



# Pain:

## Considering Complementary Approaches



National Center for  
Complementary and  
Integrative Health



## What's in This eBook

This eBook is your guide to complementary health approaches for pain. It comes from the National Center for Complementary and Integrative Health (NCCIH), which is part of the Federal Government's National Institutes of Health (NIH).

Researchers are looking at the role of complementary health approaches in managing pain, and they're learning new things all the time. They're finding out that some complementary approaches may be helpful but others may not be. They're also learning about whether these approaches are safe.

This eBook covers the following topics:

**Chapter 1: About Pain and Complementary Health Approaches** gives you some basic facts about pain and about complementary health approaches.

**Chapter 2: Safety of Complementary Health Approaches** explains issues you should consider to make sure that you're safe when you use complementary approaches.

**Chapters 3 through 10** discuss specific complementary approaches that people may use to help manage pain. Each chapter briefly explains what the approach is like and summarizes the scientific information on whether it's safe and helpful. You may want to read:

- **Chapter 3: Acupuncture**
- **Chapter 4: Massage Therapy**
- **Chapter 5: Meditation and Mindfulness**
- **Chapter 6: Relaxation Techniques**
- **Chapter 7: Spinal Manipulation**
- **Chapter 8: Tai Chi**
- **Chapter 9: Yoga**
- **Chapter 10: Dietary Supplements and Other Natural Products**

**Chapter 11: Other Complementary Health Approaches** briefly discusses a few complementary approaches that haven't been studied as extensively as the ones covered in earlier chapters.

**Chapters 12 and 13** discuss topics that you might want to think about if you're considering using a complementary health approach for pain. You may want to read:

- **Chapter 12: Be an Informed Consumer**
- **Chapter 13: Research on Complementary Approaches for Pain**

The eBook ends with **Chapter 14: Frequently Asked Questions**, which reviews the most important information from earlier chapters and gives you links to resources where you can find out more.

# Chapter 1 About Pain and Complementary Health Approaches

Jeremy Perkins



## **Complementary Health Approaches:**

Health care approaches developed outside of mainstream Western, or conventional, medicine. Most complementary approaches fall into one of two categories—mind and body practices, or natural products.

Pain is a common health problem. The 2012 National Health Interview Survey showed that about 11 percent of U.S. adults have pain every day and more than 17 percent have severe levels of pain.

Chronic pain is more common among women than men, and it becomes more common as people grow older. One reason why older people are more likely to have chronic pain is that health problems that can cause pain, such as arthritis, become more common with advancing age.

Not all people with chronic pain have a health problem that has been diagnosed by a doctor, but among those who do, the most frequent conditions by far are low-back pain or osteoarthritis. Other common conditions include rheumatoid arthritis, migraine, carpal tunnel syndrome, and fibromyalgia.

Chronic pain may result from a disease or injury, medical treatment (such as surgery), inflammation, or a problem in the nervous system, or the cause may be unknown.

Pain can affect quality of life and productivity, and people who have pain may also have difficulty moving around, trouble sleeping, anxiety, depression, and other problems.

## **What Are Complementary Health Approaches?**

This eBook discusses a variety of complementary health approaches that have been studied for pain. But what exactly are complementary approaches, and how do they differ from standard medical care?

The term “complementary” refers to health care approaches developed outside of mainstream Western, or conventional, medicine. Most complementary approaches fall into one of two categories:

- **Mind and body practices.** Mind and body practices include a varied group of techniques administered or taught by a trained practitioner or teacher. Examples include acupuncture, massage therapy, meditation, and yoga.
- **Natural products.** Natural products include herbs, vitamins and minerals, and probiotics. They are often sold as dietary supplements.

## Complementary Versus Alternative

People often use the words “alternative” and “complementary” interchangeably, but the two terms refer to different concepts:

- “Complementary” generally refers to using a non-mainstream approach *together with* conventional medicine.
- “Alternative” refers to using a non-mainstream approach *in place of* conventional medicine.

Most people use non-mainstream approaches along with conventional health care.

## Integrative Health Care

You may have heard of “integrative” health care and wondered what that term means. Integrative health care emphasizes a holistic, patient-focused approach to health care and wellness—often including mental, emotional, functional, spiritual, social, and community aspects.

Integrative health care often brings conventional and complementary approaches together in a coordinated way. For example, cancer treatment centers that have integrative health care programs may offer services like acupuncture and meditation to help manage symptoms and side effects for patients who are receiving conventional cancer treatments such as chemotherapy.

## To Find Out More

- To learn more about pain and pain research, visit the [Pain](https://nccih.nih.gov/health/pain) page (<https://nccih.nih.gov/health/pain>) on the NCCIH website and the National Institute of Neurological Disorders and Stroke’s page on [Chronic Pain](https://www.ninds.nih.gov/disorders/all-disorders/chronic-pain-information-page) (<https://www.ninds.nih.gov/disorders/all-disorders/chronic-pain-information-page>).
- To learn more about complementary health approaches, visit [Complementary, Alternative, or Integrative Health: What’s In a Name?](https://nccih.nih.gov/health/integrative-health) (<https://nccih.nih.gov/health/integrative-health>) on the NCCIH website.
- To learn more about complementary approaches for specific health conditions, visit [Health Topics A–Z](https://nccih.nih.gov/health/atoz.htm) (<https://nccih.nih.gov/health/atoz.htm>) on the NCCIH website.



## Chapter 2 Safety of Complementary Health Approaches

Are complementary health approaches safe? This is an important question, and it doesn't have a simple answer. Safety depends on the specific approach, and each complementary product or practice should be considered on its own.

- **Complementary health approaches that are safe for healthy people may not be safe for people with some medical conditions.** This may be because of the condition itself or because of the treatment the person is receiving. If you have pain, you have at least one health problem. You might have others as well. So it's important to find out whether a complementary approach is safe for you.
- **Always talk with your doctor or other health care provider before starting a new complementary approach.** If the approach involves working with a practitioner or taking classes with an instructor, discuss your health conditions with that person, too. Your health care provider and the complementary health practitioner can help you decide whether the approach is appropriate for you.

### Mind and Body Practices

As you will see in the following chapters, mind and body practices—like acupuncture, massage therapy, meditation, relaxation techniques, spinal manipulation, tai chi, and yoga—generally have good safety records when done properly by a trained professional or taught by a well-qualified instructor. Serious side effects are rare.

However, just because a practice is safe for most people doesn't necessarily mean it's safe for you. Your medical conditions, the medicines you take, or other special circumstances (such as pregnancy) may affect the safety of a complementary health approach. That's why it's so important to talk with your health care provider and with the complementary health practitioner or instructor.

