Making Healthy Decisions about Complementary Medicine

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Abstract:

Too often consumers base their decisions about complementary medicine on unrealistic expectations or inadequate information. As the cost of total health care is rising, consumers are paying more both for conventional and complementary medicine. Consumers must learn to evaluate health information critically to make sure they get value for what they pay. Good decisions require understanding what is needed, how likely the treatment is to provide it, and a means to verify that the treatment is working. Ultimately, consumers will have to become more aware of their own body and learn to trust their direct experience. The goal of complementary medicine--Whole health--depends more on lifestyle (exercise, diet, stress management and spiritual practice) than upon any treatment, conventional or complementary.

INTRODUCTION

More and more people are deciding to use complementary medicine to stay healthy or to treat illness. There are many reasons for this. Because the overall cost of medical care is rising it is important to understand how you make decisions about health care. Perhaps the most important point is to realize that you are making a choice when you see a practitioner or purchase a product. Such choices should be made wisely because your health is at stake.

The following stories, based upon real patients, represent some of the ways people use complementary medicine. These case histories, though simplified, are not unusual. They show how some people make poor decisions about complementary medicine.

Mr. J. is a middle-aged executive in a high stress job requiring much travel. His diet is erratic, he doesn't have time to exercise regularly and he has no consistent means of stress reduction. To stay healthy and young he takes 30-40 supplements daily because "he read about them."

Mr. J. understands that his lifestyle is unhealthy and he is apprehensive about getting sick. Rather than do the more difficult job of modifying his lifestyle he takes the easy way and assumes that supplements will magically protect him from harm.

Mrs. M. "watches" her diet and tries to exercise at least once a week but has not lost the 35 pounds her doctor recommended, nor has she lowered her cholesterol below 270. She often skips her blood pressure and cholesterol medicines to save the $25 prescription co-pay her insurance requires. She has talked with health-food saleswomen who have sold her devices and supplements to prevent heart attacks, improve her energy, cure her arthritis, keep her from aging, help her lose weight and treat the menopause.

Mrs. M. is suspicious of prescription medication because of the listed side effects. She feels that non-prescription supplements and herbs must be safe because they are natural. She doesn't realize her alternative medicines cost her over $200 per month.

Ms. S. has advanced breast cancer. She and her husband have traveled to Brazil, Texas, Tijuana and the Philippines searching for a cure. They learn about treatments from books such as "The Cure for All Cancers," late-night TV infomercials, and chat groups on the internet. They have exhausted their savings and have had to borrow money from their children.

Ms. S. was traumatized by a doctor's comment that she had less than a year to live. Understandably frightened she looked for any source of hope. Much of her information about alternative treatments came from sources "selling" a product and offering a promise of cure.

COST OF HEALTH CARE

In 2001 Americans spent $1.47 trillion on health care. That number is growing every year. The cost of medical insurance is rising. A husband and wife, with average ratings, may pay up to $700/mo even with a $2000 deductible. Companies, facing the rising cost of insurance, pass on that cost to employees with more restricted and expensive choices. The cost of HMO insurance has gone up by 20% and PPO by 88%.

The patient's share of that insurance is going up with higher deductibles and higher co-pays at the time of office visits or procedures. It is estimated that within 2 years even individuals covered by an employer health plan will pay $4500/year out of pocket.

The price of prescription drugs has risen faster than any other segment. More drugs are available and patients take more different medications. There is more direct advertising of these drugs to the public and pharmaceutical companies spend $40 billion each year to promote them.

The use and cost of complementary medicine* is growing, too. In 1990 there were 425,000,000 visits to alternative health care providers, more than to primary care physicians in that same period. (Astin) This number increased by 47% by 1997. (Eisenberg 2001) In 2001 consumers spent $300 billion on complementary medicine. In recognition of its importance, the National Center for Complementary and Alternative Medicine, a part of the National Institutes of Health (NIH) has a $100.6 million budget to fund studies of complementary treatments.

In 2000 Americans spent over $15.7 billion on dietary supplements. At least 52% of Americans take some form of vitamin or supplement. More than 30% take vitamins or supplements regularly. In 1997 12.1% of Americans used herbal medicine, spending over $5.1 billion. (DeSmet) Of those who used herbal medicines, only 15.1% saw a trained practitioner, the rest, presumably, getting their information from the media or salespersons.

