

HIV EXAMINER

A Monthly Newsletter of Writers Against Aids and Tobacco Smoking

September Edition

Alternative Medicine

I Introduction

Alternative Medicine, also called unconventional medicine, therapeutic practices, techniques, and beliefs that are outside the realm of mainstream Western health care. Alternative medicine emphasizes therapies that improve quality of life, prevent disease, and address conditions that conventional medicine has limited success in curing, such as chronic back pain and certain cancers. Proponents of alternative medicine believe that these approaches to healing are safer and more natural and have been shown through experience to work. In certain countries, alternative medical practices are the most widely used methods of health care. However, many practitioners of modern conventional medicine believe these practices are unorthodox and unproven.

By some estimates 83 million United States residents use alternative medicine, spending more than \$27 billion a year. Reports from Canada, the United Kingdom, and Australia also indicate a widespread interest in alternative therapies.

A special report prepared for the National Institutes of Health (NIH), *Alternative Medicine: Expanding Medical Horizons*, categorizes alternative medicine practices into six fields. The first field, mind-body intervention, explores the mind's capacity to affect, and perhaps heal, the body. Studies have shown that the mental state has a profound effect on the immune system, and these studies have provoked interest in the mind's role in the cause and course of disease. Specific mind-body interventions include meditation, hypnosis, art therapy, biofeedback, and mental healing.

Bioelectromagnetic applications, the second field of alternative medicine, make use of the body's response to nonthermal, nonionizing radiation. Current uses involve bone repair, nerve stimulation, wound healing, treatment of osteoarthritis, and immune system stimulation.

The third field is alternative systems of medical practice. Each of these systems is characterized by a specific theory of health and disease, an educational program to teach its concepts to new practitioners, and often a legal mandate to regulate its practice. Examples include acupuncture, Ayurvedic medicine, homeopathy, and naturopathy.

Touch and manipulation are the mainstays of the manual healing methods, which constitute the fourth field of alternative medicine. Practitioners of chiropractic and massage therapies such as Rolfing structural integration believe that dysfunction of one part of the body often affects the function of other, not necessarily connected, parts. Health is restored by manipulating bones or soft tissues or realigning body parts.

The pharmacological and biological treatments that make up the fifth field of alternative medicine consist of an assortment of drugs and vaccines not yet accepted in mainstream medicine. Compounds such as antineoplastins (from human blood and urine) for acquired immunodeficiency syndrome (AIDS), various products of the honey bee for arthritis, and iscador (a liquid extract from mistletoe) for tumors have not been scientifically evaluated because of the expense of conducting safety and effectiveness studies.

Throughout the ages people have turned for healing to herbal medicine, the sixth field of alternative medicine. All cultures have folk medicine traditions that include the use of plants and plant products. Many licensed drugs used today originated in the herbal traditions of various cultures, such as the medication commonly used for heart failure, digitalis, which is derived from foxglove. In the United States, herbal products may be marketed only as food supplements. Since they are not regulated by the Food and Drug Administration (FDA), there is no guarantee of their purity or safety. The World Health Organization (WHO) estimates that 4 billion people, or 80 percent of the world's population, use herbal medicine for some aspect of primary health care.

II POPULAR THERAPIES

A Acupuncture



Acupuncture

Acupuncture is a traditional Chinese medical technique that involves stimulating specific points in the body to restore health. The practice is used to treat a range of conditions, including chronic pain, drug addiction, bronchitis, and insomnia.

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Acupuncture, a Chinese traditional medicine dating from 3000 to 2000 BC, involves stimulating specific points in the body for therapeutic purposes. Puncturing the skin with a needle is the usual method of application, but acupuncturists may also use heat, pressure, friction, suction, or impulses of electromagnetic energy to stimulate acupuncture points. Stimulated acupuncture points alter the chemical neurotransmitters released and the therapeutic effects result from the associated changes in the chemical balance of the body. Acupuncture is used for many ailments, including chronic pain, drug addiction, arthritis, chemotherapy-induced nausea, and mental illness.

In the past 40 years acupuncture has become a well-known and widely available treatment in both developed and developing countries. More than 50 schools of acupuncture in the United States are accredited or candidates for accreditation by the National Accreditation Commission for Schools and Colleges of Acupuncture and Oriental Medicine. Many conventionally trained physicians take courses in acupuncture and incorporate it into their practices. Licensure or registration in acupuncture is available in 35 states plus the District of Columbia. It is estimated that some 12 million health-care visits per year are for acupuncture.

Acupuncture is one of the most thoroughly researched and documented alternative medical practices. In 1998 an NIH panel reviewed scientific studies of acupuncture and concluded that the technique is effective at relieving nausea and vomiting caused by chemotherapy and surgical anesthesia. Good evidence suggests that it also relieves nausea during pregnancy and pain after dental surgery. Controlled studies have also demonstrated some positive effects of acupuncture on a variety of other conditions, but so far the statistical results have not been conclusive.