## Dietary Supplements and Other Natural Products

Although many dietary supplements come from natural sources, "natural" doesn't always mean "safe." For example:

- Some products that have been sold as dietary supplements, including the herbs comfrey and kava and some products used for bodybuilding, can cause serious liver damage.
- St. John's wort can interact with a variety of drugs, making the drugs less effective.
- Getting too much vitamin A can cause headaches and liver damage, reduce bone strength, and cause birth defects.
- Vitamin K supplements can reduce the effectiveness of the anticoagulant (blood thinning) medicine warfarin (Coumadin).

There are many unknowns about the safety of dietary supplements. For example, there's little safety data on most herbal supplements, and it's hard to test the safety of these products because they may contain hundreds of substances.

It's important to tell all of your health care providers about all dietary supplements and other natural products you take. The health history form you filled out on your first visit to the provider's office probably included questions about dietary supplements, but you may have started or stopped using some supplements since then. Make sure to keep your health care providers up to date about your supplement use.



**Dietary Supplements:** Federal law defines dietary supplements as products that you take by mouth; are made to supplement the diet; have one or more dietary ingredients, including vitamins, minerals, herbs or other botanicals, amino acids, enzymes, tissues from organs or glands, or extracts of these; and are labeled as being dietary supplements.



## Using Complementary Approaches Appropriately

Another important aspect of safety involves how you use a complementary approach. Even if the approach is safe in itself, using it inappropriately could be harmful.

- **Never use a complementary approach as a reason to delay seeing your doctor or other health care provider about pain or any other health problem.** You might have a medical condition—such as an infection—that needs to be treated promptly. If you wait to see your health care provider while trying complementary approaches, your condition could get worse.
- **If you're thinking about stopping (or not starting) conventional care for your health problem, discuss it with your health care provider.** In some instances, going without conventional care can lead to serious problems. Rheumatoid arthritis is an example. Conventional treatments can stop or slow damage to the joints in rheumatoid arthritis. Going without conventional care could lead to permanent joint damage.

## To Find Out More

- You can learn more about the safety of specific complementary health approaches in the chapters in this eBook that discuss those approaches.
- For more detailed information, visit NCCIH's resources on [Safe Use of Complementary Health Products and Practices \(https://nccih.nih.gov/health/safety\)](https://nccih.nih.gov/health/safety).



## Chapter 3 Acupuncture

Acupuncture involves the stimulation of specific points on the body—most often by inserting thin needles through the skin. It’s a practice used in traditional Chinese medicine.

According to the 2012 National Health Interview Survey, more than 3 million U.S. adults had used acupuncture in the previous year.

### Is Acupuncture Safe?

Acupuncture is generally considered safe when it’s done by an experienced practitioner using sterile needles. But it may cause serious harm (such as infections or punctured organs) if it’s not done properly.



**Acupuncture:** A technique in which practitioners stimulate specific points on the body—most often by inserting thin needles through the skin. It is one of the practices used in traditional Chinese medicine.

### Does Acupuncture Help To Relieve Pain?

Studies suggest that acupuncture may help relieve low-back pain and knee pain associated with osteoarthritis. It may help reduce the frequency of tension headaches and prevent migraine headaches. It may also help relieve some fibromyalgia symptoms.

Scientists don’t fully understand how acupuncture works in the body to relieve pain. The effect may not be entirely due to the needles. The patient’s expectations and beliefs about acupuncture may play important roles in how it may help relieve pain.

– **Low-Back Pain.** Acupuncture may lead to a slight improvement in low-back pain.

When health care providers need to make decisions about the best ways to treat their patients, they often rely on clinical practice guidelines—science-based recommendations for patient care. A clinical practice guideline issued by the American College of Physicians, a national organization of doctors who specialize in internal medicine, recommends acupuncture as one of several nondrug approaches physicians should consider for people with low-back pain.



**Fibromyalgia:** A common disorder that involves widespread pain, tenderness, fatigue, and other symptoms.

- **Osteoarthritis.** Acupuncture may relieve pain in people with knee pain due to osteoarthritis, but its effects seem to last for only a short time.
- **Headaches.** Acupuncture may be helpful for tension-type headaches. Adding acupuncture to other migraine treatment may help reduce frequency of migraines.
- **Neck Pain.** There's some evidence that acupuncture may be helpful for neck pain, but only a small amount of research has been done on this type of pain.
- **Fibromyalgia.** Recent studies have provided encouraging evidence that mind and body practices, including acupuncture, may help relieve some fibromyalgia symptoms.

### To Find Out More

- You can find out more about acupuncture, including its use for pain, on NCCIH's [Acupuncture](https://nccih.nih.gov/health/acupuncture) page (<https://nccih.nih.gov/health/acupuncture>).
- NCCIH's fact sheet [Acupuncture: In Depth](https://nccih.nih.gov/health/acupuncture/introduction) (<https://nccih.nih.gov/health/acupuncture/introduction>) includes information on the training and licensing of acupuncture practitioners.

## Chapter 4 Massage Therapy

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Massage has been practiced in most cultures, both Eastern and Western, throughout human history. It was one of the earliest tools that people used to try to relieve pain. There are many different types of massage therapy, but in general, they all involve manipulating the soft tissues of the body with the goal of helping to manage a health condition or enhance wellness.

According to the 2012 National Health Interview Survey, 15.4 million U.S. adults and 385,000 U.S. children had received massage therapy in the previous year.



**Massage therapy:** A practice that encompasses many different techniques in which therapists press, rub, and otherwise manipulate the muscles and other soft tissues of the body. They most often use their hands and fingers, but may use their forearms, elbows, or feet.

### Is Massage Therapy Safe?

The risk of harmful effects from massage therapy appears to be low. However, there have been rare reports of serious injuries. Some of the reported cases involved vigorous types of massage, such as deep tissue massage.

Your massage therapist may have to take special precautions if you have special needs. For example:

- If you take an anticoagulant (blood-thinning) drug such as warfarin, vigorous massage may not be safe for you.
- If you have a weakened area on your body, such as a wound that's healing, you shouldn't be massaged in that area.
- If you have cancer, the massage therapist may need to take special precautions to ensure that massage is safe for you.

You can help to make sure that massage therapy is safe for you by talking to your health care providers to find out if any special precautions are needed, choosing a well-qualified massage therapist, and explaining your medical conditions and treatments to the massage therapist.

You can find out about the training, licensing, and certification of massage therapists in NCCIH's massage therapy fact sheet (<https://nccih.nih.gov/health/massage/massageintroduction.htm>).

## Does Massage Therapy Help To Relieve Pain?

Research suggests that massage therapy may help relieve several kinds of pain, but in most instances, the evidence isn't strong. If massage therapy does help, the effects may last for only a short time.

