

INTEGRATIVE MEDICINE

Randy J. Horwitz, MD, PhD and Julia Jernberg, MD

Introduction

Integrative medicine is far more than simply the combination of mainstream (western) medicine with *complementary and alternative medicine (CAM)*. The concept of integrative medicine embraces the philosophies and practices of different healing disciplines and functions as a bridge between them. As it is currently practiced in the United States, integrative medicine is spearheaded by western doctors who have come to appreciate the benefits and the limitations of both conventional (western) medicine and alternative healing practices and philosophies. An integrative medicine doctor practices western medicine and also utilizes other healing techniques either in combination with or, in some cases, as an alternative to conventional healing practices.

Integrative medicine was borne of a desire to expand the conventional practice of medicine beyond the traditional boundaries of modern western medicine. Conventional medicine, as it is currently practiced in the west, is one of the youngest of the medical sciences. Yet it has a well-earned reputation for achievement in certain areas such as the introduction of antibiotic therapies, *vaccine* therapies, and organ transplantation, to name just a few.

Sophisticated diagnostic procedures such as magnetic resonance imaging (MRI) and computed tomography (CT) scans reveal the inner structures of the body in minute detail. *Ultrasound* technology enables us to see blood flow through the body and the tiny beating hearts of babies in the womb. A small amount of blood can be sent to the laboratory to determine a seemingly endless number of details about the body's chemistry. The wonders of modern medicine marvel and amaze us. Advances in western medicine have saved countless lives over the years. Yet despite these advances, many patients and doctors alike believe that some of the humanistic features of *clinical* medicine have been neglected in the whirlwind of technology. Integrative medicine seeks to restore these attributes to the field of medicine, and to utilize both the newest medical technologies and time-honored healing practices to optimize patients' health and wellness.

In a quest to expand upon the therapeutic choices available to patients, several visionaries from the conventional healthcare system looked to more traditional healing practices for insights that might aid the sick and suffering. Integrative medicine practitioners utilize a wide variety of healing techniques in addition to conventional treatments.

Healing Techniques Commonly Utilized in Integrative Medicine

acupuncture	allopathic medicine and treatments
herbal medicine	homeopathy
nutrition	energy medicine
exercise	vitamins and nutritional supplements
spirituality	

Supporting the self-healing nature of the human body and affecting a positive influence over interactions between the mind and body are two fundamental principles of most integrative medicine practices. Scientific research conducted in recent years has shown the powerful influence of the mind on wellness and disease. Robert Ader's landmark experiments in the 1970's demonstrated the power a mental stimulus can have on the *immune system*. His work showed that psychological

conditioning could destroy a mouse's immune function almost as effectively as a powerful *chemotherapy* drug.¹ Another study found that writing about one's emotions and thoughts can significantly reduce the level of illness experienced by people with chronic diseases such as asthma and *rheumatoid arthritis*.²

Definition and Principles of Integrative Medicine

There are many formal definitions of integrative medicine. The definition used by the University of Arizona, which established the first university program for fellowship training in integrative medicine, is as follows.

Integrative medicine is healing-oriented medicine that takes account of the whole person (body, mind, and spirit), including all aspects of lifestyle. It emphasizes the therapeutic relationship and makes use of all appropriate therapies, both conventional and alternative.

In addition to this definition, the University of Arizona program has defined several principles that encompass the basic goals of integrative medicine.

- Establish a partnership between patient and practitioner.
- Facilitate the body's innate healing abilities.
- Neither reject conventional medicine nor embrace alternative medical practices uncritically.
- Realize that good medicine is grounded in good science and open to new paradigms.
- Focus on promoting health and preventing illness, as well as treating disease.

It is hoped that these principles will be integrated into the philosophy of medical care practiced by all doctors, obviating the need for a separate field of medicine.