More people are using complementary medicine. Two thirds of the general public (Kessler) have used complementary medicine, and 23% of the public see a complementary practitioner at least once a year. People with cancer use complementary treatments more frequently than any other group. (DiGianni) Up to 83% of women with breast cancer use some form of treatment, though this varies depending upon ethnic group, education and social status. Insurance often does not cover these costs; 58% of individuals pay entirely out of pocket.

Most information about complementary medicine comes from the public media. Consumers are bombarded with advertisements and "infomercials" for vitamins and supplements on TV and in every magazine and newspaper. Articles about celebrities using complementary medicines to treat cancer, heart disease and aging appear regularly.

The purpose of this article is to examine how people make healthcare decisions, specifically decisions about complementary medicine. It is not a review of any specific treatment. It is not a review of the growing literature on complementary medicine. It is not a recommendation or criticism of complementary medicine in general or any specific treatment. <u>The same decision process should be applied to conventional treatments as well</u>. Conventional treatments, ostensibly based on scientific research, have their own limits as discussed below.

*There is no clear definition of what treatments should be considered Complementary or Alternative. Usually complementary is defined as "not conventional" and hence, not taught in American medical schools. As interest in complementary medicine (however defined) has grown, more of the practices <u>are</u> being taught in medical schools. (Spiegel) At least 27 medical schools, including Stanford and Harvard, have centers for studying (and even using) many techniques that would be considered complementary.

For the purposes of this paper the classification used by Kaptchuk and Eisenberg (Taxonomy of Unconventional Healing Practices) will be used. Complementary or alternative medicine includes professional systems like chiropractic, acupuncture, homeopathy, etc.; alternative dietary programs like mega-vitamins, supplements, botanicals, macrobiotics, organic foods; energy healing like esoteric energies, crystals and magnets, spirits and mediums, Reiki, qigong; mind-body medicine like Deepak Chopra, Bernie Siegel, Course in Miracles, imagery; and "non-normative scientific enterprises" like Burzinski's antineoplastins, Livingston's pleomorphic bacteria cancer vaccine, chelation, etc.

History of Complementary Medicine

In the early 19th century there was competition between different kinds of medical practitioners. By 1830, the 6800 MD's, serving primarily the upper class, were outnumbered by the botanical healers, midwives, barber-surgeons, and "uncouinted cancer doctors, bonesetters, inoculaters, abortionists and sellers of nostrums" who served the rest of the population. (Kaptchuk and Eisenberg, Medical Pluralism) The egalitarianism of post-Revolutionary America and pluralism of society supported the right of such diverse practices to exist. It was only in the mid- and late-19th century that scientific (i.e., experimentally based) medicine developed.

The conflict between scientific medicine and the other practices, often based on economic competition, was quite bitter and polarized both practitioners and patients.

Samuel Hanemann, (1755-1842) the founder of homeopathy, claimed that "Allopaths practiced a non-healing art which shortened the lives of ten times as many human beings as the most destructive wars and rendered many millions of patients more diseased and wretched than they were originally."

Oliver Wendel Homes (1809-1894), graduate of Harvard Medical School, described Homeopathy as a "mingled mass of perverse ingenuity, of tinsel erudition, of imbecile credulity, and of artful misrepresentation."

In the 20th century the American Medical Association continued the persecution of alternative practitioners which increased the polarization. Alternative medicine became an expression of protest against conventional medicine and by extension, conservative authority in general.

The advances in science and treatment successes led to conventional medicine emphasizing the disease process rather than patient needs. Media reports of medical mishaps (Moynihan) led to a growing mistrust in conventional medicine. Conventional medicine's failure to provide the same successes in cancer as it did in infectious disease left a void in patients' needs for hope. Economic pressures further eroded the ability of conventional medicine to respond to the more individual and personal needs of patients.

