
a series of fact sheets written
by experts in the field of liver
disease

Women and HCV

Lucinda Porter, RN

Hepatitis C (HCV) is an equal opportunity virus. It affects men and women from all ethnic backgrounds. In the United States, there is a higher prevalence of HCV among men. Although more people will die with HCV than of HCV, it is a complicated disease with a challenging treatment regimen. Women living with HCV have issues that differ from men's.

Women are more likely to clear HCV than men are. This means that after they contracted HCV, their bodies successfully fought it off. They will test positive for HCV antibodies, but further tests will show they do not actually have it.

Liver disease tends to progress more slowly in women than in men. Women are less likely to die from HCV than men are. Avoiding alcohol is one of the most important steps you can take in order to help your liver. The amounts of alcohol for healthy women (without HCV) are lower than the amounts for men. Women are more susceptible to alcohol-related health problems. Add in hepatitis C and you have a recipe for disaster.

Now some good news. There is effective treatment for HCV. It does not always eliminate the virus, but it is more likely to succeed than to not succeed. More good news, even if treatment does not eliminate the hepatitis C virus, people can still reap some benefit from trying it.

Women have a better chance of eliminating HCV with treatment. Women have a higher success rate if they complete treatment prior to menopause. If you are a woman thinking about treatment, learn about the risks and benefits of treatment. Above all else, know the warnings about pregnancy and breastfeeding.

HCV is often a silent disease. Some people report feeling free of symptoms and are often surprised when they learn they have HCV. Sometimes the only sign of HCV is found when a blood test is done. This may occur when one of the liver enzymes, ALT, is abnormally high. This suggests that the liver might be inflamed, so more lab tests are ordered to find out the reason for the inflammation. Sometimes a person can be HCV+ and have normal ALT levels. This means that their medical providers will not have one of the usual clues that would suggest the need for further testing.

Why is this important for women to know? Some experts believe that the cut-off number for abnormal liver tests should actually be lower for women than the numbers most labs use. If you are a woman with any risk factors for HCV or your liver enzymes are on the high side of normal, get tested.

Although some people do not have any symptoms, there are HCV+ women who might not know they have it because their physical complaints are similar to other medical conditions. A classic example is menopause. Some women notice multiple changes at menopause as well as the years before menopause. These can include fatigue, body aches, and difficulty thinking clearly. These are also common HCV symptoms.

It is important to consult a medical provider about health changes. It is easy to confuse HCV symptoms for something else. The reverse is also true. Do not blame everything on HCV. Many medical conditions have similar symptoms to HCV. Some of these are very easy to treat.

Approximately 5 to 8 % of the population has some sort of autoimmune disease. Roughly, 3 out of 4 of these are women. Some autoimmune diseases share similar symptoms with HCV. Autoimmunity has been linked to HCV, but the relationship is not well understood. Autoimmunity is a confused immune system in which our body starts attacking its own cells.

This sounds frightening, but not all autoimmune diseases are serious if treated. The most common autoimmune disease causes a low thyroid problem. For most people, this can be treated easily. There are other more serious autoimmune diseases, such as lupus. Talk to your medical provider about this, especially if you have a family history of autoimmune diseases.

Women with HCV want to know if it is okay to take hormones, such as birth control pills or hormone replacement therapy (HRT). From an HCV perspective, the answer is yes. HRT is controversial for other reasons not related to liver disease. Talk to your medical provider about this.

If you take medication for menstrual cramps or other causes of pain, ask your medical provider what the best medications are for pain management. Although acetaminophen is generally safe, it can cause liver damage at high doses or if taken with alcohol. Some pain medications, such as hydrocodone, are combined with acetaminophen. Find out how to use all medications safely.

Many other issues are unique to women. Some of these include transmission, birth control, and treatment side effects.

For more information see the complete series on Women and HCV at : <http://www.hcvadvocate.org/hepatitis/factsheets.asp>

- Women and HCV: Treatment
- Women and HCV: Pregnancy, Childbirth, and Breastfeeding
- Women and HCV: Transmission
- Women and HCV: Supplements Commonly Used by Women
- Women and HCV: The Cosmetic Side Effects of HCV Treatment
- Women and HCV: Reproduction Issues during Treatment

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Women and HCV: Supplements Commonly Used by Women

Lucinda Porter, RN

HEPATITIS C (HCV) IS AN EQUAL OPPORTUNITY VIRUS.

