

# Assessment of Immunization Rate of Hepatitis B Vaccination among Health Care Personnel in Tehran

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## ABSTRACT

### Background

Hepatitis B is one of the most important etiologic factors of acute and chronic hepatitis, cirrhosis of the liver and hepatocellular carcinoma. The best preventive method is vaccination. The Aim of the study was to evaluate the immunization rate against hepatitis B in medical health personnel.

### Materials and Methods

This study was conducted on 331 health care workers employed in public, semiprivate, and private hospitals that had received the complete dosage of vaccination with an average duration of 0-3 years since the last dose, and had not previously received any booster or HBV - Immunoglobulin.

The Shariati (public), Imam Khomeini (public), Baqiyatallah (semi-private) and Day (private) hospitals were the sites of our research. Regarding the age and occupational status, persons were randomly selected and data relating to demographic aspects and serum anti-HBs titer were recorded in all individuals and then were evaluated.

### Results

Results show that out of the 331 cases, 47 (14.2%) were non-responder (Anti-HBs titer <10 IU/L), 160 (54.4%) had low response ( $10 \leq$  Anti-HBs titer  $\leq 100$  IU/L), and 104 persons (31.4%) were found to have good response (Anti-HBs titer >100 IU/liter). There was no significant relationship between the antibody titer and other variables including age, gender, smoking, body mass index (BMI) and duration since last dose of vaccine.

### Conclusions

We suggest the assessment of Anti-HBs titer after complete vaccination in high-risk groups to find non- and low-responders in order to revaccinate them.

**Keywords:** Hepatitis B, vaccination, Anti-HBs titer

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## INTRODUCTION

Hepatitis B infection is one of the major health problems throughout the world with the annual

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infection rate of 350 million cases.(1), According to the WHO data, 75% of this rate is related to the Asian countries.(2), The prevalence of this infection varies among different countries from 10-20% for the Far East (including China and Hong Kong)(3) to 3-5% for the middle-east countries (including Iran).(4, 5), According to the WHO statistics, the mortality rate of this infection