

Highlights

- Many cancer patients are using integrative medicine (IM) to help ease their cancer symptoms and reduce the side effects of cancer treatment.
- IM combines standard medicine (such as surgery, chemotherapy, radiation therapy and immunotherapy) with safe and effective complementary therapies.
- Complementary therapies are treatments used along with standard treatments but are not considered standard medical care. Some examples of complementary therapies include acupuncture, meditation, therapeutic massage and yoga.
- No complementary health treatment has been proven to cure cancer, but some complementary treatments may help cancer patients manage their cancer symptoms or treatment side effects and enhance well-being. These treatments may help cancer patients suffering from anxiety, fatigue, nausea, pain, or stress.
- Some complementary therapies, especially natural health products such as herbs and supplements, have their own side effects and can interfere with standard cancer treatments. It is important to discuss complementary therapies with your healthcare providers. This will allow your doctors to develop a comprehensive treatment plan that incorporates complementary therapies that are safe and effective.
- Unproven products or practices should never be used to replace or delay standard medical treatment for cancer.

Introduction

Cancer patients may suffer from physical and emotional distress due to their disease or its treatment. Many patients are turning to integrative medicine (IM) to reduce stress, prevent or minimize side effects and symptoms, and support health and healing. IM combines standard medicine (such as surgery, chemotherapy, drug therapy and radiation therapy) with safe and effective complementary therapies. Standard treatments are based on scientific research and are accepted by medical experts as proper treatment for a disease. Less research has been done for most complementary therapies.

Complementary therapies include an array of healing philosophies, approaches and therapies that embrace a more holistic approach to care – treating the mind, body and spirit. Examples of complementary therapies are

- Therapeutic massage
- Acupuncture
- Meditation
- Yoga
- Music therapy.

By integrating complementary therapies into conventional treatment plans, healthcare providers are better able to address the physical, emotional and spiritual needs of their patients.

Researchers are currently exploring the potential benefits of IM. The National Center for Complementary and Integrative Health (NCCIH) and the National Cancer Institute Office of Cancer Complementary and Alternative Medicine (OCCAM) support research that holds complementary therapies to the same rigorous scientific standards used to evaluate medical treatments. Researchers work to determine which treatments are promising, which treatments are effective and which treatments are safe.

Some complementary therapies have been studied and have demonstrated safety and benefits for cancer patients. For example, there are certain complementary therapies that help patients manage cancer treatment-related side effects, such as nausea, fatigue and pain. However, there is little or no scientific evidence about the safety or effectiveness of other

complementary therapies. For this reason, it is important for patients to learn as much as they can about any of these therapies and to consult their healthcare provider before trying any of them.

A growing number of hospitals, cancer centers and individual healthcare providers offer complementary therapies as part of a patient's treatment plan. A number of major cancer centers have established IM services to make complementary therapies, such as music therapy, therapeutic massage, acupuncture, meditation and yoga, easily accessible to patients and families. As a result, some cancer patients taking advantage of these therapies can receive their complementary treatment and their primary cancer treatment in the same setting.

Understanding the Benefits and Risks of Complementary Therapies

A growing number of people are turning to complementary therapies as a way to help manage symptoms, reduce side effects, and restore and promote a sense of control and vitality. Roughly two out of three cancer patients have tried at least one complementary therapy as part of their cancer care.

Existing scientific evidence has found that certain complementary therapies may alleviate cancer-related symptoms and treatment side effects such as nausea and fatigue. For example, acupuncture has been evaluated in a number of studies and is now recognized as a safe method for managing chemotherapy-associated nausea and vomiting, and it is effective for some patients. Many complementary therapies are gentle, relaxing and minimally invasive and provide ways for patients to develop an appreciation of themselves and an awareness of their inner strength. Some techniques are "passive," requiring limited participation such as massage and aromatherapy, while others are "active" such as yoga and tai chi.

Still, there are relatively few studies about the safety and effectiveness of most complementary therapies. To date, there is no definitive clinical evidence that any complementary therapies can slow cancer progression per se. Unproven products or practices should not be used to replace or postpone standard medical treatment. Delaying conventional cancer treatment can be dangerous and decrease the likelihood of a remission or a cure. Any treatments that are presented as alternatives to standard cancer therapies should be considered only within the context of clinical trials (See *Treatments Under Investigation* on page 4).

In spite of some patients' views that alternative and complementary therapies are natural and safe, there is research

indicating that not all of these therapies are harmless. Cancer patients should consult with their healthcare providers before using any complementary therapies for any purpose, whether it is cancer-related or not. The following are examples of how alternative and complementary therapies could adversely affect patients.