- **Low-Back Pain.** There's some evidence that massage may lead to slight improvements in chronic low-back pain. It's uncertain whether some types of massage are more effective than others.
- **Neck and Shoulder Pain.** Massage therapy may be helpful for neck and shoulder pain, but it seems to provide only short-term relief.
- **Cancer Pain.** Massage therapy can be part of supportive care for cancer patients who want to try it, but the evidence that it can relieve pain and anxiety is not strong.
- **Arthritis.** Some evidence suggests that massage therapy may be helpful for arthritis pain. More research has been done on osteoarthritis than on rheumatoid arthritis.
- **Headaches.** Only a small number of research studies have looked at whether massage therapy is helpful for headaches, and their results have been inconsistent.
- **Fibromyalgia.** Massage therapy may be helpful for some fibromyalgia symptoms, including pain, if it's continued for at least several weeks.

## To Find Out More

- Visit the [Massage Therapy page](https://nccih.nih.gov/health/massage) (<https://nccih.nih.gov/health/massage>) on NCCIH's website.



## Chapter 5 Meditation and Mindfulness

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Meditation has a history that goes back more than 3,000 years. Most meditation techniques started in Eastern religious or spiritual traditions.

- Some types of meditation, such as Transcendental Meditation, involve maintaining mental focus on a particular sensation (such as breathing), a sound, a silently repeated word or phrase, or a visual image.
- Other practices, such as mindfulness meditation, involve keeping attention or awareness on the experience of the present moment and being open or accepting toward that experience.



**Meditation:** A mind and body practice that has a long history of use for increasing calmness and physical relaxation, improving psychological balance, coping with illness, and enhancing overall health and well-being.

Meditation and mindfulness may be practiced for many reasons. This chapter discusses only one of their many uses: helping to manage pain. There's a link to more comprehensive information on meditation and mindfulness, including information on its other health-related uses, at the end of the chapter.

According to the 2017 National Health Interview Survey, 14.2 percent of U.S. adults and 5.4 percent of U.S. children practiced meditation in the previous year.

### Are Meditation and Mindfulness Safe?

Meditation and mindfulness are usually considered safe for most people. However, because only a few studies of these techniques have looked for harmful effects, it isn't possible to be absolutely sure about their safety.

People with physical problems may not be able to participate in meditative practices that involve movement. Meditative practices that involve long periods of sitting still may be painful for some people, such as those with arthritis. There have been rare reports that meditation could cause or worsen symptoms in people with mental health problems such as posttraumatic stress disorder or schizophrenia.

If you have a physical or mental health problem, talk with your health care providers before starting meditation or mindfulness, and tell your instructor about your condition.

### **Do Meditation and Mindfulness Help To Relieve Pain?**

- There's only been a small amount of research on meditation or mindfulness for pain. Studies have shown that mindfulness meditation isn't more effective than cognitive-behavioral therapy (a type of psychotherapy) for chronic pain, but it could be another option to try.
- Learning mindfulness may lead to a small short-term improvement in low-back pain.

### **To Find Out More**

Visit NCCIH's [Meditation](https://nccih.nih.gov/health/meditation) webpage (<https://nccih.nih.gov/health/meditation>).



## Chapter 6 Relaxation Techniques

Relaxation techniques include a number of practices such as progressive relaxation, guided imagery, biofeedback, self-hypnosis, and deep breathing exercises. The goal is similar in all: to produce the body's natural relaxation response, characterized by slower breathing, lower blood pressure, and a feeling of calm and well-being.

Some people use relaxation techniques to release tension and counteract the ill effects of stress. Relaxation techniques are also used to induce sleep, calm emotions, and reduce pain. This chapter only discusses the use of relaxation techniques to reduce pain. There's a link to information on other uses of relaxation techniques at the end of the chapter.



**Relaxation Techniques:** Practices such as progressive relaxation, guided imagery, biofeedback, self-hypnosis, and deep breathing exercises, that share the goal of producing the body's natural relaxation response, characterized by slower breathing, lower blood pressure, and a feeling of increased well-being.

### Are Relaxation Techniques Safe?

Relaxation techniques are generally considered safe for healthy people. There have been rare reports that certain relaxation techniques might cause or worsen symptoms in people with certain mental health conditions, or those with a history of abuse or trauma. People with heart disease should talk to their health care providers before doing progressive muscle relaxation.



**Irritable bowel syndrome (IBS):**

A chronic disorder that affects the large intestine and causes symptoms such as abdominal pain, cramping, constipation, and diarrhea.

## Do Relaxation Techniques Help To Relieve Pain?

Research results indicate that relaxation techniques may be a helpful addition to treatment plans for some painful conditions.

- **Irritable Bowel Syndrome.** Relaxation techniques may prevent or relieve symptoms of irritable bowel syndrome in some people.
- **Temporomandibular Disorder (pain and loss of motion in the jaw joints).** Relaxation techniques and biofeedback may help to decrease pain in some people.
- **Fibromyalgia.** There's preliminary evidence that relaxation or guided imagery techniques may sometimes improve pain and reduce fatigue from fibromyalgia.
- **Other types of pain.** Relaxation techniques may help reduce headaches and abdominal pain in children.

## To Find Out More

Read NCCIH's fact sheet *Relaxation Techniques for Health* (<https://nccih.nih.gov/health/stress/relaxation.htm>).



## Chapter 7 Spinal Manipulation



**Spinal Manipulation:** A practice performed by health care professionals (such as chiropractors, osteopathic physicians, naturopathic physicians, physical therapists, and some medical doctors) in which practitioners use their hands or a device to apply a controlled force to a joint of the spine. The goal of the treatment is to relieve pain and improve physical functioning.

In spinal manipulation, chiropractors or other health professionals use their hands or a device to apply a controlled force to a joint of the spine.

### Is Spinal Manipulation Safe?

Serious harmful effects associated with spinal manipulation are rare. However, it's not unusual for people to have discomfort in the parts of the body that were treated, temporary headaches, or tiredness after spinal manipulation. To find out more, see the NCCIH fact sheets *Headaches: In Depth* (<https://nccih.nih.gov/health/pain/headachefacts.htm>) and *Spinal Manipulation for Low-Back Pain* (<https://nccih.nih.gov/health/pain/spinemanipulation.htm>).

### Does Spinal Manipulation Help To Relieve Pain?

— **Low-Back Pain.** Spinal manipulation can provide mild-to-moderate relief from low-back pain. It appears to work as well as conventional treatments such as applying heat, using a firm mattress, and taking pain-relieving medications.

The American College of Physicians, a national organization of doctors who specialize in internal medicine, has recommended spinal manipulation as one of several nondrug treatments that patients with chronic low-back pain may want to consider.

- **Headaches.** Spinal manipulation may help people with chronic tension-type or cervicogenic (neck-related) headaches and may also be helpful in preventing migraines.
- **Neck Pain.** There's some evidence that spinal manipulation may help to relieve neck pain, but much of the research on this technique has been of low quality.

