

# backgrounder

## Ayurvedic Medicine: An Introduction

Ayurvedic medicine (also called Ayurveda) is one of the world's oldest medical systems. It originated in India and has evolved there over thousands of years. In the United States, Ayurvedic medicine is considered complementary and alternative medicine (CAM)—more specifically, a CAM whole medical system. Many therapies used in Ayurvedic medicine are also used on their own as CAM—for example, herbs, massage, and specialized diets. This fact sheet provides a general overview of Ayurvedic medicine and suggests sources for additional information.

### Key Points

- The aim of Ayurvedic medicine is to integrate and balance the body, mind, and spirit. This is believed to help prevent illness and promote wellness.
- Ayurvedic medicine uses a variety of products and techniques to cleanse the body and restore balance. Some of these products may be harmful if used improperly or without the direction of a trained practitioner. For example, some herbs can cause side effects or interact with conventional medicines.
- Before using Ayurvedic treatment, ask about the practitioner's training and experience.
- Tell your health care providers about any complementary and alternative practices you use. Give them a full picture of what you do to manage your health. This will help ensure coordinated and safe care.

### Background

Ayurvedic medicine, also called Ayurveda, originated in India several thousand years ago. The term “Ayurveda” combines the Sanskrit words *ayur* (life) and *veda* (science or knowledge). Thus, Ayurveda means “the science of life.”

In the United States, Ayurvedic medicine is considered a type of CAM and a whole medical system. As with other such systems, it is based on theories of health and illness and on ways to prevent, manage, or treat health problems.

U.S. DEPARTMENT OF HEALTH  
AND HUMAN SERVICES

National Institutes of Health

National Center for Complementary  
and Alternative Medicine



NCCAM

Ayurvedic medicine aims to integrate and balance the body, mind, and spirit; thus, some view it as “holistic.” This balance is believed to lead to happiness and health, and to help prevent illness. Ayurvedic medicine also treats specific physical and mental health problems. A chief aim of Ayurvedic practices is to cleanse the body of substances that can cause disease, thus helping to reestablish harmony and balance.

## **Ayurvedic Medicine in India**

Ayurvedic medicine, as practiced in India, is one of the oldest systems of medicine in the world. Many Ayurvedic practices predate written records and were handed down by word of mouth. Two ancient books, written in Sanskrit more than 2,000 years ago, are considered the main texts on Ayurvedic medicine—*Caraka Samhita* and *Sushruta Samhita*. The texts describe eight branches of Ayurvedic medicine:

- Internal medicine
- Surgery
- Treatment of head and neck disease
- Gynecology, obstetrics, and pediatrics
- Toxicology
- Psychiatry
- Care of the elderly and rejuvenation
- Sexual vitality.

Ayurvedic medicine continues to be practiced in India, where nearly 80 percent of the population uses it exclusively or combined with conventional (Western) medicine. It is also practiced in Bangladesh, Sri Lanka, Nepal, and Pakistan.

Most major cities in India have an Ayurvedic college and hospital. The Indian government began systematic research on Ayurvedic practices in 1969, and that work continues.

## **Use in the United States**

According to the 2007 National Health Interview Survey, which included a comprehensive survey of CAM use by Americans, more than 200,000 U.S. adults used Ayurvedic medicine in the previous year.

## **Underlying Concepts**

Ayurvedic medicine has several key foundations that pertain to health and disease. These concepts have to do with universal interconnectedness, the body’s constitution (*prakriti*), and life forces (*doshas*).

**Interconnectedness.** Ideas about the relationships among people, their health, and the universe form the basis for how Ayurvedic practitioners think about problems that affect health. Ayurvedic medicine holds that:

- All things in the universe (both living and nonliving) are joined together.
- Every human being contains elements that can be found in the universe.

- Health will be good if one's mind and body are in harmony, and one's interaction with the universe is natural and wholesome.
- Disease arises when a person is out of harmony with the universe. Disruptions can be physical, emotional, spiritual, or a combination of these.

**Constitution (*prakriti*).** Ayurvedic medicine also has specific beliefs about the body's constitution. Constitution refers to a person's general health, the likelihood of becoming out of balance, and the ability to resist and recover from disease or other health problems.

