



# HEPATITIS C

VA research on hepatitis C includes clinical trials of treatments, epidemiologic studies, investigations into the biological mechanisms of infection, and studies on improving quality of life for patients with this condition. Some recent studies have focused on boosting the rates at which Veterans with the condition receive antiviral treatment.

## EXAMPLES OF VA RESEARCH ADVANCES

**SEEKING REASONS FOR LOWER TREATMENT RATES**—African American Veterans are more likely than white ones to have hepatitis C, but also less likely to receive antiretroviral therapy, which can cure the disease about 55 percent of the time. A four-year study by Seattle VA researchers, initiated in 2009, seeks to discover the reasons behind the discrepancy in treatment rates. The study will involve audio recordings of provider-patient communication, as well as in-depth interviews with both patients and providers.

**IT'S NOT EASY BEING GREEN**—Iowa City VA researchers have shown that a product of hemoglobin breakdown may be a potential drug therapy for hepatitis C. Biliverdin appears in bruises as a green pigment. The VA team found that biliverdin blocked the effects of an enzyme that the hepatitis C virus needs to replicate itself. The team also tested bilirubin, because biliverdin rapidly converts to bilirubin in the body. Bilirubin's effects on the viral enzyme were much less potent. The team notes that biliverdin or its derivatives may be useful in creating future drug therapies for hepatitis C.

**HELPING TO PREDICT TREATMENT SUCCESS**—Certain tests may help physicians predict which HCV patients will respond to antiviral therapy. A Palo Alto VA team reviewed information on all Veterans with HCV treated at VA medical centers in 2007 and 2008. All started antiviral therapy during that time and were tested for rapid virological response (RVR), which indicates patients with a higher likelihood of treatment success. The study included 2,424 patients with genotype 1 HCV, 666 with genotype 2 and 419 with genotype 3. RVR rates were 15 percent, 71 percent, and 57 percent, respectively. RVR was more likely in patients with lower viral RNA levels before treatment. The researchers found several factors linked with RVR, including race, diabetic status, body mass index, LDL cholesterol levels, platelet levels, and the type of antiviral therapy. Links varied with viral genotype. The team believes that the results may help guide treatment decisions.

★ **FACTS ABOUT HEPATITIS C**—*The liver disease hepatitis C is caused by one of about 22 forms of the hepatitis C virus. It is spread through contact with infected blood or contaminated IV needles, razors, tattoo tools, or other items. Hepatitis C is particularly prevalent among Veterans, especially those who received blood transfusions prior to 1992. Between 4 and 17 percent of Veterans are infected, compared with 2 percent in the non-Veteran population. Most people with hepatitis C do not have any signs or symptoms of the disease for decades. By the time the disease is diagnosed, there can be significant damage to the liver, leading to complications such as cirrhosis and liver cancer, and sometimes resulting in death. Treatments using antiviral drugs can be effective, but potential side effects such as mood disorders must be managed carefully.*