



Textbook: *Complementary and Alternative Medicine*

The Problem:

The use of complementary and alternative medicine (CAM) in the United States has greatly increased during the past decade. Most experts agree that there are several factors guiding this increase, including the desire for individual empowerment, patient dissatisfaction with conventional medicine, and the dramatic increases in the relative cost of conventional health care.

In the United States, approximately 38 percent of adults (about 4 in 10) and approximately 12 percent of children (about 1 in 9) are using some form of Complementary and Alternative Medicine. CAM use among adults is greater among women, as well as those with higher levels of education and higher incomes. According to the American Hospital Association's Annual Survey of Hospitals, the number of hospitals offering CAM services has more than doubled, from 7.9 percent in 1998 to 19.8 percent in 2006. Research teams from UCLA and UC San Diego recently surveyed 2000 medical students and discovered that 84 percent of the participants thought CAM contains beliefs, ideas and therapies that could benefit conventional medicine.

Know the Terms:

1. **Acupressure:** Traditional Chinese Medicine (TCM) related to acupuncture. Involves the application of pressure to selected body points to affect energy flow.
2. **Acupuncture:** Traditional Chinese Medicine (TCM) practice; involves the insertion of long, thin needles to affect flow of energy (*qi*) along pathways (meridians) within the body for the treatment of various diseases and disorders.
3. **Alternative Medicine:** Treatment used in place of conventional medicine.
4. **Biologically Based Practices:** Treatment using substances found in nature, such as herbs, special diets, or vitamin supplement.
5. **Chiropractic Medicine:** Manipulation of the spine to focus on disorders of the musculoskeletal and nervous systems.
6. **Complimentary Medicine:** Treatment used together with conventional medicine.
7. **Holistic:** Treatment of the whole body and not just the parts. Focus is placed on the interactions with systems, rather than treatment of individual parts.
8. **Homeopathic Medicine:** Greek term meaning "like-suffering" or "same-disease", treatment is based on the principle that "like cures like".
9. **Manipulative and Body-Based Practices:** Treatments involving manipulation or movement of one or more body parts, e.g. chiropractic/osteopathic manipulation, reflexology, and massage therapy, to name a few.
10. **Mind-Body Medicine:** Techniques designed to enhance the mind's ability to affect health.
11. **Naturopathic Medicine:** System of medicine based on the principle that the body has the ability to heal itself. In the place of conventional surgery and drugs, Naturopathy focuses on nutrition, exercise, plant-based remedies, and fresh-air/sun, to name a few.
12. **Nutraceuticals:** From "nutrition" and "pharmaceutical", food product that reportedly provides health and medical benefits, including the prevention and/or treatment of disease.
13. **Qi:** A part of Traditional Chinese Medicine (TCM) referring to vital energy force.
14. **Tinctures:** Herbal extracts usually combined with grain alcohol.
15. **Traditional Chinese Medicine (TCM):** Ancient system of healing using herbs, acupuncture/acupressure, and massage to bring the body into balance and to remove blockages of vital energy flow that lead to disease.

Complementary and Alternative Medicine: Basic Training

1. Basics Defined:

- **CAM or Complementary and Alternative Medicine:**
 - A group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine, or are not part of standard care (The National Center for Complementary and Alternative Medicine).
 - Conventional medicine or standard care (also called Western or allopathic medicine) is medicine as practiced by holders of M.D.(medical doctor) and D.O. (doctor of osteopathic medicine) degrees, and by allied health professionals such as physical therapists, psychologists, and registered nurses.
- **Complementary Medicine:**
 - Nonstandard treatments that you use together, or in conjunction with, standard care.
- **Alternative Medicine:**
 - Treatments that you use instead of, or in place of, standard care.
- **Integrative Medicine:**
 - A total approach to care that combines standard medical treatments with CAM practices.
 - An example is taking an omega-3 fatty acid supplement in addition to a prescription statin medication to reduce cholesterol.

2. Types of CAM: Classified into five broad categories:

1. Alternative Medical Systems:

- Built upon complete systems of theory and practice.
- Many of these AMS have evolved apart from, and earlier than, conventional medical practice used in the United States. Examples include:
 - Acupuncture
 - Ayurveda
 - Homeopathy
 - Native American healing practices
 - Naturopathic medicine
 - Tibetan medicine
 - Traditional Chinese medicine

2. Mind-Body Interventions:

- Uses a variety of techniques designed to enhance the mind's capacity to impact body function and symptoms.
- Some techniques that were considered alternative in the past have become mainstream (for example, patient support groups and cognitive-behavioral therapy).
- Other mind-body techniques are still considered alternative, including:
 - Art therapy
 - Biofeedback
 - Dance therapy
 - Guided imagery
 - Humor therapy
 - Hypnotherapy
 - Meditation
 - Music therapy
 - Prayer therapy
 - Yoga

3. Biologically-Based Therapies:

- Biologically based therapies use substances found in nature, such as herbs, foods, and vitamins; examples include:
 - Diet products and Dietary supplements
 - Herbal products
 - Megavitamins