B Homeopathy

Homeopathy is a 200-year-old system of medicine that uses pills or medicinal drops made from diluted extracts of herbs and other substances. Developed by German physician Samuel Hahnemann, homeopathy is based on two main principles. The first states that a substance that can cause certain symptoms when given to a healthy person can cure those same symptoms in someone who is sick. The second states that, contrary to teachings of modern chemistry and physics, the more a substance is diluted, the more potent it becomes. Proponents of homeopathy claim there remains a so-called molecular memory of the original substance. Critics say water molecules vibrate and change constantly, so that any impressions made by a substance previously dissolved in them are quickly lost.

Each year in the United States 2.5 million people use homeopathy and make 5 million visits to homeopathic practitioners. The number of homeopathic practitioners in the United States has increased from less than 200 in the 1970s to approximately 3,000 in 1996. The FDA allows homeopathic products to be sold as long as specific health claims are not made in advertising or on product labels.

A number of studies in reputable scientific journals have suggested that homeopathic remedies are useful for diarrhea, asthma, hay fever, influenza, and migraine headaches. However, critics claim that these studies were flawed and that more scientifically rigorous investigations would likely show no benefit.

C Chiropractic



Chiropractic Exam

Practitioners of chiropractic believe that many ailments and diseases can be healed by the manual adjustment of bone and tissue. Chiropractors offer non-surgical remedies for back and neck pain, headaches, and other conditions. Chiropractic is also considered a preventative health-care method.

Art Stein/Science Source/Photo Researchers, Inc.

The field of chiropractic was founded by David Daniel Palmer in the 1890s. He believed that joint subluxation, or a partial dislocation, is a causal factor in disease and that removal of the subluxation by thrusting on the bony projections of the vertebrae restores health.

In addition to manipulating and adjusting bone and tissue, particularly in the spinal column, chiropractors use a variety of manual, mechanical, and electrical treatments. Chiropractors are

most widely recognized for providing drug-free, non-surgical management of back and neck pain as well as of headaches. Some chiropractors also treat a variety of other ailments—such as bladder infections, arthritis, and depression—with spinal adjustments and other manipulations. Disease prevention and health promotion through proper diet, exercise, and lifestyle are other important features of chiropractic medicine.

There are about 80,000 licensed chiropractors in the United States. Licensing is required in all states. Chiropractors are allowed to use manual procedures and interventions but not surgery or chemotherapy.

D Biofeedback



Biofeedback in Progress

A patient at a biofeedback clinic sits connected to electrodes on his head and finger. Biofeedback is a technique in which patients attempt to become aware of and then alter bodily functions such as muscle tension and blood pressure. It is used in treating pain and stress-related conditions, and may help some paralyzed patients regain the use of their limbs.

Owen Franken/Corbis

Biofeedback is a treatment method that uses monitoring instruments to provide patients with physiological information of which they are normally unaware. In the 1960s, experimental psychologist Neal Miller demonstrated that the autonomic nervous system—which controls heart rate, blood pressure, blood flow to various organs, and gastrointestinal activity—is entirely trainable. In succeeding decades the validity of Miller’s observations was documented in thousands of articles and books, leading to widespread application of this technique. Today, biofeedback is used to treat a wide variety of conditions and diseases including stress, drug addiction, sleep disorders, epilepsy, fecal and urinary incontinence, headaches, and high blood pressure.

By watching a monitoring device, patients learn by trial and error to adjust their mental processes in order to control bodily processes. Electrodes are attached to the area of the patient being monitored—for instance, to the involved muscles during muscle therapy, or to the head during brain-wave monitoring. These electrodes feed the electrical information to a small monitoring box. The results are registered by a tone that varies in pitch or by a visual meter that varies in brightness as the function being monitored changes. The patient engages in mental exercises, in an attempt to reach the desired result, such as muscle relaxation or contraction. Voluntary control may be achieved in as few as ten sessions, although chronic or severe disorders may require longer therapy. Eventually, patients may learn to control symptoms without the use of the monitoring device.

E Naturopathy

Naturopathy was founded in the beginning of the 20th century by a group of therapists who were followers of Sebastian Kneipp, a 19th-century proponent of the healing powers of nature. At the height of its popularity, there were more than 20 naturopathic medical schools (today there are only three) in the United States and naturopathic physicians were licensed in most states. The practice of naturopathic medicine declined as the use of pharmaceutical drugs increased. However, in the past several decades there has been a resurgence of interest in naturopathy.

Naturopathic medicine integrates alternative medical practices—such as botanical medicine, homeopathy, acupuncture, and Oriental medicine—with modern scientific diagnostic methods

and standards of care. Naturopathic physicians are trained in conventional medical disciplines as well as in alternative approaches. They integrate this knowledge according to principles that recognize the body's inherent ability to heal itself, the importance of prevention, and the possibility of therapeutic use of nutrition to promote health and fight disease.

Most of the research on naturopathy has been based on observation of treatments rather than on controlled clinical trials that compare naturopathic therapy with no treatment (a placebo) or with an alternative treatment.