Surveys in 1994 (Astin) and 1998 (Eisenberg 2001) showed that most people who use complementary medicine also use conventional medicine for many of the same problems. Only 4.4% of patients relied primarily on alternative medicine for treatment (mainly out of distrust of conventional doctors or desire for control). Patients felt that using both complementary and conventional therapy was better than either one alone. They preferred complementary treatments more for back and neck problems, fatigue, arthritis and headaches. Hypertension was treated more with conventional therapy. The

congruence with worldview ("holistic") was often cited as the reason a complementary treatment was used.

The basis for the appeal of complementary medicine is complex. There are many individual or personal factors. Kaptchuk and Eisenberg (Kaptchuk 1998) have identified the following cultural ideas which make complementary medicine attractive to many people.

1) Complementary treatments are "natural" and hence more innocent and wholesome than man-made. Oliver Wendell Holmes called this romantic view "the nature-trusting heresy" which disregards the potential harm of natural things such as anthrax and poisonous mushrooms.

2) Another concept which supports complementary treatments is that of "vitalism." Complementary therapies connect people with fundamentally benign cosmic powers such as Qi, or "spiritual vital essence."

3) Complementary therapies are often based upon a self-defined science which is either different from the science of conventional medicine or draws conclusions from basic science that conflict with other research. The science on which complementary theories are based is often observational rather than strictly controlled studies. The role of placebo is rarely addressed. The criticisms of complementary science are taken as evidence of persecution rather than critique of methodology.

4) Complementary therapies often have an implicit (if not explicit) spirituality. This unification of "body-mind-spirit" is attractive to those who feel the demarcation between science and religion has become too one-sided.

Why making decisions is important:

Most people are unaware of how they make decisions about complementary medicine. They see headlines on the cover of a magazine about the promise of "Power Herbs to Heal Your Mind and Body" (AARP Modern Maturity, Jan/Feb. 2003) and glance at the herbs mentioned in the article. They don't read the "fine print" which states that none of the claims have been proven.

Stressful lifestyles and a sense of being vulnerable to illness support the hope that there is something that will prevent problems. The limits of conventional medicine—after years of promising miracles—have created the expectation that complementary medicine will supply that missing miracle.

People want simple answers to sometimes complex problems. They want explanations that make sense and are compatible with their worldview. They want to be comfortable and safe with the minimum of effort. They want to maintain control over their lives.

These motivations are very human and quite understandable. Unfortunately, they do not always lead to wise decisions. Now, more than ever, as people turn to complementary medicine for a significant part of their health care, it is important to make thoughtful, conscious and healthy decisions. Here are some reasons why.

1 Health care costs are rising. Consumers will pay even more in the future to get well and stay well. There are many reasons for this, both cultural and personal. Consumers pay more for health insurance which covers less. Out-of-pocket costs are higher. New technologies are discovered and the cost of their development is passed on to the consumer. Consumer demand is rising as the population ages and has more

medical problems. Consumer expectations are rising as products are marketed that address quality of life issues (e.g. Viagra and supplements that are designed to "fight aging.") Patients are encouraged to become better informed and make more decisions about their health care. Much of that information comes from commercial or unregulated sources of information including the internet or from advertisements and paid endorsements. Unfortunately, many patients do not evaluate the quality of information available or pay attention to the way they make decisions.

The economic burden for health care (both conventional and complementary) is shifting to the consumer. Ultimately, it all comes out of the same pocket. Consumers have a right and a responsibility to expect value for the money they spend, **Are you getting what you pay for?**

2 There are personal consequences to choosing a complementary therapy. If you choose treatment A, which is less likely to work, you miss the opportunity to use treatment B, which may be more likely to work. Treatment A, chosen because of its promise to cure or treat a significant problem but without data to support its claim, may cause your health to suffer because it is ineffective. Because there is no law requiring complementary therapies to report their side effects, you may be exposed to harmful events without knowing it.

3 Often consumers will choose a treatment for reasons other than the obvious. Some complementary therapies and practitioners provide greater personal attention and care than conventional medical practices. This can relieve anxiety and relieve uncertainty by providing an explanation for symptoms. Subconscious or unexpressed needs may be met even though the overt justification is not. These needs are important and should be made explicit. There is no reason to sacrifice one goal for another: both may be satisfied if you make good decisions.