## To Find Out More

- Visit NCCIH’s [Spinal Manipulation](https://nccih.nih.gov/health/spinalmanipulation) webpage (<https://nccih.nih.gov/health/spinalmanipulation>). To learn about the training, credentials, and licensing of complementary health practitioners who may perform spinal manipulation, read NCCIH’s webpages on [chiropractic](https://nccih.nih.gov/health/chiropractic) (<https://nccih.nih.gov/health/chiropractic>) and [naturopathy](https://nccih.nih.gov/health/naturopathy) (<https://nccih.nih.gov/health/naturopathy>).
- NCCIH’s fact sheets on [headaches](https://nccih.nih.gov/health/pain/headachefacts.htm) (<https://nccih.nih.gov/health/pain/headachefacts.htm>) and [spinal manipulation for low-back pain](https://nccih.nih.gov/health/pain/spinemanipulation.htm) (<https://nccih.nih.gov/health/pain/spinemanipulation.htm>) include information on the safety and usefulness of spinal manipulation for headaches and low-back pain.



## Chapter 8 Tai Chi

Tai chi, which originated in China as a martial art, is a mind and body practice. Tai chi involves moving the body slowly, gently, and with awareness, while breathing deeply. Many people practice tai chi to improve their health and well-being. Tai chi has also been studied for certain health problems.



**Tai Chi:** A centuries-old mind and body practice that involves certain postures and gentle movements with mental focus, breathing, and relaxation.



**Osteoarthritis:** A common type of arthritis caused by the breakdown of cartilage, which is the connective tissue that cushions the ends of bones within the joint. Osteoarthritis is characterized by pain, joint damage, and limited motion.

### Is Tai Chi Safe?

In general, yes. However, as with all complementary approaches, “safe” doesn’t necessarily mean “safe for you.” If you have any chronic health conditions, if you take medication, or if you are pregnant, talk with your health care provider before starting tai chi, and make sure that your tai chi instructor is familiar with your health situation.

### Does Tai Chi Help To Relieve Pain?

Tai chi has been studied in people with osteoarthritis, low-back pain, and fibromyalgia.

- **Osteoarthritis.** In research studies, tai chi was better than an education and stretching program and comparable to physical therapy in relieving pain in people with osteoarthritis of the knee. The American College of Rheumatology’s guideline for treating knee osteoarthritis mentions tai chi as one of several nondrug approaches that might be helpful.

- **Low-Back Pain.** A clinical practice guideline issued by the American College of Physicians, a national organization of doctors who specialize in internal medicine, has recommended tai chi as one of several nondrug treatments that patients with chronic low-back pain may want to consider.
- **Fibromyalgia.** Findings from some studies suggest that meditative movement therapies, such as tai chi, may provide moderate relief of some fibromyalgia symptoms.

### To Find Out More

Visit NCCIH's **Tai Chi** webpage (<https://nccih.nih.gov/health/taichi>).



## Chapter 9 Yoga

Bryan Ewsichek

Yoga is a complex practice, rooted in Indian philosophy, that originated several thousand years ago. Although classical yoga also includes other elements, yoga as practiced in the United States typically emphasizes physical postures, breathing techniques, and meditation.

Many people who practice yoga do so for reasons related to general health and well-being. Yoga is also used for specific health conditions, some of which involve pain.

According to the 2017 National Health Interview Survey, about one in seven U.S. adults practiced yoga in the previous year. Among U.S. children age 4 to 17, it was about 1 in 12.



**Yoga:** An ancient and complex practice, rooted in Indian philosophy, that originated several thousand years ago and has become popular as a way of promoting physical and mental well-being. Although classical yoga also includes other elements, yoga as practiced in the United States typically emphasizes physical postures (*asanas*), breathing techniques (*pranayama*), and meditation (*dyana*).

### Is Yoga Safe?

Yoga is generally considered safe for healthy people when performed properly, under the guidance of a qualified instructor. However, as with other types of physical activity, injuries can occur—most commonly, sprains and strains. Serious injuries are rare.

People with health conditions, older adults, and pregnant women may need to avoid or modify some yoga poses and should discuss their individual needs with their health care providers and the yoga instructor. Different situations call for different restrictions. For example, people with conditions that weaken their bones should avoid forceful forms of yoga, and people with glaucoma should avoid upside-down positions.

## Does Yoga Help To Relieve Pain?

- **Low-Back Pain.** Several studies have shown that yoga can be helpful for low-back pain, with effects similar to those of exercise. The American College of Physicians, a national organization of doctors who specialize in internal medicine, has recommended yoga as one of several nondrug treatments that patients with chronic low-back pain may want to consider.
- **Neck Pain.** A small amount of research indicates that yoga can have short-term benefits for neck pain.
- **Arthritis.** Not much research has been done on yoga for arthritis, but the few studies that have been completed suggest that it might be helpful.

## To Find Out More

Visit NCCIH's [Yoga](http://www.nccih.nih.gov/health/yoga) webpage ([www.nccih.nih.gov/health/yoga](http://www.nccih.nih.gov/health/yoga)).

# Chapter 10 Dietary Supplements and Other Natural Products

Anastasia Dulgier

Natural products used in complementary health include herbs (also known as botanicals), vitamins, minerals, probiotics, and other substances such as glucosamine and fish oil. Natural products are widely marketed and often sold as dietary supplements.

Different natural products have been studied for different pain conditions. This chapter summarizes the research on dietary supplements and other natural products for several pain conditions and discusses important issues to consider if you're thinking of using these products.

## **Pain Conditions for Which Dietary Supplements and Other Natural Products Have Been Studied**

- **Low-Back Pain.** There is some evidence that short-term use of the herbs devil's claw and white willow bark (taken by mouth), and cayenne, comfrey, and Brazilian arnica (applied on the skin) might be helpful for low-back pain, but it's uncertain whether these herbs are safe or effective when used for longer periods of time.
- **Osteoarthritis.** Although there's been a lot of research, it's still uncertain whether glucosamine and chondroitin have a meaningful impact on osteoarthritis symptoms.



**Rheumatoid Arthritis (RA):** A health condition that causes pain, swelling, stiffness, and loss of function in the joints. Conventional medical treatments are highly effective for RA; however, researchers are also studying complementary health approaches as possible additions to RA treatments.



**Irritable Bowel Syndrome (IBS):** A chronic disorder that interferes with the normal functions of the colon. IBS is characterized by symptoms such as abdominal pain, cramping, bloating, constipation, and diarrhea.

– **Rheumatoid Arthritis.** Omega-3 fatty acids of the types found in fish oil may have small beneficial effects on rheumatoid arthritis symptoms.