- While approval is required by the U.S. Food and Drug Administration (FDA) for drugs to be prescribed for a particular condition or illness, therapies such as vitamins or herbal supplements are not considered drugs, but foods. Unlike drugs, they do not have to be tested by the FDA before they are available to consumers, so their effectiveness and safety is often unknown.
- Few herbal products have been tested for quality or side effects. Product quality is highly variable with varying concentrations of active ingredients. In addition, some herbal supplements may be contaminated with microorganisms, pesticides and heavy metals that can harm patients, particularly seriously ill patients. There are also concerns that certain herbal supplements can cause allergic reactions, gastrointestinal problems, liver damage or nerve damage.
- Some herbal supplements can either increase or lessen the effects of other medications, or they may interfere with the metabolism of the drugs, making them less effective. For example, the herb St. John's wort, which is sometimes used to treat depression, can make some cancer treatments such as imatinib (Gleevec®) less effective. Conversely, some herbs can increase the effectiveness of a drug causing more side effects. Some herbs can affect blood thinners such as warfarin and make the blood too thin or too thick, increasing a patient's risk of bleeding or blood clots.
- Vitamins in high doses can also have similarly unwanted side effects. They can cause adverse effects and are prone to interact with other drugs and dietary supplements. For instance, some studies have shown that high doses of vitamin C may reduce the effectiveness of chemotherapy drugs in leukemia, lymphoma and multiple myeloma patients. Some chemotherapy treatments use free radicals to destroy cancer cells. Vitamin C may neutralize these free radicals and reduce the effectiveness of various chemotherapy drugs such as doxorubicin, methotrexate and cisplatin.

Many oncologists advise their patients to avoid these products during chemotherapy and radiation therapy. Patients undergoing cancer treatment should not take any dietary supplements unless they are prescribed by a doctor.

The FDA and the Federal Trade Commission (FTC) have warned the public to be aware of fraudulent cancer treatments. The internet is full of "miracle cures," "scientific breakthroughs," and "secret ingredients" to treat or prevent cancer. Some of these fraudulent treatments may be dangerous

and cause physical harm. Other fraudulent treatments may cause indirect harm by delaying or interfering with proven, effective treatments. Any patient considering using an anticancer product seen in advertisement should talk with their healthcare provider first.

What Types of Complementary Therapies are Available?

Complementary therapies can be grouped into five major categories:

1. Ancient/Traditional medical systems. These systems include traditional Chinese medicine, Ayurvedic medicine, homeopathy and naturopathy. Traditional Chinese medicine emphasizes the balance of qi (“chee”) or vital energy. Within this system, illness is defined as a disturbance in the balance of vital energy or various organ systems. Ayurvedic medicine is a system of healing which evolved from teachings in ancient India. It stresses the use of body, mind and spirit in disease prevention and treatment and strives to achieve harmony within the individual. Homeopathy and naturopathy are alternative health systems that have been part of Western culture for the last few centuries. Examples of techniques used in alternative medical systems include acupuncture, herbal medicine and restorative physical exercises.

2. Mind-body interventions. Mind-body interventions use strategies to enhance the mind’s ability to affect physical health. Interventions aim to help patients relax, reduce stress and relieve symptoms associated with cancer and cancer treatments. Examples include meditation, hypnosis, yoga, tai chi, and music therapy.

3. Biologically based treatments. These therapies involve substances found in nature, such as herbs, foods, vitamins and other dietary supplements. Few herbal products have been tested for side effects or quality. However, the FDA can remove a product from the market if the product is deemed harmful.

4. Manipulative and body-based therapies. These methods are based on the manipulation and/or movement of one or more parts of the body. These therapies may be used to treat pain, stress and anxiety and to improve general well-being. Examples include chiropractic treatments, therapeutic massage and reflexology.

5. Energy therapies. These therapies focus either on energy originating within the body (biofields) or from outside sources (electromagnetic fields). The aim of energy therapy is to balance the energy flow in the patient. Therapies such as reiki, healing touch, qi gong, and magnetic field therapy work with the body’s energy levels to reduce stress and anxiety and to promote well-being.

Complementary Therapies for Cancer Symptoms and Treatment Side Effects

An integrative healthcare team evaluates the physical, emotional and spiritual needs of each patient and then recommends and incorporates specific therapies and lifestyle changes as part of a comprehensive treatment plan. Team members consider the scientific evidence, identified risks and benefits, and individual preferences when they advise patients about various complementary therapies.