4. **Manipulative and Body-Based Methods:**

- Therapies that involve the movement, realignment, or manipulation of the body; examples include:
 - Acupressure
 - Alexander Technique
 - Chiropractic
 - Feldenkrais Method
 - Massage therapy
 - Osteopathy
 - Reflexology
 - Rolfing
 - Therapeutic Touch
 - Trager Approach

5. **Energy Therapies:**

- Energy medicine intends to manipulate subtle energy fields thought to exist in and around the body; They include two types of therapies:
 - Biofield therapies:
 - Intended to affect energy fields that are believed to surround and penetrate the human body.
 - Some forms of energy therapy manipulate biofields by applying pressure and/or manipulating the body by placing the hands in, or through, these fields; examples include:
 - Qi gong
 - Reiki
 - Therapeutic Touch
 - Bioelectromagnetic-based therapies:
 - Involve the unconventional use of electromagnetic fields, such as:
 - Pulsed fields
 - Magnetic fields
 - Alternating-current or direct-current fields

Talk'n Stats:

According to a 2008 report release by the National Center for Complementary and Alternative Medicine (NCCAM) and the National Center for Health Statistics (part of the Centers for Disease Control and Prevention):

- In the United States, approximately 38 percent of adults (about 4 in 10) and approximately 12 percent of children (about 1 in 9) are using some form of Complementary or Alternative Medicine.
- People of all backgrounds use CAM. However, CAM use among adults is greater among women, and individuals with higher levels of education and higher incomes.
- Non-vitamin, non-mineral natural products are the most commonly used CAM therapy among adults.
 - Use has increased for several therapies, including deep breathing exercises, meditation, massage therapy, and yoga.
- The most popular natural products are fish oil/omega 3, glucosamine, echinacea, and flaxseed.
- American adults are most likely to use CAM for musculoskeletal problems such as back, neck, or joint pain.
- Americans spent \$33.9 billion out-of-pocket on complementary and alternative medicine (CAM), according to a 2007 government survey.
 - Of the \$33.9 billion spent on CAM out-of-pocket, an estimated \$22.0 billion was spent on self-care costs—CAM products, classes, and materials—with the majority going to the purchase of nonvitamin, nonmineral, natural products (\$14.8 billion) such as fish oil, glucosamine and Echinacea.
- CAM accounts for approximately 1.5 percent of total health care expenditures (\$2.2 trillion) and 11.2 percent of total out-of-pocket expenditures (conventional out-of-pocket: \$286.6 billion² and CAM out-of-pocket: \$33.9 billion) on health care in the United States.
- U.S. adults also spent approximately \$11.9 billion on an estimated 354.2 million visits to CAM practitioners such as acupuncturists, chiropractors, massage therapists, etc.
- When prayer specifically for health reasons is included in the definition of CAM, the number of U.S. adults using some form of CAM in the past year rises to 62 percent.

Know Your Numbers:

Dietary Supplements, What You Need To Know:

The majority of adults in the United States take one or more dietary supplements either every day or occasionally. Today's dietary supplements include vitamins, minerals, herbals and botanicals, amino acids, enzymes, and many other products. Dietary supplements come in a variety of forms: traditional tablets, capsules, and powders, as well as drinks and energy bars. Popular supplements include vitamins D and E; minerals like calcium and iron; herbs such as echinacea and garlic; and specialty products like glucosamine, probiotics, and fish oils.

- **The Dietary Supplement Label:**
 - All products labeled as a dietary supplement carry a Supplement Facts panel that lists the contents, amount of active ingredients per serving, and other added ingredients (like fillers, binders, and flavorings).
 - The manufacturer suggests the serving size, but you or your health care provider might decide that a different amount is more appropriate for you.
- **Effectiveness:**
 - If you don't eat a nutritious variety of foods, some supplements might help you get adequate amounts of essential nutrients. However, supplements can't take the place of the variety of foods that are important to a healthy diet.
 - Scientific evidence shows that some dietary supplements are beneficial for overall health and for managing some health conditions. For example, calcium and vitamin D are important for keeping bones strong and reducing bone loss; folic acid decreases the risk of certain birth defects; and omega-3 fatty acids from fish oils might help some people with heart disease.
 - Other supplements need more study to determine their value.
 - Keep in mind that the U.S. Food and Drug Administration (FDA) does not determine whether dietary supplements are effective before they are marketed.
- **Safety and Risk:**
 - Many supplements contain active ingredients that can have strong effects in the body; always be alert to the possibility of unexpected side effects, especially when taking a new product.
 - Supplements can be dangerous if taken in lieu of (replacing) prescribed medicines or when people take many supplements in combination.
 - Some supplements can increase the risk of bleeding or, if a person takes them before or after surgery, they can affect the person's response to anesthesia.
 - Dietary supplements can also interact with certain prescription drugs in ways that might cause problems. Here are just a few examples:
 - Vitamin K can reduce the ability of the blood thinner Coumadin® to prevent blood from clotting.
 - St. John's wort can speed the breakdown of many drugs (including antidepressants and birth control pills) and thereby reduce these drugs' effectiveness.
 - Antioxidant supplements, like vitamins C and E, might reduce the effectiveness of some types of cancer chemotherapy.
 - Know the nutritional value of the foods that you are eating; as it is possible to overdose on certain nutrients when taking supplements, for example:
 - Too much vitamin A can cause headaches and liver damage, reduce bone strength, and cause birth defects.
 - Excess iron causes nausea and vomiting and may damage the liver and other organs.
 - Be cautious about taking dietary supplements if you are pregnant or nursing. Also, be careful about giving them (beyond a basic multivitamin/mineral product) to a child.
 - Most dietary supplements have not been well tested for safety in pregnant women, nursing mothers, or children.
- **Quality:**
 - The FDA regulations for dietary supplements are different from those for prescription or over-the-counter drugs.
 - Unlike drugs, which must be approved by the FDA before they can be marketed, dietary supplements do not require premarket review or approval by the FDA.