No other dietary supplement has shown clear benefits for rheumatoid arthritis, but there is preliminary evidence for a few, particularly gamma-linolenic acid (contained in evening primrose oil, borage seed oil, and black current seed oil) and the herb thunder god vine. However, serious safety concerns have been raised about thunder god vine.

– **Headaches.** The American Academy of Neurology and the American Headache Society have classified butterbur as “effective”; feverfew, magnesium, and riboflavin as “probably effective”; and coenzyme Q10 as “possibly effective” for migraine prevention.

– **Irritable Bowel Syndrome.** Probiotics may be helpful for symptoms of irritable bowel syndrome, such as bloating and flatulence, but it’s still not possible to draw firm conclusions about specific probiotics for IBS because different studies have used different types. Studies on peppermint oil have suggested that it may be helpful, but the quality of much of the research is poor.

## Using Natural Products Wisely

As mentioned earlier, natural products used in complementary health are often sold as dietary supplements. The U.S. Food and Drug Administration (FDA) regulates dietary supplements, but the regulations are different and less strict than those for prescription or over-the-counter drugs.

Unlike drugs, which must be approved by the FDA before they can be sold, dietary supplements do not need FDA approval before they can go on the market. Although the supplement company is responsible for having evidence that their product is safe and the label claims are truthful and not misleading, the company doesn’t have to give this evidence to the FDA before selling the product.

Once a dietary supplement is on the market, the FDA evaluates safety by doing research and keeping track of any side effects reported by consumers, health care providers, and supplement companies. If the FDA finds a product to be unsafe, it can issue a warning or require that the product be removed from the marketplace.

## “Natural” Doesn’t Always Mean “Safe”

Although many dietary supplements come from natural sources, “natural” doesn’t always mean “safe.” Natural products may contain ingredients that have strong effects in your body. A product’s safety depends on many things, such as the chemicals in it, how it works in the body, how it’s prepared, and the dose you take.

Research has been done on a variety of dietary supplements, but in many instances there isn’t enough scientific evidence to show whether they’re effective and safe. More needs to be learned about the effects of these products in the human body.



## Problems With Supplement Ingredients and Marketing

Problems have occurred with the safety and marketing of certain dietary supplements. Some products have been found to contain unsafe or illegal ingredients, and some have been promoted improperly.

- The Federal Government has taken legal action against certain dietary supplement promoters or websites that promote or sell dietary supplements because they have made false or deceptive statements about their products or because the products are unsafe.
- The FDA has warned the public that some products marketed as dietary supplements contain illegal and potentially harmful ingredients, such as prescription drugs and related substances.

## “Safe” May Not Mean “Safe for You”

Even if the dietary supplement you’re planning to take is generally considered safe, that doesn’t necessarily mean it’s safe for you. For example:

- **Some supplements may be unsafe for people who have particular medical conditions.** For example, it’s not safe for people with hemochromatosis (a hereditary disease in which too much iron builds up in your body) to take iron supplements.
- **Some supplements may cause problems if you have surgery.** They may increase the risk of bleeding or affect your response to anesthesia.
- **Some dietary supplements interact with medicines.** For example, the herbal supplement St. John’s wort interacts with many medicines, making them less effective, and supplements containing vitamin K may reduce the effectiveness of anticoagulants (blood thinners).
- **Most dietary supplements have not been tested in pregnant women, nursing mothers, or children.** Therefore, it is not known whether they’re safe for these groups of people.

## Communication Is Crucial

In Chapter 2, we talked about the importance of telling all of your health care providers—and any complementary health practitioners that you see—about everything you’re doing to manage your pain, including both conventional and complementary approaches. It’s especially important to tell them about any dietary supplements or other natural products you take. These products may have special issues—such as contamination or drug interactions—that don’t apply to other complementary approaches.

## To Find Out More

- To learn more about using dietary supplements safely and appropriately, visit NCCIH’s [Dietary and Herbal Supplements page](https://nccih.nih.gov/health/supplements) (<https://nccih.nih.gov/health/supplements>) and the website of NIH’s Office of Dietary Supplements (<https://ods.od.nih.gov/>).
- For information on contaminated or fraudulent dietary supplements, visit the FDA’s webpage of [consumer information on dietary supplements](https://www.fda.gov/consumers/consumer-updates/dietary-supplements) (<https://www.fda.gov/consumers/consumer-updates/dietary-supplements>).



## Chapter 11 Other Complementary Health Approaches

In addition to the complementary health approaches discussed in previous chapters, several other approaches have been studied for pain, at least to a limited extent.

- **Balneotherapy.** The terms “balneotherapy” or “spa therapy” refer to bathing in mineral water for health purposes and related techniques such as mud packs. Some preliminary research has been conducted on balneotherapy for symptoms of fibromyalgia and rheumatoid arthritis, but the evidence is too limited to allow any conclusions to be reached about whether it’s helpful.
- **Homeopathy.** Homeopathy was developed in Germany more than 200 years ago. It is based on two unconventional ideas: the notion that a disease can be cured by a substance that produces similar symptoms in healthy people, and the notion that the lower the dose of the medicine, the greater its effectiveness. The key ideas of homeopathy aren’t consistent with fundamental concepts of science. There’s little evidence to support homeopathy as an effective treatment for any health condition.

- **Magnets.** Several types of magnets have been studied for various painful conditions.
  - **Static magnets** have magnetic fields that don't change. They're put into products such as shoe insoles, bracelets, and headbands. Research results don't support their use for pain relief.
  - **Electromagnets** become magnetic when an electrical current charges the metal. They may have some effect on osteoarthritis pain, but it's unclear whether the effect is large enough to make a difference to patients.
  - **Transcranial magnetic stimulation (TMS)** is a technique in which a magnetic pulse is applied to the head to stimulate part of the brain. The U.S. Food and Drug Administration has approved a TMS device to treat migraines.
- **Music.** Studies have shown that music can reduce self-reported pain and depression symptoms in people with chronic pain.
- **Prolotherapy.** Prolotherapy (a treatment involving repeated injections of irritant solutions) has been studied for low-back pain, but research results have been inconsistent.
- **Reiki.** Reiki is a complementary health approach in which practitioners place their hands lightly on or just above the person, with the goal of facilitating the person's own healing response. There isn't enough high-quality research to evaluate whether Reiki is helpful for relieving pain.

## To Find Out More

Visit these pages on the NCCIH website:

- Pain (<https://nccih.nih.gov/health/pain>)
- Homeopathy (<https://nccih.nih.gov/health/homeopathy>)
- Magnets for Pain (<https://nccih.nih.gov/Health/magnets-for-pain>)
- Reiki (<https://nccih.nih.gov/health/reiki-info>)



## Chapter 12 Be an Informed Consumer

Decisions about your health care are important—including decisions about whether to use complementary approaches to help manage pain. Take charge of your health by being an informed consumer. The information in this chapter can help.

