

What you need to know about hepatitis B



Public health talk

Viral Hepatitis Control Office
Department of Health

Content

- 🍷 Introduction of hepatitis B
- 🍷 Living with chronic hepatitis B
- 🍷 Hepatitis B vaccine
- 🍷 Health information of viral hepatitis
- 🍷 Q&A

- Introduction of hepatitis B
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Function of liver



I am an important organ for metabolism,
I work for 24 hours!

Secretory function

- Bile is secreted by the liver. Bile salt facilitates the absorption of fat and fat soluble vitamins (vitamins A, D, E and K)

Metabolic function

- When blood sugar level is low, liver glycogen will be converted into glucose and then released into the blood stream, maintaining the glucose level
- Protein is synthesized in the liver from amino acids that is absorbed from the intestines
- The liver is also important in the metabolism of fat, vitamins and hormones

Detoxification

- A variety of exogenous toxins, like alcohol, drugs and endogenous toxic metabolites are modified by liver into less toxic or soluble forms

Causes of hepatitis

“Hepatitis” = inflammation of the liver

Causes of hepatitis:

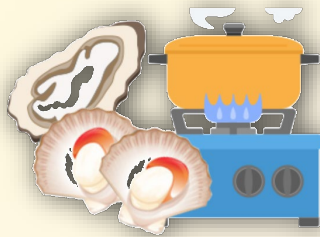
- 🍷 Viral infection (common cause)
- 🍷 Fatty liver
- 🍷 Alcohol, drugs or genetic diseases



Types of viral hepatitis

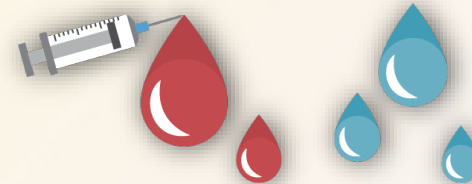
There are FIVE types of viral hepatitis:

A E



Transmitted primarily by the faecal-oral route

B C D

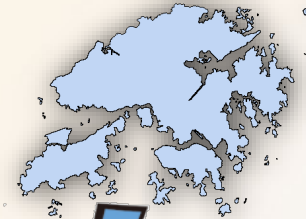


Transmitted by blood / body fluids

Hepatitis B is a liver disease caused by hepatitis B virus (HBV) infection, and it is the most common type of viral hepatitis in Hong Kong.

Epidemiology of hepatitis B in Hong Kong (1)

- As derived from the results of Population Health Survey 2020-22 conducted by the Department of Health,



About 5.6%
~410 000 people
with hepatitis B

There is **one person** living with **chronic hepatitis B** in every **20 Hong Kong people**.

