

East Meets West: Complementary and Alternative Therapies for Chronic Pain and Autoimmune Disorders

In use for hundreds and thousands of years, these therapies have been shown to be effective when used to complement medical treatment plans.

By Rachel Colletta, BSN, CRNI, IgCN, VA-BC

THOUSANDS OF YEARS before the dawn of Western medicine, ancient Chinese cultures used practices like acupuncture, herbal remedies, massage and meditation to treat a variety of conditions — from pain to mental illness. During that period, these practices were the only form of medical care available, and they have continued to evolve over the centuries. Chinese medicine focuses on the importance of the mind-body connection in the healing process. Dating back 3,000 years, traditional Chinese medicine practitioners treated the root of the illness using a holistic approach to bring about a state of complete healing. Today, modern-day alternative medicine practitioners believe the body's energy forces must be in balance to achieve wellness. The process of restoring balance is accomplished by focusing on the person as a whole, not as a disease state or a group of symptoms. Understanding how the systems of mind, body and spirit work together enables practitioners to develop a treatment plan that addresses the imbalances in these energy forces to bring the body into a state of harmony. Only then can healing begin.

What Are Alternative and Complementary Therapies?

What do the terms “complementary therapies,” “alternative medicine” and “integrative treatments” mean, and how can these ancient practices be used to treat patients with chronic pain and autoimmune disorders?

Alternative medicine is any of a range of medical therapies not regarded as orthodox by the medical profession such as herbalism and acupuncture. Complementary medicine is any of a range of medical therapies that fall beyond the scope of scientific medicine, but may be used alongside it in the treatment of disease. Examples include acupuncture and osteopathy (a therapy involving manipulation of the bones). Integrative medicine is a form of medical therapy that combines practices and procedures from alternative medicine with conventional medicine.

Complementary and alternative medicine (CAM) is a term used to describe a group of healthcare practices and/or products that are not considered a part of conventional Western medicine. While there is a lack of scientific evidence supporting the effectiveness of many of these treatments, more people than ever are integrating these practices into their treatment plan. Indeed, many patients may already be incorporating some form of CAM into their daily healthcare regimen.

Types of CAM

The National Institutes of Health (NIH) reports approximately 38 percent of adults and 12 percent of children are practicing some form of CAM.¹ In 2012, a nationwide survey conducted by NIH found Americans spent more than \$30 billion out of pocket for complementary and alternative therapies, representing more than nine percent of overall out-of-pocket expenses paid that year. The following are therapies for which Americans are spending their money (Figure).

Fish oil/omega 3. These are fatty acids that can be found in fish and plant oils, but may also be taken as a supplement. In clinical trials, omega 3 has been shown to lower both triglyceride levels and blood pressure.

Probiotics. Probiotics are bacteria similar to existing bacteria in a healthy gut. These bacteria, that number in the trillions, are the first line of defense against unwanted invaders to the gastrointestinal (GI) tract. Frequent or overuse of antibiotics can kill healthy bacteria, leaving the gut vulnerable to infections. Probiotics may be ingested as supplements, or they can be found in certain foods such as yogurt. Evidence suggests probiotics may slow the growth of certain tumors, particularly of the colon; however, more studies are needed to fully understand their role.

Echinacea. Echinacea is a flower found in regions of North America that is primarily used to treat common colds and to stimulate the immune system. It may be taken as a supple-

ment, or it can be ingested as tea or juice. There is conflicting data about the effectiveness of this supplement in treating or preventing the common cold.

Natural herbal remedies. Because of their anti-inflammatory effect, herbal and plant-based products have been used for thousands of years as an effective pain remedy. Commonly used herbal remedies include turmeric, willow bark, green tea, cat's claw and ginger.² The anti-inflammatory effect of these products has also been shown to help with GI issues. However, because the supplement industry is not regulated by the U.S. Food and Drug Administration, it is essential for patients to use quality products and to inform their physician and pharmacist of all herbal supplements taken to ensure there are no potential drug interactions.

