

Are Human Dietary Supplements Safe? The Supplement Sleuth
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The author of this article, Jennifer Couzin-Frankel is a staff writer for Science. She wrote about Pieter Cohen's findings that some human dietary supplements are tainted. Dr. Cohen is an assistant professor at Harvard Medical School and an internist at Cambridge Health Alliance and an expert on dietary supplements. He and two collaborators have found that at least a dozen supplements sold in the US for weight loss, enhanced brain function, and improved athletic performance contained a synthetic stimulant. The chemical structure of that stimulant resembled methamphetamine and it had only been tested in 2 animal studies in the 1940's. Its efficacy and safety in humans were not known.

The modern supplement era began in 1994. Congress passed the Dietary Supplement and Health Education Act. Before then the supplements industry was primarily focused on minerals and vitamins. The Act legally defined supplements as substances intended to supplement the diet, containing dietary ingredients such as herbs, botanicals, or vitamins. The law did not require companies to notify FDA as long as the dietary supplement had a history of use before the law was passed.

Unlike drug products that must be proven safe and effective for their intended use before marketing, there are no provisions in the law for FDA to approve dietary supplements...before they reach the consumer. The agency can only act after a supplement is on the market and evidence shows it is unsafe.

Cohen and others were working in a network of neighborhood clinic and noticed that some patients developed unexplained symptoms. One had palpitations, sweating, anxiety, and fatigue. Another went to the ER with kidney failure. One had a urine test positive for amphetamines; that person lost their job. The commonality among the patients was that they were Brazilian immigrants and had been taking a weight loss pill imported in bulk from Brazil; it was a prescription drug. Private lab testing of the capsules revealed, amphetamines, thyroid hormones, diuretics, benzodiazepines (e.g., valium, Xanax are in this group of drugs), and antidepressants. The group then did a survey of Brazilian clinic patients and a couple of nearby churches; 18% in the clinic and 9% in the churches were taking the pills and two-thirds reported side effects.

Dietary supplements which are not prescribed have also been found to be tainted with substance(s), as have some drugs.

Lesson. When you decide to take a prescription drug and have side effects that are not listed for it, contact your doctor; if you're taking a prescription drug obtained from other than your doctor, likewise, contact your doctor. In either situations, discontinue use of the drug.

Lesson. Think twice before administering supplements and non-prescription herbals to your dog. Do you really know what is in the product? How do you know? Some certainly will be safe. Others may be tainted as in the case of substances consumed by humans.