How to Choose an Integrative Medicine Practitioner

An ideal integrative medicine practitioner must above all be a well-trained practitioner of conventional medicine. He or she must be able to diagnose ailments based on the medical history, physical examination, laboratory tests, x-ray exams, and other diagnostic tests. He or she is able to successfully treat acute ailments that lend themselves to conventional remedies such as antibiotics or surgery that are curative and potentially life-saving. In addition, an integrative medicine practitioner utilizes non-conventional (CAM) diagnostic and treatment techniques if they will benefit the patient. CAM healing techniques are often used when no conventional therapies are available or when they produce side effects that are unacceptable to the patient.

It can be challenging to find a qualified integrative medicine practitioner since this approach is relatively new in the United States, and there is no formal accreditation or certifying board. However, the following guidelines may be helpful. Be sure your integrative medicine doctor is a qualified conventional medical practitioner. He or she should have an M.D. (medical doctor) or D.O. (doctor of osteopathy) degree from a recognized medical school.

Board certification is another indicator of a doctor's qualifications. It means the doctor has completed several years of training after medical school in a particular specialty area and has passed a rigorous examination in that field. While this does not ensure that you have located a "good" doctor, it certainly reflects his or her level of training. Several national organizations certify doctors in the fields of internal medicine and family practice. The certification status of a doctor can be verified on the Internet at www.abim.org or www.abfp.org. Within certain medical specialties, there are also subspecialties. Subspecialty board certification (such as gastroenterology, a subspecialty of internal medicine) can also be verified at www.abms.org.

In recent years, several university medical schools have established fellowship programs in integrative medicine. While there is no board certification for integrative medicine, university-affiliated training programs must meet the university's quality standards. The University of Arizona, the University of California, San Diego with Scripps Institute, Beth Israel Medical Center in New York, and Harvard University (research only) have integrative medicine fellowship programs. A practitioner's participation in an integrative medicine fellowship program is one gauge of his or her qualifications.

However, many highly qualified and experienced doctors began practicing integrative medicine before formal fellowship training was available. While these doctors were not formally trained in an integrative medicine fellowship program, many are highly skilled integrative medicine practitioners. It is important to take into account not only qualifications but also a practitioner's experience and your impressions before deciding to work with any healthcare provider. In summary, people interested in pursuing an integrative medicine approach to healthcare should choose a doctor who is knowledgeable and experienced in both conventional medicine and other healing disciplines.

Integrative Medicine and Chronic Hepatitis C

A typical visit to an integrative medicine doctor often begins much like a conventional medical visit. You will likely be questioned about your medical history, *symptoms*, and the specifics of your *hepatitis C* experience including recent laboratory studies (*genotype, viral load, liver enzymes, etc.*) and treatment to date.

An integrative medicine doctor is also likely to ask other questions about your life and experiences that may be unlike those you've been asked by other healthcare providers. The point of these questions is to help your doctor get to know you; who you are is more than the sum of your medical data and symptoms. Some topics often included in an integrative medicine interview include:

- your upbringing and parents
- the nature of your relationships (spouse, children, friends, etc.)
- aspects of your life that really matter to you
- sources of joy in your life
- stressors in your life and how you manage them
- your diet
- physical activities, exercise, and frequency
- the role of spirituality in your life
- what you do for relaxation

An integrative medicine practitioner uses the information you provide to help him or her tailor your treatments to suit your personal preferences, lifestyle, and personality. The information you provide can be particularly helpful in choosing mind/body interventions that are likely to be beneficial.

Following the initial interview, the review of your current symptoms and physical exam is generally much like a conventional medical visit. Practitioners skilled in traditional Chinese medicine may include a tongue and pulse examination, two diagnostic skills not used by conventional medical doctors. The doctor then reviews the information gathered during your visit along with your medical records (including *liver biopsy*, ultrasound, and laboratory results). After considering all of this information and discussing treatment options and goals with the client, a treatment plan is prepared.

Integrative medicine doctors may recommend many different healing techniques. The choice of recommendations varies with each patient. Taking into consideration a person's specific medical condition and goals, and a reasonable chance of success, an integrative medicine doctor may well recommend conventional interferon-based therapy. Both conventional and alternative techniques are often used to help decrease the occurrence and severity of side-effects for people on conventional therapy.

