

UNDERSTANDING HEPATITIS C DISEASE

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SECTION

2

PROMOTING LIVER HEALTH

Introduction

The human body is amazingly resilient. It can recover from devastating trauma and disease. It continues to function with missing or malfunctioning limbs. The body even adapts to the loss of some organs and the severely limited function of others. However, the human body cannot survive for more than 24 hours without a liver. The liver is an incredibly complex organ. It is involved in more than 500 body functions. Your liver is responsible for such things as detoxifying drugs and *alcohol*, making vital substances such as *proteins*, and processing nearly every class of nutrient.

Many things we do or are exposed to can increase the work our livers must do to keep us healthy and alive. Alcohol, environmental pollutants, food preservatives and additives, drugs, and other *toxic* substances can challenge the liver's ability to function effectively. *Hepatitis C* infection makes these challenges even more difficult for the liver.

One way to help your liver perform its best despite *HCV* infection is to reduce other challenges to the liver. This chapter discusses some ways to accomplish this in your own life.

The Healing Power of a Positive Attitude

How do you meet the demands of a disease like hepatitis C and live a full life? A positive, healing attitude helps many people meet this challenge head-on.

Negative feelings may drain your body of the energy needed for healing. Without qualities such as endurance, integrity, honor, and self-esteem, healing the physical body is a difficult task. It has been said, "If you *believe* you can, you probably can. If you *believe* you won't, you most assuredly won't. Belief is the ignition switch that gets you off the launching pad."¹

For many people with a life-changing illness, a positive attitude is not just a cliché, it is what gets them through the day. Consider positive thinking as the process of creating thoughts that produce and focus energy, which in turn brings about positive outcomes. Positive thinking is a powerful healing tool. We all have access to it, but few of us put it into full use.

One research study of cancer patients who had a spontaneous *remission* found only one factor common to each person they examined. Everyone in the study had changed his or her attitude prior to remission and, in some way, had found hope. Each had become more positive in his or her approach to the disease.²

Acceptance of reality is the first step toward taking responsibility for and controlling one's life. Each of our lives is influenced by a number of outside factors, many of which we cannot control. Your attitude, however, reflects the ways in which you respond to what is happening to you. And your attitude is completely within your control.

How you adapt to situations and the actions you take can affect your health and may influence your recovery.

Some believe that every thought you have produces a reaction in each cell in your body, from the top of your head to the tips of your toes. They believe the body is constantly reacting to thoughts, whether those thoughts are based on real situations or your imagination. According to this belief, your body becomes an obedient servant of your mind, reacting with the emotional intensity that you associate with your thoughts. Pleasant thoughts produce pleasant feelings; unpleasant thoughts produce unpleasant feelings.

How do you begin to practice having a positive attitude? Every time your life is not going according to plan or presents you with a challenge, try thinking of it as an opportunity. Challenges and disappointments can be opportunities to try new approaches, to amass more know-how, and to exercise your brainpower.

There is so much we still do not know about the human body and how it works. We are only beginning to discover the powerful interactions between our minds and bodies. When you consider the miracle of the human body, it is not hard to believe that it is capable of contributing to its own healing.

Lifestyle Changes and Personal Habits

Changing your lifestyle and personal habits to reduce the effects of *chronic hepatitis C* may be one of the hardest things you do in your life. Try to remember that you are not alone in facing these difficult tasks. Ask for help if you need it. It is much easier to address problems you may experience if you have support and proper medical care.

Sleep

Our society tends to focus on health issues. We spend billions of dollars on *nutritional supplements* and pills. We try to keep ourselves physically fit and mentally stable. We exercise and strive for more quality time with our families. But we often overlook the most fundamental aspect of good health – sleep. Many professionals consider sleep to be the most fundamental practice associated with good health. Sleep enhances immune function, and *immune system* activity enhances sleep.³

Getting enough sleep in our fast-paced world is not always easy. We all experience situations that can keep us up around the clock, if we allow it to happen. While adequate sleep is crucial for everyone, it is particularly vital for those living with a long-term disease such as hepatitis C.

Ambitious schedules are not the only enemy of sleep. Anxiety and/or *depression* are experienced by many people with *chronic hepatitis C*. These problems are often associated with sleeping difficulties. Lack of sleep often intensifies anxious and/or depressed feelings creating a vicious cycle. It is important to get the help you need to end this cycle, and to ensure yourself a healthy amount of sleep.

A large study from the United Kingdom showed that decreased amounts of sleep over time was associated with a significantly increased risk of cardiovascular death.⁴ However, the amount of sleep needed varies from one person to another. The same study mentioned above also found that people who significantly increase their nightly sleep over prolonged periods of time also have increased mortality rates due to non-cardiac causes.