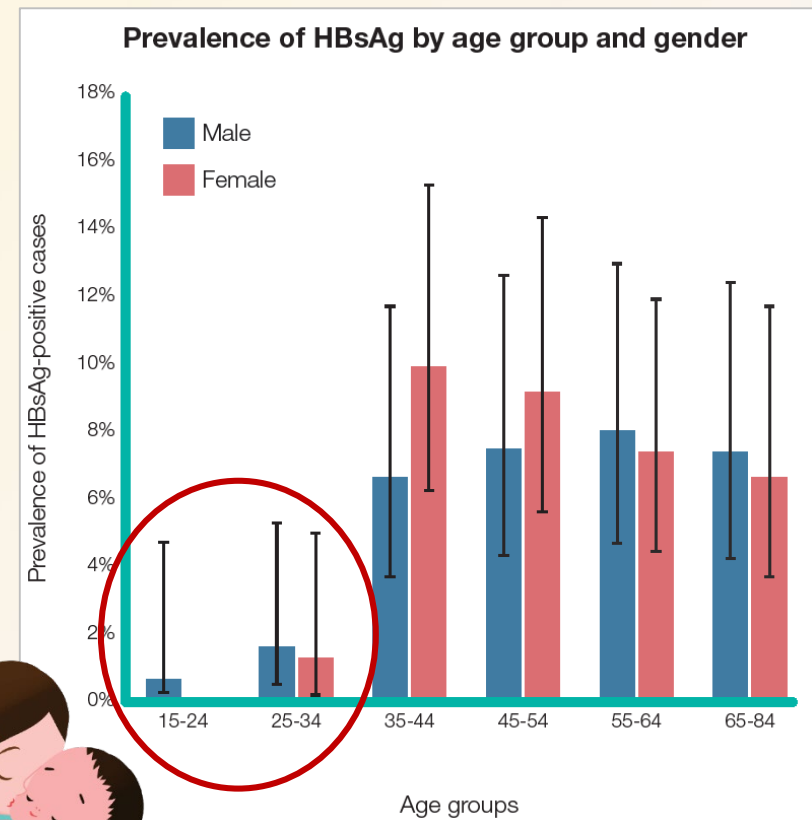


Epidemiology of hepatitis B in Hong Kong (2)

Population Health Survey 2020 - 22

- Prevalence of HBV infection is much lower in the younger generation
- HBsAg prevalence among participants
 - aged 15-24 = 0.3%
 - aged 25-34 = 1.5%

A series of interventions preventing MTCT of HBV implemented since the 1980s have effectively reduced the HBsAg prevalence of the younger generation to <1%.



Epidemiology of hepatitis B in Hong Kong (3)

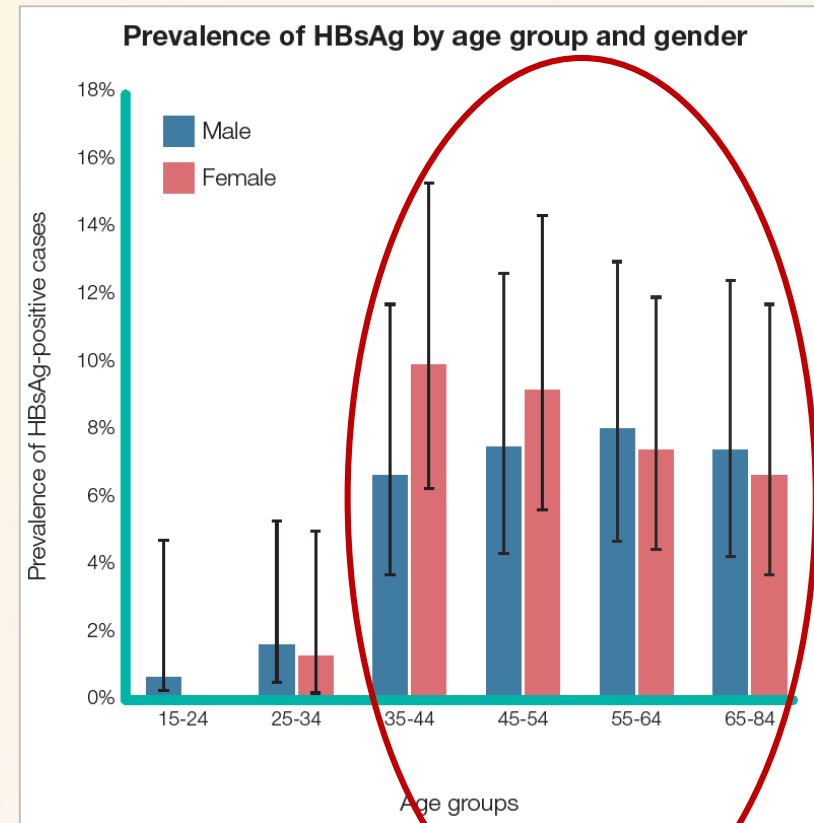
Population Health Survey 2020 - 22

- Prevalence of HBV infection is much higher among the participants aged 35 or above

HBsAg prevalence among those aged 35-54 = 8.4%

- Mainly affecting those who are born before 1988, when the universal neonatal hepatitis B vaccination programme was implemented

Public health burden imposed by hepatitis B in Hong Kong remains substantial



How is hepatitis B transmitted? (1)

1

Mother-to-child transmission
(MTCT)



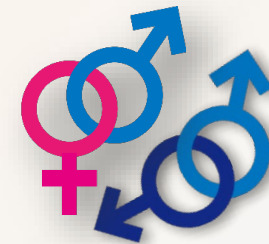
2

Contact with blood/ body fluids
of an infected person



3

Sexual contact



How is hepatitis B transmitted? (2)