It affects men and women from all ethnic backgrounds. In the United States, there is a higher prevalence of HCV among men. Although more people will die with HCV than of HCV, it is still a complicated disease with a challenging treatment regimen. Women living with HCV have issues that differ from men's.

Some people use herbs and other supplements. Tell your provider about all the herbs and supplements you take, even if you think he or she might disapprove. Although they may seem appealing, a number of herbs can cause harm. Herbs can cause hepatotoxicity (poisoning of the liver), so people with HCV should avoid herbs or use them cautiously with the advice of a healthcare provider. Drugs, herbs, and supplements can interact with each other, and may affect various health conditions. People with decompensated cirrhosis should never use herbs.

It is not known whether it is safe to take herbs or other supplements while undergoing HCV treatment. It is also not known if herbs can interfere with HCV medications, possibly affecting the treatment outcome. Until more is known about this, the safe choice is to refrain from herb use until treatment is completed.

If you do use dietary supplements, get informed and be sure your information is current. Before you take an herb or supplement, find out if it is compatible with other drugs or supplements you are taking. Verify that the supplement is not contraindicated for any other condition you may have. Apply the same caution and commonsense approach to supplements that you would to any drug.

Never take high doses of vitamins, minerals, or other supplements unless you do so under medical care and it has been cleared by the specialist who is following your liver disease.

Multivitamins and minerals – Choose a no or low iron version unless your medical provider wants you to have the additional iron. Do not take extra just because you think you need it. More is not better. Never take more than 25,000 IU of vitamin A. The best way to take vitamins and minerals is by eating a nutritional diet.

Calcium – It will not damage your liver if you take the recommended daily allowance of calcium. Talk to your medical provider about the correct dose for your needs.

Black Cohosh - This herb has been approved by Germany's prestigious Commission E for premenstrual complaints, painful periods, and management of menopause symptoms. In Australia, here were 3 reports of severe hepatitis linked to black cohosh use. Two of these cases resulted in liver failure requiring transplant surgery. Since these cases involved the use of herbal blends mixed with other ingredients besides cohosh, experts do not all agree about this risk. Gastric discomfort is the most common side effect. Black cohosh should not be taken by pregnant or lactating women. Safety is unknown for women with endometriosis, breast or uterine cancer. Black cohosh may interact with a number of other drugs, herbs and dietary supplements.

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Women and HCV: Being a Positive Mother

Lucinda Porter, RN

A DIAGNOSIS OF HEPATITIS C (HCV)

can be distressing. Add pregnancy to the equation and the distress multiplies. This fact sheet addresses three situations that HCV-positive women may confront: 1) considering pregnancy, 2) currently pregnant, or 3) have already had children.

The technical term for an infection passing from mother to unborn offspring is *vertical transmission*. *Horizontal transmission* refers to household members passing an infection to each other during their daily routines. Theoretically, HCV can be passed horizontally, say if an uninfected person cuts himself or herself with a razor that has HCV-positive blood on it. However, the circumstances for HCV to be transmitted between household members have not been proven and are so unusual that we say that HCV is not passed horizontally.

Vertical transmission is also uncommon, but it does occur. The prevalence of HCV is low among women of childbearing age (1.2%). The Centers for Disease Control and Prevention (CDC) does not recommend routine HCV testing for pregnant mothers. Among HCV-positive women, the CDC estimates that the rate of vertical transmission is 5% to 6%. Pregnancy for HCV-positive mothers is NOT discouraged. *Note: The HCV transmission rate climbs to 18.7% for women who are HIV/HCV co-infected.*

There are no universal guidelines for labor and delivery regarding HCV-positive women. Some obstetricians avoid performing *amniocentesis* during pregnancy. This procedure tests for fetal abnormalities by inserting a long slender needle into the pregnant woman's abdomen and withdrawing *amniotic fluid*. This fluid surrounds the fetus. Some experts discourage the use of *fetal scalp monitoring*. This procedure records the fetal heartbeat by threading a thin wire into the soon-to-be-born infant's scalp. Alternative monitoring techniques are available. Some experts raise concerns about the *prolonged rupture of membranes* (more than 6 hours). In simpler terms, this refers to the length of time the bag containing the amniotic fluid is broken before delivery occurs. There are no recommendations advising the use of Cesarean section rather than vaginal delivery.

