Table B-1: Hepatitis A Fact Sheet *(www.cdc.gov)*		
Signs & Symptoms	Adults will have signs and symptoms more often than children.	
	jaundice ♦ fatigue ♦ abdominal pain ♦ loss of appetite ♦ nausea ♦ diarrhea ♦ fever	
Cause	Hepatitis A virus (HAV)	
Long-term Effects	There is no chronic (long-term) infection (cannot get again once you have it.) About 15% of people infected with HAV will have prolonged or relapsing symptoms over a 6-9 month period.	
Transmission	HAV is found in the stool (feces) of persons with hepatitis A. Usually spread from person to person by putting something in the mouth (even though it may look clean) that has been contaminated with the saliva of a person with hepatitis A.	
Persons at Risk	Household contacts of infected persons Sex contacts of infected persons Persons, especially children, who live in areas with increased rates of hepatitis A during the baseline period from 1987-1997. (see map below)	Persons traveling to countries where hepatitis A is common Men who have sex with men Injecting and non-injecting drug users
Prevention	Hepatitis A vaccine is the best protection. Short-term protection against hepatitis A is available from immune globulin. It can be given before and within 2 weeks after coming in contact with HAV. Always wash your hands with soap and water after using the bathroom, changing a diaper, and before preparing and eating food.	
Vaccine Recommendations	Vaccine is recommended for the following persons from 12 months of age and older: travelers to areas with increased rates of hepatitis A; Men who have sex with men; Injecting and non-injecting drug users; Persons with clotting-factor disorders (e.g. hemophilia); Persons with chronic liver disease;Children living in areas with increased rates of hepatitis A (see map below))	
Trends & Statistics	Occurs in epidemics both nationwide and in communities During epidemic years, the number of reported cases reached 35,000. In the late 1990s, hepatitis A vaccine was more widely used and the number of cases reached historic lows. One-third of Americans have evidence of past infection (immunity).	

Figure B-1: Global Anti-HAV Prevalence (1987-1997) (www. cdc.gov)

