

MARG

Medical Associates Research Group, Inc.

8008 Frost Street, Suite 200
San Diego, CA 92123
Phone 858-277-5678
Fax 858-277-2317

More About HEPATITIS C

Did you know that over 4 million Americans have been infected with hepatitis C?

A Brief Overview:

Hepatitis C is a disease of the liver that has no vaccine and is contracted from the blood from an infected person. Thus, behavior such as sharing needles for intravenous drug use puts one at greater risk for contracting the virus. Symptoms, if they do exist, are very minor, such as fatigue, muscle soreness, and stomach pain.

Hepatitis C can cause liver disease, cirrhosis of the liver, liver failure, and liver cancer. In the US, Hepatitis B and C cause between 3,000 and 15,000 deaths every year.

Genotype:

Hepatitis C genotype refers to the genetic make-up of the virus. There are at least 6 distinct HCV genotypes that have been identified, with genotype 1 being the most common genotype found in the United States.

It is important to know what genotype you are as there are 6 known genotypes and over 50 subtypes of the hepatitis C virus. Knowing your genotype is helpful in making recommendations and counseling regarding treatment and therapy. Patients with genotypes 2 and 3 are almost three times more likely than patients with genotype 1 to respond to the "standard" treatment of HCV (Interferon and Ribavirin). Once a genotype is identified, there is no need to test again as genotypes do not change during the course of infection.

Current Treatment and Side Effects:

Currently there is a **standard treatment** of antiviral medication - a combination of a regimen of **interferon** (which is injected) along with **ribavirin** (an oral medication). Unfortunately these are effective < 50% in people with genotype I, hepatitis C - the most common type of hepatitis C in the US.

Interferon is a naturally occurring chemical in the body that fights infections particularly virus. When you have the flu your body produces interferon. It is the interferon that gives you the many of the common symptoms. Therefore, the most common side effect of interferon treatment is flu like symptoms.

While interferon is produced naturally in the human body, when used as treatment for HCV it is given in much higher doses than the body would naturally produce. Interferon can cause serious but rarely life-threatening psychiatric problems, infections, and autoimmune diseases. Therefore, it needs to be monitored very carefully with blood tests and frequent visits to a physician.

Ribavirin is a pill that prevents virus infections. The mechanism for this is not well understood.

Common **side effects** of interferon treatment include injection site reactions, fever, headaches, nausea, fatigue, insomnia, depression, irritability, hair loss, skin rashes, and cough. Treatment can result in a decrease in white cell count, platelet count, or red cell count. It can lead to thyroid problems in which the thyroid can become overactive or underactive. Treatment can cause or worsen diabetes. It can cause cardiac rhythm problems or other heart damage. It can cause inflammation of the colon with bleeding. It can worsen autoimmune disease including thyroiditis, rheumatoid arthritis, ulcerative colitis, Crohn's disease, systemic lupus, or psoriasis. It can cause lung disorders including cough, inflammation of the lung, pneumonias, sarcoidosis and occasionally permanent damage to the lung called bronchiolitis obliterans. It can cause eye problems including blindness, bleeding in the back of the eye, and changes in the back of the eye. It can also cause nerve damage.

Most side effects improve after discontinuation of medication. However, occasionally side effects can be permanent.

Ribavirin most common side effect is anemia.

These two drugs, **interferon plus ribavirin**, are currently the standard of care treatment for hepatitis C and works < 50% of the time.

New Treatment:

Protease and polymerase inhibitors are newly discovered chemicals that are currently being researched that prevent the virus from replicating. When these are combined with standard treatment the success rate has been shown to increase to 65-85%. There are many of these currently being researched; each has its own side effects.

Currently there are several trials enrolling for people with genotype I. There are trials that use the standard treatment plus additional medicines such as protease and polymerase inhibitors; and trials that do not use interferon and instead use oral medication. Qualified volunteers include those who have HCV and have never before received treatment and those who have received treatment but did not respond.

Hepatitis News

At MARG, we have conducted 20 Hepatitis studies over the past 10 years. Recently, the results of two of our hepatitis studies were published, one in the prestigious *New England Journal of Medicine*.

We Conduct Clinical Research Studies for Hepatitis C:

For more information contact us at (858) 277-5678.

Or click on "Learn About Our Studies" on our site to fill out a sign-up form.