Women should never become pregnant during and for six months after the completion of HCV treatment. Current HCV treatment may cause birth defects and fetal death.

All major medical guidelines recommend routine testing of children born to HCV-positive mothers. Infants can begin life with their mother's HCV antibodies but this does not mean they are HCV-positive. Since infants' immune systems take time to develop, testing should not occur until they are at least 12 months old. The American Association for the Study of Liver Diseases (AASLD) recommends waiting for at least 18 months.

HCV-positive children usually have little or no symptoms. According to the AASLD, disease progression is minimal for the first 20 years of a child's life. Children can be treated with antiviral therapy. The response rate for children is better than the adult rate. Children usually tolerate treatment well, some having little or no side effects. At this point, what the long-term effects are on adults who underwent treatment during childhood is unknown.

Ninety-five out of a hundred times, an HCV-positive woman will give birth to an HCV-negative baby. Statistics may be reassuring, but the reality is that motherhood is a complicated role. Worry is a constant companion for mothers. A woman who is considering pregnancy is probably going to have some fears about this.

If you go ahead with a pregnancy, it will be a long time before you will know if your baby is one of the 95% or the 5%. You may fret about this. Since worrying does more harm than good, it is wise to keep anxiety to a minimum. Try to think positively. Learn how to relax and manage stress. Take good care of yourself. As an HCV-positive mother, your child will need you to be well. Motherhood lasts a long time and learning how to maintain your health and sanity will benefit your family.

After your child is 12 to 18 months old, you can request HCV testing. This is a blood test and children do not like to have their blood drawn. If your child needs to have blood drawn for another reason, ask the medical provider to include an HCV antibody test on the lab order.

If your child is one of the 5%, then you will probably experience strong emotions. This is normal. Worry, grief, fear and guilt are common reactions. Start by getting good information and support. Other women have children with HCV or other chronic diseases, so learn from their experiences. Lean on others until you are strong enough to cope. Learn how to manage worry and guilt. These two emotions can do more harm than good.

Request a referral to a pediatric hepatologist or gastroenterologist. If your child's primary care provider does not know much about HCV, you may want to see if he/she attempts to learn about it. If you are not satisfied, find another provider.

You may find out you have HCV long after your children are grown. You may be a grandmother. Experts recommend testing for your children. It may not be easy to discuss this with them, even if they are adults. Reassure them that their chances of having HCV are very low. If you acquired HCV via injection drug use, you do not have to disclose this or other details to your children.

Above all, take care of yourself. If you feel guilty, forgive yourself. You did not intend for this to happen. Learn how to live with a chronic disease. Join a support group. Seek professional counseling if you have trouble coping or experience depression. Be a role model. Show your child how to live well.

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Women and HCV: Pregnancy, Childbirth, and Breastfeeding

Lucinda Porter, RN

Hepatitis C viral infection (HCV) is a medical problem that can be an emotional issue. It becomes even more emotional when we think that babies are at risk. The overall risk of mothers infecting their unborn is about 5%. This rate increases when women also have HIV or hepatitis B. The rate may be higher for those women who have a higher viral load (a higher amount of virus in their blood).

Pregnancy should not occur while a patient is being treated for HCV. Ribavirin, one of the drugs used for HCV treatment, has been linked to birth defects and miscarriages. There are strong warnings against this that apply both to female patients and female partners of male patients. Patients are told to use two reliable forms of birth control during HCV treatment and for 6 months after treatment has stopped.

There are no recommendations against pregnancy for women with HCV who are not on HCV treatment and whose partners are not on treatment. If an HCV+ woman does become pregnant, she should inform her medical team of her HCV status. There are no recommendations against amniocentesis. There are no recommendations regarding vaginal versus Caesarean Section delivery. There may be a higher mother-to-infant transmission risk for those with both HCV and HIV. Some doctors believe that a Cesarean may decrease this risk, but there are no specific recommendations for this.

After the birth, the mother should tell her infant's pediatrician. The Centers for Disease Control (CDC) recommends testing for children born to HCV + mothers. Some babies may be born with the HCV antibody but they may actually lose this by the time they are 18 months. It is advised to wait for 18 months after the birth before doing this test.

Pregnancy does not change HCV progression except if cirrhosis is present. Lab tests measuring liver function (liver enzymes) may fluctuate during pregnancy and postpartum. The amount of virus in the blood (viral load) may also fluctuate during pregnancy. It is recommended that women needing a viral load test should wait until after the postpartum period.