For a number of patients, *HCV viral clearance* may not be an immediate goal of integrative medicine therapy for *chronic hepatitis C*. Among these patients, the focus is typically on decreasing liver *inflammation* since it contributes to the *fibrosis* and scarring that can lead to *cirrhosis*. In addition, maintaining liver functions such as detoxification and making nutrients is a high priority. If a person's functional capabilities can be maintained and disease progression can

be prevented or slowed with minimal side-effects, then the goals of integrative medical therapy for HCV have been accomplished.

Before exploring some of the healing techniques integrative medicine doctors commonly use in treating chronic hepatitis C, I want to address the topic of liver biopsies. In our practice, we often propose liver biopsies – but only if the results may influence future management. For example, if a patient is adamant about not using interferon-based therapy under any circumstances, a liver biopsy will not provide the patient with more management choices. However, for a patient who is considering conventional therapy, a liver biopsy provides very useful information that may well influence the timing and/or decision to treat. For a person who would like to delay treatment until such time as there is marked deterioration in liver status, a liver biopsy gives a baseline assessment of the current state of the liver and enables the treatment team to monitor for disease progression.

Postponing therapy is a personal choice. However, we try to make sure a patient has all of the facts needed to make an informed decision. Eligibility for future treatments is a factor in some patients' decision to postpone conventional treatment. Say a remarkable new therapy with great preliminary success in the laboratory is discovered tomorrow. The new treatment will most likely be available first to "treatment naïve" people in *clinical trials*. Someone who is treatment naïve has not received prior treatment for the condition being studied in a clinical trial. Allowing only people with no prior treatment into a trial eliminates the possibility that previous treatment effects will influence response to the new therapy. Thus, the first people who are most likely to receive new therapies are those with previously untreated hepatitis C. Typically, if a new therapy is successful in treatment naïve people, it will then be studied in people whose prior therapy failed. The timeframe between these two types of testing is variable. Thus, this issue may not be as clear-cut as it first appears.

Healing Techniques That May Be Used in an Integrative Medicine Treatment Plan for Hepatitis C

A wide range of healing techniques may be used by integrative medicine doctors for the management of chronic hepatitis C. The treatment plan is typically tailored to match a person's unique personality, needs, attributes, and goals. A few of the more common healing techniques used by integrative medicine for the management of HCV are briefly discussed in this section. Other chapters offer additional details about many of the topics mentioned here.

MIND/BODY MEDICINE

This broad area of healing takes advantage of the fact that the immune system is subject to controls both within our awareness (conscious) and outside our awareness (subconscious). A field of study called "psychoneuroimmunology" is devoted to discovering and understanding the complex interactions between the mind and the immune system.

Meditation, *yoga*, and numerous other mind/body systems have been found to influence immune function. I commonly recommend a formal meditation sitting practice for patients. I prefer a simple program such as the one established by Jon Kabat-Zinn at the University of Massachusetts. He calls his program, "Mindfulness-Based Stress Reduction." It is taught in classes throughout the United States, as well as in self-study books and tapes. Although the program is loosely based on Buddhist meditation techniques, it does not promote any particular religious denomination.

Clinical hypnosis is another mind/body technique that has been useful in people with hepatitis C. Hypnosis uses subconscious suggestions given during a trance state. A hypnotic trance is nothing more than a daydream state. There is no loss of control during the induction of a trance. A trance is simply a form of deep relaxation. A hypnosis session will leave you relaxed yet invigorated. You need not fear that you will quack like a duck or sing like Elvis. Clinical hypnosis is not a form of entertainment but a genuine healing technique. We recommend people work with a practitioner certified by the American Society for Clinical Hypnosis (www.asch.net).

TRADITIONAL CHINESE MEDICINE

Both traditional Chinese medicine and acupuncture are addressed in *Chapter 11, Chinese Medicine*, so I refer you to there for details about these forms of treatment.

