Your guide to understanding
Hepatitis B
What is Hepatitis?
What is Hepatitis B?

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This brochure is developed together with the Ministry of Health’s Clinical Practice Guidelines on Management of Hepatitis B. Clinical Practice Guidelines are recommendations to help doctors and patients make appropriate choices about patient care based on the best scientific evidence currently available. These guidelines do not replace the judgment of the attending doctor. It is important to remember that each person is different, and the Clinical Practice Guidelines may not always apply to everyone.

Although this booklet has been primarily written for patients with Hepatitis B, it may also be useful to their family members and care givers.
Hepatitis is an inflammation or swelling of the liver. Normally, the liver helps to change food we eat into energy. It also breaks down waste products produced in our body. When one has hepatitis, the liver gets damaged and hence cannot function properly.

Hepatitis may be caused by alcohol, drugs, or viruses. Most cases of hepatitis are due to viruses. The common types of viruses commonly affecting Singaporeans include Hepatitis A, Hepatitis B, Hepatitis C and Hepatitis E viruses.

**What is Hepatitis?**

**What is Hepatitis B?**

- Hepatitis B is the most common chronic liver infection in the world and is caused by the Hepatitis B virus. It ranges in severity from a mild illness to a severe life-long infection.

- When a person first gets Hepatitis B, he is said to have an ‘acute’ infection. Most adults are able to fight off the infection and clear the virus.

- But for most newborns (unvaccinated at birth) and some adults who are not able to completely get rid of the virus, this may develop into a ‘chronic’ infection. This chronic infection is usually life-long and can cause serious health problems over time due to gradual liver damage.
Hepatitis B virus is carried in the blood and body fluids such as semen and vaginal fluids. It is contagious and is spread by:

- Having sex with an infected partner or a carrier
- Sharing needles, syringes, or skin piercing instruments
- An infected mother to her baby during childbirth

Hepatitis B virus does NOT spread by:

- Sharing of utensils, food, social kissing, hugging, holding hands, coughing or sneezing
- Participating in all activities including contact sports
- Interacting with others (e.g. in schools, day care centres)
Hepatitis B has to be taken seriously as those with chronic infection may not even know that they are infected since they do not look or feel sick. **They carry the virus permanently in their body and can pass the virus to others.** Those with chronic or life-long Hepatitis B infection are known as Hepatitis B carriers.

Hepatitis B carriers are at risk of serious health problems due to gradual liver damage. This may lead to cirrhosis of the liver (permanent scarring and hardening of the liver), liver failure and liver cancer.

Most people who contract Hepatitis B virus at birth or during early childhood are unable to clear the virus from their bodies and are at a higher risk of developing liver cancer. Hepatitis B virus is the commonest cause of liver cancer in Singapore.
Blood tests can tell whether you have Hepatitis B virus infection or are immune to it. These screening tests look for markers of the Hepatitis B virus in the blood and include:

**Hepatitis B surface antigen (HBsAg)**
A positive HBsAg result means you are infected with the virus. This could be either an acute or chronic Hepatitis B infection.

**Antibody to HBsAg (anti-HBs)**
A positive anti-HBs result means you have either recovered from an acute Hepatitis B infection in the past, or have been immunised effectively.

Screening tests should be done within six months before vaccination for all except newborn babies. Based on the results of the above tests, your doctor would then advise you accordingly on the need for Hepatitis B vaccination.
How can I ensure effective immunity against Hepatitis B?

Individuals who have never received Hepatitis B vaccinations

**For newborns:**

Under the National Childhood Immunisation Programme, all newborns are given three doses of Hepatitis B vaccine: at birth, then at one month and at six months of age.

For children born to HBsAg-positive mothers, Hepatitis B immunoglobulin (0.5ml) is given along with the first dose of Hepatitis B vaccine.

If anti HBs level is ≥ 10 IU/L within three months after the completion of the course, the child has developed effective immunity against the Hepatitis B virus.

**For adults:**

Adults who have never been vaccinated should also receive a full course of Hepatitis B vaccination. This consists of a series of three shots over six months.

If anti-HBs is > 10 IU/L within three months after the completion of the course, the individual has developed effective immunity against the Hepatitis B virus.
Blood tests are done within three months of vaccination to check if a person has developed effective immunity against the virus.

Individuals who have previously received Hepatitis B vaccinations

A person’s antibody levels (anti-HBs) decline over time. If your anti-HBs level was previously tested to be >10 IU/L, but has now fallen to <10 IU/L there is no need for you to do anything.

However, if your anti-HBs level tested for the first time is <10 IU/L, please discuss your next course of action with your doctor, even if you have received Hepatitis B vaccination before.

Individuals who have no immunity after receiving Hepatitis B vaccinations

If an otherwise healthy individual fails to develop anti-HBs of >10 IU/L after two courses of Hepatitis B vaccinations (i.e. a total of six shots), he may discuss with his family doctor and consider a referral to a gastroenterologist specialist for further management.

Individuals found to be HBsAg-positive

If you are tested to be HBsAg positive, you need further evaluation and follow-up by a doctor. You are considered to have chronic Hepatitis B virus infection if you are tested to be HBsAg positive twice at least six months apart.
How is chronic Hepatitis B infection managed?

Individuals with chronic Hepatitis B should have six-monthly blood tests for transaminase (marker of liver damage suggestive of chronic hepatitis) and alpha-fetoprotein (a tumour marker for liver cancer) levels and a yearly ultrasound examination of the liver. All individuals at high-risk need close monitoring and follow-up with a gastroenterologist specialist.

Treatment for chronic Hepatitis B involves either use of injections to boost immunity to help clear the virus, or antiviral drugs to suppress the virus. The response to the various treatment options varies between individuals depending on their health condition at that particular point of time. Consult your doctor for more information.

Family members of the individuals with Hepatitis B should also be screened for the virus infection.
How can I prevent Hepatitis B?

Vaccination is the only certain way to prevent Hepatitis B infection. Hepatitis B vaccination is payable through Medisave and consists of three doses:

• 1<sup>st</sup> dose - at the appointed date
• 2<sup>nd</sup> dose - one month after the first dose
• 3<sup>rd</sup> dose - six months after the first dose

You must complete all three doses in order to be effectively immune against Hepatitis B virus. Hepatitis B immunisation is safe, effective and your BEST protection against Hepatitis B related liver cancer.

Other ways to prevent transmission of Hepatitis B:

• Avoid multiple sex partners
• Use a condom during sexual intercourse if you are unsure of your partner’s status
• Encourage your partner to be vaccinated against Hepatitis B
• Do not share personal items like razors or toothbrushes
• Cover open wounds
• Do not donate blood, sperm and/or organs if you are infected
• Clean blood spills with bleach/detergents
Who should get vaccinated against Hepatitis B?

Vaccination is recommended for:

- Individuals with multiple sex partners of unknown Hepatitis B status
- Close family members and sex partners of individuals with Hepatitis B virus infection
- All infants at birth, especially babies of mothers with Hepatitis B
- Healthcare workers in close contact with blood and blood products (e.g. laboratory and hospital staff, surgeons and dentists), those requiring dialysis and repeated blood transfusions

Those who are known to be allergic to the Hepatitis B vaccine or its preservatives and those who are already HBsAg positive should not be vaccinated.

For more information, call HealthLine at 1800 223 1313 during office hours to speak to our Nurse Advisors.