Complementary therapies do not work for everyone. While some patients find relief from complementary therapies, some have found them to be ineffective or have reported problems. Benefits may vary from individual to individual. The following is a partial list of complementary therapies:

- **Acupuncture**—Acupuncture has been used in China for thousands of years as part of traditional Chinese medicine. Acupuncturists insert very thin needles through the skin at strategic places known as acupuncture points. Sometimes heat and pressure is used along with the needles. There is substantial evidence that acupuncture can help relieve treatment-related nausea and vomiting in cancer patients. There is mixed evidence on whether acupuncture relieves other symptoms such as cancer pain, fatigue, anxiety, sleep problems, dry mouth and neuropathy, but it can be tried if symptoms are severe and conventional therapies are ineffective. It is important for acupuncturists to follow strict clean needle procedures by using a new set of disposable needles for each patient.
- **Aromatherapy**—Aromatherapy is the use of essential oils from plants. Essential oils are usually massaged into the body in a diluted form or they are added with water to a diffuser and inhaled. Aroma therapy may work by sending chemical messages to the area of the brain that affects mood and emotions. There is some evidence suggesting that aromatherapy massage can help cancer patients reduce stress, anxiety and fatigue.
- **Exercise**—A growing body of evidence suggests that physical exercise (walking, swimming, strength training) improves a cancer patient’s fatigue and increases energy levels. Patients who exercise are less tired, less depressed and sleep better than patients who do not exercise. Exercise works by maintaining or building a person’s stamina and strength. Before starting an exercise program, patients should consult with their healthcare team. Patients may be referred to a physical therapist for a physical assessment and an exercise plan. A patient’s exercise plan should be individualized based on the patient’s age, type of cancer and physical fitness level.
- **Hypnosis**—Hypnosis is a trance like state (similar to daydreaming) in which the body is relaxed but the mind is

active. A specially trained therapist can direct the patient’s attention to specific thoughts, feelings, images, sensations or behaviors. While under hypnosis, a person may feel calm, relaxed and more open to positive suggestions that may help reduce physical symptoms such as pain, anxiety, nausea and vomiting.

- **Massage Therapy**—Research suggests that massage therapy may help relieve symptoms such as pain and anxiety in cancer patients. Massage therapy involves pressure to muscle and connective tissue to reduce tension and pain, improve circulation, and encourage relaxation. Patients should consult with their healthcare providers before starting massage therapy to learn if there are any special precautions needed. For example, a massage therapist should not use deep or intense pressure especially near enlarged lymph nodes or on skin that is sensitive following radiation therapy.
- **Meditation**—Meditation is a mind-body practice that focuses the mind and increases awareness. Meditation has a long history of use for increasing calmness and physical relaxation, improving psychological balance and enhancing overall health and well-being. The most extensively studied form of meditation in cancer patients is a multicomponent approach called mindfulness-based stress reduction (MBSR), which includes meditation, yoga, and group dynamics. MBSR may help cancer patients relieve anxiety, stress, fatigue, and sleep disturbances.
- **Music Therapy**—Music therapy uses music to help improve a person’s health and well-being. It may include listening to relaxing music, singing, composing music and/or moving to music. In recent years, the use of music therapy has become more common for cancer patients. Music therapy may reduce stress, pain, anxiety, and nausea.
- **Relaxation Techniques**—Relaxation techniques promote health by relaxing the body and quieting the mind. These therapies are used to relieve stress and muscle tension, lower blood pressure and reduce pain. Relaxation techniques include guided imagery (focusing the mind on positive thoughts), biofeedback (learning to control specific body functions such as heart rate, blood pressure and muscle tension with the help of a special machine), self-hypnosis, and deep breathing exercises. For patients with cancer, regular relaxation training has decreased stress levels, increased immune system functioning, decreased pain, decreased the side effects of cancer treatment, and improved mood.
- **Tai chi**—Tai chi combines physical movement, breathing exercises and meditation to improve health and quality of life. In some patients, tai chi is effective in relieving pain, reducing fatigue and stress, and improving sleep quality. The practice may also help increase aerobic capacity, muscular strength, balance and flexibility in patients.

- **Yoga**—Yoga is an ancient Indian practice combining both the mind and the body. The various types of yoga usually combine physical postures, breath control and meditation or relaxation. Yoga may help improve anxiety, depression and stress in cancer patients. It should be noted, however, that only a small number of yoga studies in cancer patients have been completed. Therefore, more research is necessary. Since yoga involves physical activity, it is important for patients to discuss yoga with their healthcare providers to find out whether yoga may be safe for them.