QUESTIONS TO ASK:

Before making any health care decision, whether to see an acupuncturist, buy herbs or vitamins, or take a prescription medication you should ask yourself the following questions.

What result do I want?
How likely is the treatment to give that result?
What is the potential for harm?
How will I know if the treatment is successful?

1 What results do I want?

A Conscious and overt

The first step in choosing a treatment is defining its goal. Do you want to get rid of a symptom you have now? Do you want to cure or control the disease which is causing that symptom? Do you want to prevent further disease?

Some symptoms are obvious and objective. You feel hot and your temperature is 103 degrees. Aspirin will bring down your fever but may not alter the cause of the infection.

The diagnosis of a disease can be more subtle. Often tests are defining and necessary such as a chest X-ray to show pneumonia or a biopsy to show cancer.

Sometimes there is controversy over the definition of a disease. Not all symptoms are related to a specific disease.

The diagnosis of "chronic Lyme disease" is a good example. (Sigal) Though there is a specific infection with Borellia burgdorferi which can cause a syndrome of arthritis and rash, the term has been applied to a variety of symptoms that have no connection with a bacterial infection. Hence, treatments for infection will not cure the source of the symptoms.

The issue of preventing disease is even more complex. How can you know if what you do will prevent a disease? By definition, all you can know is if it failed to prevent it. Hence, unless there are controlled studies which show different outcomes, there is no way to show that a treatment can prevent an illness, regardless of how plausible its effect may be.

Using vitamins to prevent cancer has been popular for many years, based upon the consistent finding that certain diets, rich in certain vitamins, are linked to lower cancer rates. Vitamin A has been shown in test tube and animal studies to prevent many of the steps in cancer development. When it was tested in human beings, however, the subjects who received Vitamin A pills got more lung cancer than the ones taking placebo.

The broader issue of "being well" or "staying healthy" is much harder to define. Most people want more than just remaining free of any definable disease. They want to feel good and have a sense of wellbeing. This is obviously subjective and susceptible to many influences.

Day to day variations in mood, the natural tendency to remember certain feelings more than others and changes in outside circumstances have profound influence on wellbeing that are unrelated to specific treatments. Many complementary therapies, whether supplements or treatments, promise greater "health" without ever defining what this is or how to know if the treatment is successful.

B Subconscious or covert

Regardless of the explicit reasons for taking a treatment, there are always implicit or less overt reasons, too. Few people can experience a change in their body without some apprehension. Disease creates a sense of vulnerability. There is a universal need to feel safe and retain control when this happens. It is natural to want to make sense out of what otherwise is a random event. It is natural to want reassurance from some powerful person or technology.

All of these reasons enter into the decision to seek treatment, whether they are consciously acknowledged or not. Given the stresses in our lives, the amount of information bombarding us, and the growing complexity of our environment, these factors are becoming even more important in choosing treatments.

In the past, conventional physicians could provide such reassurance. The doctor-patient relationship was based upon trust and faithful care. Unfortunately, "Marcus Welby, MD," retired many years ago. It is difficult to find a replacement in the current conventional medical system. This is one of its greatest and growing deficiencies.

Complementary practitioners, however, often take a hands-on approach and spend time listening to patients more thoroughly. They may present a plausible explanation for the illness that does not require a scientific background to understand. Treatment recommendations often include some form of stress reduction, which may address the

source of distress and anxiety. Complementary practitioners may give the most important medicine of all, a caring human being.

Sometimes, however, the treatments that provide reassurance may be chosen rather than those that actually provide relief.

2 How likely is the treatment to give results?

A Scientific research

Before choosing any treatment most people want some sense of how well it works. Well-controlled scientific research generally can answer that question. It isolates the contribution of the doctor or patient from the technology and offers a fairly precise estimate of success before treatment. The emphasis is on the treatment being studied (e.g., a new chemotherapy drug for cancer), not the doctor or the patient. The scientific process ideally eliminates the contribution of the placebo effect (the belief of either the doctor or patient that the treatment will work) and any other variables that could influence the outcome.

