



TOX TOPIC*

*Documents like this created after 2014 are dubbed Express Statements.

Dietary Supplement Adulteration and Impact on Human Health

Reviewed by the SOT Food Safety Specialty Section leadership in June 2015

Introduction

The use of dietary supplements (also called natural health products in some countries) is growing, and the products are becoming more widely available in stores and on the internet. According to some estimates, United States consumers spent over \$28 billion on dietary supplements in 2010. The ingredients for these products are grown and/or processed in many different countries and may go through many distribution nodes before being used in the final products. Adulteration (the purposeful addition of ingredients not listed on the product label) can occur at any stage in the manufacturing process, which means that consumers can be exposed to unknown, and potentially dangerous ingredients. Companies and governments have an increased need to monitor these products. There are some categories of products (especially those marketed for weight loss, erectile dysfunction, body building, and sleep problems) that tend to have more incidence of adulteration than others.

Issues

It is recognized around the world that adulterated dietary supplements are a potential health concern for consumers. Furthermore, many countries have traditional medicinal products and practitioners. Many of these traditional products are imported for use by multicultural communities and by people wishing to use complementary and alternative medicines. These products, for the most part, will be of good quality, but because of differing quality standards in different countries, it is possible that some traditional medicines may contain adulterants or contaminants such as pharmaceutical drugs or heavy metals, that will not appear on the product label. These potentially harmful ingredients may be difficult to detect. For example, an herbal supplement may not contain the correct plant species. The dietary supplement may be contaminated with other herbs, pesticides, or metals, or even adulterated with unlabeled ingredients such as prescription drugs.

Quality standards that help determine the authenticity, identity and purity of ingredients can aid regulators, manufacturers and consumers by increasing the quality of products sold on the market. The quality of products can be increased by having regulations for quality control, and/

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or independent third party assessment showing that the ingredients and the final product are indeed manufactured properly. These efforts can help prevent adulteration as well as accidental contamination of products. Poor quality products will always reflect badly on, and reduce public confidence in, specific product lines, and dietary supplements as a whole.

Additional Sources of Information:

- US Food and Drug Administration: <http://www.fda.gov/Food/DietarySupplements/default.htm>
- Health Canada: <http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/med/nat-prod-adulter-eng.php>
- United States Pharmacopeia: <http://www.usp.org>

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