1 MTCT

- HBV can be transmitted from mothers with chronic hepatitis B (CHB) to their babies during normal spontaneous delivery or caesarean section
- In endemic places, most persons with CHB acquired HBV infection by MTCT
- Up to **90%** of newborn babies infected with HBV would develop CHB



How is hepatitis B transmitted? (3)

2 Contact with blood/ body fluids of an infected person



Contact with an infected person's blood or body fluids through broken skin, or mucosal membranes of the eyes or mouths



Sharing injection instruments for drug injection



Using contaminated instruments for ear-piercing, tattooing or acupuncture



Sharing personal items, which may be contaminated with blood, such as razors, shavers and nail clippers



Reusing inadequately sterilised medical equipment

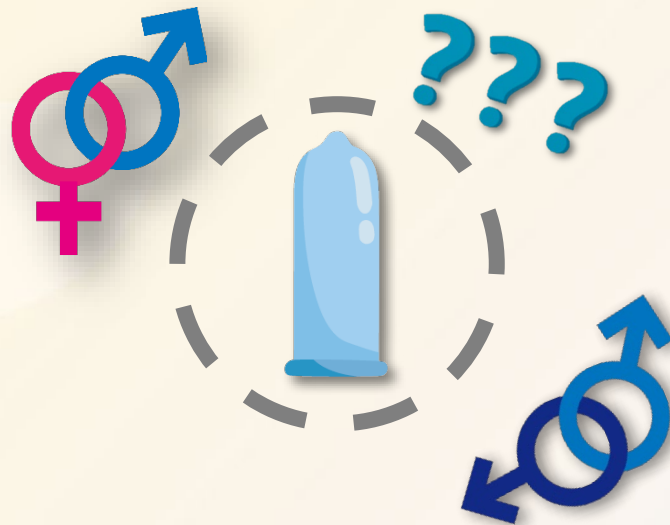


Transfusion of contaminated blood or blood products

How is hepatitis B transmitted? (4)

3 Sexual contact

Unprotected sexual contact with an infected person



How is hepatitis B transmitted? (5)

HBV is **not** transmitted through breastfeeding or social contact

Breastfeeding



Sharing eating utensils, dining together

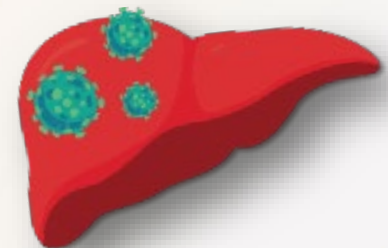


Hugging, shaking hands and kissing



Signs and symptoms of acute hepatitis B (1)

- ✎ The incubation period ranges from 30 to 180 days, with an average of 75 days
- ✎ Infants and young children are mostly asymptomatic when newly infected with HBV
- ✎ 30–50% of older children or adults with acute hepatitis B may develop symptoms
- ✎ The symptoms are undistinguishable from hepatitis of other causes



Signs and symptoms of acute hepatitis B (2)



Fever



Tea-coloured urine



Fatigue



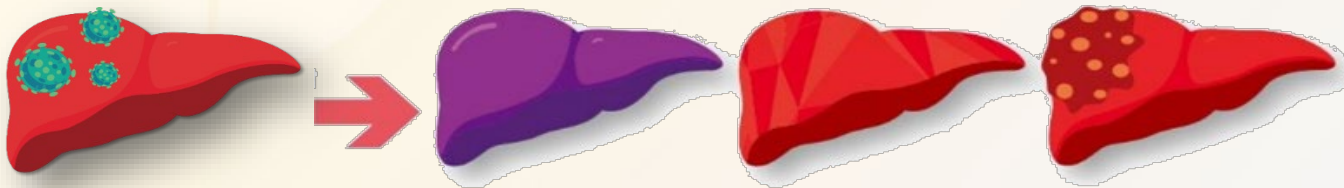
Jaundice



Vomiting

Chronic hepatitis B (1)

- Some people fail to clear the virus and develop **chronic hepatitis B (CHB)**
 - Most adults can recover after acute HBV infection, and the risk of developing chronic infection in adults is about 5%
 - Up to 90% of newborn babies infected with HBV would develop CHB
 - CHB is a **lifelong infection**
- About **15 - 40%** of untreated people with CHB could develop cirrhosis and liver cancer