Women should not breastfeed during HCV treatment. Otherwise, there are no recommendations against breastfeeding for HCV+ women. During this time, practice good nipple care. If your nipples are cracked or bleeding, stop breastfeeding until you are healed.

One question that HCV+ women ask is should they become pregnant first or have HCV treatment first. There is no clear answer to this. The rate of successful HCV treatment is better than 50%. Women have a slightly higher successful outcome than men. Those who are younger also have an advantage. However, if your treatment duration is 48 weeks, that means you need to prevent pregnancy for at least 48 weeks plus another 6 months. Some people don't want to wait that long.

Women who start their family first might want to postpone treatment until their children are older. Current HCV treatment has side effects, such as fatigue and

depression. It can be hard to take care of young children if you aren't in good physical and emotional condition. No matter what age your child or children are, get support while you are undergoing treatment.

For more information see the HCSP Fact Sheet HCV and Women: Reproduction Issues during Treatment.

For more information see the complete series on Women and HCV at : <http://www.hcvadvocate.org/hepatitis/factsheets.asp>

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Women and HCV:
Reproduction
Issues
during Treatment

Lucinda Porter, RN

There are two main reproduction issues associated with current treatment for hepatitis C virus infection (HCV). One is pregnancy, the other is breastfeeding. It is important to understand these issues before you begin treatment as these will affect you before, during, and after treatment.

Reproduction

When ribavirin was combined with interferon and tested on animals, it was linked to birth defects and fetal death. Because of this, the Food and Drug Administration (FDA) has strict requirements for companies selling ribavirin. Ribavirin is a category X drug. This means it may cause birth defects or death to a fetus. There are bold warnings printed on the labels for the two most frequently prescribed brands, Copegus™ and Rebetol®.

Your doctor or nurse should verify that you are not pregnant immediately before you start treatment. This means taking a pregnancy test. This also holds true if you are the female partner of a man planning

to undergo HCV treatment. If you or your partner have the starter kit that accompanies Copegus™, a urine pregnancy test is supplied to enable you to do this. If you don't have a starter kit or you have the kit that comes with Rebetol®, you can obtain a test through your doctor or drugstore.

Assuming pregnancy is ruled out, then the goal is to avoid pregnancy throughout treatment and for six months after treatment has been stopped. The guidelines are to use two reliable forms of birth control. Birth control should be used in situations where pregnancy is even remotely possible. This includes women who have had tubal sterilizations and men who have had vasectomies. Technically the only conditions in which pregnancy is technically impossible are for women who are post-menopausal or who have had a hysterectomy. According to the Menopause Guidebook published by the North American Menopause Society, menopause is defined as the permanent end of fertility marked by the absence of any menstrual bleeding for 1 year (assuming there are no other causes).

Notice the use of the word reliable when discussing birth control. Reliable means using medically accepted contraceptive methods and using them correctly. Whatever you choose, make sure you are well-informed on how to use the method correctly. Also, notice the word two. This means that if you use two forms of birth control and one fails, then you have back-up protection.

If pregnancy occurs during or six months after treatment has stopped, report this immediately. Tell your medical provider. All pregnancies should be reported to the Ribavirin Pregnancy Registry. You or your doctor can do this. This is confidential, free, and important. (See Resource Section)

Types of Birth Control (The higher percentage is with perfect use)

- Abstinence – 100% reliable, but since it's impractical, include a back-up method
- Tubal Sterilization – 99.5-99.9% reliable
- Vasectomy – 99.5-99.9% reliable
- Condom 85-98% reliable, nearly 100% with withdrawal

- Female condom 79 - 95% reliable
- Spermicide 71– 85% reliable
- Diaphragm 84– 94% reliable
- The “Pill” 92– 98% reliable
- The “Patch” 92 – >99% reliable
- The “Ring” 92– >99% reliable
- The “Shot” 97– 99.7% reliable
- IUDs 99– >99% reliable
- Fertility Awareness 75– 99% reliable when using a back-up method for fertile days
- Withdrawal 73–96% reliable

Below are examples of two reliable forms of contraception, where vasectomy is considered one method and tubal ligation another.

