

# backgrounder

## Homeopathy: An Introduction



© Photodisc/Thinkstock

Homeopathy, also known as homeopathic medicine, is an alternative medical system that was developed in Germany more than 200 years ago. This fact sheet provides a general overview of homeopathy and suggests sources for additional information.

### Key Points

- There is little evidence to support homeopathy as an effective treatment for any specific condition.
- Although people sometimes assume that all homeopathic remedies are highly diluted and therefore unlikely to cause harm, some products labeled as homeopathic can contain substantial amounts of active ingredients and therefore could cause side effects and drug interactions.
- Homeopathic remedies are regulated by the U.S. Food and Drug Administration (FDA). However, FDA does not evaluate the remedies for safety or effectiveness.
- Several key concepts of homeopathy are inconsistent with fundamental concepts of chemistry and physics. There are significant challenges in carrying out rigorous clinical research on homeopathic remedies.
- Tell all your health care providers about any complementary health approaches you use. Give them a full picture of all you do to manage your health. This will help ensure coordinated and safe care.

### Overview

The alternative medical system of homeopathy was developed in Germany at the end of the 18th century. Supporters of homeopathy point to two unconventional theories: “like cures like”—the notion that a disease can be cured by a substance that produces similar symptoms in healthy people; and “law of minimum dose”—the notion that the *lower* the dose of the medication, the *greater* its effectiveness. Many homeopathic remedies are so diluted that no molecules of the original substance remain.

U.S. DEPARTMENT OF HEALTH  
AND HUMAN SERVICES

National Institutes of Health  
National Center for Complementary  
and Alternative Medicine



Homeopathic remedies are derived from substances that come from plants, minerals, or animals, such as red onion, arnica (mountain herb), crushed whole bees, white arsenic, poison ivy, belladonna (deadly nightshade), and stinging nettle. Homeopathic remedies are often formulated as sugar pellets to be placed under the tongue; they may also be in other forms, such as ointments, gels, drops, creams, and tablets. Treatments are “individualized” or tailored to each person—it is not uncommon for different people with the same condition to receive different treatments.

## **Use in the United States**

According to the 2007 National Health Interview Survey, which included a comprehensive survey on the use of complementary health practices by Americans, an estimated 3.9 million adults and 910,000 children used homeopathy in the previous year. These estimates included use of over-the-counter products labeled as “homeopathic,” as well as visits with a homeopathic practitioner. Out-of-pocket costs for adults were \$2.9 billion for homeopathic medicines and \$170 million for visits to homeopathic practitioners.

## **The Status of Homeopathy Research**

Most rigorous clinical trials and systematic analyses of the research on homeopathy have concluded that there is little evidence to support homeopathy as an effective treatment for any specific condition.

Homeopathy is a controversial topic in complementary health research. A number of the key concepts of homeopathy are not consistent with fundamental concepts of chemistry and physics. For example, it is not possible to explain in scientific terms how a remedy containing little or no active ingredient can have any effect. This, in turn, creates major challenges to rigorous clinical investigation of homeopathic remedies. For example, one cannot confirm that an extremely dilute remedy contains what is listed on the label, or develop objective measures that show effects of extremely dilute remedies in the human body.

Another research challenge is that homeopathic treatments are highly individualized, and there is no uniform prescribing standard for homeopathic practitioners. There are hundreds of different homeopathic remedies, which can be prescribed in a variety of different dilutions for thousands of symptoms.

## **Side Effects and Risks**

- Certain homeopathic products (called “nosodes” or “homeopathic immunizations”) have been promoted by some as substitutes for conventional immunizations, but data to support such claims are lacking. The National Center for Complementary and Alternative Medicine (NCCAM) supports the Centers for Disease Control and Prevention’s recommendations for immunizations/vaccinations. To learn more about vaccines visit [www.vaccines.gov](http://www.vaccines.gov).
- While many homeopathic remedies are highly diluted, some products sold or labeled as homeopathic may not be highly diluted; they may contain substantial amounts of active ingredients. Like any drug or dietary supplement that contains chemical ingredients, these

homeopathic products may cause side effects or drug interactions. Negative health effects from homeopathic products of this type have been reported.

