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Norah Terrault, MD, interprets the available information about the sexual transmission of hepatitis C.

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Old habits are hard to break but by taking these seven small steps, it could be a lot easier to make that change.

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Telling people you have hepatitis C can be unnerving. Here's some advice for minimizing your discomfort.

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A Primer on Hepatitis C Treatment Options

By Norah Terrault, MD
Adjunct Associate Professor of Medicine,
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The primary goals of treatment are (1) to eradicate infection and (2) to prevent progression of the HCV disease (complications such as cirrhosis and liver cancer). Patients who are anti-HCV positive, with elevated serum aminotransferase levels and chronic hepatitis on biopsy are candidates for interferon (IFN) treatment.

While a liver biopsy is not essential prior to treatment, it provides important information about the stage of disease and rate of disease progression and also is useful in guiding decisions regarding the urgency of undertaking treatment.

"Response" to treatment is defined in several ways: (1) virological response = disappearance of HCV RNA from the blood, (2) biochemical response = normalization of liver enzymes (AST and ALT), and (3) histological response = improvement in the liver biopsy, usually a reduction in the amount of inflammation. Response to treatment is typically measured at the end of treatment.

Candidates for treatment with Interferon/ribavirin: Adult patients with elevated liver enzymes and detectable HCV RNA in serum.

Contraindications for treatment with Interferon/ribavirin: Children, patients with decompensated liver disease, pregnant or breast-feeding women, patients with a history of significant or unstable heart disease, kidney disease, significant depression, hemoglobinopathies or autoimmune hepatitis, and persons who are unable to practice effective contraception.

Candidates for treatment with Interferon: Adult patients with elevated liver enzymes and detectable HCV RNA in serum.

Contraindications for treatment with Interferon: Children, patients with decompensated liver disease, pregnant or breast-feeding women, patients with a history of significant or unstable cardiac disease, significant depression, or autoimmune hepatitis.

Treatment of Naive Patients: Interferon monotherapy (IFN 3 MU or 9 ug three times weekly for 12 months), although approved for the treatment of naive patients, is suboptimal. The sustained virological response with interferon (3 MU or 9 ug TIW for 12 months) is only 20 percent. Higher doses and daily administration of interferon has been shown to increase initial response rates.

Results with combination interferon/ribavirin are superior to interferon monotherapy, and thus combination therapy is currently the treatment of choice for patients with chronic HCV infection who have not been treated previously.

Treatment of Relapsers: Approximately 50 percent of patients who initially respond to interferon monotherapy will relapse after treatment is discontinued.

Patients who responded biochemically and virologically at the end of treatment but relapsed following discontinuation of therapy are potential candidates for retreatment with higher dose interferon or treatment with combination interferon/ribavirin.

Retreatment with higher interferon for a period of 12 months produces a sustained response in about 50

percent of treated patients. Alternatively, retreatment with 6 months of interferon and ribavirin produces a similar sustained response rate (50 percent). It is not known whether 12 months of combination therapy with interferon plus ribavirin would be more effective than 6 months of therapy. The factors that are associated with a sustained response in relapsers treated with interferon/ribavirin are low pre-treatment viral titer (<2 million viral copies/mL) and non-1 HCV genotype.

Treatment of Non-Responders: Treatment options for patients who have been previously treated with interferon and have not responded are limited. Response rates with retreatment of non-responders with higher doses of interferon used for longer treatment periods is one option, although sustained virological response rates are only about 10%. Retreatment with interferon/ribavirin can be considered. Preliminary data suggest sustained response rates up to 30 percent but the results of ongoing clinical trials are awaited to confirm these results. A third option is "watchful waiting", i.e. waiting for better therapies to become available.

This may be the best course of action in some patients, particularly those with mild histological disease. Patients may also want to consider participating in experimental protocols such as those using pegylated interferons and other combination therapies.

Summary of Currently Approved Treatment Options for HCV:

Never Been Treated: Interferon alpha-2b + Ribavirin (Rebetron)

Previously Treated with Combination Therapy but No Response: Consider experimental protocols.

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Interleukin 10 Found to Reduce Fibrosis in Non-Responders

An study published in the April issue of the medical journal Gastroenterology has found that interleukin 10 treatment can reduce fibrosis in patients with Hepatitis C who are interferon nonresponders.

