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## Hepatitis B Vaccine - A New Weapon For Disease Control

In an exciting development, Hepatitis B Vaccine was licensed in November, 1981. The vaccine is produced from antigen harvested and purified from the plasma of human carriers of hepatitis B virus and is the first vaccine ever made directly from human blood.

Hepatitis B virus is an important cause of viral hepatitis in Alaska. There is no specific treatment for this disease. The incubation period for Type B hepatitis is six weeks to six months. Persistence of viral infection (the chronic hepatitis B carrier state) occurs in 5 to 10% of persons following acute hepatitis B. Serious complications and sequelae of hepatitis B virus infection include massive hepatic necrosis, cirrhosis of the liver, chronic active hepatitis, and hepato-cellular carcinoma. There is also evidence that several diseases other than hepatitis have been associated with hepatitis B virus infection through an immunologic mechanism involving antigen-antibody complexes. Such diseases include a syndrome with rash, urticaria, and arthralgia resembling serum sickness; polyarteritis nodosa; membranous glomerulonephritis; and infantile papular acrodermatitis.

The new Hepatitis B Vaccine has been demonstrated to be safe and efficacious in humans. Studies have shown Hepatitis B Vaccine to reduce the incidence of infection by over 90 percent. The vaccine protects against acute hepatitis B asymptomatic infection and chronic antigenemia.

Hepatitis B Vaccine is given intramuscularly in a series of three doses. The first shot is given at the elected date; the second dose a month later; and the third dose six months after the first dose. Available data suggests that immunity will last for about five years in patients who have received all three doses, after which time a single booster dose of vaccine might be necessary to maintain immunity.

A special Hepatitis B Vaccine Immunization Project is currently underway in Alaska, being conducted by the Centers for Disease Control (CDC) and the Indian Health Service. Nearly 1700 Alaskan Natives in Southwestern Alaska will be vaccinated and protected from Hepatitis B infection. The CDC field station in Anchorage has been closely involved in public health and disease prevention in Alaska for many years. CDC took the lead in initiating this vaccine project in conjunction with the Alaska Area Native Health Service. Hepatitis B is a serious health hazard throughout the world. In Alaska, studies by CDC have shown that the rate of Hepatitis B in some Alaskan villages is 75 times higher than the rates reported for other populations in the United States. As in other populations of the world where hepatitis B infection is very common, the Alaskan Natives also have a higher than expected rate of primary liver cancer, five times the rate observed in the United States. Because of the high prevalence of hepatitis B disease, Alaska was therefore high priority for first distribution of the vaccine in the United States. At this time only those persons involved in the CDC study are candidates for vaccination with the New Hepatitis B Vaccine.

Although licensed in November of 1981, Hepatitis B Vaccine is in short supply and all available vaccine has been allocated for clinical trials. It is not expected that any Hepatitis B Vaccine will be commercially available until at least the summer of 1982. The Division of Public Health is carefully following developments related to Hepatitis B Vaccine and its availability so that Division policies can be developed and vaccine made available consistent with recommendations for its use as they become available. Official recommendations for use of Hepatitis B Vaccine have not yet been made by the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Pediatrics (AAP). As the vaccine becomes widely available and formal recommendations for its use are formulated, the Division of Public Health will provide additional information and recommendations.