If you are suffering from	Consider trying
Anxiety, depression, stress	Acupuncture, aromatherapy, exercise, hypnosis, massage therapy, meditation, music therapy, yoga
Chemotherapy-induced nausea/vomiting	Acupuncture, aromatherapy, hypnosis, massage therapy, music therapy
Fatigue	Acupuncture, aromatherapy, exercise, meditation, tai chi, yoga
Pain	Acupuncture, hypnosis, massage therapy, music therapy, relaxation techniques
Sleep problems	Acupuncture, meditation, relaxation techniques, yoga

Treatments Under Investigation

Patients are encouraged to explore clinical trials. Clinical trials test new drugs and treatments before they are approved by the FDA as standard treatments. Clinical trials are carefully controlled research studies, conducted under rigorous guidelines to help researchers determine the beneficial effects and possible adverse effects of new treatments. Clinical trials are designed to be accurate and very safe. Patient participation in clinical trials is important in the development of new and more effective treatments for blood cancers and may provide patients with additional treatment options.

Conventional cancer treatments like chemotherapy, immunotherapy and radiation therapy have undergone years of rigorous study. Clinical trials to study various complementary therapies are underway in many locations across the country to assess their safety, benefits, dosing and relative effectiveness. Patients enrolled in complementary studies receive the best standard cancer treatment either with or without the complementary therapies in question.

For more information about clinical trials, see the free LLS booklet *Understanding Clinical Trials for Blood Cancers* or visit www.LLS.org/clinicaltrials.

The following are some complementary therapies currently under investigation:

- Aromatherapy and essential oils in improving insomnia and other symptoms in patients with newly diagnosed acute leukemia undergoing chemotherapy
- Yoga therapy in improving quality of life in patients with childhood lymphoma or leukemia
- The effects of ginseng on cancer-related fatigue
- Brief mindful meditation practice in improving quality of life in patients with cancer undergoing radiation therapy
- Hypnotherapy in treating chronic pain in cancer survivors
- Stress management training in reducing stress in caregivers of patients with blood cancers undergoing donor stem cell transplantation
- Natural products that may be of value in cancer prevention or treatment such as bamboo extract, grape seed extract, white tea, red ginseng and S-adenosyl-L-methionine (SAMe).

Will My Insurance Pay for Complementary and Alternative Therapies?

Some health insurance companies have started covering certain complementary therapies such as acupuncture and chiropractic care. Check with your insurance provider to find out about your health plan coverage.

Talking to Your Healthcare Provider

Make sure to speak openly with your healthcare providers about any complementary or alternative therapies that you are currently using or considering. This is important because

- Many complementary therapies have not yet been extensively studied. For this reason, it is not widely known which are potentially helpful or harmful.
- Some therapies – herbal remedies and dietary supplements in particular – can interact with radiation therapy or chemotherapy.
- If you have been doing research on specific complementary therapies, your healthcare providers can help you to better understand the scientific studies. Together, you can determine which therapies will be the most effective and safest for you.

Questions to Ask Your Healthcare Team

Use the following questions as a guide to discuss complementary therapies with your healthcare team:

- Are there complementary therapies that you would recommend?
- What research is available about this therapy's safety and effectiveness?
- What are the benefits and risks of this therapy?
- How will I know if the therapy is working or not?
- Will this therapy interfere with standard cancer treatments?
- Are there potential side effects? What should I look for?
- Do you offer this therapy as part of your practice? If not, can you refer me to a licensed practitioner in the area?
- Are there specific therapies which you would advise against?
- Do you know if this therapy is part of a clinical trial? Should I consider participating?

Locating an IM Specialist or a Complementary Health Practitioner

If you are looking for a complementary health practitioner for treatment, it is important to conduct a careful and thorough search. Here are some suggestions to help in your search for a practitioner:

- Your oncologist or cancer center may be able to refer you to a complementary health practitioner. A local hospital or medical school, professional organizations, state regulatory agencies or licensing boards, or even your health insurance provider may also be able to give you a referral.
- Ask family and friends if they can recommend a practitioner for the type of therapy that you are seeking.
- Learn as much as you can about any prospective practitioner including education, training, licensing and certifications.

Be sure to find out whether the practitioners you are considering are licensed or certified and if they have worked with cancer patients. Before scheduling any appointments, ask how many years they have been in practice, where they received their training, as well as the estimated cost of treatment. The goal is to find practitioners who will work with your oncologist and other healthcare providers so that together, they can devise a treatment plan that meets your needs.