The study, from the University of Florida College of Medicine found that interleukin-10 (IL-10) therapy is safe and well tolerated in patients with chronic hepatitis C. While it has no antiviral activity, IL-10, the study found, normalizes serum ALT levels, improves liver histology and reduces liver fibrosis in a large proportion of patients receiving treatment. The doctors conducting the study believe that IL-10 may have therapeutic potential in patients with chronic hepatitis C who do not respond to interferon-based therapy.

Interleukin 10 is a cytokine that helps decrease liver inflammation and inhibits fibrosis. The aim of this study was to determine the effect of IL-10 on hepatic injury in patients with chronic hep C.

Twenty-four patients with chronic hepatitis C who had not previously responded to interferon-based therapy were enrolled in a randomized, double-blinded 2-dose trial in which they received either 4 or 8 mug/kg IL-10 subcutaneously daily for 90 days. Liver biopsies were performed before and at the end of therapy.

IL-10 treatment was well tolerated with 22 patients completing the study. Serum ALT levels normalized in 19 of 22 patients by the end of therapy and were sustained in 5 of 22. Liver inflammation decreased in 19 of 22 patients. Fibrosis decreased in 14 of 22 patients. There was no change in serum HCV RNA levels. IL-10 therapy was associated with changes in serological markers, suggesting a reduction of immune response and fibrogenesis.

Sexual Transmission of Hepatitis C

By Norah Terrault, MD
Adjunct Associate Professor of Medicine,
University of California at San Francisco.

The available information regarding the sexual transmission of hepatitis C can be difficult to interpret. Overall, the data suggests that HCV can be sexually transmitted but the efficiency of transmission by the sexual route is very low.

In long-term studies of heterosexual couples in steady relationships of 15-20 years duration, the rate of HCV-positivity among the sexual partners of HCV-infected persons is only 0.5 to 3 percent and the vast majority of couples in these studies did not use condoms. There is a suggestion that transmission from an infected male to an uninfected female partner may be slightly more efficient than transmission from an infected female to an uninfected male partner. Overall, however, the rate of infection in long-term partners is very low and should provide reassurance to couples in long-term relationships.

A frequently quoted figure regarding the risk of HCV transmission by sexual contact is 20 percent. This percentage refers to the proportion of HCV-infected persons with newly diagnosed hepatitis C who reported sexual contact with a HCV-positive person or with more than two sexual partners in the six months preceding their diagnosis of HCV. Other studies have shown that persons engaged in high-risk sexual practices, with a higher number of sexual partners, non-use of condoms, history of other sexually-transmitted disease or sex with trauma were more frequently found in HCV-positive persons than those who did not report engage in these high-risk sexual behaviors. However, the higher frequency of HCV-positivity among such individuals may not be because of acquisition of HCV via sexual activities but rather because of other behaviors that expose them to HCV.

Thus, the recommendations regarding the prevention of HCV transmission differ for persons in long-term steady relationships and those with multiple partners:

- 1) For individuals in monogamous relationships, no specific changes in sexual practices are recommended. Barrier methods may be used if a couple wishes to eliminate the very small risk of transmission of HCV through sexual contact.
- 2) For HCV-infected individuals who are not in monogamous relationships, abstinence is recommended; also barrier methods should be used when engaging in any sexual activity.

HCV-infected individuals are strongly encouraged to discuss the issue of sexual transmission with their partners. Partners should understand that the risk of HCV transmission is low but not zero. In my practice, I encourage partners in long-term relationships to be tested; but because the risk of transmission is very low, I do not recommend repeat testing.

There remain unanswered questions. In particular, the factors that may influence the risk of transmission through sexual contact are unknown. Also, more information is needed on the whether the level of the virus in the infected person matters or whether some sexual practices are more risky than others are.

In the absence of such information, I have recommended to my patients that they use barrier methods if their sexual activities produce trauma, or if they engage in sex during the menstrual period or during a herpes outbreak, since these situations theoretically provide an opportunity for transmission of the virus through blood.

Healthwise: Seven Steps to Changing Unhealthy Habits

By Lucinda Porter

There are many approaches to health. Some people are prevention oriented. They do what they can to optimize their circumstances. The image that comes to mind is that of a conscientious homeowner who annually checks the smoke detectors and never leaves empty gas cans on the premises.