Listening to your own body is the best way to know if you are getting adequate sleep. If you require a jolt of *caffeine* every morning to awaken fully, feel uncharacteristically irritable, fall asleep during tasks, or otherwise feel tired throughout the day, you may not be getting sufficient sleep. One way to determine how much sleep you need is to keep an activity diary for a month. Keep track daily of the quantity and quality of your sleep, your daytime activities, and your mood. By looking at the patterns in your diary, it will become clear what amount of sleep is best for you.

Exercise: Staying Active

Many people do not realize the central role of exercise in maintaining good health. People who exercise regularly not only feel better, but also often respond more positively to medical treatment.⁵ Exercise boosts the immune system. Several studies have shown that exercise can enhance specific immune function. They have shown increased *natural killer cell* activity and increased speed and magnitude of *antibody* response.^{6,7} A recent study showed that exercise can also alleviate depression. They found the optimal benefit on depression occurs when 17.5 calories per kilogram of body weight is expended per week.⁸ As an added bonus, exercise gives us self-esteem and confidence by providing a sense of accomplishment and a feeling of independence. Remember, exercise is anything that causes you to be physically active. Everyday activities such as housework, gardening, raking leaves, and walking the dog all “count” as exercise because they are forms of physical activity.

Exercise causes the *pituitary gland* to release substances called *endorphins*. Endorphins remain in the body for hours and have a number of effects. They improve mood, relieve pain, increase *red blood cell* production, and reduce the amount of cortisol in the blood. Increased red blood cell production provides better *oxygenation* to the body tissues. Better oxygenation helps us feel more energetic and leads to better brain function. Cortisol is a hormone linked to stress and depression. Reduced levels of cortisol may lead to reduced stress and better mood.

For someone living with hepatitis C, the key to exercise is moderation. Moderate exercise performed regularly boosts the *immune system* and increases resistance to disease. However, extreme exercise such as marathon running causes immediate suppression of the immune system. Extreme forms of exercise may be particularly harmful if you have *cirrhosis*.

HCV increases your risk of *osteoporosis*, a weakening of the bones. To counter this risk, some experts advise people with liver disease to incorporate weight-bearing exercises into their exercise routine because weight bearing strengthens bones. Weight training also reduces the amount of fat in the liver.⁵ In advanced liver disease, the body may use its own muscle tissue as a source of energy. Moderate exercise may help counter and/or reduce the impact of this muscle destruction. By building strong bones and muscles, you can build up a reserve to help fight off some of the physical complications of liver disease.

It is important to drink plenty of water before, during, and after any type of exercise to prevent *dehydration*. Many people like to have a massage after their workout. If you have a massage after exercising, it is especially important to drink plenty of water to flush out the toxins released into the blood by the massage.

Review your exercise program with your healthcare provider to make sure your routine is healthy for you. It is also important to listen to what your body tells you. There may be days, or even weeks or months, during which you may not be able to engage in your normal exercise routine. When you are not up to your normal routine, you may want to consider other gentle forms of exercise such as *qi gong*, *tai chi*, or *yoga*. See *Chapter 13, Mind-Body Medicine and Spiritual Healing* for more information on these forms of exercise.

Weight Management

Exercise can be an effective tool for weight management. Maintaining or achieving your ideal body weight has several benefits for people living with HCV. Researchers in Australia reported that weight loss improved the *fibrosis*, *ALT*, *insulin* and triglyceride status in people with HCV.⁹ Although this was a small study, the results suggested significant benefits associated with weight loss. The *grade of steatosis* (fat in the liver) decreased in all seven patients, and the fibrosis score was reduced in three of the seven patients.

People with high BMIs have a higher incidence of *fatty liver*.¹⁰ This is important because fatty liver has been shown to increase the risk of fibrosis progression in untreated HCV-positive patients, especially those with *genotype 3*.¹¹⁻¹³ HCV-infected patients with significant amounts of liver fat have lower response rates to *interferon-based therapy* than those without fatty liver disease.¹⁴⁻¹⁶ One study showed that obesity lowered the chance of a *sustained response* to *antiviral* therapy, independent of the amount of fatty liver.¹⁷ See *Chapter 15, Nutrition and Hepatitis C* for more information about how to achieve and/or maintain your ideal weight.

Sexual Activity

When first diagnosed with hepatitis C, many people become fearful about continuing their sex life. What is normal is different for everyone, but according to a study by researchers at Wilkes University, sexual activity can benefit your immune system.¹⁸ The arousal, desire, excitement, and physical release of sexual activity may enhance the ability of the immune system to ward off illness.