Deep breathing techniques or meditation. Meditation is one of the oldest forms of alternative medicine in the world, thought to have started around 3500 B.C. on the continent of India. It is a mind-body practice that allows the body to calm, the breath to slow and the mind to still. Meditation comes in a variety of forms, but each has several commonalities: a quiet space, a comfortable position, a focus of attention and a willingness to be open to the practice. Meditation can be used as a relaxation technique; however, it has also been shown to

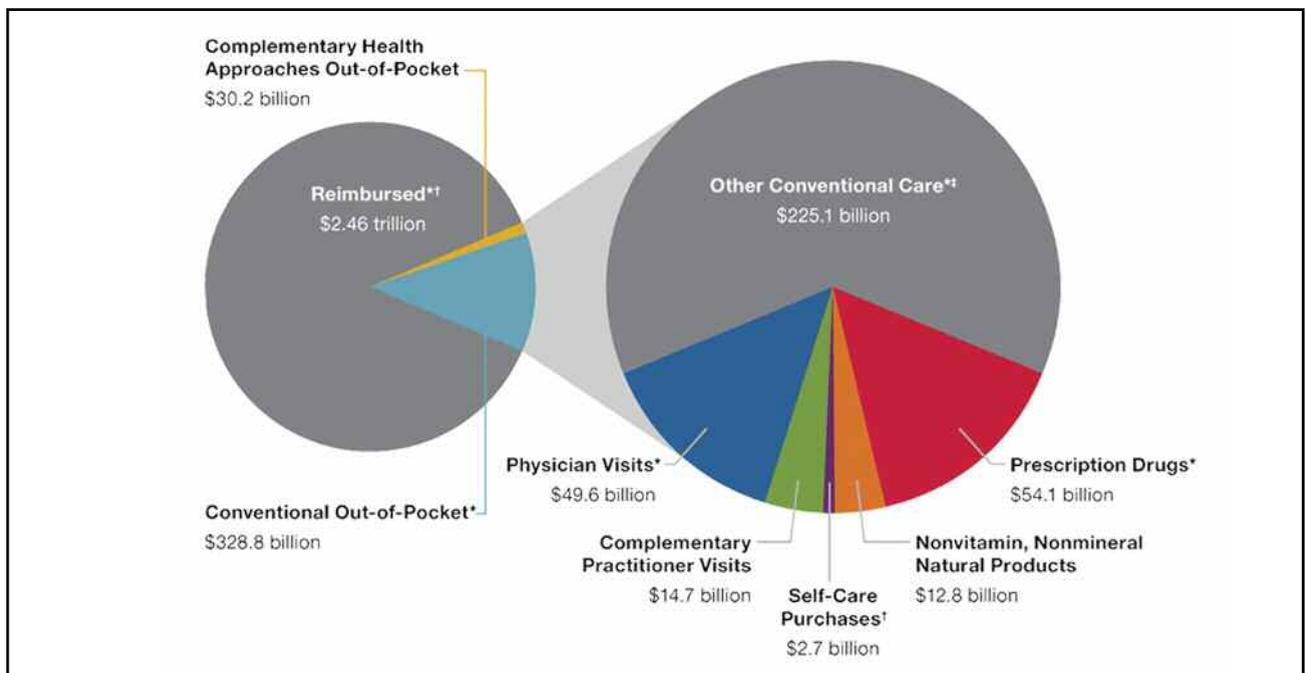
assist with issues such as insomnia, high blood pressure, pain, anxiety and depression, to name a few. Meditation does not have to be a structured activity, and there is no right or wrong way to meditate. It involves merely breath and focus.

It is thought meditation actually changes the chemistry of the brain, which allows for the healing process to take place. Just a few minutes a day of meditation may start to relieve stress and help relieve symptoms of chronic illness. A beginner's guide to meditation can be found at www.yogajournal.com/meditation/let-s-meditate.

Acupuncture. Acupuncture is an ancient practice that predates history. Evidence of the use of acupuncture dates back to the Stone Age, when sharp stone objects were used to puncture and drain wounds. The practice of acupuncture was first recorded in Chinese history around the 13th century and documented in European history around the 17th century.