Then there is the emergency approach to health. People who practice this tend to overlook prevention and wait until something drastic occurs. These people do not call the fire department unless the fire is out of control. Finally, there are those who ignore their health completely. The house is on fire but they still do not call for help.

Which approach do you practice? The ideal of course, is to practice prevention. Self-awareness can be the first step in the process of moving towards the prevention model.

The reality is that few of us do this consistently. Who has the time to do aerobic, resistance, and flexibility exercises? Add eating well, sleeping eight hours every night, flossing your teeth, meditating, having a social life, regular medical exams, and one has a formula for unmet expectations. Throw in some hepatitis C fatigue and brain fog and the recipe gets even murkier. So how is a person to take good care of him or herself?

First, prioritize. If you have chronic hepatitis C viral (HCV) infection, you smoke, and you drink alcohol, consider which factor is hurting you the most. In this example, quitting drinking would take precedence, followed by stopping smoking, followed by addressing the HCV. We know that alcohol use in the presence of HCV is a very serious matter.

We also know that many more people die each year from diseases related to smoking (more than 400,000) as compared to HCV related causes (10,000). I encounter many patients who smoke or drink and have HCV. They are very worried about their liver and overlook these other health risks. The house is on fire and they are worried about the smoke in the shed. The message here is this: attack your biggest risk factors first.

The second step is to make one change at a time. Trying to be perfect does not work. Modify one behavior at a time for at least one month or more. After you feel confident of your ability to maintain the new behavior, you can address a new arena. However, if you find that the first behavioral change is in jeopardy, back off the new one.

Third, take small steps. Some of these behaviors have been a part of our lives for many years.

Fourth, reward yourself for your attempts. If you are trying to lose weight and you stick to your food plan for a week, reward yourself. Link the reward to your behavior, not to the result. Even if you did not lose any weight, reward yourself for trying.

Fifth, turn relapses around as quickly as possible. Addiction experts note that the key to giving up an addiction is how quickly one recovers from a relapse, rather than how perfectly one kicks an addiction. The phrase "two steps forward, one step back" applies here.

Sixth, ask for help. There are many ways to make changes in our lives. Sometimes it is just a matter of finding the right one at the right time. Support groups and the Internet can be useful resources.

Finally, above all be kind to yourself. Never condemn your efforts. Chastisement only makes us feel bad

about ourselves. In order to feel better, people pick up old habits, which create a vicious cycle. The easiest way to break the cycle is to forgive yourself.

Lucinda K. Porter, RN is a research nurse and patient educator at Stanford in the area of hepatology. She co-facilitates a support group and is active in many aspects of hepatitis C education. In addition to being HCV+, she has a life which include her husband and teenaged daughter.

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Treatment Advocate: To Disclose or Not to Disclose: Some Helpful Advice

By Joe Shaw

Nothing could be more difficult than having to decide to tell a new friend or new potential partner or an employer about your HCV status. We all have fears about disclosure, but here are some helpful guidelines to help you should you decide to tell someone you have hepatitis C.

Whether it's a friend, family member, your employer, a healthcare worker, a partner or potential partner, you're probably worried about what to say and what their reaction will be. These feelings are perfectly normal.

Remember: you have control over who you choose to tell. You may choose not to tell some people about your hepatitis C, and this is your right. Your choice not to tell others is your own and should be respected.

Who do I have to tell?

Generally speaking you don't have to tell anybody that you have hepatitis C. Most people do not have to tell their employer that they have hepatitis C. If you are a healthcare worker involved in 'exposure prone procedures', then you may be legally obliged to inform your employer of your positive status.

Health authorities recommend that you inform healthcare workers if you have hepatitis C as this may be necessary for good health care. If healthcare workers, including dentists, are possibly going to come into contact with any person's blood, they should be using standard infection control precautions.

While some people have experienced discrimination from healthcare workers after telling them that they have hepatitis C, it is strongly suggested that you inform healthcare workers and your dentist, so they can take proper precautions to avoid infection.

Telling someone you have hepatitis C

How you decide to tell another person, what you say, and when you tell them will depend completely on your own personality. There are a few things that you can do to make it easier for both you and the person you are telling.