The constitution is called the *prakriti*. The *prakriti* is a person's unique combination of physical and psychological characteristics and the way the body functions to maintain health. It is influenced by such factors as digestion and how the body deals with waste products. The *prakriti* is believed to be unchanged over a person's lifetime.

**Life forces (*doshas*).** Important characteristics of the *prakriti* are the three life forces or energies called *doshas*, which control the activities of the body. A person's chances of developing certain types of diseases are thought to be related to the way *doshas* are balanced, the state of the physical body, and mental or lifestyle factors.

Ayurvedic medicine holds the following beliefs about the three *doshas*:

- Each *dosha* is made up of two of five basic elements: ether (the upper regions of space), air, fire, water, and earth.
- Each *dosha* has a particular relationship to bodily functions and can be upset for different reasons.
- Each person has a unique combination of the three *doshas*, although one *dosha* is usually prominent. *Doshas* are constantly being formed and reformed by food, activity, and bodily processes.
- Each *dosha* has its own physical and psychological characteristics.
- An imbalance of a *dosha* will produce symptoms that are unique to that *dosha*. Imbalances may be caused by a person's age, unhealthy lifestyle, or diet; too much or too little mental and physical exertion; the seasons; or inadequate protection from the weather, chemicals, or germs.

The *doshas* are known by their original Sanskrit names: *vata*, *pitta*, and *kapha*.

The ***vata dosha*** combines the elements ether and air. It is considered the most powerful *dosha* because it controls very basic body processes such as cell division, the heart, breathing, discharge of waste, and the mind. *Vata* can be aggravated by, for example, fear, grief, staying up late at night, eating dry fruit, or eating before the previous meal is digested. People with *vata* as their main *dosha* are thought to be especially susceptible to skin and neurological conditions, rheumatoid arthritis, heart disease, anxiety, and insomnia.

The **pitta dosha** represents the elements fire and water. Pitta controls hormones and the digestive system. A person with a pitta imbalance may experience negative emotions such as anger and may have physical symptoms such as heartburn within 2 or 3 hours of eating. Pitta is upset by, for example, eating spicy or sour food, fatigue, or spending too much time in the sun. People with a predominantly pitta constitution are thought to be susceptible to hypertension, heart disease, infectious diseases, and digestive conditions such as Crohn's disease.

The **kapha dosha** combines the elements water and earth. Kapha helps to maintain strength and immunity and to control growth. An imbalance of the kapha dosha may cause nausea immediately after eating. Kapha is aggravated by, for example, greed, sleeping during the daytime, eating too many sweet foods, eating after one is full, and eating and drinking foods and beverages with too much salt and water (especially in the springtime). Those with a predominant kapha dosha are thought to be vulnerable to diabetes, cancer, obesity, and respiratory illnesses such as asthma.

## Treatment

Ayurvedic treatment is tailored to each person's constitution. Practitioners expect patients to be active participants because many Ayurvedic treatments require changes in diet, lifestyle, and habits.

**The patient's dosha balance.** Ayurvedic practitioners first determine the patient's primary dosha and the balance among the three doshas by:

- Asking about diet, behavior, lifestyle practices, recent illnesses (including reasons and symptoms), and resilience (ability to recover quickly from illness or setbacks)
- Observing such physical characteristics as teeth and tongue, skin, eyes, weight, and overall appearance
- Checking the patient's urine, stool, speech and voice, and pulse (each dosha is thought to make a particular kind of pulse).

**Treatment practices.** Ayurvedic treatment goals include eliminating impurities, reducing symptoms, increasing resistance to disease, and reducing worry and increasing harmony in the patient's life. The practitioner uses a variety of methods to achieve these goals:

- **Eliminating impurities.** A process called *panchakarma* is intended to cleanse the body by eliminating *ama*. *Ama* is described as an undigested food that sticks to tissues, interferes with normal functioning of the body, and leads to disease. *Panchakarma* focuses on eliminating *ama* through the digestive tract and the respiratory system. Enemas, massage, medical oils administered in a nasal spray, and other methods may be used.
- **Reducing symptoms.** The practitioner may suggest various options, including physical exercises, stretching, breathing exercises, meditation, massage, lying in the sun, and changing the diet. The patient may take certain herbs—often with honey, to make them easier to digest. Sometimes diets are restricted to certain foods. Very small amounts of metal and mineral preparations, such as gold or iron, also may be given.