Many people find thinking of themselves as sexual beings, regardless of whether or not they participate in sexual activity, helps them develop a greater ability to enjoy life. The feelings we have when we are sexually aware are sufficient to alleviate a variety of physical and emotional ills. Being or feeling sexual can be good for your self-esteem. It can help ward off depression. As a form of physical exercise, sexual activity helps trigger endorphin release creating a more positive attitude. Sexual activity allows you to relax and, at least for a time, to forget about some of your troubles. Your sexuality can go a long way toward enhancing the healing process and creating an environment for a better functioning immune system.

Sexual expression often becomes a concern for people living with hepatitis C. There is an almost universal concern about passing the virus on to others through sexual activity. Sexual transmission of HCV has been a hot-button issue for both the hepatitis C and public health communities. The Centers for Disease Control and Prevention (CDC) has stated that “sexual transmission of HCV is possible but inefficient.” CDC further noted in 2006 that, “Additional data are needed to determine whether sexual transmission of HCV might be increased in the context of *HIV* infection or other STDs.”¹⁹

CDC’s recommendations state that people with HCV who have one long-term sexual partner do not need to change their sexual practices. People with HCV who are not in *monogamous* relationships are cautioned to practice safe sex. This means using latex condoms correctly and consistently with every sexual encounter. Practicing safe sex prevents the transmission of HCV to others, and protects you from being exposed to other HCV genotypes. It also helps you avoid other sexually-transmitted diseases such as HIV, *hepatitis B*, and gonorrhea.

If it is applicable to your situation, talk with your healthcare provider about whether you should avoid certain sexual practices such as rough sex, “high risk” sexual activities, and sex while menstruating.²⁰

Stress

Stress does not cause disease directly, but it can contribute to disease. Stress can suppress the immune system, which may cause you to be more vulnerable to disease. Hepatitis C can be a frightening diagnosis. Your stress may be compounded by the fact that you may never know how, when, or where the infection occurred since most people are not diagnosed until well after the initial infection.

Stress-reduction techniques such as warm baths, *yoga*, *meditation*, visualization, and/or keeping a journal can help soothe your soul and thereby strengthen your immune system. Asking questions and trying to understand as much as you can about hepatitis C can also go a long way toward reducing your stress level. Without knowledge, you run the risk of having your decisions controlled by fear and misinformation.

Regardless of how well-informed you are, there will be times when fear and stress dominate your thought processes. These feelings make it difficult to concentrate on the important issues you need to focus on to make informed decisions about your health and ultimately, your life. It is in those times of fear and stress when it most important to realize you are not alone.

Many people turn to friends, loved ones, and personal advisors during times of stress. If you do not already have a trusted support network of friends, advisors, and mentors, you may want to consider developing such a network. If you choose to pursue this option, seek out people with whom you can openly share your experiences and feelings. Look for people with whom you can speak freely, and from whom you can gain information and insight.

You may also want to consider pursuing individual counseling with a mental health professional or clergy member. These people can further help you adjust to the new realities of your life with hepatitis C. Your physical, mental, and emotional health can all benefit when you share your voice with others, exchange ideas and concepts, and engage in thought-pro-

voking discussions. You can gain much useful information from others who are facing similar circumstances. However, try to keep in mind that each person's experiences are different.

Stressful situations may cause people to seek an escape from their troubles. This leads some people to turn to alcohol or drugs. Drugs and alcohol are very dangerous for people with hepatitis C. Be very cautious about taking any drug (legal or not). Drugs have the potential to seriously complicate the situation for a person living with HCV. Similarly, people with HCV should not drink any alcohol because alcohol is known to increase the liver damage done by chronic HCV infection.

If you are feeling overwhelmed by your situation, we strongly urge you to ask for help. **You are not alone!** Many people are available to help make your situation more manageable and tolerable.

Prescription Medicines and Over-The-Counter Drugs

Some prescription medicines and over-the-counter drugs have toxic effects on the liver. Many over-the-counter compounds contain *acetaminophen* (also known as APAP). Acetaminophen taken in quantities over the recommended or prescribed amount can cause *liver failure*, even in people with a healthy liver. A partial list of common brand name products that contain acetaminophen is shown below. Always read the label to see if the medication you are about to take contains acetaminophen.