When should I tell someone that I have hep C?

If you have only recently found out that you have hepatitis C, it may be worth waiting a while before you tell many people about it. It will probably take you some time to adjust to the new diagnosis and to decide who you do and don't want to tell.

Many people worry about telling a new or potential partner and how long they should wait before telling them. Some people choose to let the person know before the relationship begins. That way, if the outcome is unfavorable it would be easier to leave the relationship. Others may choose to wait until the relationship has developed and there is a certain level of comfort and trust.

Some healthcare workers-such as your primary care physician-may need to know about your hepatitis C so they can provide you with better healthcare treatment for any accident or ailment you may have (for example: providing medicines that may be less harmful for the liver).

Where and when?

There are better times than others to raise the topic. It is important that you have the discussion when both persons are able to give the subject plenty of time and attention. Also, try to choose a place where you feel comfortable and safe. Some people take the phone off the hook and talk about it over a quiet dinner. Others like to choose a more public place such as a restaurant or park so the person can feel free to go and think about things alone.

What should I say?

First of all, remember that this is not a confession. You are simply sharing with someone some new information about yourself. It is a good idea to practice the situation with a person you have already told. If you have not told anyone before, try it first with a counselor or even in front of the mirror. Having practiced it out loud can make the world of difference when it comes to the real situation. When you practice, plan what you are going to say and how you are going to say it. You might want to write down some points that you don't want to forget. Try to be natural and spontaneous, and speak calmly and clearly. If you do practice with a friend don't let the response always be calm and understanding. It is important to prepare for all situations.

Conversation starters

Here are some ideas about how to raise the subject. Remember these are only ideas to get you started. Make sure you say what feels comfortable and right for you.

"I have something I'd like to discuss with you, last year I found out that I have hepatitis C. Can we talk about it now?"

"I feel as though we are really starting to get to know each other and I would like to tell you something personal. I have a virus called hepatitis C, do you know much about it?"

"I feel our relationship is strong and that I can tell you anything. I found out recently that I have hepatitis C."

Know the basic facts

When you decide to tell someone that you have hepatitis C, they are likely to ask you questions about it. It is important that you are able to answer these questions yourself, or to have some literature on hand that can help you give the answers. This will make it easier for both of you.

How will it end?

People will react differently when you tell them you have hepatitis C. Some people may be very concerned for you. Some may find your news perfectly normal and offer you support. Others, however, may respond fearfully or belittle you.

If the outcome is a negative one, it is not a reflection on you and you are not responsible for their reaction. People may have a misunderstanding about what hepatitis C is, or their views might be based on misconceptions about hepatitis C. This is why it is a good idea to have up-to-date and accurate information on hand.

It may take some people a little time to take in the information you have just shared with them. Remember you probably had many different thoughts, feelings and questions when you found out that you had hepatitis C.

Whatever the outcome, give yourself a pat on the back because you have achieved a task that many people find difficult.

Adapted from the Hep C Review, Dec 1999, NSW Australia Hepatitis C Council.

Joe Shaw was diagnosed with HCV in January 1998 and lives with his partner and his two pugs, Willie and

Sammie in Long Beach, CA.

News Briefs

California's ADAP Adds Hep C Drugs to Formulary for HIV/HCV patients

The AIDS Drug Assistance Program (ADAP) was established in 1987 to help ensure that uninsured and low and moderate income individuals with HIV have access to drug therapies. On March 2, ADAP added ribavirin, interferon alfacon 1, and ribavirin/interferon alfa 2B(Rebetron). This allows for dispensing of interferon (Intron A, Rolferon, Infergen), compounded ribavirin or Rebetron-Schering's bundled product of interferon and ribavirin. For information, contact the ADAP statewide services contractor, Professional Management Development Corporation (PMDC), at 888-311-7632 or access their website at www.pmdc.org.

Source: Celia Banda-Brown , ADAP ,Office of AIDS, Department of Health Services - State of California.

California DHS Convenes Statewide HCV Strategic Planning Council

On April 17, 2000 the State of California, Department of Health Services convened a planning council of physicians, community health care workers, HCV activists, medical insurers and California public health officials to develop a comprehensive plan to address the HCV epidemic in California.

This is an important first step in the long process to implement services and acquire funding from local, state and federal sources for HCV.