- A 2007 systematic review found that highly diluted homeopathic remedies, taken under the supervision of trained professionals, are generally safe and unlikely to cause severe adverse reactions. However, like any drug or dietary supplement, these products could pose risks if they are improperly manufactured (for example, if they are contaminated with microorganisms or incorrectly diluted).
- A 2012 systematic review of case reports and case series concluded that using certain homeopathic treatments (such as those containing heavy metals like mercury or iron that are not highly diluted) or replacing an effective conventional treatment with an ineffective homeopathic one can cause adverse effects, some of which may be serious.
- Liquid homeopathic remedies may contain alcohol. The FDA allows higher levels of alcohol in these remedies than it allows in conventional drugs.
- Homeopathic practitioners expect some of their patients to experience “homeopathic aggravation” (a temporary worsening of existing symptoms after taking a homeopathic prescription). Researchers have not found much evidence of this reaction in clinical studies; however, research on homeopathic aggravations is scarce. Always discuss changes in your symptoms with your health care provider.

## **Regulation of Homeopathic Treatments**

Homeopathic remedies are regulated as drugs under the Federal Food, Drug and Cosmetic Act (FDCA). However, under current Agency policy, FDA does not evaluate the remedies for safety or effectiveness. FDA enforcement policies for homeopathic drugs are described in FDA’s Compliance Policy Guide entitled *Conditions Under Which Homeopathic Drugs May be Marketed* (CPG 7132.15).

FDA allows homeopathic remedies that meet certain conditions to be marketed without agency preapproval. For example, homeopathic remedies must contain active ingredients that are listed in the *Homeopathic Pharmacopeia of the United States (HPUS)*. The HPUS lists active ingredients that may be legally included in homeopathic products and standards for strength, quality, and purity of that ingredient. In addition, the FDA requires that the label on the product, outer container, or accompanying leaflet include at least one major indication (i.e., medical problem to be treated), a list of ingredients, the number of times the active ingredient was diluted, and directions for use. If a homeopathic remedy claims to treat a serious disease such as cancer, it must be sold by prescription. Only products for minor health problems, like a cold or headache, which go away on their own, can be sold without a prescription.

## **Licensing**

Laws regulating the practice of homeopathy in the United States vary from state to state. Usually, individuals who are licensed to practice medicine or another health care profession can legally practice homeopathy. In some states, non-licensed professionals may practice homeopathy.

Arizona, Connecticut, and Nevada are the only states with homeopathic licensing boards for doctors of medicine (holders of M.D. degrees) and doctors of osteopathic medicine (holders of D.O. degrees). Arizona and Nevada also license homeopathic assistants, who are allowed to perform medical services under the supervision of a homeopathic physician. Some states explicitly include homeopathy within the scope of practice of chiropractic, naturopathy, and physical therapy.

## If You Are Thinking About Using Homeopathy

- Do not use homeopathy to replace conventional care or to postpone seeing your health care provider about a medical problem.
- If you are considering using a homeopathic remedy, bring the product with you when you visit your health care provider. The provider may be able to help you determine whether the product might pose a risk of side effects or drug interactions.
- Follow the recommended conventional immunization schedules for children and adults. Do not use homeopathic products as substitutes for conventional immunizations.
- Women who are pregnant or nursing, or people who are thinking of using homeopathy to treat a child, should consult their (or their child's) health care providers.
- Tell all your health care providers about any complementary health approaches you use. Give them a full picture of all you do to manage your health. This will ensure coordinated and safe care. For tips about talking with your health care providers about complementary health approaches, see NCCAM's Time to Talk campaign at [nccam.nih.gov/timetotalk](http://nccam.nih.gov/timetotalk).

## Selected References

- Altunc U, Pittler MH, Ernst E. Homeopathy for childhood and adolescence ailments: systematic review of randomized clinical trials. *Mayo Clinic Proceedings*. 2007;82(1):69-75.
- Cucherat M, Haugh MC, Gooch M, et al. Evidence of clinical efficacy of homeopathy: a meta-analysis of clinical trials. *European Journal of Clinical Pharmacology*. 2000;56(1):27-33.
- Der Marderosian AH. Understanding homeopathy. *Journal of the American Pharmaceutical Association*. 1996;NS36(5):317-321.
- Ernst E. A systematic review of systematic reviews of homeopathy. *British Journal of Clinical Pharmacology*. 2002;54(6):577-582.
- Ernst E. Homeopathy: what does the "best" evidence tell us? *Medical Journal of Australia*. 2010;192(8):458-460.
- Ernst E. The truth about homeopathy. *British Journal of Clinical Pharmacology*. 2007;65(2):163-164.
- Jonas WB, Kaptchuk TJ, Linde K. A critical overview of homeopathy. *Annals of Internal Medicine*. 2003;138(5):393-399.
- Kuehn BM. Despite health claims by manufacturers, little oversight for homeopathic products. *JAMA: Journal of the American Medical Association*. 2009;302(15):1631-1634.
- Merrell WC, Shalts E. Homeopathy. *Medical Clinics of North America*. 2002;86(1):47-62.

