

“Ephedra”

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Ephedra, also known as mahuang, is a perennial shrub native to Central Asia. It is especially prominent in China, Tibet, India and Pakistan.

As an herb with pharmaceutical properties, ephedra has been used for thousands of years in traditional Chinese medicine, usually as one of several components in multi-herbal formulas. It is generally prescribed, in this tradition, primarily for the treatment of asthma, as well as for the flu, chest and nasal congestion, wheezing, cough and the common cold. Ephedra is also used in Oriental medicine practices to treat headaches, fever, chills and a lack of perspiration.

Today, ephedra is listed for its medicinal properties in the national pharmacopeias of China, Japan and Germany, as well as in the Ayurvedic pharmacopoeia of India. In Germany, ephedra can be dispensed by medical prescription.

In the United States, ephedra is classified, for now, as a dietary supplement by the Dietary Supplement and Health Education Act (DSHEA), passed by Congress in 1994. As a medicine, it is used in herbal teas and in a variety of products prescribed by licensed naturopathic physicians. Because it is marketed in this country as a dietary supplement, not a drug, it mostly, but not entirely, is free of more stringent regulations through the Food and Drug Administration (FDA).

Ephedra-containing dietary products are also available as unprescribed “over the counter” dietary supplements that can be purchased at relatively low cost. The vast majority of these products are marketed as an aid to weight loss. A few products also market ephedra as an “energy supplement” of sorts.

Unquestionably, ephedra has medicinal and pharmacological properties. It affects the body in several different ways. It is one of the few preparations that increase metabolism, especially of stored body fat. For this reason, it is very popular, and for most overweight individuals, effective in promoting loss of unwanted weight.

Some weight lifters use ephedra-containing products to become “ripped,” losing that last amount of body fat and thus increasing the delineation of muscle mass. For this purpose, ephedra is usually combined with caffeine and some form of aspirin. This combination is sometimes called a “stack.”

The selling of ephedra products in this country, as well as abroad, is a multibillion dollar industry. Classified by law as a dietary supplement, ephedra, for all practical

purposes, can be sold essentially as a “food.” Unlike the usual pharmacologic drugs, the marketing of this product does not require pre-marketing testing for safety. A burden of proof is placed on the FDA to show that these products cause harm before they can be forcibly removed from the sales place.

Ephedra is also a stimulant, much like adrenaline. Some athletes believe it enhances their physical performance. It is banned by the National Football League (NFL), the National Collegiate Athletic Association (NCAA) and the International Olympic Committee (IOC), all of whom test for its presence. Some sports drinks, such as Extreme Ripped Force and Ephedra White Cross, contain ephedra.

Ephedra also stimulates the brain and in high doses, can be hallucinogenic. Various “street drugs,” such as certain types of “ecstasy,” containing high doses of ephedra can be obtained as illicit drugs. Since its production is not really controlled, literally hundreds of manufacturers of ephedra products exist in the state of Texas alone.

The FDA has engaged consultants who have concluded that ephedra can be dangerous, accounting for over a thousand reported adverse events and over a hundred deaths. Since tens of millions of people use ephedra-containing products, the Ephedra Education Council has questioned the FDA’s conclusions and claims the occurrence of adverse events and even deaths with those using ephedra is no higher than the “background level” that would be seen in a group of people of this size.

In a few small studies, including those published from Harvard and Columbia Universities, there is no real evidence to conclude that ephedra is harmful. These studies, however, are too limited to apply their conclusions on safety or efficacy to large populations of users. Ephedra does increase body temperature, increase heart rate, elevate blood pressure and increase metabolism, as well as cause other changes. It is these properties that make it an effective weight loss therapy.

The American Herbal Products Association (APHA) and the National Nutritional Foods Association (NNFA) have developed guides, recommending individual doseages of ephedra do not exceed 25 milligrams in one setting and no more than an accumulative doseage of 100 milligrams be consumed in any one day. If used within these guidelines, ephedra would be relatively safe.

The DSHEA laws limit all dietary supplements to contain only natural substances. No synthetic products should be added to a preparation. Thus, ephedrine sulfate, pseudoephedrine hydrochloride and all forms of phenylpropanolamine as “additives” are banned.

The recent highly publicized death in spring training of Steve Bechler, a Baltimore Oriole professional baseball pitcher, has kindled new interest for more effective FDA intervention and regulation. This athlete, who allegedly had been using ephedra, died of heat stroke with a body temperature of 108°F.

So, are ephedra-containing products, marketed as a dietary food supplement and not monitored or regulated as a drug, safe? The answers to that question are inconsistent and controversial. The FDA has commissioned the RAND Corporation, an independent Washington-based “think tank,” to critically review the existing evidence. That may help.

Until we have better information, ephedra products should be used with considerable care. Following the AHPA and NNFA guidelines to not exceed the limited recommended doseages is good advice. Higher doses should be avoided. When taken in excessive amounts, ephedra can be dangerous or even deadly.