



HCSP FACT SHEET

HCV ADVOCATE

• EXTRAHEPATIC MANIFESTATION OF HCV •

Peripheral Neuropathy (PN)

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Foreword

Neuropathy is a medical term for any disease of the nerves. There are four major forms of neuropathy – polyneuropathy, autonomic neuropathy, mononeuropathy and the most common form, peripheral polyneuropathy – more commonly called peripheral neuropathy (PN). Peripheral neuropathy damages the nerves in the legs and arms. Usually the first area that PN affects is the feet and legs before the hands and arms. This fact sheet will discuss the HCV-related form of peripheral neuropathy including the cause, symptoms, and treatments.

HCV & PN

The exact cause of HCV-related PN is not completely understood, but there is some speculation that it could be caused by HCV RNA (viral load) deposits in blood vessels that supply oxygen to the nerves, HCV infection of the nerves, an inflammation process in the nerves, and/or an HCV-related immune disorder. In the past it was believed that only people with cryoglobulinemia developed HCV-related PN but it has been proven that HCV-related PN can occur even in the absence of cryoglobulinemia. Studies have found that up to 15.3% of the HCV population has PN. If HCV is the cause of PN it would make sense to treat the cause.

Important note: Everyone with hepatitis C should be evaluated and receive HCV treatment. Current treatment is very expensive, and some insurance companies and Medicaid/Medicare are restricting HCV treatment to people with the most severe HCV disease. One of the conditions that qualify people for HCV treatment are extrahepatic manifestations. Discuss any symptoms with your medical provider and have them recorded in your medical records. If you are not approved for the drugs to treat hepatitis C, you may qualify for free drugs or

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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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HCV – Peripheral Neuropathy (PN)

co-pay assistance through a pharmaceutical patient assistance program. More information is available at the end of this fact sheet.

Causes and Risk factors for PN include:

- Infections such as hepatitis C, Lyme disease, shingles, Epstein-Barr, and HIV
- The most common cause of PN is diabetes – it is estimated that 34% of the diabetic population has PN. This compares to a prevalence of 2.4 - 8% in the general population
- Chronic alcohol abuse
- Vitamin B deficiencies
- Various autoimmune diseases such as lupus and rheumatoid arthritis
- Environmental toxins
- Medications, such as HIV medications

Symptoms

The most common symptoms of PN are numbness, tingling, sharp pain or cramps, loss of balance and coordination, and pain. The pain is usually perceived as a steady burning, 'pins and needles', and/or like an electric shock. The symptoms of PN are usually worse at night. PN can also cause muscle weakness, loss of reflexes (especially in the ankles), and foot problems including sores and blisters that could potentially lead to infections of the skin and bone. PN doesn't always progress or become worse; just because a person develops symptoms of PN it doesn't mean that it is going to progress to a more serious condition.

PN is usually diagnosed on the basis of physical symptoms and direct examination. It is important to

know that many people with PN have no symptoms so it may be difficult to diagnose. An extensive examination of the foot is the most common way PN is diagnosed. A doctor will look for specific signs of PN including skin lesions, circulation problems, and test the degree of sensation by touching a filament to different areas of the foot or leg. There are other tests that can be done to determine the type and extent of nerve damage such as nerve conduction studies, electromyography, quantitative sensory testing, heart rate variability, ultrasound, and nerve or skin biopsy.

Treatment

The most common treatment of PN consists of managing the symptoms. A medical provider may recommend aspirin, acetaminophen, or a non-steroidal anti-inflammatory drug (NSAID). There are other measures to control more severe symptoms including topical creams, lidocaine patches, opioid analgesics, tricyclic antidepressants, anticonvulsants, and another class of antidepressants called serotonin norepinephrine reuptake inhibitors (SSNRI). Other measures include transcutaneous electrical nerve stimulation (TENS), which uses electricity to block pain signals, hypnosis, biofeedback and acupuncture. In general, antidepressants seem to work better to manage the constant burning pain.

Treatment for most HCV-related extrahepatic manifestations is to treat the underlying cause (hepatitis C). Generally, treatment of PN in someone with hepatitis C is done on a case-by-case basis evaluating the person with PN based on the severity of the PN and chances of responding to various treatments including HCV therapy.

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Self-Care Tips:

A healthy lifestyle can help manage PN and the symptoms associated with it. These lifestyle modifications include:

- **Exercise** – can help to reduce some of the symptoms, increase overall muscle strength, increase blood circulation, and prevent muscle wasting or atrophy.
- **Nutrition** – Eat a healthy diet that will improve overall health and which may help with the gastrointestinal symptoms people with PN experience.
- **Smoking** – Cigarette smoking constricts the blood vessels that provide oxygen and nutrients to peripheral nerves. Seek professional services to stop smoking.
- **Drinking** – Alcohol abuse is a leading cause of PN. Avoid or greatly reduce alcohol use.
- **Massage** – especially to areas that are affected by PN (hands/feet) will stimulate, relax and may lessen some of the pain
- Do not put too much pressure on limbs-legs and elbows such as crossing legs for a long period of time.

Foot Care

As discussed earlier PN usually affects the feet and legs first. Because NP can cause loss of sensation to the lower extremities it is very important that people with PN pay special attention to their feet. The loss of sensation caused by PN can lead to unrecognized cuts, blisters and other damage to the feet. If a condition or injury goes unchecked it could lead to infections and ulcerations that may

spread to the bone. Severe bone infection can lead to amputation of the infected bone. There are many ways to take care of and protect your feet. The American Diabetes Association (ADA) recommendations for foot care can be easily adapted to everyone with PN:

- Check all the areas of the feet every single day. Look for red spots, cuts, swelling and blisters. If you can not see the bottom of your feet, use a mirror or ask someone to inspect them for you.
- Be more active (exercise and stretching).
- Wash your feet everyday. Dry them carefully, especially between the toes.
- Moisturize your feet daily (but not between the toes).
- Never go barefoot – always wear comfortable shoes and socks. This is because people with PN can cut or damage their feet and may not even notice or feel the pain.
- Keep toe nails trimmed so that the nails don't rub or cut nearby toes.
- Be careful not to expose your feet to hot and cold temperatures.
- Keep the blood circulating throughout the feet. The ADA recommends wiggling your ankles up and down for 5 minutes – two or three times a day. Don't cross your legs for long periods of time.
- Stop smoking cigarettes.
- Check with your medical provider about the need for special shoes (orthotics).

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Check out the following publications:

- **An Overview of Extrahepatic Manifestations**
http://hcvadvocate.org/hepatitis/factsheets_pdf/Extrahepatic.pdf
- **Patient Assistance Programs**
http://hcvadvocate.org/hepatitis/factsheets_pdf/Patient_Assistance.pdf
- **Systemic Lupus Erythematosus**
http://hcvadvocate.org/hepatitis/factsheets_pdf/SLE.pdf

For more information

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| <ul style="list-style-type: none">• Americans with Disabilities Act
www.ada.gov• Centers for Disease Control and Prevention
www.cdc.gov | <ul style="list-style-type: none">• "Peripheral Neuropathy" at the Mayo Clinic
www.mayoclinic.com• The Neuropathy Foundation
www.neuropathy.org |
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