

**Medical Staff vaccine decrease risk of Hepatitis B**

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## **Abstract**

This report investigates the study Medical staff vaccine decrease risk of hepatitis B. Hepatitis B virus (HBV) infection is a well recognized occupational risk for healthcare workers (HCWs). Hepatitis B vaccination is the most effective measure to prevent HBV infection and its consequences .

## **Introduction**

Hepatitis B is the most important infectious occupational disease for health care workers. The high risk of being infected is the consequence of the prevalence of virus carriers in the assisted population, the high frequency of exposure to blood and other body fluids and the high contagiousness of hepatitis B virus (HBV). Vaccination is able to prevent the most threatening consequences of the infection in responders, even after loss of detectable antibodies. Non-responders to the primary series may benefit from administration of up to three more doses of vaccine. However, newly developed vaccines that seem more immunogenic are presently under evaluation and should further decrease the number of non-immune workers in the near future. In the meantime, coverage with standard vaccines should be improved also by supplying complete information on the risks of hepatitis B and on the safety and efficacy of active immunization .

## **Discussion :**

Throughout the world, millions of healthcare professionals work in health institutions and it is estimated that 600,000 to 800,000 injuries occur among them per year<sup>(1)</sup> . Hepatitis B virus (HBV) is the greatest threat of infection for healthcare workers (HCW). The risk of contracting hepatitis B by healthcare personnel is four times greater than that of the general adult population, among those who do not work in healthcare institutions<sup>(2)</sup>. The discovery of HBV vaccines and the results obtained from their introduction constitute a landmark of great importance for medical practice. Besides providing immunity against HBV infection, these vaccines indirectly protect against hepatocarcinoma<sup>(3)</sup> . During the last few years, the American Health Inspection Service has demonstrated a decrease in the incidence of hepatitis B in HCW, probably due to the use of vaccines and recommended safety measures<sup>(4)</sup>. Considering that hepatitis B virus is the etiological agent of chronic hepatopathies, and that patients with this acute infection may not develop symptoms in most cases, knowledge of aspects of this infection, such as prevalence, effectiveness of vaccination and are fundamental for the improvement of preventive measures for health professionals .December 8, 1997 Progress Toward the Elimination of Hepatitis B Virus Transmission Among Health Care Workers in the United States . Vaccination coverage of HCWs was determined from a review of medical records on a sample of employees from 113 randomly selected hospitals. The number of HBV infections among HCWs and the general US population for 1983 through 1995 was estimated from national surveillance data. Studies on long-term protection after hepatitis B vaccination of adults were reviewed<sup>(1)</sup> .

A total of 2837 employee medical records were reviewed; 2532 employees (90%) were eligible to receive hepatitis B vaccine, and 66.5% of them (95% confidence interval, 61.9%-70.9%) had received 3 doses of hepatitis B vaccine. Vaccination coverage was highest (75%) for personnel with frequent exposure to infectious body fluids (phlebotomists, laboratory personnel, and nursing staff) and lowest (45%) for employees at low risk for exposure (dietary and clerical staff). The number of HBV infections among HCWs declined from 17 000 in 1983 to 400 in 1995. The 95% decline in incidence observed among HCWs is 1.5-fold greater than the reduction in incidence in the general US population. Studies on long-term protection demonstrate that vaccine-induced protection persists at least 1 years even when titers of antibody to hepatitis B surface antigen decline below detectable levels<sup>(4)</sup>.

### **Conclusions :**

Although a high percentage of HCWs have been fully vaccinated with hepatitis B vaccine, efforts need to be made to improve this coverage. There has been a dramatic decrease in the number of HBV infections among HCWs who are now at lower risk of HBV infection than the general US population. Vaccine-induced protection persists at least 11 years and booster doses are not needed at this time for adults who have responded to vaccination .

### **References :**

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