- The FDA has established quality standards for dietary supplements and periodically inspects facilities that manufacture dietary supplements.
- Several independent organizations offer quality testing and allow products that pass these tests to display their seals of approval.
 - These seals of approval provide assurance that the product was properly manufactured, contains the ingredients listed on the label, and does not contain harmful levels of contaminants.
 - These seals of approval do not guarantee that a product is safe or effective. Organizations that offer this quality testing include:
 - U.S. Pharmacopeia
 - ConsumerLab.com
 - NSF International
- **Keep in Mind:**
 - Beware of taking dietary supplements to treat a health condition that you have diagnosed yourself, without consulting a health care provider.
 - Don't take supplements in place of, or in combination with, prescribed medications without your health care provider's approval.
 - Check with your health care provider about the supplements you take if you are scheduled to have any type of surgical procedure.
 - The term "natural" doesn't always mean safe.
 - A supplement's safety depends on many things, such as its chemical makeup, how it works in the body, how it is prepared, and the dose used.
 - Certain herbs (for example, comfrey and kava) can harm the liver.
 - Before taking a dietary supplement, ask yourself these questions:
 - What are the potential health benefits of this dietary supplement product?
 - What are its potential benefits for me?
 - Does this product have any safety risks?
 - What is the proper dose to take?
 - How, when, and for how long should I take it?
- **Talk with Your Doc:**
 - Let your health care providers (including doctors, nurse practitioners, pharmacists, dietitians, etc.) know which dietary supplements you're taking.
 - Your health care provider can help you determine which supplements, if any, might be valuable for you.
 - Keep a record of the supplements you take in one place, just as you should be doing for all of your medicines.
 - Note the specific product name, the dose you take, how often you take it, and the reason why you use each one.
 - You can also bring the products you use with you when you see your health care provider.

Thoughts for Living:

Be a Smart Shopper:

*Millions of Americans use some form of complementary medicine. Like any decision concerning your health, decisions about whether to use complementary therapies are important. Consider the following steps from the **National Center for Complementary and Alternative Medicine (NCCAM), a division of the National Institutes of Health**, when deciding to use complementary practices and products.*

- **Be a Proactive Consumer.**
 - Do your homework:
 - Investigate any scientific studies have been done on the safety and effectiveness of the complementary product or practice that interests you.
 - Get the input of your health care provider before making a decision.

- **Provider Picking:**
 - If you are considering a therapy provided by a complementary medicine practitioner, such as acupuncture or naturopath, choose the practitioner as carefully as you would choose a conventional health care provider.
 - Search for reviews, ratings, comments, and feedback from others.
- **Supplement Smarts:**
 - If you are considering a dietary supplement do your homework
 - Search for research or studies of the products that you are considering.
 - Review "*Dietary Supplements, What You Need To Know*" above.
- **Be a Smart Patient:**
 - Tell all your health care provider(s) about any complementary approaches you use.
 - Give them a full picture of what you do to manage your health. This will help ensure coordinated and safe care.
 - Complementary products or practices that have not been proven safe and effective should never be used as a replacement for conventional medical treatment or as a reason to postpone seeing a health care provider about any health problem.
- **Safety First:**
 - Learn about factors that affect safety including:
 - For therapy that is administered by a practitioner, these factors include the training, skill, and experience of the practitioner.
 - For a product such as a dietary supplement, the specific ingredients and the quality of the manufacturing process are important factors.
 - Always look for the verified logos above.
 - This logos indicate that the dietary supplement or product contains the ingredients, potency, and amounts listed on the label, and does not contain harmful levels of specified contaminants.
- **Beware of Buzz Words:**
 - Keep in mind that "natural" does not necessarily mean "safe." (Think of mushrooms that grow in the wild: some are safe to eat, while others are not.)
 - Question terms like "scientific breakthrough," "miracle cure," "secret ingredient," or "ancient remedy."
 - Remember: if it sounds too good to be true—for example, claims that a therapy can cure a disease or works for a variety of ailments—it usually is.