



**LICKETY-SPLIT
HEPATITIS A & B
VACCINES**

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Objectives

- To present information about Hepatitis A and Hepatitis B vaccines in a rapid and superficial manner
- To establish a baseline of information for those who are involved with vaccine promotion and administration

Hepatitis A Infection

- RNA virus
- Humans are only natural host
- Stable at low pH levels and moderate temperatures
- Inactivated by temperature greater than 185 degrees F, formalin, or chlorine
- Fecal-oral transmission, replicates in the liver
- Virus excretion occurs 10 - 12 days after infection and may continue for up to 3 weeks after onset of symptoms
- Hepatitis is highly endemic in areas such as Central and South America, Africa, the Middle East, Asia and the Western Pacific

Hepatitis A Clinical Features

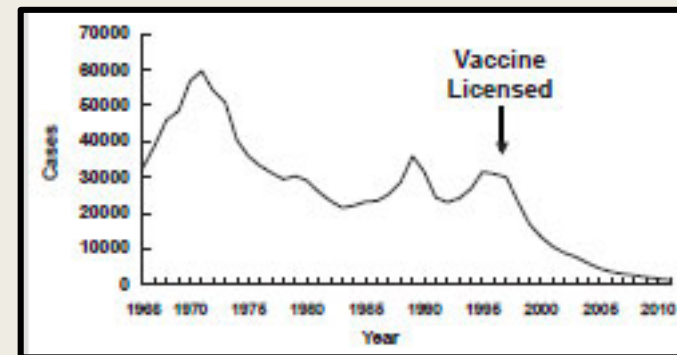
- Incubation period 28 days
- Symptoms non-specific – fever, malaise, anorexia, nausea, dark urine and jaundice
- Children generally asymptomatic; adults symptomatic
- Severe clinical complications rare but do occur – e.g. fulminant hepatitis
- Serologic testing is required to confirm diagnosis
- Treatment is supportive; no specific treatment available

Hepatitis A Vaccine

- Inactivated whole-virus vaccines
- Two formulations – pediatric and adult
- 2 dose schedule
- Intramuscular injection
- ACIP Recommendations
 - *All children starting at age 1*
 - *Adults at risk – international travelers, contact with some international adoptees, men who have sex with men, persons who use illegal drugs, persons with clotting disorders, occupational risk, chronic liver disease*
 - *Not routinely recommended for plumbers, food handlers, child care workers or healthcare workers*

The Good News

- Hepatitis A became nationally reportable in 1966
- Peak year of reported cases was 1971 (59,606 cases)
- Hepatitis A vaccine introduced in 1996
- Hepatitis A rates have decreased and have been at historically low levels since 1998
- In 2010, 1,670 reported cases



Hepatitis B Infection

- Hepadnaviridae family
- Numerous antigenic components
- Humans only known host
- May retain infectivity for more than 7 days at room temperature
- More than 350 million people chronically infected worldwide
- Established cause of chronic hepatitis, cirrhosis and 50% of hepatocellular cancers
- Bloodborne transmission; can be transmitted 1 -2 months before and after onset of symptoms; person with acute or chronic infection with HBsAG present can transmit

Hepatitis B Clinical Features

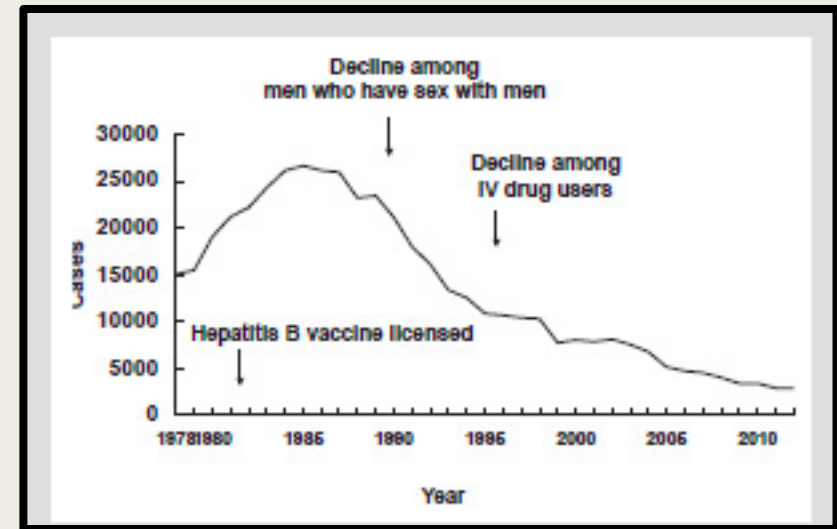
- Incubation period 45 – 160 days
- Non-specific symptoms: malaise, anorexia, headaches, myalgia, fever, headache ending with jaundice
- At least 50% of infections are asymptomatic
- Chronic hepatitis more likely to occur with infection as infant or child
- Serologic testing needed for diagnosis; specific tests to determine whether acutely or chronically infected, immune due to vaccination, immune due to natural infection
- Treatment is supportive; there is no specific treatment

Hepatitis B Vaccine

- Recombinant vaccine
- 2 formulations - pediatric and adult; also is combined with some other vaccines
- 3 doses
- Duration of immunity – 20 years
- Intramuscular injection in deltoid muscle of adults and children, lateral thigh in infants and neonates, 5/8 inch needle for newborns, 1 inch needle for all others
- Specific formulation for dialysis patients; also get more doses
- Vaccine recommended for:
 - *All infants after birth and before hospital discharge*
 - *Adults at risk for HBV infection*
 - Sexual exposure
 - Percutaneous or mucosal exposure to blood – e.g. healthcare workers
 - Some international travelers
 - Persons infected with HIV

The Good News

- Hepatitis B became reportable in the 1970s
- Peaked in mid-1980s with 26,000 cases



Thank you for your patience!

- Source: The Pink Book <https://www.cdc.gov/vaccines/pubs/pinkbook/index.html>