

# Hepatitis C virus genotype 1 is most prevalent worldwide

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In one of the largest prevalence studies to date, researchers from the U.K. provide national, regional, and global genotype prevalence estimates for the hepatitis C virus (HCV). Findings published in *Hepatology*, a journal of the American Association for the Study of Liver Diseases, indicate that genotype 1 is the most prevalent worldwide, with over 83 million patients infected of which one-third reside in East Asia. Genotype 3, at just over 54 million cases, is the next most prevalent, followed by genotypes 2, 4, 6, and 5.

Despite efforts to control HCV, it remains one of the most prevalent diseases globally, with up to 150 million patients living with chronic infection according to the World Health Organization (WHO). Previous research shows that chronic HCV leads to the development liver cirrhosis, hepatocellular carcinoma (HCC) or [liver cancer](#), liver failure and death. WHO reports that 350,000 to 500,000 deaths each year are caused by liver diseases related to HCV.

"While the HCV infection rate is decreasing in developed countries, deaths from liver disease secondary to HCV will continue increasing over the next 20 years," explains lead co-author Dr. Jane Messina with the University of Oxford in the U.K. "Understanding the global trends in the genetic makeup of HCV is the focus of our study and imperative in developing new treatment strategies that may save millions of lives around the world."

Researchers identified 1,217 medical studies between 1989 (the year

HCV was discovered) and 2013 that reported HCV genotypes. The data were then combined with HCV prevalence estimates from the WHO Global Burden of Disease project. Roughly 90% of the global population, representing 117 countries was included in this study.

Analysis shows that HCV genotype 1 is the most prevalent at 46% of all HCV cases, followed by genotype 3 at 30%; genotypes 2, 4, and 6 with a combined total of 23% and genotype 5 at less than 1%. Researchers highlight that genotypes 1 and 3 are most dominant regardless economic status, but found lower-income countries had larger concentrations of genotypes 4 and 5.

Dr. Eleanor Barnes with the University of Oxford adds: "The testing of new therapeutics is still dependent upon knowledge of viral genotype. Non-genotype 1 HCV, comprises more than half of all HCV cases. Our study provides evidence of [genotype](#) prevalence for specific countries and regions that will help improve access to new viral therapies to combat HCV."

**More information:** "The Global Distribution and Prevalence of HCV Genotypes." Jane P. Messina, Isla Humphreys, Abraham Flaxman, Anthony Brown, Graham S. Cooke, Oliver G. Pybus and Eleanor Barnes. *Hepatology*; [DOI: 10.1002/hep.27259](https://doi.org/10.1002/hep.27259). Online Publication: July 28, 2014.

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