- Anacin® Aspirin Free
- Excedrin P.M.®
- Excedrin® Extra-Strength
- Excedrin® Migraine
- Genapap®
- Goody's® Extra Strength Tablets
- Tylenol® (all varieties)
- Tylenol® Arthritis Pain Extended Relief Caplets®
- Vanquish®

Many over-the-counter combination remedies and prescription pain medicines also contain acetaminophen. Some common examples include:

- Allerest®
- Dristan®
- Endocet®
- Lorcet-HD®
- Lortab®
- Midol®
- Pamprin®
- Percocet®
- Percodan®
- Percogesic®
- Roxicet®
- Sinarest®
- Sinutab®
- Sudafed® Sinus & Headache
- Tylox®
- Vicodin®

If you are considering taking acetaminophen, discuss it with your healthcare provider first to determine if it is safe for you. The same advice holds true for any medicinal product you are considering taking.

Always ask your healthcare provider before taking a new product to make sure it is not toxic to the liver.

The Physician's Desk Reference (PDR) is available at most local libraries. It provides information about prescription drugs. However, the PDR is written for healthcare professionals and contains technical language that can be quite difficult to understand. Several books written for people with hepatitis C contain excellent lists of prescription drugs about which people with hepatitis C need to be aware. Two examples are *The Hepatitis C Handbook* and *The Hepatitis C Help Book*. See *Appendix IV* for a list of some prescription and over-the-counter medicines that can be harmful to the liver.

Street Drugs and Other Recreational Drugs

People with hepatitis C need to be very cautious about taking drugs of any kind. Nearly all drugs are metabolized by the liver. Some drugs are *hepatotoxic* meaning they have the potential to directly damage the liver. Many other drugs suppress the immune system even if they are not directly hepatotoxic. For example, marijuana is not hepatotoxic but it is *immunosuppressive* and *carcinogenic*.

Immunosuppression makes the body more susceptible to infections. Carcinogens induce chemical changes in the body that can eventually lead to cancer. People with hepatitis C are already at increased risk for *hepatocellular carcinoma* (*liver cancer*). Using carcinogenic drugs adds to this risk. A recent study showed that daily marijuana (cannabis) smoking is significantly associated with fibrosis progression during chronic hepatitis C.²¹

The liver damage caused by HCV can prevent the liver from effectively *metabolizing* and processing drugs. This may cause the effects of drugs to be intensified, increasing the possibility of an overdose.

Even if you already have HCV, you can still be infected with other *quasispecies* of the virus. This can make it more difficult to treat your infection. If you are an intravenous drug user, do not share any equipment. Take every precaution possible to keep a sterile environment to avoid transmitting HCV to someone else. One microscopic drop of blood containing HCV can change another person's life forever.

Tobacco

We know the far-reaching dangers of tobacco use including lung cancer, head and neck cancer, mouth cancer, emphysema, chronic bronchitis, and other conditions. Tobacco contains much more than nicotine, the addictive substance that hooks people into long-term use. Tobacco contains many naturally occurring carcinogens. During the manufacturing process, many other chemicals are added to all forms of tobacco including cigarettes, cigars, pipe tobacco, and chew. Many of these chemical additives are also carcinogens.

Hepatitis C infection and smoking are independent risk factors for liver cancer. Therefore, combining these two risk factors increases your risk for liver cancer. Keeping your body free of tobacco is one important way to help preserve your liver health.

Toxic Chemicals

Every chemical we are exposed to has the potential to stress the liver. Repeated exposure to the following highly toxic chemicals should be rigorously avoided.²²

- benzene
- carbon monoxide
- carbon tetrachloride and other dry cleaning fluids
- chlorine
- dioxin
- exhaust fumes
- fluoride and fluorine

organophosphorous *pesticides*
 paints
 petroleum-based chemicals such as gasoline and diesel fuel
 radioactive substances
 solvents

Vaccines

In general, people with chronic hepatitis C should be vaccinated against *hepatitis A* and hepatitis B. The exceptions would be people who have already had (or currently) have these viruses. There are other exceptions as well, but this is a very important topic to discuss with your doctor.

Protecting yourself against hepatitis A and hepatitis B will prevent the potentially serious complications that may occur if you are infected with more than one of the hepatitis viruses.

Talk with your doctor about whether you need to be vaccinated against hepatitis A and hepatitis B as soon as possible. At the same time, discuss whether you need to be immunized against other infectious diseases as well such as pneumonia and influenza.

Summary

Regular exercise, adequate sleep, and a positive attitude can help promote liver health. Avoiding addictive substances and environmental toxins will also help keep your liver healthy. Behaviors that enhance your immune system should be practiced every chance you get. Anything you can do to promote the health of your liver will help you live a longer, healthier life with hepatitis C.

For more tips on promoting your overall health, see *Chapter 13, Mind-Body Medicine*.

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