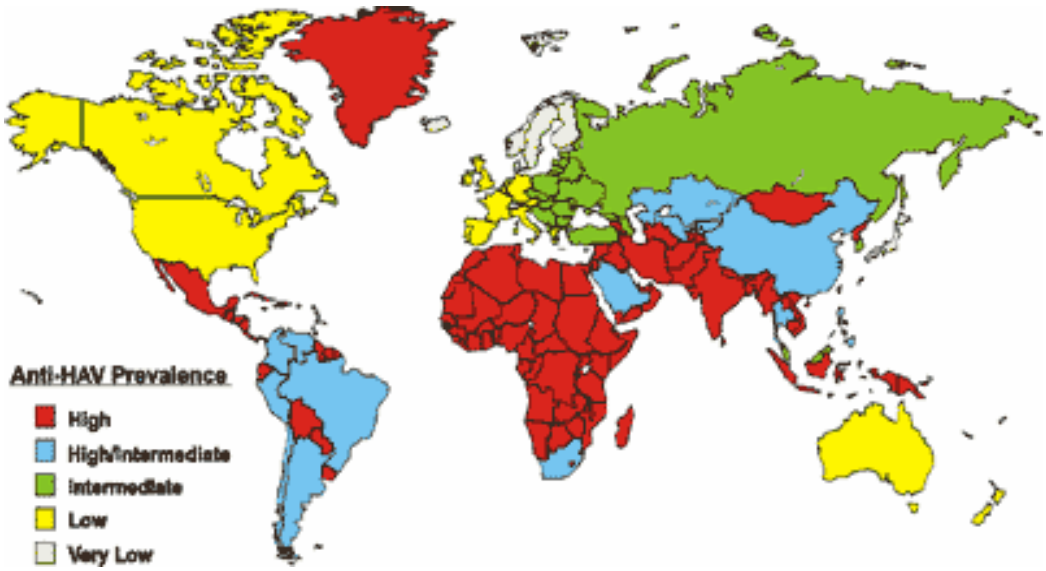

Table B-2: Hepatitis B Fact Sheet *(page 1 of 2) (www.cdc.gov)*		
Signs & Symptoms	About 30% of persons have no signs or symptoms. Signs and symptoms are less common in children than adults.	
	jaundice ♦ fatigue ♦ abdominal pain ♦ loss of appetite ♦ Nausea ♦ vomiting ♦ joint pain	
Cause	Hepatitis B virus (HBV)	
Long-Term Effects Without Vaccination	infection occurs in: 90% of infants infected at birth 30% of children infected at age 1 - 5 years 6% of persons infected after age 5 years Death from chronic liver disease occurs in: 15-25% of chronically infected persons	
Contraindications to vaccine	A serious allergic reaction to a prior dose of hepatitis B vaccine or a vaccine component is a contraindication to further doses of hepatitis b vaccine. The recombinant vaccines that are licensed for use in the United States are synthesized by Saccharomyces cerevisiae (common bakers' yeast), into which a plasmid containing the gene for HBsAg has been inserted. Purified HBsAg is obtained by lysing the yeast cells and separating HBsAg from the yeast components by biochemical and biophysical techniques. Persons allergic to yeast should not be vaccinated with vaccines containing yeast.	
Transmission	Occurs when blood from an infected person enters the body of a person who is not infected. HBV is spread through having sex with an infected person without using a condom (the efficacy of latex condoms in preventing infection with HBV is unknown, but their proper use may reduce transmission), by sharing drugs, needles, or "works" when "shooting" drugs, through needlesticks or sharps exposures on the job, or from an infected mother to her baby during birth. Persons at risk for HBV infection might also be at risk for infection with hepatitis C virus (HCV) or HIV.	
Risk Groups	Persons with multiple sex partners or diagnosis of a sexually transmitted disease Men who have sex with men Sex contacts of infected persons Injection drug users Household contacts of chronically infected persons	Infants born to infected mothers Infants/children of immigrants from areas with high rates of HBV infection (see country listing) Health care and public safety workers. Hemodialysis patients

Table B-2: Hepatitis B Fact Sheet *(page 2 of 2) (www.cdc.gov)*	
Prevention	Hepatitis B vaccine is the best protection. If you are having sex, but not with one steady partner, use latex condoms correctly and every time you have sex. The efficacy of latex condoms in preventing infection with HBV is unknown, but their proper use may reduce transmission. If you are pregnant, you should get a blood test for hepatitis B; Infants born to HBV-infected mothers should be given HBIG (hepatitis B immune globulin) and vaccine within 12 hours after birth. Do not shoot drugs; if you shoot drugs, stop and get into a treatment program; if you can't stop, never share drugs, needles, syringes, water, or "works", and get vaccinated against hepatitis A and B. Do not share personal care items that might have blood on them (razors, toothbrushes). Consider the risks if you are thinking about getting a tattoo or body piercing. You might get infected if the tools have someone else's blood on them or if the artist or piercer does not follow good health practices. If you have or had hepatitis B, do not donate blood, organs, or tissue. If you are a health care or public safety worker, get vaccinated against hepatitis B, and always follow routine barrier precautions and safely handle needles and other sharps.
Vaccine Recommendations	Hepatitis B vaccine available since 1982 Routine vaccination of 0-18 year olds Vaccination of risk groups of all ages
Treatment & Medical Management	HBV infected persons should be evaluated by their doctor for liver disease. Adefovir dipivoxil, interferon alfa-2b, pegylated interferon alfa-2a, lamivudine, and entecavir are five drugs used for the treatment of persons with chronic hepatitis B. These drugs should not be used by pregnant women. Drinking alcohol can make your liver disease worse.
Trends & Statistics	Number of new infections per year has declined from an average of 260,000 in the 1980s to about 73,000 in 2003. Highest rate of disease occurs in 20-49-year-olds. Greatest decline has happened among children and adolescents due to routine hepatitis B vaccination. Estimated 1.25 million chronically infected Americans, of whom 20-30% acquired their infection in childhood.