Practitioners of Chinese medicine in ancient times understood that inside every human body is a series of channels or meridians. These meridians are like a superhighway through which the body's energy flows. Unlike the circulatory system with its veins and arteries, meridians can't be seen in the physical sense. Rather, meridians are invisible pathways within the body that connect, flow and transfer energy.

Figure. Out-of-Pocket Spending on Complementary Health Approaches in the U.S. (Total Health Care Spending, 2012: \$2.82 Trillion)



Source: National Center for Complementary and Integrative Health. Americans Spent \$30.2 Billion Out-of-Pocket on Complementary Health Approaches. Accessed at nccih.nih.gov/news/press/cost-spending-06222016.

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Immune Globulin Subcutaneous
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**My Life,
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Hizentra is an Ig* therapy that provides proven protection for PI and CIPD with the convenience of self-administration, so you can focus on everyday living

*Ig=immunoglobulin

Important Safety Information

WARNING: Thrombosis (blood clots) can occur with immune globulin products, including Hizentra. Risk factors can include: advanced age, prolonged immobilization, a history of blood clotting or hyperviscosity (blood thickness), use of estrogens, installed vascular catheters, and cardiovascular risk factors.

If you are at high risk of blood clots, your doctor will prescribe Hizentra at the minimum dose and infusion rate practicable and will monitor for signs of clotting events and hyperviscosity. Always drink sufficient fluids before infusing Hizentra.

See your doctor for a full explanation, and the full prescribing information for complete boxed warning.

Hizentra is a prescription medicine used to treat:

- Primary immune deficiency (PI) in patients 2 years and older
- Chronic inflammatory demyelinating polyneuropathy (CIPD) in adults

Treatment with Hizentra might not be possible if your doctor determines you have hyperprolinemia (too much proline in the blood), or are

IgA-deficient with antibodies to IgA and a history of hypersensitivity. Tell your doctor if you have previously had a severe allergic reaction (including anaphylaxis) to the administration of human immune globulin. Tell your doctor right away or go to the emergency room if you have hives, trouble breathing, wheezing, dizziness, or fainting. These could be signs of a bad allergic reaction.

Inform your doctor of any medications you are taking, as well as any medical conditions you may have had, especially if you have a history of diseases related to the heart or blood vessels, or have been immobile for some time. Inform your physician if you are pregnant or nursing, or plan to become pregnant.

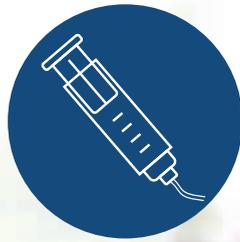
Infuse Hizentra under your skin *only*; do not inject into a blood vessel. Self-administer Hizentra only after having been taught to do so by your doctor or other healthcare professional, and having received dosing instructions for treating your condition.

Why Choose Hizentra?



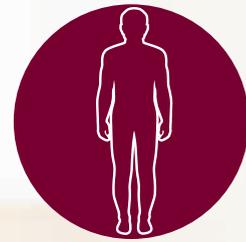
Choose where you infuse

Self-administration with Hizentra means you and your doctor can decide where you can infuse. Convenient dosing routines mean you won't have to adjust or cancel your plans due to IV infusion appointments.



No IV infusions

IV infusions can be challenging for people who have hard-to-find or damaged veins. Hizentra allows you to infuse just under the skin, not into a vein, after training from your doctor.



Proven safety

Hizentra has an established safety profile and demonstrated tolerability. In clinical trials, the most common side effects were redness, swelling, itching, and/or bruising at the infusion site; headache, chest, joint or back pain; diarrhea; tiredness; cough; rash; itching; fever, nausea, and vomiting. These are not the only side effects possible.

Discover all the benefits Hizentra has to offer at Hizentra.com

Immediately report to your physician any of the following symptoms, which could be signs of serious adverse reactions to Hizentra:

- Reduced urination, sudden weight gain, or swelling in your legs (possible signs of a kidney problem).
- Pain and/or swelling or discoloration of an arm or leg, unexplained shortness of breath, chest pain or discomfort that worsens on deep breathing, unexplained rapid pulse, or numbness/weakness on one side of the body (possible signs of a blood clot).
- Bad headache with nausea; vomiting; stiff neck; fever; and sensitivity to light (possible signs of meningitis).
- Brown or red urine; rapid heart rate; yellowing of the skin or eyes; chest pains or breathing trouble; fever over 100°F (possible symptoms of other conditions that require prompt treatment).

