## **Committed to fighting viral hepatitis**

Every day, approximately 4,000 people die from the consequences of viral hepatitis –1.4 million people every year<sup>1</sup>



Five important tips for preventing viral hepatitis

- 1. Improved hygiene. You can reduce the risk of contracting hepatitis with good hygiene and sanitation, including regular hand washing with safe water and avoiding drinking water from possibly unsafe sources.
- 2. Vaccination. One of the best ways to protect oneself from hepatitis A, B and E. Vaccines are very effective in preventing infection, and are recommended for all infants.

<sup>&</sup>lt;sup>1</sup> World Health Organization. World Hepatitis Day. Last accessed July 2016 at http://who.int/campaigns/hepatitis-day/2016/event/en/

- Blood screening. According to the WHO, every year 1.6 million blood donations are rejected because they are positive for HBV, HCV or HIV<sup>2</sup>. Make sure medical practice is safe and equipment sterile.
- 4. Protected sex. HBV and HCV can be spread through sexual contact, so safer sex practices including using condoms are recommended.
- 5. Don't share or reuse needles. Unsafe injections account for millions of new hepatitis B and C infections every year. It is therefore important to make sure that injections are being performed safely and with sterile equipment.

## Understanding viral hepatitis

Hepatitis is an inflammation of the liver, most commonly caused by a virus. There are five main types of viruses causing hepatitis, the most common being hepatitis A (HAV), hepatitis B (HBV) and hepatitis C (HCV). HAV is spread by ingestion of contaminated food and/or water or through direct contact with an infectious person, while HBV and HCV are commonly spread via blood or other body fluids of an infected person.<sup>3</sup>

In addition to causing short-term (acute) infections, HBV and HCV infections often become persistent (chronic), eventually leading to more serious and life threatening conditions such as liver cirrhosis and cancer<sup>4</sup>.

<sup>3</sup> World Health Organization. Topics: Hepatitis. Last accessed July 2016 at

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http://www.who.int/entity/hepatitis/topics/en/index.html http://who.int/campaigns/hepatitis-
day/2016/event/en/
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<sup>&</sup>lt;sup>2</sup> World Health Organization: Blood Donor Counselling, Implemention Guidelines 2014. Last accessed July 2016 at http://www.who.int/bloodsafety/voluntary\_donation/Blooddonorcounselling.pdf

<sup>&</sup>lt;sup>4</sup> World Heath Organization. What is Hepatitis? Reviewed July 2015. Last accessed July 2016 at http://who.int/features/qa/76/en/

Hepatitis B and C are among the most common viral infections in the world, with more than 240 million people<sup>5</sup> affected by a chronic hepatitis B infection and about 130 to 150 million<sup>6</sup> people with chronic hepatitis C.

Drawn to science: HBV virus—the little enemy



## Diagnostics support treatment decisions

In vitro diagnostics play a key role in diagnosing, treating and managing the disease. Symptoms of viral hepatitis often resemble the flu, though many people experience no symptoms at all until and unless, liver damage becomes very serious. A laboratory diagnostic test is therefore crucial to confirm a diagnosis.

<sup>&</sup>lt;sup>5</sup> World Health Organization. Hepatitis B Fact Sheet Updated July 2016. Last accessed July 2016. http://who.int/mediacentre/factsheets/fs204/en/

<sup>&</sup>lt;sup>6</sup> World Health Organization. Hepatitis C Fact Sheet Updated July 2016. Last accessed July 2016. <u>http://who.int/mediacentre/factsheets/fs164/en/</u>



For patients with hepatitis B or C, Roche offers diagnostic tests which detect the presence of viral proteins and antibodies or measure the quantity of the virus in the blood helping doctors to diagnose an infection, determine the disease stage and if there is a response to treatment. In cases with no response, treatment may need to be changed or stopped.

In chronic hepatitis C patients, diagnostic tests can also identify virus genotypes in the blood. This information is useful for doctors, enabling them to personalise patient and disease management. As a result, treatment times can be drastically cut, side effects greatly reduced, and up to 90 per cent of patients treated clear the virus.<sup>7</sup>



## Research efforts ongoing to find new treatments

<sup>&</sup>lt;sup>7</sup> Schinazi et al. HCV direct-acting antiviral agents: the best interferon-free combinations. Liver International (2014); 34 Suppl 1:69-78.

Though we have made progress in combatting viral hepatitis, more still needs to be done. Roche is continuing to look for new and innovative ways to prevent, test and treat viral hepatitis. "Infectious diseases are a core area of research at Roche with clinical development programmes focused on hepatitis B, influenza and multi-drug resistant bacterial infections," said Janet Hammond, Global Head and Senior Vice President, Infectious Diseases, Roche Pharma Research & Early Development.

"In hepatitis B, current treatment approaches suppress the replication of the virus and help the body's own natural defences fight the infection; however, neither of these results in a cure for the vast majority of patients. We are focused on investigating different ways to target the hepatitis B virus with the hope that we can offer more patients a functional cure from this life-threatening infection in the future," said Janet Hammond.

Roche is committed to the fight against viral hepatitis, with a comprehensive portfolio of medicines and diagnostic tests to diagnose, confirm, manage and treat the disease.