Topics discussed in this chapter include:

- Evaluating complementary health information on the Internet
- Finding reliable sources of health information
- Selecting a complementary health practitioner

### Complementary Health Information on the Internet

Many people look for health information on the Internet. The number of websites, social media sites, and mobile apps offering information about complementary and integrative health grows every day. Some online sources are useful, but others are inaccurate or misleading.

If you're visiting an online health site for the first time or downloading a new app, these five questions may help you check it out:

- **Who** runs or created the site or app? Can you trust them?
- **What** is the site or app promising or offering? Do its claims seem too good to be true?
- **When** was the information written or reviewed? Is it up-to-date?
- **Where** does the information come from? Is it based on scientific research?
- **Why** does the site or app exist? Is it selling something?

Rather than searching the Internet, it's often easier to find reliable health information online by visiting U.S. Government health websites where all the information has been checked to make sure it's accurate. The following online Federal Government collections of high-quality, up-to-date resources may be particularly helpful:

## Resources on Complementary Health Approaches

- NCCIH's website ([www.nccih.nih.gov](http://www.nccih.nih.gov))
- NIH's Office of Dietary Supplements website (<https://ods.od.nih.gov/>)

## Resources on All Health Topics

- MedlinePlus (<https://medlineplus.gov/>), a collection of resources maintained by NIH's National Library of Medicine
- Healthfinder.gov (<https://healthfinder.gov/>), a collection of resources maintained by the Office of Disease Prevention and Health Promotion in the U.S. Department of Health and Human Services
- Know the Science (<https://nccih.nih.gov/health/know-science>), NCCIH's collection of tools to help people better understand complex scientific topics related to health research

## Mobile Health Apps

There are thousands of mobile apps that provide health information you can read on your smartphone or tablet.

Keep these things in mind when using a mobile health app:

- The content of most apps isn't written or reviewed by medical experts and may be inaccurate and unsafe. In addition, the information you enter when using an app may not be secure.
- There's little research on the benefits, risks, and impact of health apps, such as the many mindfulness meditation apps that are now available.
- It's not always easy to know what personal information an app will access or how it will store your data.
- Before you download an app, find out if the store you get the app from says who created it. Don't trust the app if contact or website information for the creator isn't available.

Some reliable health apps created by Government agencies can be found by visiting:

- U.S. National Library of Medicine (<https://www.nlm.nih.gov/mobile/>)
- Centers for Disease Control and Prevention (<https://www.cdc.gov/mobile/generalconsumerapps.html>)

If you're interested in herbs, you may want to consider downloading **HerbList™** (<https://nccih.nih.gov/Health/HerbListApp>), NCCIH's app for research-based information about the safety and effectiveness of herbal products.

## Where To Find Reliable Information

The Internet, when used carefully, can be a good source of information about complementary health approaches, but other resources are also available.

Your health care providers and your pharmacist are good resources for learning about complementary health approaches. You can ask them about safety, effectiveness, and possible interactions with medicines, and they can help you understand scientific reports.

Another good information source is the NCCIH Clearinghouse. The information specialists at the Clearinghouse can respond to inquiries in English and Spanish, send you publications on complementary health approaches, and search Federal databases of scientific and medical literature for you. However, they cannot provide medical advice, treatment recommendations, or referrals to practitioners.

You can reach the Clearinghouse in three ways:

- **By phone.** Call 1-888-644-6226 (toll-free in the United States). Deaf or hard-of-hearing callers can call the TTY number, 1-866-464-3615. Both numbers are answered from 10 a.m. to 4 p.m. ET, Monday through Friday. Voicemail messages can be left at any time, and an information specialist will call you back.
- **By email.** Send your questions to [info@nccih.nih.gov](mailto:info@nccih.nih.gov).
- **By postal mail.** Write to NCCIH Clearinghouse, P.O. Box 7923, Gaithersburg, MD 20898.

## Selecting a Complementary Health Practitioner

Some of the practices described in this eBook, such as acupuncture, massage therapy, and spinal manipulation, involve working with a practitioner.

When you're looking for a complementary health practitioner to help treat a health problem, it's important to be as careful and thorough in your search as you are when looking for conventional medical care. Here are some tips:

- **If you need names of practitioners in your area, first check with your doctor or other health care provider.** A nearby hospital, professional organizations, or your health insurance provider may also be helpful. NCCIH cannot refer you to practitioners.
- **Find out as much as you can about any potential practitioner, including education, training, licensing, and certifications.** The credentials required for complementary health practitioners vary tremendously from state to state and from discipline to discipline.

- **Find out whether the practitioner is willing to work together with your conventional health care providers.** For safe, coordinated care, it's important for all of the professionals involved in your health to communicate and cooperate.
- **Explain all of your health conditions to the practitioner, and find out about the practitioner's training and experience in working with people who have your conditions.** Choose a practitioner who understands how to work with people with your specific needs. And remember that health conditions can affect the safety of complementary approaches.
- **Don't assume that your health insurance will cover the practitioner's services.** Coverage varies for different approaches, and it may be partial rather than complete. It's wise to contact your insurance provider and ask what coverage you have.

### To Find Out More

- The NCCIH website has a collection of resources on **being an informed consumer** (<https://nccih.nih.gov/health/decisions>).
- NCCIH's fact sheet, *Finding and Evaluating Online Resources* (<https://nccih.nih.gov/health/webresources>), provides tips on how to evaluate health information on the Internet. *MedlinePlus* (<https://medlineplus.gov/healthywebsurfing.html>) also provides useful information on healthy web surfing.
- Read about **credentials and licensing** (<https://nccih.nih.gov/health/decisions/credentialing.htm>) of complementary health practitioners and **paying for complementary health approaches** (<https://nccih.nih.gov/health/financial>) on the NCCIH website.



## Chapter 13 Research on Complementary Approaches for Pain

Research on pain is a high priority for NCCIH and the larger agency we're part of, the National Institutes of Health (NIH). Here are some highlights of current research:

- NIH has launched an aggressive effort to speed scientific solutions to the opioid crisis called the HEAL (Helping to End Addiction Long-term) Initiative. One part of HEAL is research to prevent addiction by improving pain management. This includes research on nondrug and integrated therapies for pain.
- With NCCIH as the lead agency, NIH is collaborating with the U.S. Department of Defense and U.S. Department of Veterans Affairs on large-scale research on nondrug approaches for pain management in the military and veteran health care delivery systems.
- NCCIH does research at the NIH laboratories in Maryland on the role of the brain in perceiving, modifying, and managing pain. Some of the research projects involve finding out how factors such as emotion, attention, environment, and genetics affect the perception of pain. Others involve learning about the cells and molecules involved in the brain's ability to detect pain and other sensations. These efforts may lead to the development of better ways to treat pain.