III CURRENT OUTLOOK

There remains considerable skepticism among practitioners of conventional medicine and among biomedical researchers regarding the efficacy of alternative medicine. Many of the claims made by practitioners of alternative medicine have not been supported by rigorously controlled scientific study. However, in recent years many scientists have begun to conduct such studies to evaluate alternative therapies. A division of the NIH, the National Center for Complementary and Alternative Medicine (NCCAM, originally the Office of Alternative Medicine), was established by the Congress of the United States in 1992 to facilitate the fair scientific evaluation of alternative therapies. The NCCAM seeks to reduce barriers that may keep promising alternative therapies from gaining widespread use. Physicians are also gaining more confidence in alternative therapies. By the late 1990s, some 75 U.S. medical schools had incorporated courses in alternative medicine into their curricula. It is possible that what was considered alternative in the past will become mainstream in years to come.

Contributed By:

James A. Blackman

CIPROFLOXACIN

Ciprofloxacin, drug used to treat bacterial infections in the lower respiratory tract, urinary tract, bones, joints, and skin. It is also used to treat serious ear infections, cholera, tuberculosis,

infectious diarrhea, and infections associated with acquired immunodeficiency syndrome (AIDS). Ciprofloxacin is prescribed after exposure to the bacteria that cause anthrax to reduce the incidence or progression of the disease. For maximum effectiveness against inhalation anthrax, the most dangerous form of the disease, the drug should be administered as soon as possible after exposure, even before symptoms appear. Ciprofloxacin works by blocking the action of gyrase, an enzyme needed by the invading bacteria for cell reproduction, thereby slowing or completely stopping bacterial growth.

The drug is available by prescription in tablets, which are taken orally with or without food, and in a liquid, which is used in the form of eyedrops. Depending on the severity of infection, dosages for tablets range from 250 to 750 mg taken every 12 hours. Eyedrops are typically prescribed as one or two drops every 2 to 4 hours for the treatment of bacterial eye infections. Patients taking ciprofloxacin should drink plenty of fluids but avoid excessive caffeine. Pregnant women, breast-feeding women, and children under the age of 18 should not take this drug.

Possible side effects include abdominal pain, nausea, vomiting, headache, skin rash, sensitivity to light, or restlessness. Serious side effects should be reported to a doctor, as allergic reactions to this drug, while rare, can be fatal. Allergic symptoms may include facial swelling, shortness of breath, tingling or itching, hives, or unconsciousness.

Patients with severe liver disease, impaired kidney function, or with epilepsy or other disorders or injuries affecting the central nervous system should use this drug with caution. Those who experience dizziness or lightheadedness with this medication should not drive, operate dangerous machinery, or engage in other risk-related activities. Because of the possible risk of tendon rupture, strenuous physical activity should be avoided or approved by a doctor.

Ciprofloxacin should not be combined with the drug theophylline, as serious or fatal reactions can result. It may interact adversely with phenytoin and warfarin. Ciprofloxacin may be less effective when used in combination with vitamin supplements containing zinc or iron or with antacids containing calcium, aluminum, or magnesium.

Brand Names: *Cipro, Ciloxan*

FLUCONAZOLE

Fluconazole, drug used to treat fungal infections, especially of the mouth and throat. It is also used for pneumonia, peritonitis, meningitis, infections of the urinary tract, and vaginal yeast infections. It is useful in treating fungal infections in organ transplant patients and those with acquired immunodeficiency syndrome (AIDS). The drug works by damaging the cell walls of the invading fungus, thereby inhibiting its growth.

Fluconazole must be prescribed by a doctor. It is available in tablet or liquid form, with one liquid form made for injection. Dosages range from 100 to 400 mg per day, usually starting with a high dose on the first day. It may be taken with or without food. The drug's effectiveness is usually seen after two to four weeks of treatment, although long-term use (months to years) may be required for some patients.

Patients with impaired liver or kidney function should use this drug with caution. Its safety for use during pregnancy or while nursing is not known. Its use in children under age 13 is not clearly established, although some children have used it safely.

Possible side effects may include nausea, abdominal pain, vomiting, diarrhea, headache, or skin rash. Additional symptoms such as hives, drop in blood pressure, swelling, or difficulty breathing or swallowing may indicate an allergic reaction to this drug, which requires immediate medical attention.

Fluconazole may interact adversely with certain antihistamines, drugs that treat diabetes, anticoagulants (especially warfarin), ulcer medications, phenytoin, rifampin, or hydrochlorothiazide.

Brand Name: *Diflucan*

ZIDOVUDINE

Zidovudine or AZT, antiviral drug used in the treatment of acquired immunodeficiency syndrome (AIDS). It is not a cure for the disease but prolongs the lives of people suffering from the symptoms of AIDS.

Zidovudine was developed in the mid-1980s and approved for use in 1987. Taken every four hours, night and day, it reduces the risk of infection and relieves many neurological complications associated with AIDS. However, frequent blood monitoring is required to control anemia, a potentially life-threatening side effect of zidovudine. Blood transfusions are often necessary, and the drug must be withdrawn if bone-marrow function is severely affected.

A research study on zidovudine in 1994 showed that the drug does provide some protection to babies whose mothers are infected by the human immunodeficiency virus (HIV). The number of babies infected was reduced by two-thirds when mothers received zidovudine during pregnancy.