The gold standard for clinical research is the "randomized double-blind placebo controlled" study with adequate numbers of subjects to give a statistically valid answer. This means that of two identical groups (matched for all important variables such as age, other diseases, stage of disease treated, etc.), one receives active treatment (e.g., a drug) and the other group receives identical but inactive treatment (an inert substance), and neither doctor nor patient knows which is which.

Though this is the ideal, much research falls short of this standard. Research reviews, examining the scientific quality of the studies, frequently discard over 90% of the published papers, considering them inadequately designed or statistically too weak to justify their conclusions.

There are limits, however, on scientific research. What is believed to be true now may later be disproven. An example of this is the controversy over the ability of hormone replacement therapy (HRT) to prevent heart disease. Over the last 40 years a large number of studies have shown that women who took HRT had fewer heart attacks. Only recently have well-controlled trials shown that this is not true. The prior conclusions were based on non-randomized studies and the women who took HRT happened to have fewer risks for heart disease in the first place.

The research quoted to support the claims of complementary therapies is generally of even lower quality. Often the studies are done only on animals or in test tubes and have never been validated on humans. Those studies done in humans rarely control for background variation or placebo effect. Reviews of published studies of complementary therapies show that the vast majority of the research is so poorly done that no conclusions can be drawn.

What is a patient/consumer to do, given the inadequacy of most research in complementary medicine and the impermanence of conventional research conclusions? Is there anything that can be trusted?

The answer is a qualified "yes, some things can be trusted." Though difficult for an untrained person to judge research objectively, consumers should investigate what research has been done. Were studies done in humans? If they were, did they measure the outcome of the disease or something else that might not be relevant? Was there a

control group? Were the studies published in a reputable journal with other scientists reviewing the research? These are the minimum standards.

The distressing fact that there are few absolute truths in medicine is inescapable. Even the findings of well-controlled research can be reversed with new research. It can be difficult if not impossible to control for all the variables. All research should be considered provisional and its truths temporary. It may, however, be the best information available.

As long as the consumer accepts these facts and does not expect a guarantee, scientific research remains the best way to predict whether a treatment will be successful.

B Expert opinion

Expert opinion, based on the experience of professionally trained personnel, offers the next best way to predict the likely success of a treatment. For example, an orthopedic surgeon who has done thousands of knee operations can often tell before surgery whether the procedure will help. The concept of a "second opinion" is based upon the wisdom of an independent physician's review. Where research or facts do not allow a clear decision, the thoughtful opinion of an experienced practitioner is vital.

There are also several disadvantages to this approach. Even experts have biases and limits to their points of view. They may be prejudiced for or against one treatment or another. They may offer advice based on their own needs (ego or profit) either consciously or unconsciously. They may understand a disease well but not understand your particular problems with the disease. Experts may take the same information and draw different conclusions.

An even more fundamental problem is knowing who is an expert. Describing oneself an expert does not necessarily make it true. There should be some independent authority who validates such claims. Expertise in academics or research does not always translate into clinical expertise. Friends may endorse a practitioner as an "expert" based upon how satisfactory their own experience was rather than how experienced the practitioner is.

In evaluating experts' opinions take into account their credentials (training and experience), the experience of others who have followed their advice, and your own sense of how trustworthy they are. Experts who are selling something (their own services or a product) should be evaluated carefully for conflicts of interest. The profit motive does not automatically disqualify an individual but is a cause for caution.

C Anecdotes

Anecdotes, or stories about individuals who benefited from a treatment, often offer hope. If true, they show there is at least the possibility of success. Treatments that are later shown to be beneficial may be discovered because of anecdotal evidence of their success. Digitalis and aspirin were developed based on the folk remedies which contained foxglove and willow bark respectively. Anecdotes are often used in promoting treatments which have little scientific evidence or which are very controversial. It is difficult to argue with anecdotes since they do provide hope at times when little else can offer any reassurance of success.

There are several problems in using anecdotes. It is difficult to verify them. Independent reviews of the "best cases" of several prominent alternative cancer practitioners have shown either their patients did not have cancer or that the improvement was related to conventional therapy rather than the alternative therapy.

Because they are based on the stories of individual experiences, you cannot know if the result applies to your situation. Important details may be omitted. For example, the type or stage of cancer may be different. Other treatments may be used but not mentioned.