- Posadzki P, Alotaibi A, Ernst E. Adverse effects of homeopathy: a systematic review of published case reports and case series. *The International Journal of Clinical Practice*. 2012;66(12):1178-1188.
- Rowe T. Homeopathy. In: Goldblatt E, Snider P, Quinn S, et al., eds. *Clinicians' and Educators' Desk Reference on the Licensed Complementary and Alternative Healthcare Professions*. Seattle, WA: Academic Consortium for Complementary and Alternative Health Care; 2009.
- Shang A, Huwiler-Müntener K, Nartey L, et al. Are the clinical effects of homoeopathy placebo effects? Comparative study of placebo-controlled trials of homoeopathy and allopathy. *Lancet*. 2005;366(9487):726-732.
- Tedesco P, Cicchetti J. Like cures like: homeopathy. *American Journal of Nursing*. 2001;101(9):43-49.
- U.S. Food and Drug Administration. *Manual of Compliance Policy Guides*. Sec. 400.400. *Conditions Under Which Homeopathic Drugs May Be Marketed*. U.S. Food and Drug Administration Web site. Accessed at <http://www.fda.gov/ICECI/ComplianceManuals/CompliancePolicyGuidanceManual/ucm074360.htm> on March 22, 2012.
- Vallance AK. Can biological activity be maintained at ultra-high dilution? An overview of homeopathy, evidence, and Bayesian philosophy. *Journal of Alternative and Complementary Medicine*. 1998;4(1):49-76.

## **For More Information**

### **NCCAM Clearinghouse**

The NCCAM Clearinghouse provides information on NCCAM and complementary 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  
TTY (for deaf and hard-of-hearing callers): 1-866-464-3615  
Web site: [nccam.nih.gov](http://nccam.nih.gov)  
E-mail: [info@nccam.nih.gov](mailto:info@nccam.nih.gov)

### **PubMed®**

A service of the National Library of Medicine (NLM), PubMed contains publication information and (in most cases) brief summaries of articles from scientific and medical journals.

Web site: [www.ncbi.nlm.nih.gov/pubmed](http://www.ncbi.nlm.nih.gov/pubmed)

### **NIH Clinical Research Trials and You**

The National Institutes of Health (NIH) has created a Web site, NIH Clinical Research Trials and You, to help people learn about clinical trials, why they matter, and how to participate. The site includes questions and answers about clinical trials, guidance on how to find clinical trials through [ClinicalTrials.gov](http://ClinicalTrials.gov) and other resources, and stories about the personal experiences of clinical trial participants. Clinical trials are necessary to find better ways to prevent, diagnose, and treat diseases.

Web site: [www.nih.gov/health/clinicaltrials/](http://www.nih.gov/health/clinicaltrials/)

## **Research Portfolio Online Reporting Tools Expenditures & Results (RePORTER)**

RePORTER is a database of information on federally funded scientific and medical research projects being conducted at research institutions.

Web site: [projectreporter.nih.gov/reporter.cfm](http://projectreporter.nih.gov/reporter.cfm)

## **MedlinePlus**

To provide resources that help answer health questions, MedlinePlus (a service of the National Library of Medicine) brings together authoritative information from the national Institutes of Health as well as other Government agencies and health-related organizations.

Web site: [www.medlineplus.gov](http://www.medlineplus.gov)

## **Acknowledgments**

NCCAM thanks the following people for their technical expertise and review of the update of this publication: Elisabeth Walther, Pharm.D., J.D. and colleagues, Office of Compliance, Center for Drug Evaluation and Research, U.S. Food and Drug Administration, and John (Jack) Killen, Jr., M.D., NCCAM.

*This publication is not copyrighted and is in the public domain.  
Duplication is encouraged.*

NCCAM has provided this material for your information. It is not intended to substitute for the medical expertise and advice of your primary health care provider. We encourage you to discuss any decisions about treatment or care with your health care provider. The mention of any product, service, or therapy is not an endorsement by NCCAM.

National Institutes of Health



U.S. Department of Health and Human Services