- A man with a vasectomy whose post-procedure infertility has been confirmed plus a correctly used condom
- A woman who underwent tubal sterilization whose partner uses a condom correctly
- A man who correctly uses a condom with a spermicidal
- A woman who correctly uses a diaphragm with a spermicidal
- A man with a vasectomy and a woman with a tubal ligation

For information about emergency contraception, talk to your medical provider or contact Planned Parenthood.

Important Points

- Rule out pregnancy prior to starting HCV treatment
- Use two reliable forms of birth control during and six months after treatment
- Whatever method you choose, know how to use it correctly
- Report any pregnancy immediately

Breastfeeding

Nursing mothers who want to undergo HCV treatment must choose either breastfeeding or treatment. They should not do both at the same time.

Resources

- Ribavirin: Pregnancy Registry 1-800-593-2214; 1-910-509-4991 (Call collect) www.ribavirinpregnancyregistry.com
- Planned Parenthood: 1-800-230-PLAN or 1-800-230-7526 www.plannedparenthood.org/pp2/portal/medicalinfo
- Hoffman-La Roche (Pegasys™ and Cogegus™): 1-877-PEGASYS (1-877-734-2797) www.pegasys.com
- Schering Plough (PegIntron® and Rebetol®): 1-888-HEP-2608 (437-2608) www.pegintron.com

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Women and HCV: Transmission

Lucinda Porter, RN

Hepatitis C (HCV) is the most common blood-borne virus in the United States. Approximately 2% of the population is infected with HCV. Although there are significantly more males than females with HCV, women have unique issues surrounding this disease.

Transfusion Risks

Pregnancy and reproductive organ problems may need emergency blood transfusions. Prior to 1992, some of the blood supply in the U.S. was contaminated with HCV. It is estimated that 250,000 women are infected with HCV because they received blood for Cesarean Sections prior to 1992. The blood supply in the U.S. has been very safe since 1992.

Sexual Risks

The rate of infection due to sexual transmission is believed to be quite low. Women who are in exclusively monogamous relationships with men have about a 0-3% risk. The risk may be higher in the presence of blood, such as during a woman's menstrual cycle. Current recommendations are that people in stable monogamous relationships do not need to change their sexual practices. Safer sex is recommended for those engaged in sex with multiple partners.

The risk increases if a partner has HIV, other sexually transmitted diseases, or open sores, cuts, or wounds.

Anal sex may have a higher risk, particularly if any tissue is torn. Oral sex appears to be without risk for HCV.

Over a lifetime, sexual activity between women is 8 – 20 %. There is not much research on the subject of Lesbians and HCV. There is a general assumption that sex between women carries little or no HCV transmission risk. However, although this may be true, this assumption may create a barrier between health educators and their female clients. Often, safer sex options are not discussed, thus putting Lesbians and other women at potential risk.

Any partner who wants to practice safer sex for whatever reason is encouraged to do so. Do not let anyone talk you into doing anything you don't feel comfortable about. "No" is a complete sentence. If you are raped or sexually assaulted, ask the trauma team or other medical provider if you should be tested for HCV, along with other diseases. Your HCV risk may be low, but the value of reassurance may be worth it.

For more information, see HCSP FactSheet Sexual Transmission of Hepatitis C

Occupational Risks

Some predominately-female occupations may have more opportunities for blood-to-blood contact. Some of these are nurses and other healthcare workers; those in the janitorial and housecleaning industries; and those in the cosmetic and personal care industry, such as manicurists, facialists, and so on.

The rate of infection for those in healthcare is close to that of the general population. This is likely due to the strict precautions that healthcare workers follow. For those who work closely with blood: know what the safety guidelines are for your work situation. Following them may keep you and others safe.

The sex worker industry employs a significant number of women. Although sexual transmission of HCV is normally low, transmission risks increase because of a number of factors. First, the risk of HCV sexual transmission increases with multiple partners. Second, sex workers are less likely to practice safer sex when engaged in sexual activity with someone who is not a client. Third, some women trade sex for drugs. Drugs and all shared

drug paraphernalia can be contaminated with HCV or other organisms. The risks are highest if drugs are injectable, although intranasal (snorting) routes are also risky. Fourth, drug use is more likely to lead to unsafe sex. Finally, sex workers are more likely to engage in unprotected sex if there is additional incentive, either financial or drug-related.