The comment made by skeptics of complementary medicine that "the pleural of anecdotes is not data" applies also to phase I (very early testing) research in conventional medicine. Recently there has been a lot of attention paid to new "biological" therapies whose success is based upon a very limited number of patients. While these results are very important to the patients who benefited, and offer promising leads to develop further, they do not predict success for the next patient.

When using anecdotes to decide on treatments consider carefully their source and whether there is an ulterior motive. Such stories may be offered to provide hope or to sell a product or service. Examine also what your needs are: to maintain hope or to treat a disease.

D Marketing or advertising

Marketing or advertising a treatment informs you of its existence and encourages you to purchase it. Because of the economic motivation, the objectivity of the information is suspect. "Infomercials" purport to give information but are designed to present a very limited and optimistic perspective. Adverse effects are rarely mentioned. Often they rely on fear or emotional appeal to get you to use their product.

Conventional products and technologies are marketed to consumers in this way. Whole body scans are advertised to "save lives" and make your life safer when there are no studies proving that they do so. The radiation exposure (equivalent of 500 chest X-rays) is not mentioned. Neither is the additional expense and discomfort of additional tests to pursue the indeterminate but ultimately benign findings. Expensive antihistamines and arthritis drugs are promoted directly to consumers as if they were toothpaste or automobiles, though they are no better than less expensive medicines available without prescription.

The expression "caveat emptor" (let the buyer beware) certainly applies here. Advertising is designed to get you to spend your money on a product. It is <u>always</u> biased. You should consider carefully what you are buying (is it really protection from disease or a superior product?) and how much it costs (can you get the same thing cheaper?).

3 What are the chances of harm?

The choice of any treatment includes a cost/benefit analysis. Even if you know the result you want, and can estimate the likelihood of success, there is still the issue of side effects and cost.

To license a drug, pharmaceutical companies must do research on the side effects and publish a list of side effects. The same is true for licensed medical devices such as heart valves or dialysis machines. The ethics and laws that govern the conventional medical system require telling the truth about treatments so patients can give informed consent. As a direct consequence of the scientific method that underlies conventional medicine, there is a strong drive for self-scrutiny. (Davidoff 1998)

The combination of these values and laws has emphasized the potential dangers of treatments often more than their successes. Articles published in scientific journals analyzing adverse events are quoted in the media and give a simplified and often

distorted view of the findings. The media treatment of Tamoxifen, giving the impression that it caused more cancers than it prevented, is a good example. (Moynihan 2000)

The first question most patients ask when a new medication is prescribed is "What are the side effects?" While this question is appropriate for any medication or treatment, additional questions also should be asked. "If I get a side effect, is it caused by the medication?" "How often do people get serious side effects from the medication? "Will the side effects go away if I stop the medication?"

Table 1 shows the side effects of two drugs. (Fallowfield) Based on the incidence of symptoms, both look pretty dangerous. Medication B, however, is placebo. Hence the "side effects" attributed to that drug are not directly caused by the chemical action of the medication. Many of the symptoms are common to the group who were taking the medications, healthy women aged 35 to 75 (a similar frequency of different side effects would be true for men in that age range).

Drug A is Tamoxifen, which reduces the chances of developing breast cancer by half. It also causes uterine cancer which can be serious and requires treatment. However, only 1 or 2 women in 1000 taking Tamoxifen would get uterine cancer and the vast majority would be cured by a simple hysterectomy. Hence, the danger of dying from uterine cancer is minute compared to the number of women saved by not getting breast cancer.

Complementary treatments do not have to report adverse effects. They do not have to prove they are effective. There are no laws requiring they maintain quality control over their products. It is very difficult to find out if there are side effects until there is an article in the newspaper or a scientific journal. Even then, the reports of harm are often discounted because of personal and cultural beliefs that "if it doesn't require a prescription it must be harmless."

As mainstream scientists are investigating complementary treatments, more and more information about drug interactions and adverse effects is discovered. Articles by Ang-Lee, Herbal Medicines and Perioperative Care and Ernst, The Risk-Benefit Profile of Commonly Used herbal Therapies: Ginkgo, St. John's Wort, Ginseng, Echinacea, Saw Palmetto, and Kava give descriptions of side effects of supposedly "harmless" herbs. Particularly important are the drug interactions with prescribed medications and the potential for abnormal bleeding, arrhythmia, or inactivation of anti-viral, chemotherapy or birth control drugs.