- **Increasing resistance to disease.** The practitioner may combine several herbs, proteins, minerals, and vitamins in tonics to improve digestion and increase appetite and immunity. These tonics are based on formulas from ancient texts.
- **Reducing worry and increasing harmony.** Ayurvedic medicine emphasizes mental nurturing and spiritual healing. Practitioners may recommend avoiding situations that cause worry and using techniques that promote release of negative emotions.

**Use of plants.** Ayurvedic treatments rely heavily on herbs and other plants—including oils and common spices. Currently, more than 600 herbal formulas and 250 single plant drugs are included in the “pharmacy” of Ayurvedic treatments. Historically, Ayurvedic medicine has grouped plant compounds into categories according to their effects (for example, healing, promoting vitality, or relieving pain). The compounds are described in texts issued by national medical agencies in India. Sometimes, botanicals are mixed with metals or other naturally occurring substances to make formulas prepared according to specific Ayurvedic text procedures; such preparations involve several herbs and herbal extracts and precise heat treatment.

## **Practitioner Training and Certification**

Many practitioners study in India, where there are more than 150 undergraduate and 30 postgraduate colleges for Ayurvedic medicine. Training can take 5 years or longer. Students who receive their Ayurvedic training in India can earn either a bachelor’s degree (Bachelor of Ayurvedic Medicine and Surgery, BAMS) or doctoral degree (Doctor of Ayurvedic Medicine and Surgery, DAMS) there. After graduation, some Ayurvedic practitioners choose to provide services in the United States or other countries.

The United States has no national standard for training or certifying Ayurvedic practitioners, although a few states have approved Ayurvedic schools as educational institutions.

## **Concerns About Ayurvedic Medications**

Ayurvedic practice involves the use of medications that typically contain herbs, metals, minerals, or other materials. Health officials in India and other countries have taken steps to address some concerns about these medications. Concerns relate to toxicity, formulations, interactions, and scientific evidence.

**Toxicity.** Ayurvedic medications have the potential to be toxic. Many materials used in them have not been thoroughly studied in either Western or Indian research. In the United States, Ayurvedic medications are regulated as dietary supplements. As such, they are not required to meet the safety and efficacy standards for conventional medicines. An NCCAM-funded study published in 2004 found that of 70 Ayurvedic remedies purchased over-the-counter (all manufactured in South Asia), 14 contained lead, mercury, and/or arsenic at levels that could be harmful. Also in 2004, the Centers for Disease Control and Prevention reported that 12 cases of lead poisoning occurring over a recent 3-year period were linked to the use of Ayurvedic medications.

**Formulations.** Most Ayurvedic medications consist of combinations of herbs and other medicines. It can be challenging to know which components are having an effect and why.

**Interactions.** Whenever two or more medications are used, there is the potential for them to interact with each other. As a result, the effectiveness of at least one may increase or decrease in the body.

**Scientific evidence.** Most clinical trials (i.e., studies in people) of Ayurvedic approaches have been small, had problems with research designs, lacked appropriate control groups, or had other issues that affected how meaningful the results were. Therefore, scientific evidence for the effectiveness of Ayurvedic practices varies, and more rigorous research is needed to determine which practices are safe and effective.

## **Other Points To Consider About Using Ayurvedic Medicine**

- Tell your health care providers about any complementary and alternative practices you use, including Ayurvedic medicine. Give them a full picture of what you do to manage your health. This will help to ensure coordinated and safe care. For tips about talking with your health care providers about CAM, see NCCAM's Time to Talk campaign at [nccam.nih.gov/timetotalk/](http://nccam.nih.gov/timetotalk/).
- Women who are pregnant or nursing, or people who are thinking of using Ayurvedic therapy to treat a child, should be especially sure to consult their health care provider.
- It is important to make sure that any diagnosis of a disease or condition has been made by a provider who has substantial conventional medical training and experience with managing that disease or condition.
- Proven conventional treatments should not be replaced with an unproven CAM treatment.
- It is better to use Ayurvedic remedies under the supervision of an Ayurvedic medicine practitioner than to try to treat yourself.
- Before using Ayurvedic treatment, ask about the practitioner's training and experience.
- Find out whether any rigorous scientific studies have been done on the therapies in which you are interested.