In our clinic, the majority of people with chronic hepatitis C have normalized their liver enzymes and lowered their viral loads using these techniques. However, I need to add another fact to keep in mind. There is insufficient evidence to prove that lowering liver enzyme levels has any effect on liver inflammation or disease progression in people with chronic HCV infection. We have seen good outcomes in our clinic with Chinese medicine, but there have been no rigorously controlled studies to determine if there is a relationship between the normalization of laboratory values and the level of liver inflammation in chronic hepatitis C. One study supports the intuitive notion that maintaining normal liver enzyme levels is preferable to having markedly high levels. In a 12-month trial of people with viral hepatitis, a high dose of milk thistle (420 milligrams of silymarin) resulted in a reversal of liver cell damage as seen on liver biopsy. Participants also showed increased blood *proteins* and lowered liver enzyme levels. Common symptoms of hepatitis such as abdominal discomfort, decreased appetite, and *fatigue* also improved.³

NUTRITION

We give individualized nutritional advice to people with hepatitis C. However, some of the following generalities may be useful to you.

- We recommend a low-protein, low-fat diet with approximately 15% of the total daily calories coming from protein. By lowering the need to digest protein, the liver's workload is reduced. Similarly, we recommend avoiding extremely low *carbohydrate* diets such as the Atkins' diet, and concentrated protein and *amino acid* supplements.
- Increase your fiber intake. Fibers are great at binding toxins in the intestine and speeding their excretion from the body. This reduces the liver's workload by reducing the amount of detoxification needed. We also recommend that patients take a small amount of psyllium (for example, Citrucel®) daily.
- Increase your starch, fruit, and vegetable intake to about eight servings daily. If possible, eat organic products to decrease your exposure to *hormones* and potentially toxic chemicals. Washing all fruits and vegetables before eating (even organic produce) also helps decrease your exposure to chemicals.
- Eliminate saturated fats as much as possible. Cutting down on meat, and palm and coconut oils will help accomplish this. Margarine and most vegetable oils contain large amounts of polyunsaturated fats that should also be limited.
- Increase your intake of omega-3 essential fatty acids. These fatty acids have been found to help decrease inflammation. In some studies, they also showed anti-cancer properties. It is important that you limit your intake of certain fish that may be "naturally" contaminated with heavy metals, such as tuna, shark, swordfish, king mackerel and bluefish. More information may be found on the web at www.edf.org/page.cfm?tagID=1521.
- Limit your *iron* intake, including in multivitamins. Iron can accumulate in liver cells and tax the liver. Further, elevated iron levels have been associated with increased severity of viral hepatitis infections.⁴

HERBS & NUTRITIONAL SUPPLEMENTS

Certain herbs and plant (botanical) preparations have a long history of use in liver diseases. An excellent discussion of medicinal herbs can be found in *Chapter 14, Naturopathic Medicine*. Three botanicals we use frequently in our practice are presented in this section.

MILK THISTLE (SILYBUM MARIANUM)

Milk thistle contains silymarin, a mixture of natural chemicals (flavonoids) that help protect the liver by reducing inflammation. Silymarin also promotes regeneration of liver cells and helps them become more efficient at detoxifying the blood. Conventional medicine uses silymarin to treat *Amanita phalloides* (death cap mushroom) poisoning because of its liver-protective effects. It is thought to act by inhibiting the uptake of amatoxin by liver cells and interfering with the delivery of the toxin from the intestine to the liver.⁵ Milk thistle also has potent *antioxidant* activity.

Nonetheless, evidence regarding the possible therapeutic effects of milk thistle remains lacking. A review of all the published literature on this topic in 2007, the authors concluded that there is no evidence that milk thistle is harmful, but there is also not conclusive evidence that it is beneficial.⁷ The authors also noted that high quality scientific studies were few and encouraged further research into this topic. See *Chapters 14 and 16* for additional information about antioxidants and their role in the liver.

