



## HCV-Associated Arthritis

The hepatitis C virus (HCV) can cause arthritis, muscle pain and weakness, and vascular problems in addition to liver disorders. These associated inflammatory musculoskeletal disorders are very common in individuals infected with the virus and the resulting chronic hepatitis. In fact, these disorders can appear before the patient is even diagnosed with HCV.

### Fast facts

- HCV-associated rheumatic disorders are very common in HCV-positive patients. The infection often is latent and commonly follows a contaminated blood transfusion.
- Patients recently diagnosed with arthritis or cryoglobulinemia (a condition marked by having an abnormal protein in the blood) should be tested for HCV infection.
- Some medicines used to treat HCV, such as interferon, can induce or increase HCV-associated rheumatic disorders.

### What are HCV-associated rheumatic diseases?

HCV-associated rheumatic diseases are disorders of the joints and muscles that can result from the HCV virus. Painful joints and muscles combined with fatigue are usually the first and most common complaints.

Less common, but just as important, rheumatic disorders that can occur include joint swelling and inflammation of blood vessels ([vasculitis](#)).

### What causes HCV-associated rheumatic diseases?

The musculoskeletal complications of HCV-associated rheumatic disorders are a reaction to the immune system's fight against the virus. This leads to the formation of immune complexes (formed by the HCV or "antigen" combining with the patient's antibody against



The white material in the bottom of the test tube is due to the presence of a cryoglobulin, an abnormal protein in the blood.



HCV) as well as the production of abnormal proteins called cryoglobulins.



The white fingertips are an example of Raynaud's phenomenon.

Cryoglobulinemia (certain abnormal proteins in the blood that undergo precipitation at low temperatures, as shown in the picture above) may cause blood vessel problems, particularly during cold weather. This can result in Raynaud's phenomenon, which causes fingers to whiten in the cold.

#### Who gets HCV-associated rheumatic diseases?

HCV-associated rheumatic disorders affect individuals of all ages, ethnicities and genders who have the HCV virus.

The major mode of infection is through blood transfusions already contaminated by the virus itself. Intravenous drug abuse is another mode of

contamination. Unlike human immunodeficiency virus (HIV), unprotected sex with infected individuals is a less common cause. However, patients testing positive for HCV should be tested for HIV, and those with HIV should be tested for HCV.

#### How are HCV-associated diseases diagnosed?

Because clinical symptoms of HCV are frequently absent, blood tests to diagnose HCV infection have to be used more widely, particularly in patients with hepatitis, arthritis and fatigue. These tests are easy to perform and are reliable.

The diagnosis is based on the detection of antibodies against the virus in the serum and confirmed by the detection of the virus in the blood. This allows physicians to determine the virus replication (that is, how fast the virus is making copies), which is its level of activity. This assessment is used for follow-up.

#### How are HCV-associated diseases treated?

Typically, HCV treatment combines interferon with antiviral medicines such as ribavirin. While the use of this antiviral therapy has improved control of liver damage caused by the virus, it unfortunately can cause the development or increase the intensity of HCV-related symptoms, including inflammatory musculoskeletal complaints.

Control of resulting joint problems is limited by the use of drugs, which can have their own liver toxicity or increase virus activity. Rheumatologists and liver doctors need to work together to treat these patients. Fortunately, based on studies that looked back at how joint symptoms were treated in HCV patients, the use of [methotrexate](#), the most common treatment for rheumatoid arthritis, appears to be safe and relatively effective in HCV patients.

More recently, anti-tumor necrosis factor (commonly called "TNF") agents have further improved the efficacy of the treatment of rheumatoid arthritis. Their use in HCV patients appears to be safe, with no liver toxicity or increase in viral replication. Effectiveness in this patient population, however, seems



lower than that observed in rheumatoid arthritis. Other medications now being tested in this context include rituximab (*MabThera, Rituxan*), an agent which targets the B subset of lymphocytes.

### Prevention

Better screening of blood transfusions greatly has reduced the occurrence of blood-related HCV contamination.

On an individual basis, reducing risk factors associated with HCV, as with HIV, can help prevent the spread of the virus.

### Living with HCV-associated diseases

HCV-associated musculoskeletal manifestations cause discomfort in everyday life. Because treatment is complex, communication between the physicians in charge of treating HCV-related liver disease and the physicians in charge of treating the non-liver HCV symptoms is needed. This quality interaction also contributes to the necessary long-term follow-up of any HCV-positive patient, since the liver disease can become progressively worse, leading to liver failure or liver cancer. Patient support groups also provide helpful support and coping suggestions.



### Points to remember

- Any musculoskeletal syndrome can be the consequence of an HCV infection, even in the absence of hepatitis.
- HCV-associated rheumatic disease may occur before the diagnosis of HCV infection.
- Treatments of these manifestations do exist but are better used in a context of a multi-disciplinary interaction between physicians taking care of the patient.

### To find a rheumatologist

For more information about rheumatologists, [click here](#).

Learn more about [rheumatologists](#) and [rheumatology health professionals](#).

### For more information

If you want more information on this or any other form of arthritis, contact the Arthritis Foundation at (800)283-7800 or visit the Arthritis Foundation Web site at [www.arthritis.org](http://www.arthritis.org).



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