Nobel Prize for Physiology/Medicine 2020

Why in News

Americans **Harvey J Alter** and **Charles M Rice**, and British scientist **Michael Houghton** were awarded the **Nobel Prize for Medicine or Physiology**, 2020 for the discovery of the Hepatitis C Virus.

- The Hepatitis C virus was discovered in **1982** by screening millions of DNA samples.
- The Nobel award comes with a gold medal and prize money of 10 million Swedish kronor (over USD 1,118,000) and was created by Swedish inventor Alfred Nobel.

Key Points

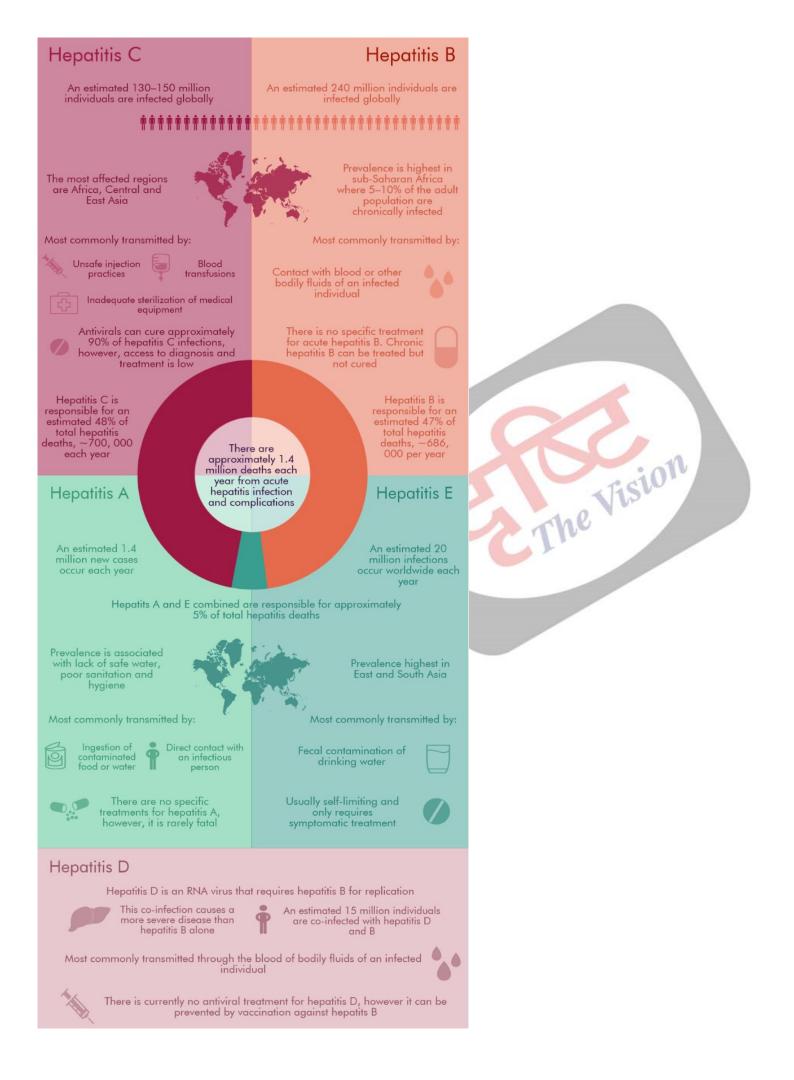
- Hepatitis:
 - Hepatitis refers to an inflammatory condition of the liver.
 - It's commonly caused by a **viral infection**, but there are other possible causes of hepatitis like **autoimmune responses**, medications, drugs, toxins, and alcohol.
 - There are 5 main hepatitis viruses, referred to as types A, B, C, D, and E.
 - World Hepatitis Day is observed each year on 28th July to enhance awareness of viral hepatitis.
- Hepatitis C:
 - Hepatitis C is caused by the Hepatitis C Virus (HCV).
 - It is transmitted through **direct contact with infected body fluids,** typically through injection drug use and sexual contact.
 - According to the <u>World Health Organization</u>, about 71 million people in the world have chronic infection with the Hepatitis C virus, which is also a major cause of liver cancer.
 - A vaccine for the disease has still not been developed but it can be treated with the help of **anti-viral drugs**.
- Significance of the Discovery:
 - The discovery helped in finding a cure for the disease, and effective anti-viral drugs are now available.
 - Tests have also been developed to **identify blood containing this virus,** so that infected blood is not given to any patient.

Hepatitis in India

- 40 million people are chronically infected with the Hepatitis B virus and 6 to 12 million with the Hepatitis C virus.
- In 2018 the National Viral Hepatitis Control Programme (NVHCP) was launched which has the target to eliminate Hepatitis C by 2030. The program is the largest program for Hepatitis B and C diagnosis and treatment in the world.
- Hepatitis B is included under <u>India's Universal Immunization Programme (UIP)</u> which provides free of cost vaccination against a total of 12 vaccine-preventable diseases.
- The first recombinant DNA-based vaccine for Hepatitis B infection was made in India by

Hyderabad-based Shantha Biotech.





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