HBV infection

Chronic
hepatitis

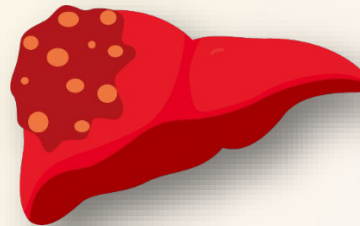
Cirrhosis

Liver
cancer

Chronic hepatitis B (2)

- HBV infection may **remain asymptomatic** until signs and symptoms develop secondary to serious liver damage
- When people with CHB develop symptoms, it may be a sign of advanced liver disease (such as cirrhosis and liver cancer)

About 80% of people with liver cancer in Hong Kong are infected with HBV



Chronic hepatitis B (3)




No need to follow up if a person with CHB has no symptoms?

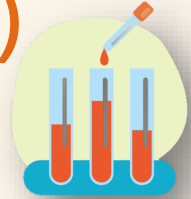
WRONG!

- Majority of people with CHB could be asymptomatic
- CHB could lead to cirrhosis and liver cancer
- Should have **regular examination** for early detection of changes in the liver condition
- Follow doctor's instruction to receive treatment and follow-up

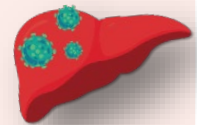


Blood test to diagnose hepatitis B (1)

 **Blood test** is required to diagnose hepatitis B and assess immune status




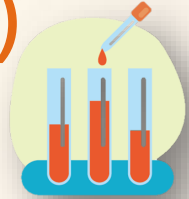
Test results		Clinical interpretation
Hepatitis B surface antigen (HBsAg)	Hepatitis B surface antibody (anti-HBs)	
Positive (+)	Negative (-)	<ul style="list-style-type: none"> • Infected with HBV • Should seek medical consultation as early as possible

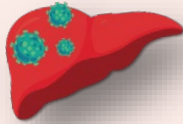



Persons who are uncertain about their hepatitis B status should get tested

Blood test to diagnose hepatitis B (2)


 **Blood test** is required to diagnose hepatitis B and assess immune status

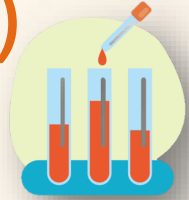


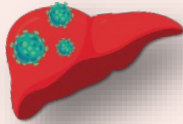


Test results		Clinical interpretation
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Positive (+)	Negative (-)	<ul style="list-style-type: none"> • Infected with HBV • Should seek medical consultation as early as possible 
Negative (-)	Positive (+)	<ul style="list-style-type: none"> • No evidence of HBV infection • Have adequate protective antibodies against HBV infection 

Persons who are uncertain about their hepatitis B status should get tested

Blood test to diagnose hepatitis B (3)

 **Blood test** is required to diagnose hepatitis B and assess immune status



Test results		Clinical interpretation
Hepatitis B surface antigen (HBsAg)	Hepatitis B surface antibody (anti-HBs)	
Positive (+)	Negative (-)	<ul style="list-style-type: none"> • Infected with HBV • Should seek medical consultation as early as possible 
Negative (-)	Positive (+)	<ul style="list-style-type: none"> • No evidence of HBV infection • Have adequate protective antibodies against HBV infection 
Negative (-)	Negative (-)	<ul style="list-style-type: none"> • No evidence of HBV infection • Not immune to HBV infection and may consider hepatitis B vaccination 

Persons who are uncertain about their hepatitis B status should get tested

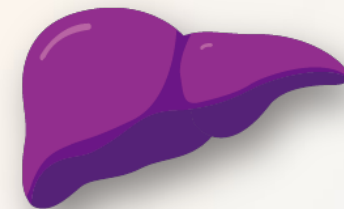
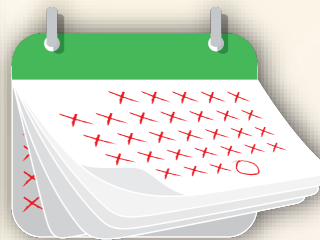
Blood test to diagnose hepatitis B (4)

- Persistence of HBsAg positive result for **more than 6 months** indicates **chronic HBV infection**

