



Highlights of [GAO-10-662T](#), a testimony before the Special Committee on Aging, U.S. Senate

### Why GAO Did This Study

Recent studies have shown that use of herbal dietary supplements—chamomile, echinacea, garlic, ginkgo biloba, and ginseng—by the elderly within the United States has increased substantially. Sellers, such as retail stores, Web sites, and distributors, often claim these supplements help improve memory, circulation, and other bodily functions. GAO was asked to determine (1) whether sellers of herbal dietary supplements are using deceptive or questionable marketing practices and (2) whether selected herbal dietary supplements are contaminated with harmful substances.

To conduct this investigation, GAO investigated a nonrepresentative selection of 22 storefront and mail-order retailers of herbal dietary supplements. Posing as elderly consumers, GAO investigators asked sales staff (by phone and in person) at each retailer a series of questions regarding herbal dietary supplements. GAO also reviewed written marketing language used on approximately 30 retail Web sites. Claims were evaluated against recognized scientific research published by the National Institutes of Health (NIH) and the Food and Drug Administration (FDA). GAO also had an accredited lab test 40 unique popular single-ingredient herbal dietary supplements for the presence of lead, arsenic, mercury, cadmium, organochlorine pesticides, and organophosphorous pesticides.

[View GAO-10-662T](#) or [key components](#). For more information, contact Gregory D. Kutz at (202) 512-6722 or [kutzg@gao.gov](mailto:kutzg@gao.gov).

## HERBAL DIETARY SUPPLEMENTS

### Examples of Deceptive or Questionable Marketing Practices and Potentially Dangerous Advice

#### What GAO Found

Certain dietary supplements commonly used by the elderly were deceptively or questionably marketed. FDA statutes and regulations do not permit sellers to make claims that their products can treat, prevent, or cure specific diseases. However, in several cases, written sales materials for products sold through online retailers claimed that herbal dietary supplements could treat, prevent, or cure conditions such as diabetes, cancer, or cardiovascular disease. When GAO shared these claims with FDA and the Federal Trade Commission (FTC), both agreed that the claims were improper and likely in violation of statutes and regulations. In addition, while posing as elderly customers, GAO investigators were often told by sales staff that a given supplement would prevent or cure conditions such as high cholesterol or Alzheimer’s disease. To hear clips of undercover calls, see <http://www.gao.gov/products/GAO-10-662T>. Perhaps more dangerously, GAO investigators were given potentially harmful medical advice. For example, a seller stated it was not a problem to take ginkgo biloba with aspirin to improve memory; however, FDA warns that combining aspirin and ginkgo biloba can increase a person’s risk of bleeding. In another case, a seller stated that an herbal dietary supplement could be taken instead of a medication prescribed by a doctor. GAO referred these sellers to FDA and FTC for appropriate action. The table below includes several deceptive claims made by sellers.

**Deceptive Marketing Claims for Herbal Supplements Found by GAO Investigators**

Claim	Comments
Garlic prevents obesity and diabetes and cures cardiovascular disease.	NIH does not recognize this herbal supplement as a treatment for obesity, diabetes, or cardiovascular disease.
Ginseng cures diseases, including cancer.	NIH specifically recommends that breast and uterine cancer patients avoid this product, as it may have an adverse interaction with some cancer drugs.
Garlic can be taken in lieu of prescribed high blood pressure medication.	Evidence that this product reduces high blood pressure is unclear, and both NIH and FDA state that no dietary supplement can take the place of prescribed medicines.
Ginkgo biloba can be taken with a daily aspirin prescription.	Taking this product with aspirin may increase the risk of bleeding.
Ginkgo biloba treats Alzheimer’s disease, depression, and impotence.	No clear scientific evidence supports any of these treatment claims.

Source: GAO.

GAO also found trace amounts of at least one potentially hazardous contaminant in 37 of the 40 herbal dietary supplement products tested, though none in amounts considered to pose an acute toxicity hazard. All 37 supplements tested positive for trace amounts of lead; of those, 32 also contained mercury, 28 cadmium, 21 arsenic, and 18 residues from at least one pesticide. The levels of heavy metals found do not exceed any FDA or Environmental Protection Agency (EPA) regulations governing dietary supplements or their raw ingredients, and FDA and EPA officials did not express concern regarding any immediate negative health consequences from consuming these 40 supplements. While the manufacturers GAO spoke with were concerned about finding any contaminants in their supplements, they noted that the levels identified were too low to raise any issues internal product testing.