4 How to determine results?

How do you know if the treatment you're using is working? For some situations, there are objective, measurable outcomes: a cholesterol level goes down or an X-ray becomes normal. In other circumstances the results are more subjective: pain diminishes or a sense of wellbeing increases. Both methods can be valid. Both methods have limitations.

A Objective measurement

"Objective" tests, even if the result is a number, are subject to errors in performing the test (lab error) or human variation in interpreting the data (different radiologists may "read" the same mammogram differently). Sometimes what is measured, even if it is precise, may not correlate with or even be relevant to the real outcome. Serum markers for cancer, such as CEA for colon cancer, do not always show

cancer growth. Cholesterol levels, though useful in assessing general vascular risk, may not correspond to the amount of arteriosclerosis in an individual.

As long as their limits are acknowledged, however, objective tests offer the best way of measuring results when there is a defined illness being treated.

B Personal/subjective experience

Subjective experience can be another valid way to measure the outcome of treatment. For example, the only way to measure pain relief is to ask the person how they feel. No outside observer or test is as valid as the person's own subjective assessment. For many other experiential or functional outcomes, subjective reports are not only the best measurement, they are the only relevant measurement.

Inherent in subjective experience, however, are the placebo and nocebo effects. (Placebo is Latin for "I will please" and nocebo is the word for "I will harm.") A placebo is an inert substance or sham procedure that is not chemically or physically able to produce an effect. It is compared with active treatment to subtract the background effect of doing some intervention. In almost all drug studies the placebo effect produces a 20 to 40% improvement in symptoms or function. The nocebo effect, or side effects caused by inert substances, is likewise 20 to as high as 70%. (Barsky) (See also Table 1)

Rather than discrediting the individual's ability to know whether they feel or are different from a treatment, this information highlights two things. Firstly, the mind is powerful and can both help and harm the body. It may not be the substance you take but the intention you have in taking it that produces the effect. If this is the "active ingredient" then you should cultivate healthy intentions rather than necessarily using (sometimes expensive) symbols of your own ability to heal.

Secondly, subjective assessment should be used cautiously in ascribing cause and effect. Expectations, prior conditioning, anxiety and depression, and the context of the treatment can all lead to misinterpreting your experience. It is not your experience that is questioned, but the connection between the treatment and the outcome that must be examined.

Conclusions:

What's a patient to do?

It may seem that there is no solution to this conundrum. The information on complementary treatments is not always reliable. The guiding rule is "caveat emptor," let the buyer beware, because you may be throwing away money on useless treatments you will need to buy the medicine that keeps your heart beating or your cancer from growing.

Previously accepted conventional treatments, when reexamined in the light of new research, may be rejected and medical recommendations changed. The guiding rule is that in medicine, truth is always spelled with a small "t."

What is left to guide a person in making wise choices about complementary treatments (or conventional ones for that matter)? The following principles can help.

- You have a choice. When you decide to use a treatment or decide not to take a treatment, you are making a decision. Not making a choice is also a kind of decision, albeit a passive one.
- Examine the basis for your decisions. What is the quality of the information you have? What exactly do you expect from the treatment?
- Don't let distrust of one kind of medicine (either conventional or complementary) lead you to blind trust in the other. Hold each system accountable for its results.

- If you want preventive medicine, look at lifestyle change rather than a bottle of pills or someone else to do the work for you.
- If you want treatment for functional problems (e.g., indigestion, headaches, etc.), try stress reduction first. It may give you better results at a lower cost than anything else.
- To explore complementary medicine for defined diseases, first define the urgency of the situation; some treatments work faster than others. Define how you will measure success (e.g., able to walk farther without pain or shrinkage of a mass on Chest X-ray). Interview the practitioner for a "fit" of style and needs. Try the treatment, but be willing to explore other options if the first one doesn't work.