HBsAg positive result for
more than 6 months



Chronic hepatitis B

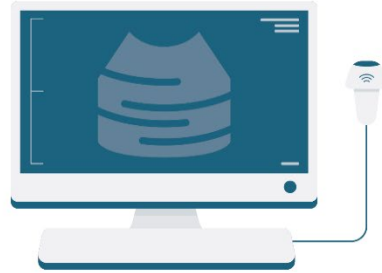


Persons at a higher risk of HBV infection



- Introduction of hepatitis B
- Living with chronic hepatitis B
- Hepatitis B vaccine
- Health information of viral hepatitis
- Q&A

People with CHB should



receive regular
examination



follow doctor's
instruction to receive
treatment and follow-up



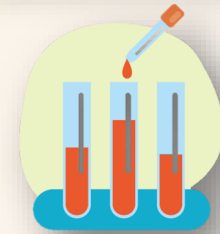
maintain healthy diet
and lifestyle



adopt preventive
measures to stop HBV
transmission

Regular examination

- Have **regular examination**, no matter whether clients have symptoms
 - ✓ **Regular blood test** (liver function, alpha-fetoprotein, viral load, etc.)
 - ✓ **Ultrasonographic abdominal examination** for early detection of changes in the liver condition



Follow doctor's instruction to receive treatment and follow-up

- ✔ **Antiviral medication** is effective in **inhibiting HBV replication** and reducing the risk of cirrhosis, liver failure and liver cancer
- ✔ Doctors will assess the condition of client to determine when antiviral medication is needed
- ✔ Whether the client requires antiviral medication depends on
 - The level of liver enzymes (e.g. alanine aminotransferase (ALT)) in the blood
 - The level of viral replication in their body – hepatitis B viral load (HBV DNA)
 - The presence of liver damage caused by viral infection (Degree of liver inflammation, liver fibrosis/ cirrhosis)



Please consult your doctor for further information regarding antiviral treatment

Maintain healthy diet and lifestyle



Do not smoke or drink



Maintain balanced diet with abundant fresh vegetables and fruits



Avoid eating raw or undercooked shellfish



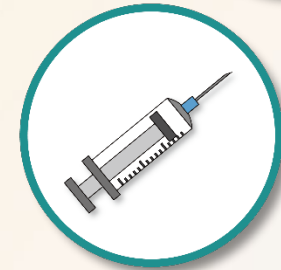
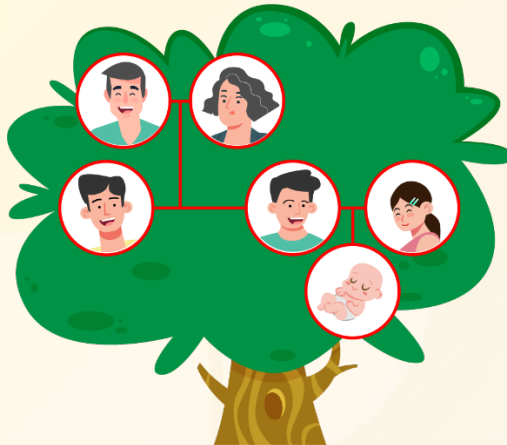
Do not take medication with uncertain ingredients to avoid liver damage



Be physically active and maintain healthy body weight

Prevent transmission of HBV (1)

- Family members and sexual partners of people with hepatitis B should **get tested** for hepatitis B, and consider receiving **hepatitis B vaccination** if found to be non-immune and not infected with HBV

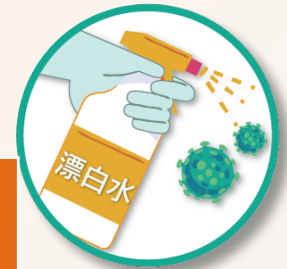


- Practice **safer sex and use condom** if sex partner has an unknown hepatitis B immunity status or has not been fully vaccinated



Prevent transmission of HBV (2)

- Wear gloves while handling open wounds with care and bandage them properly
- Disinfect items contaminated by blood or body fluids with household bleach and gloves on



Contaminated items	Methods
<p>Furniture or toilet seat splashed by blood</p>	<ul style="list-style-type: none"> Wipe the visible dirt away with highly absorbent disposable towels Disinfect with 1 in 4 diluted household bleach Leave the bleach for 10 minutes, then rinse with water and wipe dry



Prevent transmission of HBV (3)