The risk of acquiring HCV increases when there are open sores or co-infection with HBV or HIV. Although there is no guaranteed prevention method, the use of barrier protection is advised. Knowing how to correctly use a condom and spermicidal can decrease HCV exposure risks. Sex workers who use injectable drugs are encouraged to learn how to do so safely. Community Needle Exchange and Harm Reduction programs offer education and services that promote safer drug use.

Household Risks

Although there hasn't been a documented case, HCV can theoretically be passed via personal items. Do not share razors, cuticle scissors, nail clippers, toothbrushes or other items that might be exposed to blood. Feminine hygiene products should be discarded properly. Look at the product information insert for proper disposal recommendations on the sanitary product that you use. Most public restrooms have special disposal units for feminine hygiene products. Carry a zip-lock bag with you in case you need to dispose of a product in the trash. You can use this method at home as well.

For more information, see:

- Easy C Facts: *HCV and Hygiene Items*
- Easy C Facts: *HCV and Needle Exchange*
- HCSP Fact Sheet: *Occupational Exposure to Hepatitis C*
- HCSP Fact Sheet: *Preventing HCV Transmission in Personal Setting*
- HCSP Fact Sheet: *Sexual Transmission of Hepatitis C*
- Hep C Basics: *Sexual Transmission of Hepatitis C*

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The information in this fact sheet is designed to help you understand and manage HCV and is not intended as medical advice. All persons with HCV should consult a medical practitioner for diagnosis and treatment of HCV.

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a series of fact sheets written
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disease

Women and HCV: The Cosmetic Side Effects of HCV Treatment

Lucinda Porter, RN

Success rates for the treatment of hepatitis C viral infection (HCV) are steadily improving. Women have a slightly higher success rate than men. A favorable outcome depends on finishing the entire course of treatment at the maximum dose for your medical condition. Although this is encouraging, HCV treatment has side effects. Sometimes these side effects can interfere with a person's ability to stay at their recommended dose of medication or to finish the treatment.

Most of the side effect of HCV treatment can be managed. Early intervention is important so the side effects don't become big problems. Some of the side effects are cosmetic in nature. They aren't serious and they may not be painful, but they are bothersome. No one likes to admit they have some vanity. However, no one likes the thought of some of the cosmetic changes that occur during treatment.

Most of these changes can be managed successfully. All of the cosmetic side effects are temporary. When patients are done with treatment, they usually say that the cosmetic changes were the least of their problems.

Side Effects

If you ask women which cosmetic side effect they fear the most, hair loss would top the list. Most patients think this means baldness, but nothing could be further from the truth. Hair loss becomes noticeable about 3 months after

starting HCV treatment. The loss is evenly distributed around the head and the term "thinning" is a better description of what occurs. Patients notice hair on their brush, their pillows, or in the sink long before they notice it missing from their head. The hair loss is usually not apparent to anyone other than the patient. It is most noticeable on patients who start with thin hair. Patients who have very thick hair may even like the change.

Unfortunately, another side effect, depression, may also start to set in at about the same time patients' hair begins to thin. This depression is physiological, caused by the HCV medications. Patients can have a hard time feeling good about themselves because their brains are not making enough "feel good" chemicals. Thinning hair can feel like a final straw.

These side effects will go away after HCV treatment has stopped. Your hair will grow back, your nails will get stronger, and your skin will regain its natural oils. If you lost weight, this will also return to your pre-treatment levels. If you like the weight loss, then you can prevent a weight gain with exercise and diet changes.

The following are some tips for common cosmetic side effects:

Hair Loss

- Try washing your hair less often.
- Avoid tight braiding or hair weaves.
- If you use chemicals on your hair, ask for the mildest product, or even skip them altogether.
- Avoid or reduce your use of hair dryers, curling irons, and rollers.
- Keep your hair conditioned; use moisturizers and detangling products.
- Use hair products that add body and texture.
- Some people swear by Nioxin products, which can be purchased at salons or beauty supply stores. For maximum effect, begin using them before you start treatment.
- Comb and brush your hair less; choose a soft brush or wide-tooth comb.
- Do not "tease" or "back-comb" your hair.
- Try a shorter or different hairstyle.
- Protect your hair with a hat, scarf, or hair sunscreen products.
- Use a satin pillow when you sleep.

- Splurge on hats and scarves that accentuate your best features.
- Wear a hair piece or wig
- Ask your medical provider to evaluate and treat you for depression, if necessary.