### To Find Out More

- Visit the NIH Pain Consortium's website (<https://www.painconsortium.nih.gov/>) to learn more about pain-related research activities throughout NIH.
- For the latest news on the HEAL Initiative, visit the HEAL webpage (<https://www.nih.gov/research-training/medical-research-initiatives/heal-initiative>).
- Go to the NCCIH Pain page ([www.nccih.nih.gov/health/pain](http://www.nccih.nih.gov/health/pain)) for information about NCCIH's pain research projects.



## Chapter 14 Frequently Asked Questions

### **Q: How common is pain, and who is most likely to have it?**

**A:** Many people have pain. According to a national survey, about 11 percent of adults have pain every day and more than 17 percent of adults have severe levels of pain. Chronic pain is more common among women than men, and it becomes more common as people grow older.

To find out more, visit NCCIH's webpage on [Pain \(https://nccih.nih.gov/health/pain\)](https://nccih.nih.gov/health/pain).

### **Q: What are complementary health approaches?**

**A:** Complementary approaches are health care approaches with a history of use or origins outside of mainstream Western, or conventional, medicine. They include mind and body practices (such as acupuncture, yoga, and massage therapy) and natural products (such as herbs, vitamins, and probiotics).

To find out more, read NCCIH's fact sheet [Complementary, Alternative, or Integrative Health: What's In a Name? \(https://nccih.nih.gov/health/integrative-health\)](https://nccih.nih.gov/health/integrative-health).

### **Q: Are complementary approaches safe?**

**A:** There is no simple answer to this question. Safety depends on the specific approach, and each complementary product or practice should be considered on its own.

Safety also varies for different people. Complementary approaches that are safe for healthy people may not be safe for people with some medical conditions, either because of the condition itself or because of the treatment the person is receiving for it.

**Q: Can you give some tips on how to use complementary approaches safely?**

**A:** Here are three important things to remember:

1. Always tell all of your doctors or other health care providers about all complementary approaches you're using.
2. Never use a complementary approach as a reason to delay seeing your health care provider about a health problem.
3. If you're thinking about stopping (or not starting) conventional care for a health problem, discuss it with your health care provider. In some instances, going without conventional care can lead to serious problems.

To learn more about the safety of complementary health approaches, visit NCCIH's webpage on [Safe Use of Complementary Health Products and Practices \(https://nccih.nih.gov/health/safety\)](https://nccih.nih.gov/health/safety).

**Q: Does acupuncture help to relieve pain?**

**A:** Studies suggest that acupuncture may help relieve low-back pain and knee pain associated with osteoarthritis. It may also help reduce the frequency of tension headaches and prevent migraine headaches. There is also some research that suggests acupuncture may help relieve some fibromyalgia symptoms.

To find out more, visit NCCIH's [Acupuncture](https://nccih.nih.gov/health/acupuncture) webpage (<https://nccih.nih.gov/health/acupuncture>).

**Q: Does massage therapy help to relieve pain?**

**A:** There's some evidence that massage therapy can be helpful for low-back pain, cancer pain, and arthritis, but the evidence isn't very strong. Massage therapy may provide short-term relief from neck and shoulder pain.

To find out more, visit NCCIH's [Massage Therapy](https://nccih.nih.gov/health/massage) webpage (<https://nccih.nih.gov/health/massage>).

**Q: Do meditation and mindfulness help to relieve pain?**

**A:** There's only been a small amount of research on meditation or mindfulness for pain. Mindfulness meditation could be an option to try for chronic pain, but it hasn't been shown to be more effective than cognitive-behavioral therapy (a type of psychotherapy). For low-back pain, learning mindfulness was associated with a small, short-term improvement in pain.

To find out more, visit NCCIH's [Meditation](https://nccih.nih.gov/health/meditation) webpage (<https://nccih.nih.gov/health/meditation>).

**Q: Do relaxation techniques help to relieve pain?**

**A:** Relaxation techniques may be helpful for certain painful conditions, such as irritable bowel syndrome. Some research suggests that relaxation techniques may be helpful for some people with temporomandibular disorder and fibromyalgia, but overall the results have been inconclusive. Relaxation techniques may help to reduce headaches and abdominal pain in children.

To find out more, read NCCIH's fact sheet on [Relaxation Techniques](https://nccih.nih.gov/health/stress/relaxation.htm) (<https://nccih.nih.gov/health/stress/relaxation.htm>).

**Q: Does spinal manipulation help to relieve pain?**

**A:** Spinal manipulation can provide mild-to-moderate relief from low-back pain. The American College of Physicians, a national organization of doctors who specialize in internal medicine, has recommended spinal manipulation as one of several nondrug treatments that patients with chronic low-back pain may want to consider. Spinal manipulation may also help people with some types of headaches.

To find out more, visit NCCIH's [Spinal Manipulation](https://nccih.nih.gov/health/spinalmanipulation) webpage (<https://nccih.nih.gov/health/spinalmanipulation>).

**Q: Does tai chi help to relieve pain?**

**A:** Tai chi may be helpful for relieving pain from fibromyalgia or knee osteoarthritis. It also may help with neck pain.

To find out more, visit NCCIH's [Tai Chi](https://nccih.nih.gov/health/taichi) webpage (<https://nccih.nih.gov/health/taichi>).

**Q: Does yoga help to relieve pain?**

**A:** Studies show that yoga can be helpful for low-back pain, with effects similar to those of exercise. There hasn't been much research on yoga for neck pain or arthritis, but the few studies that have been done have had promising results.

To find out more, visit NCCIH's [Yoga](https://nccih.nih.gov/health/yoga) webpage (<https://nccih.nih.gov/health/yoga>).

**Q: Can any dietary supplements or other natural products help with low-back pain?**

**A:** There is some evidence that short-term use of the herbs devil's claw and white willow bark (taken by mouth), and cayenne, comfrey, and Brazilian arnica (applied on the skin) might be helpful for low-back pain; however, it's uncertain whether these herbs are safe or effective when used for longer periods of time.

**Q: Can glucosamine and chondroitin help with osteoarthritis pain?**

**A:** Despite a lot of research, it's still uncertain whether glucosamine and chondroitin have a meaningful effect on osteoarthritis pain.

**Q: Are dietary supplements safe because they are natural?**

**A:** Not necessarily. Natural doesn't always mean safe. Dietary supplements and other natural products may contain ingredients that have strong effects in your body.

To find out more about how to use dietary supplements safely, visit NCCIH's [Dietary and Herbal Supplements](https://nccih.nih.gov/health/supplements) page (<https://nccih.nih.gov/health/supplements>) and the website of NIH's [Office of Dietary Supplements](https://ods.od.nih.gov/) (<https://ods.od.nih.gov/>).