Contaminated items	Methods
<p>clothing stained with blood</p>	<ul style="list-style-type: none"> Immerse in 1 in 49 diluted household bleach Leave the bleach for 30 minutes, then rinse with water
<p>Furniture/ items splashed by body fluid</p>	<ul style="list-style-type: none"> Wipe the visible dirt away with highly absorbent disposable towels Disinfect with 1 in 49 diluted household bleach Leave the bleach for 30 minutes, then rinse with water



Prevent transmission of HBV (4)

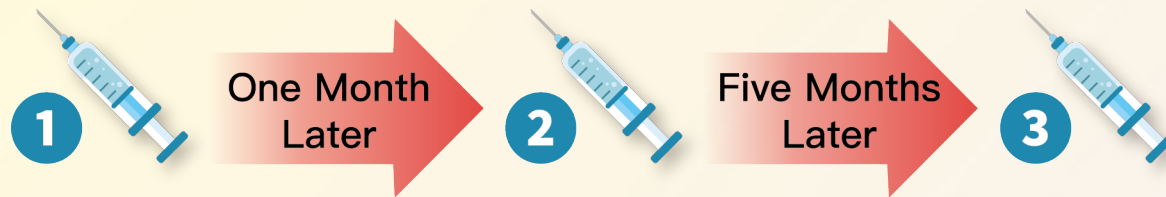
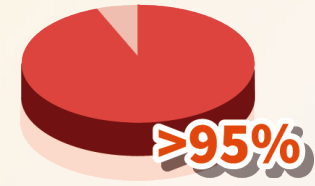
- Do not share personal care items which may be contaminated with blood, such as razors and nail clippers
- Do not share needles or any other injecting equipment



- Introduction of hepatitis B
- Living with chronic hepatitis B
- Hepatitis B vaccine**
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Hepatitis B vaccine is effective in preventing HBV infection

- More than 95% of healthy people would produce protective antibody levels after completing 3-dose vaccination series



- Provide long-term protection
- Very safe with minimal side effects (e.g. slight pain at injection site)
- If there is an interruption between doses of hepatitis B vaccination, it is not necessary to restart the vaccination series. Arrangement for the subsequent doses should be made as soon as possible



Universal childhood hepatitis B vaccination programme

- Since 1988, the universal childhood hepatitis B vaccination programme has been implemented in Hong Kong
- Maternal and Child Health Centres of the DH offer hepatitis B vaccination to children from birth to five years old



At birth

1



Age of
1 month

2



Age of
6 months

3



People at higher risk of infection should consider hepatitis B vaccination

- Family members (e.g. parents, siblings & offspring) & sexual partners of people with CHB
- People who inject drugs
- Men who have sex with men
- People with multiple sexual partners
- People with HIV
- People who receive blood/ blood products on a regular basis
- People on dialysis
- Healthcare workers who may have occupational exposure to blood or other body fluids of patients



Only persons without HBV infection and protective antibody require hepatitis B vaccination.
If you are tested to be infected with HBV, vaccination will not be effective.

Who **should not receive** hepatitis B vaccine?

-  Allergic to any component in hepatitis B vaccine (e.g. yeast)
-  Had allergic reaction after previous dose of hepatitis B vaccine



Please consult your family doctor if you want to receive hepatitis B vaccination.

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- Living with chronic hepatitis B
- Hepatitis B vaccine
- Health information of viral hepatitis**
- Q&A

Health information of viral hepatitis

Website of
Viral Hepatitis Control Office, Department of Health
www.hepatitis.gov.hk

VHCO
Viral Hepatitis Control Office
Department of Health
The Government of the Hong Kong Special Administrative Region

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行動計劃
HONG KONG
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ACTION PLAN
2025 - 2030

Hepatitis A, E







Hepatitis B

Maternal Transmission
of Hepatitis B

Hepatitis C



Health information of viral hepatitis B

Category	Cover	Title	QR code
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Video		<u>Hepatitis B Can Cause Cancer Get Tested and Treated Early</u>	
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Poster		<u>Hepatitis B Can Cause Cancer Get Tested and Treated Early</u>	

Health information of viral hepatitis B

Category	Cover	Title	QR code
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Pamphlet		<u>Prevent Mother-to-child Transmission of Hepatitis B</u>	

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