Dry skin/rashes

- Dry, itchy skin is a common complaint. Make a commitment to care for your skin at the very beginning of treatment.
- Have all rashes evaluated.
- Drink sufficient water.
- Avoid soap. Use Cetaphil cleanser or a similar substitute.
- Hypoallergenic creams and lotions applied immediately following bathing can reduce dry skin. Creams are generally more effective than lotions. Add a couple of drops of unscented, lightweight oil to the lotion for extra protection.
- Avoid prolonged sun exposure. Use high SPF sun protection.
- Scratching leads to more itching. Avoid scratching, especially with fingernails. Cold packs or pressure can be applied to itchy areas.
- Try to avoid chapped lips by lubricating frequently, especially with a product that contains sunscreen.
- Injection site redness is extremely common. Rotate injection sites. Report any signs of infection, such as red lines running along your skin, or an area that is swollen or hot to the touch.
- If you want to wear a bathing suit that exposes your thighs or a top that shows your midriff, make a choice of one over the other. Injection site redness is so common that it is likely that you will not want to walk around exposing red blotches on your skin. For instance, if you are planning a beach vacation where you want to wear a one-piece bathing suit, confine your injections to your abdomen starting about 4 weeks prior to the event. Start rotating your sites after you return.

Dry, Brittle nails

- Keep nails short.
- Use hand lotions and creams as much as possible, and especially after your hands have been in water.
- Wear gloves to protect hands when doing chores such as dishwashing, cleaning, gardening, or using chemicals.
- At bedtime, apply oils or thick creams to your hands. Smear extra on your nails. Wear cotton gloves while you sleep to protect your sheets and clothing.

- If you polish your nails, use gentle polish removers.
- Avoid nail polish altogether. Use nail strengtheners and buffing.
- If you have your nails professionally manicured, know how to keep others as well as yourself safe from blood-borne viruses. See HCSP Factsheet Preventing HCV Transmission in Personal Care Settings

Excessive or Unwanted Weight Loss

- Eat small, frequent meals.
- Choose foods that are high in calories and protein. Try products designed to promote weight gain, such as nutritional supplements. Instant breakfast powders, high-calorie puddings, and “shakes” can be easy to digest. For extra calories, add powdered milk to regular milk, soups, mashed potatoes, hot cereal, and puddings. Peanut butter is an excellent source of nutrition and calories.
- Consult a nutritionist for further advice.
- For more on this topic, see HCSP Factsheets HCV Treatment Side Effect Management: Weight Loss; HCV Treatment Side Effect Management: Nausea; HCV Treatment Side Effect Management: Taste Changes

Support groups can help women and men cope with HCV, its treatment, and its impact on their lives. See if there is a support group near where you live.

For more information about hepatitis C, hepatitis B and HCV coinfections, please visit www.hcvadvocate.org.

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Women and HCV: Treatment

Lucinda Porter, RN

Making the Decision

The decision to undergo treatment for chronic hepatitis C virus infection (HCV) can be complicated. There are many elements to consider. Women have issues that differ from men's. Women are slightly more likely to respond favorably to HCV treatment. However, there are other factors to consider while making this decision.

Many factors influence when to start HCV treatment. Depending on your situation, treatment can last 24 to 48 weeks, or even longer. Women with children are constantly trying to balance work and family issues. HCV treatment can upset this balance. Above all, make your health a priority. There may not be a perfect time to start, but it is important that you have good support and a life that is somewhat settled and flexible.

Pregnancy and Breastfeeding

Two important issues are pregnancy and breastfeeding. Make sure you are not pregnant before starting HCV therapy. Be certain you are not planning to become pregnant during and up to 6 months after treatment. Never breastfeed during HCV treatment. If you are breastfeeding, you must choose between treatment and nursing.

The guidelines for pregnancy prevention state that women are to use 2 reliable forms of birth control during this time. If you are not sure about how to use contraception reliably, talk to your medical provider or contact Planned Parenthood. For more about this, see HCSP's Women and HCV Factsheets Pregnancy, Childbirth, and Breastfeeding and Reproduction Issues during Treatment.

Autoimmune Diseases

Most autoimmune diseases occur in women. If you have been diagnosed with an autoimmune disease or if you suspect you have one, discuss this with your medical provider. One of the HCV drugs, interferon, can aggravate autoimmune diseases. You and your medical provider need to make sure you can go ahead with HCV treatment and if so, discuss how you will be monitored.