## **NCCAM-Funded Research**

Examples of NCCAM-supported research on therapies used in Ayurvedic medicine include studies of:

- Herbal therapies, including curcuminoids (substances found in turmeric), used for cardiovascular conditions
- A compound from the cowhage plant (*Mucuna pruriens*), used to prevent or lessen side effects from Parkinson's disease drugs
- Three botanicals (ginger, turmeric, and boswellia) used to treat inflammatory disorders such as arthritis and asthma
- Gotu kola (*Centella asiatica*), an herb used to treat Alzheimer's disease.

## Selected References

- Barnes PM, Bloom B, Nahin R. Complementary and alternative medicine use among adults and children: United States, 2007. *CDC National Health Statistics Report #12*. 2008.
- Chopra A, Doiphode VV. Ayurvedic medicine—core concept, therapeutic principles, and current relevance. *Medical Clinics of North America*. 2002;86(1):75-88.
- Courson WA. State licensure and Ayurvedic practice: planning for the future, managing the present. *Newsletter of the National Ayurvedic Medical Association* [online journal]. Autumn 2003. Accessed at <http://starseedyoga.com/oldsite/AyurvedaDistanceArticle.htm> on February 14, 2008.
- Dodds JA. Know your CAM provider. *Bulletin of the American Academy of Orthopaedic Surgeons/American Association of Orthopaedic Surgeons* [online journal]. December 2002. Accessed at <http://www2.aaos.org/aaos/archives/bulletin/dec02/acdnw18.htm> on February 14, 2008.
- Gogtay NJ, Bhatt HA, Dalvi SS, et al. The use and safety of non-allopathic Indian medicines. *Drug Safety*. 2002;25(14):1005-1019.
- Lead poisoning associated with Ayurvedic medications—five states, 2000-2003. *Morbidity and Mortality Weekly Report*. Centers for Disease Control and Prevention Web site. Accessed at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5326a3.htm> on February 14, 2008.
- Lodha R, Bagga A. Traditional Indian systems of medicine. *Annals of the Academy of Medicine, Singapore*. 2000;29(1):37-41.
- Mishra L, Singh BB, Dagenais S. Ayurveda: a historical perspective and principles of the traditional healthcare system in India. *Alternative Therapies in Health and Medicine*. 2001;7(2):36-42.
- Mishra L, Singh BB, Dagenais S. Healthcare and disease management in Ayurveda. *Alternative Therapies in Health and Medicine*. 2001;7(2):44-50.
- Saper RB, Kales SN, Paquin J, et al. Heavy metal content of Ayurvedic herbal medicine products. *Journal of the American Medical Association*. 2004;292(23):2868-2873.
- Shankar K, Liao LP. Traditional systems of medicine. *Physical Medicine and Rehabilitation Clinics of North America*. 2004;15(4):725-747.
- Singh BB, Vinjamury SP, Der-Martirosian C, et al. Ayurvedic and collateral herbal treatments for hyperlipidemia: a systematic review of randomized controlled trials and quasi-experimental designs. *Alternative Therapies in Health and Medicine*. 2007;13(4):22-28.
- Subbarayappa BV. The roots of ancient medicine: an historical outline. *Journal of Bioscience*. 2001;26(2):135-144.

## For More Information

### NCCAM Clearinghouse

The NCCAM Clearinghouse provides information on CAM and NCCAM, 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) abstracts of articles from scientific and medical journals. CAM on PubMed, developed jointly by NCCAM and NLM, is a subset of NLM's PubMed system and focuses on the topic of CAM.

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

CAM on PubMed: [nccam.nih.gov/research/camonpubmed/](http://nccam.nih.gov/research/camonpubmed/)

## **ClinicalTrials.gov**

ClinicalTrials.gov is a database of information on federally and privately supported clinical trials (research studies in people) for a wide range of diseases and conditions. It is sponsored by the National Institutes of Health and the U.S. Food and Drug Administration.

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

## **Research Portfolio Online Reporting Tool (RePORT)**

RePORT 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)

## **Acknowledgments**

NCCAM thanks the following people for their technical expertise and review of the content update of this publication: Bala Manyam, M.D., Texas A&M University System Health Science Center College of Medicine; and Partap Khalsa, D.C., Ph.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

