

# Alternative Medicine

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Complementary, alternative, and unconventional medicine, much of it imported and adapted from various times and cultures, is becoming increasingly popular in the United States. In 1990, one out of every three Americans saw an alternative health care practitioner, constituting more than 400 million visits, more than to all conventional primary care physicians. Over \$13 billion was paid for these services, of which \$10 billion was out-of-pocket and not reimbursed.<sup>1</sup>

According to the World Health Organization, between 65% and 80% of the world's health care services are classified as traditional medicine. Many of these services, however, become complementary, alternative, or unconventional medical practices when used in Western countries. Even in countries where modern Western biomedicine dominates, the public makes extensive use of unconventional practices. In Western Europe, for example, the regular use of complementary and alternative practices ranges from 20% to 70%.<sup>2,3</sup>

The public uses these practices for both minor and major problems. Surveys show that 50% of patients with cancer<sup>4</sup> and the human immunodeficiency virus (HIV)<sup>5</sup> will use unconventional practices at some point during the course of their illness. Alternative medicine is an area of great public interest and activity, both nationally and worldwide, and for both minor and severe problems.

There is not only public but professional interest in complementary and alternative practices. Over 50% of conventional physicians use or refer patients for complementary and alternative medical treatments in the United States.<sup>6,8</sup> British, French, and Dutch physicians frequently use or refer for homeopathy; 70% of German pain clinics use acupuncture; and some of the most frequently written prescriptions by conventional physicians in Germany are written for herbal products.<sup>2,3</sup>

Physicians in training want information about complementary and alternative practices. Over 80% of medical students would like further training in

these areas.<sup>6,9</sup> Currently, almost one third of family practice residencies in the United States instruct in some type of complementary and alternative practice and over 32 medical schools offer courses in complementary and alternative medicine (CAM).<sup>10</sup>

Research involving CAM, though still small by conventional standards, is on the increase. The rate of citations tagged "alternative medicine" in the National Library of Medicine's bibliographic database, called MEDLINE, has grown at a rate of 12% per year since 1966, nearly twice the growth rate of conventional medical literature.

## DEFINING ALTERNATIVE MEDICINE

Complementary and alternative medicine straddles the border between conventional and unconventional practices. Currently, CAM is defined as those practices used for the prevention and treatment of disease that are not taught widely in medical schools, nor generally available inside hospitals.

The themes dealt with by CAM are themes that cut across all medical specialties, from molecular biology to preventive and primary health care. Complementary and alternative medicine involves practices that both complement and can be integrated into conventional medicine, in addition to those that offer true substitutes for conventional care or health care options where no conventional care exists. It includes both those practices that require highly specialized and competent practitioners and numerous over-the-counter products and self-care techniques. Just as there is a diversity of health care needs, there is a diversity of health care practices available to address those needs.<sup>11</sup>

Unlike the practices, patients who use alternative medicine are not necessarily unconventional patients. Patients do not appear to seek out alternative practices because they are disillusioned with conventional medicine in general, or harbor increasing anti-science sentiments, or have a general attraction to CAM philosophies and health beliefs, or represent a disproportionate number of uneducated, poor, seriously ill, or neurotic patients. Patients use alternative practices because it is part of their social network, or they are not satisfied with the process or result of their conventional care.<sup>4,12,13</sup> Over 80% of those who used unconventional practices in 1990

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used these practices along with conventional medicine.<sup>1</sup> These were the same patients seen in the offices of the average family physician. Complementary and alternative practices are not used to replace conventional medicine, but instead, to fill in where conventional medicine requires supplementation and support. CAM patients are you and me—patients who look for options and seek out optimal and customized care.

## EXAMPLES OF ALTERNATIVE MEDICINE RESEARCH

Information about CAM practices with potential value in the way we treat and manage chronic disease comes into the Office of Alternative Medicine (OAM) every day. For me, as a researcher and physician who cares for patients, this information is the most exciting aspect of my job. Therapies that become popularized are often not the most interesting prospects. In botanical medicine, for example, there is research showing the benefit of herbal products such as ginkgo for improving dementia due to circulation problems<sup>14</sup>; palmetto preparations for benign prostatic hypertrophy<sup>15</sup>; and extracts of hot chili paper (capsicum) for arthritis.<sup>16,17</sup> Several randomized, placebo-controlled trials have been done showing that hypericum (St John's wort) is effective in the treatment of depression.<sup>18</sup> Additional studies have compared hypericum to conventional antidepressants. These studies report that it is not only equally effective as an antidepressant, but it produces one-fourth the side effects and is one-third the cost of conventional therapy.<sup>9</sup> There is research reporting improvements in arthritis using homeopathy,<sup>19</sup> acupuncture,<sup>20,21</sup> vitamin<sup>22,23</sup> and nutritional supplements,<sup>24</sup> herbal products,<sup>16,17</sup> diet therapies,<sup>25</sup> and mind-body approaches.<sup>26</sup>

An important area in need of research is the evaluation of integrative approaches to the treatment of cancer and lifestyle-related chronic disease, that is, treatment that uses a combination of the best of conventional therapies with optimal complementary support strategies, such as nutrition and mind-body approaches. So often, it is not the "magic bullets" as developed in pharmacology, but combination approaches that prove most useful for problems with complex causes. Chronic pain, asthma, drug addiction, vascular disease, heart failure, frailty, stroke, diabetes, high blood pressure, and other conditions have been evaluated, usually in small trials, with a variety of alternative and complementary

approaches, such as nutritional, mind-body and behavioral interventions, acupuncture, homeopathy, and healing. Usually these therapies have fewer direct toxic side effects than conventional treatments and, if they prove to be as effective, may have lower costs and be preferable to patients.