Hizentra is made from human blood. The risk of transmission of infectious agents, including viruses and, theoretically, the Creutzfeldt-Jakob disease (CJD) agent and its variant (vCJD), cannot be completely eliminated.

The most common side effects in the clinical trials for Hizentra include redness, swelling, itching, and/or bruising at the infusion site; headache; chest, joint or back pain; diarrhea; tiredness; cough; rash; itching; fever, nausea, and vomiting. These are not the only side effects possible. Tell your doctor about any side effect that bothers you or does not go away.

Before receiving any vaccine, tell immunizing physician if you have had recent therapy with Hizentra, as effectiveness of the vaccine could be compromised.

Please see brief summary of full prescribing information for Hizentra on adjacent page. For full prescribing information, including boxed warning and patient product information, please visit Hizentra.com.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

IgIQ: Support Programs to Help You Get Started

Call IgIQ to find out about programs such as:



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*Other terms and conditions apply. Call IgIQ to learn more.

HIZENTRA®, Immune Globulin Subcutaneous (Human), 20% Liquid
Initial U.S. Approval: 2010

BRIEF SUMMARY OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use HIZENTRA safely and effectively. See full prescribing information for HIZENTRA.

WARNING: THROMBOSIS

See full prescribing information for complete boxed warning.

- **Thrombosis may occur with immune globulin products, including HIZENTRA. Risk factors may include: advanced age, prolonged immobilization, hypercoagulable conditions, history of venous or arterial thrombosis, use of estrogens, indwelling vascular catheters, hyperviscosity, and cardiovascular risk factors.**
- **For patients at risk of thrombosis, administer HIZENTRA at the minimum dose and infusion rate practicable. Ensure adequate hydration in patients before administration. Monitor for signs and symptoms of thrombosis and assess blood viscosity in patients at risk for hyperviscosity.**

INDICATIONS AND USAGE

HIZENTRA is indicated for:

*Treatment of primary immunodeficiency (PI) in adults and pediatric patients 2 years and older.

* Maintenance therapy in adults with chronic inflammatory demyelinating polyneuropathy (CIDP) to prevent relapse of neuromuscular disability and impairment.

-Limitation of Use: Maintenance therapy in CIDP has been systematically studied for 6 months and for a further 12 months in a follow-up study. Continued maintenance beyond these periods should be individualized based on patient response and need for continued therapy.

For subcutaneous infusion only.

DOSAGE FORMS AND STRENGTHS

0.2 g per mL (20%) protein solution for subcutaneous injection

CONTRAINDICATIONS

- Anaphylactic or severe systemic reaction to human immune globulin or components of HIZENTRA, such as polysorbate 80
- Hyperprolinemia (type I or II) (HIZENTRA contains the stabilizer L-proline)
- IgA-deficient patients with antibodies against IgA and a history of hypersensitivity

WARNINGS AND PRECAUTIONS

- IgA-deficient patients with anti-IgA antibodies are at greater risk of severe hypersensitivity and anaphylactic reactions.
- Thrombosis may occur following treatment with immune globulin products, including HIZENTRA.
- Aseptic meningitis syndrome has been reported with IGIV or IGSC, including HIZENTRA treatment.
- Monitor renal function, including blood urea nitrogen, serum creatinine, and urine output in patients at risk of acute renal failure.
- Monitor for clinical signs and symptoms of hemolysis.
- Monitor for pulmonary adverse reactions (transfusion-related acute lung injury [TRALI])
- HIZENTRA is made from human plasma and may contain infectious agents, e.g., viruses, the variant Creutzfeldt-Jakob disease (vCJD) agent and, theoretically, the Creutzfeldt-Jakob disease (CJD) agent.