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We're Here to Help

LLS is the world's largest voluntary health organization dedicated to funding blood cancer research, education and patient services. LLS has chapters throughout the United States and in Canada. To find the chapter nearest to you, visit our Web site at www.LLS.org/chapterfind or contact

The Leukemia & Lymphoma Society

3 International Drive, Suite 200
Rye Brook, NY 10573
Contact an Information Specialist at (800) 955-4572
Email: infocenter@LLS.org.

LLS offers free information and services for patients and families touched by blood cancers. The following lists various resources available to you. Use this information to learn more, to ask questions, and to make the most of your healthcare team.

Consult with an Information Specialist. Information Specialists are master's level oncology social workers, nurses and health educators. They offer up-to-date disease and treatment information. Language services are available. For more information, please:

- Call: (800) 955-4572 (M-F, 9 a.m. to 9 p.m. EST)
- Email: infocenter@LLS.org
- Live chat: www.LLS.org
- Visit: www.LLS.org/information specialists

Free Materials. LLS offers free education and support publications that can either be read online or downloaded. Free print versions can be ordered. For more information, please visit www.LLS.org/booklets.

Información en Español (LLS information in Spanish).

For more information, please visit www.LLS.org/espanol.

Telephone/Web Education Programs. LLS offers free telephone/Web education programs for patients, caregivers and healthcare professionals. For more information, please visit www.LLS.org/programs.

Online Blood Cancer Discussion Boards and Chats.

Online discussion boards and moderated online chats can provide support and help cancer patients to reach out to others in similar circumstances, and share information. For more information, please visit www.LLS.org/chat or www.LLS.org/discussionboards.

LLS Community. LLS Community is an online social network and registry for patients, caregivers, and supporters of those with blood cancer. It is a place to ask questions, get informed, share your experience and connect with others. To join visit www.LLS.org/community.

Sign Up for an E-Newsletter. Read the latest disease-specific news, learn about research studies and clinical trials, and find support for living with blood cancer. Please visit www.LLS.org/signup.

LLS Chapters. LLS offers support and services in the United States and Canada including *The Patti Robinson Kaufmann First Connection Program* (a peer-to-peer support program), in-person support groups, and other great resources. For more information about these programs or to contact your chapter, please:

- Call: (800) 955-4572
- Visit: www.LLS.org/chapterfind

Clinical Trials (Research Studies). New treatments for patients are ongoing. Patients can learn about clinical trials and how to access them. For more information, please call (800) 955-4572 to speak with our LLS Information Specialist who can help conduct clinical-trial searches.

Advocacy. The LLS Office of Public Policy (OPP) engages volunteers in advocating for policies and laws that encourage the development of new treatments and improve access to quality medical care. For more information, please:

- Call: (800) 955-4572
- Visit: www.LLS.org/advocacy

Resources

Memorial Sloan Kettering Cancer Center

www.mskcc.org
(800) 525-2225

Memorial Sloan Kettering Cancer Center's "About Herbs" database can help patients as well as healthcare professionals figure out the value of using common herbs, dietary supplements and some complementary therapies. "About Herbs" database can be found at <https://www.mskcc.org/cancer-care/treatments/symptom-management/integrative-medicine/herbs>.

National Cancer Institute

Office of Cancer Complementary and Alternative Medicine (OCCAM)

<http://cam.cancer.gov>
(800) 4-CANCER or (800) 422-6237

OCCAM's website contains information and research on complementary and alternative therapies. To search complementary and alternative clinical trials for cancer patients, visit: <https://www.cancer.gov/about-cancer/treatment/clinical-trials/search>.

National Center for Complementary and Integrative Health (NCCIH), National Institutes of Health

www.nccih.nih.gov
(888) 644-6226

NCCIH's website contains reliable, objective and evidence based information on integrative healthcare including the fact sheets "Cancer: In Depth" and "Health Topics from A to Z."

Society for Integrative Oncology

www.integrativeonc.org
(518) 694-5543

Develops practice guidelines on the use of integrative therapies during cancer treatment for clinicians and patients.

U.S. Food and Drug Administration (FDA)

www.fda.gov
(888) 463-6332

The FDA provides articles on dietary supplements and warnings concerning specific products with potentially serious side effects.

The FDA's web page dedicated to dietary supplements can be found at www.fda.gov/Food/DietarySupplements/default.htm

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