encyclopedia of Dietary Supplements. 2nd ed. New York, NY: Informa Healthcare; 2010:250-255.  
U.S. Food and Drug Administration. Final rule declaring dietary supplements containing ephedrine alkaloids adulterated because they present an unreasonable risk. Federal Register. 2004;69(28):6788-6854.  
  
  
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