ADVERSE REACTIONS

The most common adverse reactions observed in ≥5% of study subjects were local infusion site reactions, headache, diarrhea, fatigue, back pain, nausea, pain in extremity, cough, upper respiratory tract infection, rash, pruritus, vomiting, abdominal pain (upper), migraine, arthralgia, pain, fall and nasopharyngitis.

To report SUSPECTED ADVERSE REACTIONS, contact CSL Behring Pharmacovigilance at 1-866-915-6958 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

DRUG INTERACTIONS

The passive transfer of antibodies may interfere with the response to live virus vaccines, and lead to misinterpretation of the results of serological testing.

Based on March 2018 revision

The process of acupuncture involves inserting very tiny needles at specific points along the lines of the body's multiple meridians. There are more than 300 acupuncture points that access this energy highway. Placing needles in these points are thought to rebalance the body's energy flow that has been disrupted by disease or illness. Western medicine scientists believe the benefits of acupuncture come more from the release of neurotransmitters and the anti-inflammatory effect than from rebalancing the body's energy. Regardless of which school of thought is believed, acupuncture is one of the few alternative medicine practices that is widely accepted in Western medicine. In fact, many commercial insurance plans cover acupuncture therapy.

Due to the increased popularity of acupuncture, the practice has become state-regulated. Each state has its individual requirements for the practice's training and administration. The World Health Organization has established guidance for practitioners regarding the amount and kind of training providers should receive to practice safely. It is vital for patients to find a qualified practitioner. The National Certification Commission for Acupuncture and Oriental Medicine has both a practitioner registry and directory that may assist in locating qualified acupuncturists.

CAM for Autoimmune Disorders and Pain

There are thousands of published clinical trials and ongoing studies touting the benefits of acupuncture for a variety of conditions, including autoimmune disorders. Following is how acupuncture and other forms of CAM work for treating chronic pain and autoimmune disorders.

Autoimmune disorders occur when the immune system attacks, instead of protects, the body.³ Autoimmune disorders can impact any area of the body from the joints to the blood vessels. NIH estimates up to 23 million Americans suffer from some form of autoimmune disorder, which is close to three times more people than those affected by cancer. There is no cure for many autoimmune disorders, which are characterized by cycles of worsening symptoms, called flare-ups, followed by periods of calm or remission. Much of the treatment plan involves symptom management with conventional medicine like steroids and immunosuppressant therapy. While these medications can help to alleviate symptoms associated with autoimmune disorders, long-term use of these medications is associated with diminished function of the immune system and potential effects to the muscular and skeletal systems and GI system.

Each autoimmune disorder is unique in its clinical presentation; however, many have similar symptoms such as joint

pain and swelling, fatigue, skin rashes, abdominal pain or digestive issues, fever and swollen glands. When flare-ups occur, conventional medicine may not provide adequate relief. This is when alternative medicine practices can be effectively used to complement medication.

Both acupuncture and massage therapy have been shown to decrease pain and inflammation for patients with autoimmune disorders.^{4,5} Research has shown acupuncture causes a physical effect on the nerves and parts of the brain. These responses cause the body to release hormones, proteins and chemicals that control body functions such as temperature and blood pressure. Additionally, acupuncture is thought to block the body's pain receptors by releasing neurotransmitters. Massage therapy has been proven to reduce joint and muscle stiffness and fatigue, as well as promote sleep and reduce stress. Another benefit of massage therapy is a decrease in cortisol, the stress hormone, and an increase in serotonin, which may help with depression. Herbal supplements such as turmeric and willow bark may also help with joint pain and inflammation. And, ginger and probiotics may help to relieve GI distress from the disease or the medications used to treat the illness.

Still Relevant Today

Because chronic pain and autoimmune disorders can be devastating to both patients and families, anything that can be done to relieve symptoms and improve quality of life is an important step to take. Many CAM therapies have been in use for hundreds and even thousands of years, and they are still relevant in the practice of medicine today. Patients should take the time to have a discussion with their physician about how these practices may help. And, patients should only begin CAM therapy after discussing it with their physician. Importantly, these therapies are not meant to replace an existing treatment plan; they are intended to complement that plan. ■

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Resources

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