The evaluation of CAM provides an exciting area for looking at themes that are important for but difficult to examine in conventional medicine. Examples of these themes include:

- The effects of mind-body methods and consciousness on health care outcomes
- The exploration of placebo and nonspecific effects in the design of research and development of optimal practices
- The place and importance of caring, partnership, and healing in medicine, including their effect on outcomes
- The development of systems (holistic) models for the management of chronic illness
- The re-conceptualization of various product and device safety regulations, for approaches that may have a lack of direct toxicity
- The design of effective strategies for educating and integrating complementary approaches into conventional care.

What, then, should be the responsibility of the family physician in dealing with complementary and alternative medicine? Learning about CAM has the same goals that learning about any topic in medicine has, that is, to provide better medical care and help patients make appropriate treatment choices.

## INFORMATION

The first step is to learn the general concepts of complementary and alternative medicine with the goal of being able to differentiate one type of practice from another, especially in regard to safety. For example, most physicians should know or learn the difference between homeopathy and naturopathy, medical acupuncture and traditional Chinese acupuncture, standardized herbal formulas and nonstandardized traditional herbal mixtures, nutrients with low-toxicity thresholds and those with high-toxicity thresholds, and so forth. A considerable amount of information is available through conventional online reference sources, such as MEDLINE. Unfortunately, the current key word tag of "alter-

native medicine" produces a mixed bag of inadequate or irrelevant information.

The OAM at the National Institutes of Health has a list of key words and search strategy suggestions for finding more information from online databases, including MEDLINE. The OAM is currently working to provide physician education packets on the main systems and modalities of CAM and resources for further information. In addition, several universities, such as Harvard, Columbia, and Stanford, provide continuing medical education opportunities that introduce practicing physicians to CAM practices and concepts.

### SAFETY

It is useful to conceptually separate practices that have direct toxic effects and those that are unlikely to have direct toxic effects. For example, therapies such as homeopathy, acupuncture, and manipulation in the hands of those properly trained, and mind-body techniques such as meditation, biofeedback, and prayer are unlikely to produce many direct toxic or adverse effects. On the other hand, the use of herbal preparations, intravenous hydrogen peroxide, colonics, and certain high-dose vitamins and minerals can produce direct adverse effects and need to be approached with more attention and caution. Patients need to be instructed, and in some cases warned, about the differences in the probability of safety regarding these practices.

For those practices with potentially direct toxic effects, discouragement or monitoring is the appropriate approach. For those with few direct adverse effects (the bulk of practices that patients use), physicians should focus on other management issues to protect patients from indirect adverse effects. These issues include: (1) whether the practice is high in cost; (2) whether the patient truly needs an intervention (either for primary or secondary gain); (3) whether the practice provides a method of caring for the psychological components that accompany chronic disease; and (4) the degree to which effective conventional medicines are available for the problem. Complementary practices can both harm and benefit patients for any and all of these reasons. By working through these issues with patients, the family physician can help them to apply these practices in a rational and useful manner.

### USE

Some CAM practices can be beneficial. Which complementary or alternative practices should be accepted often depends less on the therapy than on why they are used. Practices that are used for common and self-limiting diseases are usually of little concern compared with those used for chronic and more serious conditions. In all cases, the physician's goal should be to maintain a dialogue with patients about CAM treatments so that they remain under the supervision of a comprehensively trained physician.

The amount of evidence needed to adopt or condone a practice varies depending on the potential impact of the disease and treatment. The application of low-side-effect, low-cost therapies such as massage, acupuncture, manipulation, some herbs and vitamins, or homeopathy can be reasonable, provided the patient understands that there may be no proof of efficacy and that his or her condition should be properly monitored. Patients with chronic conditions often seek out practitioners to provide them with personalized care, support, dialogue, health-promotion suggestions, and other factors. Many complementary and alternative practices can provide such personalization, again provided that efficacious conventional treatments for serious conditions are not abandoned. It is under these circumstances that the conventional physician can become a partner with the patient and the complementary practitioner in defining the most appropriate approach for a particular patient's problems.

### EVIDENCE-BASED COMPLEMENTARY MEDICINE

The family physician should be the leader in advancing the dialogue about complementary and alternative medicine. Patients who perceive that their physician is open to discussing these issues will reveal more of what they are doing. Those physicians who automatically have a negative attitude or take a paternalistic position indicate to their patients that they do not want to get involved in such a dialogue.

The best way to lead the patient is to take an evidence-based approach to all of medicine, including complementary and alternative medicine. Most decisions can be made using some of the common sense guidelines just outlined. However, when a patient wishes to use an alternative therapy for a serious illness, or a therapy that is costly, or one that may even be harmful, instead of effective conventional treatment, more evidence is required. Here the physician

can do a MEDLINE search or contact organizations that collect research in these areas, looking to see if any quality trials have been done in this area and evaluating those trials for the appropriateness and applicability to the patient's problem.

When considering the use of practices in complementary and alternative medicine for serious illness, we need high-quality, scientifically based evidence. Anything less will carry the risk of adverse effects for the patient and allegations of professional fraud, or at the very least, inconvenience and a waste of time and money.<sup>27,28</sup> Anything less represents a sub-optimal standard of practice. Any practice worth pursuing must be an evidence-based practice.<sup>29</sup> The use of primary published material and evidence-based guidelines under these circumstances can complete the physician's skill, and often proves highly satisfactory to patients.

Complementary and alternative medicine is likely here to stay. With increasing patient demand and the search for lower cost health care, insurance companies, health maintenance organizations, hospitals, and other groups will begin to provide these services. Family physicians, as the leaders in primary care, can use the current interest in CAM to help bring common sense and science together with compassion and service in the alleviation of human illness.

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