The Alternative to Complementary:

There is a third way to determine if a treatment is right for you: Deep knowing or "gnosis." Like the above-mentioned personal experience, it is subjective. Deep knowing, however, is not based on belief as much as faith that something is correct. It might be compared to one's "conscience" or intuition. It is the sense, for example, that you need to relax before you have a heart attack, or eat a better diet to improve your health.

It can be difficult either to hear or trust such internal voices. They often speak softly and are not demanding so much as reminding. The philosopher Madame du Staal once commented, "The voice of conscience is so very delicate that it is easy to stifle it, but so very clear that it is impossible to mistake it."

It is easy to imagine that we have committees in our minds. One voice says yes, another says no. One voice screams distress, the other is soothing. One voice is more rational, another more emotional. Often the wisest voice is not the loudest and can be drowned out by doubts, fears and desires for sensual pleasure. It takes practice to identify that wise voice and courage to follow its advice.

Ultimately, your decisions depend on trusting your own experience and wisdom. You may do your own research. You may get information from others you trust. You may try something to find out how well it works. In the last analysis, however, you will have to rely on your own ability to know what is right for you.

Trust in your own experience can only develop from conscious awareness of your body. In Ulysses, James Joyce once noted, "Mr. Duffy lived a short distance from his body." Is that true for you, too? Do you listen when your body speaks?

Your body can be a faithful guide if you grow close enough to hear what it says. Your body will tell you if you eat too much or the wrong food. Your body will tell you if you're exercising too much or too little. Your body will tell you if need to relax and relieve stress.

The glimmer of hope may come from your own reflection in the mirror.

The Last Word

Everyone wants to be healthy. If you cannot depend upon some outside source of complementary treatments to maintain or restore health, what is the alternative? Is there anything that is reliable? Can you afford it?

The answer is yes to all of these questions. The way you live your life (lifestyle) determines both how ill or healthy you will be. Poor diet, substance abuse, obesity, sedentary lifestyle and social isolation all contribute to the high incidence of cancer, heart disease, diabetes, and depression.

The best quality research shows that it is the foods in the diet rather than the pills in the bottle that provide the best nutrition. Every study that has examined the effect of

exercise on health has shown that it the incidence of disease decreases (e.g., cancer, diabetes, heart disease, and arthritis) and wellbeing increases (e.g., fewer infections, decreased depression). Stress reduction (meditation, creative expression, yoga, etc.) improves hypertension, asthma, arthritis and increases the quality of life. Maintaining social relationships helps people live longer. Religious or spiritual practice likewise reduces the incidence of many diseases and increases longevity.

The most important health decisions are the ones you make when you get out of bed in the morning or when you sit down at the table. Make them wisely.

Table 1

Percentage of subjects reporting the following problems

Symptom	Drug A	Drug B	Significance*
Weight gain	40.1	47.1	no
Joint pains	36.3	43.1	no
Feeling bloated	34.2	39.1	no
Night sweats	43.1	28.7	A>B
Hot flashes	41.6	28.7	A>B
Fatigue	27.7	40.8	B>A
Muscle stiffness	29.8	32.6	no
Forgetfulness	30.6	28.7	no
Breast tenderness	23.0	36.6	B>A
Headaches	24.3	29.6	no
Anxiety	22.5	24.9	no
Mood swings	22.4	26.4	no
Increased appetite	19.2	25.1	no
Depression	16.9	21.4	no
Poor concentration	16.9	19.7	no
Irregular periods	21.6	16.1	no
Blurred vision	10.6	22.4	B>A
Vaginal discharge	17.7	10.3	A>B
Abdominal cramps	12.4	13.7	no
Diarrhea	7.8	8.6	no
Cold sweats	9.7	2.9	A>B
Vaginal bleeding	5.0	8.0	no
Weight loss	1.7	4.1	no

Significant difference at .05 level; i.e., 5% chance that the result is random.

Table 1 is a list of side effects from two different drugs. They were given as part of a double-blind placebo controlled trial to test a drug to prevent breast cancer in otherwise healthy women without cancer, ages 35 to 75. (From Fallowfield)

Can you guess which drug is active and which is placebo? Drug A is tamoxifen, which reduces the risk of breast cancer by 50%. Drug B is a placebo without any biological activity.

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