**Q: Can you trust information on the Internet about complementary health approaches?**

**A:** Not necessarily. Some of the health information on the Internet is inaccurate or misleading.

**Q: Can you recommend some websites that provide good information about complementary health approaches?**

**A:** Yes. Visit NCCIH's website ([www.nccih.nih.gov](http://www.nccih.nih.gov)) and the NIH Office of Dietary Supplements website (<https://ods.od.nih.gov/>). You can also find information about complementary approaches, as well as a wide variety of other health topics, at [MedlinePlus](https://medlineplus.gov/) (<https://medlineplus.gov/>) and [Healthfinder.gov](https://healthfinder.gov/) (<https://healthfinder.gov/>).

**Q: Are mobile health apps trustworthy?**

**A:** They may not be. The content of most apps isn't written or reviewed by medical experts and may be inaccurate and unsafe.

**Q: Besides the Internet, what are some good sources of information on complementary health approaches?**

**A:** Your health care provider and your pharmacist are good resources.

Another good information source is the NCCIH Clearinghouse. The information specialists at the Clearinghouse can respond to inquiries in English and Spanish, send you publications on complementary health approaches, and search Federal databases of scientific and medical literature for you. However, they cannot provide medical advice, treatment recommendations, or referrals to practitioners.

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- **By email.** Send your questions to [info@nccih.nih.gov](mailto:info@nccih.nih.gov).
- **By postal mail.** Write to NCCIH Clearinghouse, P.O. Box 7923, Gaithersburg, MD 20898.

**Q: Will my health insurance cover the complementary health approach I want to use to help manage my pain?**

**A:** Not necessarily. Check with your health insurance provider.

**Q: How can I get names of complementary health practitioners in my area?**

**A:** Check with your doctor or other health care provider. A nearby hospital, professional organizations, or your health insurance provider may also be helpful.



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## Chapter 11: Other Complementary Health Approaches

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## Chapter 12: Be an Informed Consumer

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## Chapter 13: Research on Complementary Approaches for Pain

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<https://nccih.nih.gov/about/strategic-plans/2016>

National Institutes of Health HEAL Initiative website.  
<https://www.nih.gov/heal-initiative>

NIH-DoD-VA Pain Management Collaboratory website.  
<https://painmanagementcollaboratory.org>



# Additional Resources

## Chapter 1: About Pain and Complementary Health Approaches

Complementary, Alternative, or Integrative Health: What's In a Name? (NCCIH)  
<https://nccih.nih.gov/health/integrative-health>

Pain (NCCIH)  
<https://nccih.nih.gov/health/pain>

Chronic Pain Information Page (National Institute of Neurological Disorders and Stroke)  
<https://www.ninds.nih.gov/Disorders/All-Disorders/Chronic-pain-Information-Page>

## Chapter 2: Safety of Complementary Health Approaches

Safe Use of Complementary Health Products and Practices (NCCIH)  
<https://nccih.nih.gov/health/safety>

Natural Doesn't Necessarily Mean Safer, or Better (NCCIH)  
<https://nccih.nih.gov/health/know-science/natural-doesnt-mean-better>

Using Dietary Supplements Wisely (NCCIH)  
<https://nccih.nih.gov/health/supplements/wiseuse.htm>

## Chapter 3: Acupuncture

Acupuncture: In Depth (NCCIH)  
<https://nccih.nih.gov/health/acupuncture/introduction>

## Chapter 4: Massage Therapy

Massage Therapy for Health Purposes (NCCIH)  
<https://nccih.nih.gov/health/massage/massageintroduction.htm>

## **Chapter 5: Meditation and Mindfulness**

Meditation: In Depth (NCCIH)

<https://nccih.nih.gov/health/meditation/overview.htm>

## **Chapter 6: Relaxation Techniques**

Relaxation Techniques for Health (NCCIH)

<https://nccih.nih.gov/health/stress/relaxation.htm>

## **Chapter 7: Spinal Manipulation**

Chiropractic (NCCIH)

<https://nccih.nih.gov/health/chiropractic>

Spinal Manipulation for Low-Back Pain (NCCIH)

<https://nccih.nih.gov/health/pain/spinemanipulation.htm>

## **Chapter 8: Tai Chi**

Tai Chi and Qi Gong: In Depth (NCCIH)

<https://nccih.nih.gov/health/taichi/introduction.htm>

## **Chapter 9: Yoga**

Yoga: In Depth (NCCIH)

<https://nccih.nih.gov/health/yoga/introduction.htm>

## **Chapter 10: Dietary Supplements and Other Natural Products**

Using Dietary Supplements Wisely (NCCIH)

<https://nccih.nih.gov/health/supplements/wiseuse.htm>

Know the Science: How Medications and Supplements Can Interact (NCCIH)

<https://nccih.nih.gov/health/know-science/how-medications-supplements-interact>

Dietary Supplements: What You Need To Know (NIH Office of Dietary Supplements)

[https://ods.od.nih.gov/HealthInformation/DS\\_WhatYouNeedToKnow.aspx](https://ods.od.nih.gov/HealthInformation/DS_WhatYouNeedToKnow.aspx)

Dietary Supplements (U.S. Food and Drug Administration)

<https://www.fda.gov/food/dietarysupplements/default.htm>

## **Chapter 11: Other Complementary Health Approaches**

Homeopathy (NCCIH)

<https://nccih.nih.gov/health/homeopathy>

Magnets for Pain (NCCIH)

<https://nccih.nih.gov/Health/magnets-for-pain>

Reiki: In Depth (NCCIH)

<https://nccih.nih.gov/health/reiki-info>

## **Chapter 12: Be an Informed Consumer**

Finding and Evaluating Online Resources (NCCIH)

<https://nccih.nih.gov/health/webresources>

6 Things To Know When Selecting a Complementary Health Practitioner (NCCIH)

<https://nccih.nih.gov/health/tips/selecting>

Credentialing, Licensing, and Education (NCCIH)

<https://nccih.nih.gov/health/decisions/credentialing.htm>

Paying for Complementary and Integrative Health Approaches (NCCIH)

<https://nccih.nih.gov/health/financial>

Know the Science (NCCIH)

<https://nccih.nih.gov/health/know-science>

## **Chapter 13: Research on Complementary Approaches for Pain**

NCCIH Division of Intramural Research (NCCIH)

<https://nccih.nih.gov/research/intramural>

HEAL Initiative (NIH)

<https://www.nih.gov/heal-initiative>

National Pain Strategy Overview (NIH)

<https://iprcc.nih.gov/National-Pain-Strategy/Overview>

Federal Pain Research Strategy Overview (NIH)

<https://iprcc.nih.gov/Federal-Pain-Research-Strategy/Overview>

NIH-DoD-VA Pain Management Collaboratory (NIH, DoD, VA)

<https://painmanagementcollaboratory.org>



National Center for  
Complementary and  
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