Learn about the potential side effects of HCV treatment. Drug manufacturers provide information about this. HCSP also provides extensive information about side effects. Generally, the side effects for men and women are the same. However, there are some differences.

Anemia

Our bodies rely on hemoglobin (a component of our red blood cells) to carry oxygen to our cells. Women have less hemoglobin than men do. Women who are menstruating can have low hemoglobin levels because of the blood they lose every month. Sometimes this blood loss can cause anemia.

One of the treatment drugs, ribavirin, can cause a different kind of anemia. Ribavirin can cause the red blood cells to burst before our bodies have a chance to use them. This is called hemolytic anemia. Because women start with lower hemoglobin levels, they risk becoming anemic quite quickly. Menstruating women are even more vulnerable to this. The dose of ribavirin is determined by body weight, with 165 lbs as the cut-off number. Since women tend to weigh less than men, a woman who weighs 110 lbs might react differently than someone who weighs 160 lbs. During treatment, your medical provider will monitor you for this by ordering regular blood tests. If you are prone to anemia, mention this to your provider.

Depression

In the general population, women are two times more likely than men to suffer from depression. Depression is a common side effect of HCV treatment medications. Depression is a serious medical condition that can be life threatening and life altering. Talk to your medical provider about this issue and mention if you have a history of depression. Some providers recommend that their patients begin anti-depressant medications prior to treatment.

Menstruation and Menopause

Some women report menstrual irregularities during treatment. These can be anywhere from heavier to lighter periods, fewer

or more periods, more PMS or less PMS, and so forth. The point is that there is no one single predictable course during treatment.

Women who are approaching menopause also report changes. Some have more hot flashes; some have fewer. Women report more bleeding; some say their periods are shorter, fewer and lighter. HCV treatment and menopause/ menstrual cycles are areas that have not been well studied.

After menopause, women are at risk for bone loss. Abnormal bone loss is called osteopenia. Osteoporosis means the bone loss is significant enough to create a risk of fracture. A number of factors increase this risk, including smoking and family history. There have been small studies that have linked one of the HCV medications, ribavirin, to bone loss. Not enough is known to come to any conclusions about this.

What is known is that inactivity can also increase bone loss. During treatment, patients who are normally physically active may find themselves cutting back on the intensity, frequency, and/or duration of their normal fitness routines. This may leave patients with one less tool for bone loss prevention. Calcium, magnesium, vitamin D and other nutrients are necessary for preventing bone loss. Talk to your medical provider about the dosages that would be suitable for you.

Sexual Issues

HCV treatment can affect your sex life. Current HCV medications can cause vaginal dryness. This can lead to uncomfortable intercourse. Lubricants can provide relief. If you rely on condoms for protection, never use an oil-based product, such as Vaseline. Oil-based products can break down condoms.

Some patients remark that they have a decreased libido (desire for sex). Patients who are taking certain antidepressants are especially prone to sexual difficulties. Some women have problems with orgasm and arousal. Talk to your medical provider about any sexual concerns. Sometimes there are solutions for these problems.

Vaginal Infections

Most vaginal infections are caused by a fungus and are commonly called yeast infections. Women who take antibiotics are especially susceptible to these. The symptoms are itching, burning, a thick, white, cheese-like discharge, pain during intercourse, and sometimes swelling in the vaginal area.

See your medical provider if you have a vaginal infection. If you have had a yeast infection before, your provider might make recommendations over the telephone, such as to try an over-the-counter anti-fungal cream. Learn how to avoid future infections.

Hormones

If your medical provider has prescribed hormones, such as hormone replacement therapy (HRT), it is okay to continue these during HCV therapy.

Support Groups

Support groups can help women and men cope with HCV, its treatment, and its impact on their lives. See if there is a support group near where you live.

Resources

- Hepatitis C Support Project: www.hcvadvocate.org
- Hoffman-La Roche (Pegasys™ and Cogenus™): 1-877-PEGASYS (1-877-734-2797) www.pegasys.com
- Schering Plough (PegIntron® and Rebetol®): 1-888-HEP-2608 (1-888-437-2608) www.pegintron.com
- InterMune (Infergen): 1-888-ITMN411 (1-888-486-6411) www.infergen.com (not normally used for initial treatment)

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