Table B-3: Countries with Higher Prevalence of Hepatitis B *(www.cdc.gov) (page 1 of 2)*	
AFRICA	
North Africa	Algeria ♦ Egypt ♦ Libya ♦Arab ♦ Jamahiriya ♦ Morocco ♦ Tunisia
East Africa	Burundi ♦ Comoros ♦ Djibouti ♦ Eritrea ♦ Ethiopia ♦ Kenya Madagascar ♦ Malawi ♦ Mauritius ♦ Mozambique ♦ Reunion Rwanda ♦ Seychelles ♦ Somalia ♦ Uganda ♦ United R. of Tanzania
Southern Africa	Botswana ♦Lesotho ♦Namibia ♦South Africa ♦ Swaziland Zimbabwe
West Africa	Benin ♦ Burkina Faso ♦ Cape Verde ♦ Cote d'Ivoire ♦ Gambia Ghana ♦ Guinea ♦ Guinea-Bissau ♦ Liberia ♦ Mali ♦ Mauritania Niger ♦ Nigeria ♦ Sao Tome ♦ Principe Senegal ♦ Sierra Leone Togo
Central Africa	Angola ♦ Cameroon ♦ Central African Republic ♦ Chad ♦ Congo ♦ D. R. of the Congo ♦ Equatorial Guinea ♦ Gabon ♦ Sudan ♦ Zambia
Europe	
Eastern Europe and the Newly Independent States of the former Soviet Union	Albania ♦ Armenia ♦ Azerbaijan ♦ Belarus ♦ Bosnia and Herzegovina ♦ Bulgaria ♦ Croatia ♦ Czech Republic ♦ Estonia ♦ Georgia ♦ Kazakhstan ♦ Kyrgyzstan ♦ Latvia ♦ Lithuania ♦ Poland ♦ Republic of Moldova ♦ Romania ♦ Russian Federation ♦ Slovakia ♦ Tajikistan ♦ T.F.Y.R. ♦ Macedonia ♦ Turkmenistan ♦ Ukraine ♦ Uzbekistan ♦ Yugoslavia
Western Europe	Greece ♦ Italy ♦ Malta ♦ Portugal ♦ Spain

Table B-3: Countries with Higher Prevalence of Hepatitis B (www.cdc.gov) (page 2 of 2)	
The Americas	
Mexico and Central America	Belize ♦ Guatemala ♦ Honduras ♦ Panama
Temperate South America	Argentina
Tropical South America	Bolivia ♦ Brazil ♦ Ecuador ♦ Guyana ♦ Suriname Venezuela
The Caribbean	Antigua and Barbuda ♦ Dominica ♦ Dominican Republic Grenada ♦ Haiti ♦ Jamaica ♦ Puerto Rico ♦ Saint Kitts and Nevis ♦ Saint Lucia ♦ St Vincent & Grenadines Trinidad and Tobago ♦ Turcs and Caicos Islands
Australia and the South Pacific Islands	American Samoa ♦ C.N. Mariana Islands ♦ Cook Islands ♦ Fiji ♦ French Polynesia ♦ Guam ♦ Kiribati ♦ Marshall Islands ♦ Micronesia ♦ Nauru ♦ New Caledonia Niue ♦ Palau ♦ Papua New Guinea ♦ Samoa ♦ Solomon Islands ♦ Tonga ♦ Tuvalu ♦ Vanuatu ♦ Wallis and Futuna Islands
Asia	
East Asia	China ♦ D. People's R. of Korea ♦ Japan ♦ Mongolia Republic of Korea
Middle East	Bahrain ♦ Iran (Islamic Republic of) ♦ Iraq♦ Israel Jordan ♦ Kuwait ♦ Lebanon ♦ Oman ♦ Qatar ♦ Saudi Arabia ♦ Syrian Arab Republic ♦ Turkey ♦ United Arab Emirates ♦ Yemen
Southeast Asia	Brunei ♦ Cambodia ♦ Indonesia ♦ Laos ♦ People's D. R. Malaysia ♦ Myanmar (Burma) ♦ Philippines ♦ Singapore ♦ Thailand ♦ Vietnam
Indian Subcontinent and South Asia	Afghanistan ♦ Bangladesh ♦ Bhutan ♦ India ♦ Maldives ♦ Nepal ♦ Pakistan

Table B-4: How do I interpret hepatitis B serological lab results?		
Interpretation of the Hepatitis B Panel		
Tests	**Results**	**Interpretation**
HBsAg anti-HBc anti-HBs	negative negative negative	Susceptible
HBsAg anti-HBc anti-HBs	negative positive positive	Immune due to natural infection
HBsAg anti-HBc anti-HBs	negative negative positive	Immune due to hepatitis B vaccination
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive positive negative	Acutely infected
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive negative negative	Chronically infected
HBsAg anti-HBc anti-HBs	negative positive negative	Four interpretations possible *

* Four Interpretations:

1. Might be recovering from acute HBV infection.
2. Might be distantly immune and test not sensitive enough to detect very low level of anti-HBs in serum.
3. Might be susceptible with a false positive anti-HBc.
4. Might be undetectable level of HBsAg present in the serum and the person is actually chronically infected.