SCHIZANDRA (SCHIZANDRA CHINENSIS)

The dried berries of the schizandra plant contain substances called “lignins” that help prevent liver damage from hepatitis. Schizandra has been shown to normalize liver enzyme levels and increase the liver’s ability to detoxify the blood. It also contains an anti-inflammatory substance (gomisin A) that seems to act specifically on the liver. Schizandra is a nontoxic plant and is very safe. It is backed by over 1,000 years of use in China. However, schizandra may affect the circulating levels of some drugs that are processed by the liver.

OLIVE LEAF EXTRACT

Olive leaf extract is a nontoxic herb that may lower the HCV viral load. The active component is thought to be a substance called oleuropein. Most commercial preparations are standardized to contain specific amounts oleuropein.

OTHER INTERVENTIONS THAT MAY BE USED TO MANAGE CHRONIC HEPATITIS C

GREEN TEA

Several clinical studies support the use of green tea for the treatment of hepatitis. In a study of 124 patients with viral hepatitis, 3 grams of catechins (the active component of green tea) daily significantly lowered alanine aminotransferase (*ALT*), *aspartate aminotransferase (AST)*, and *bilirubin* compared to an inactive substance (*placebo*).⁶ Patients with hepatitis C had the best response.

AVOIDANCE OF LIVER TOXINS

We advise patients to avoid any medications or herbal supplements that are processed by the liver. For example, we recommend avoiding Tylenol® (*acetaminophen*) and Advil® (*ibuprofen*). In addition, we encourage all patients with hepatitis C to eliminate all alcohol consumption.

IMMUNIZATIONS

We immunize our hepatitis C patients against *hepatitis A* and *hepatitis B*. These vaccines protect against the potentially serious complications that can arise from infection with two or more hepatitis viruses.

Summary

Integrative medicine is a relatively new approach to healthcare that incorporates the best of both conventional medicine and CAM. Broad ranges of healing techniques are used by integrative medicine practitioners to treat chronic hepatitis C. Treatment plans are tailored to meet the unique needs, goals, attributes, and personality of the individual. People interested in an integrative medicine approach to managing chronic hepatitis C should seek well-trained, qualified practitioners who are willing to work with you and your *gastroenterologist* or *hepatologist*.

References

1. Ader R, Cohen N. Behaviorally conditioned immunosuppression. *Psychosom Med.* 1975;37:333-40.
2. Smyth JM, Stone AA, Hurewitz A, Kaell A. Effects of writing about stressful experiences on symptom reduction in patients with asthma or rheumatoid arthritis: a randomized trial. *JAMA.* 1999;281(14):1304-9.
3. Berenguer J, Carrasco D. Double-blind trial of silymarin vs. placebo in the treatment of chronic hepatitis. *Munch Med Wochenschr.*

- 1977;119:240-60.
4. Cotler SJ, Emond MJ, Gretch DR, et al. Relation between iron concentration and hepatitis C virus RNA level in liver tissue. *J Clin Gastroenterol.* 1999;29:322-6.
 5. Floersheim GL. Treatment of human amatoxin mushroom poisoning: myths and advances in therapy. *Med Toxicol.* 1987;2:1-9.
 6. Rambaldi A, Jacobs BP, Gluud C. Milk thistle for alcoholic and/or hepatitis B or C virus liver diseases. *Cochrane Database Syst Rev.* 2007;(4):CD003620.
 7. Piazza M, Guadagnino V, Piciotto G, et al. Effect of (+)-cyanidanol-3 in acute HAV, HBV, and non-A non-B viral hepatitis. *Hepatology.* 1983;3:45-9.

Other References

Maizes V, Caspi O. The principles and challenges of integrative medicine: more than a combination of traditional and alternative therapies. *West J Med.* 1999;171:148-9.

Maizes V, Koffler K, Fleishman S. Revisiting the health history: an integrative approach. *Advances.* 2002;18(2):31-4.