

Risk of bloodborne infection transmission in wrestling

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Occupational exposure to HBV, HCV & HIV in healthcare workers:

Percutaneous exposure: needlestick injury

Mucocutaneous exposure: broken skin or mucous membranes e.g. eyes

Other route of transmission e.g. sexual contact

Accidental blood and body fluid exposure among doctors

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Aim	To study the epidemiology and time trends of blood and body fluids (BBF) exposures among hospital doctors.
Methods	A 3-year study was carried out using data from the Exposure Prevention Information Network of four teaching hospitals in the UK.
Results	One hundred and seventy-five cases of BBF exposures in doctors were reported over the 3-year study period. Eighty-one (46%) occurred in senior doctors and 94 (54%) in junior doctors. Junior doctors had a higher rate of BBF exposures compared to senior doctors: 13 versus 4 incidents per 100 person-years, respectively (relative risk 3, 95% confidence interval 2–4). The most frequent setting for BBF exposures among senior doctors was the operating theatre/recovery (59%). Among junior doctors, it was the patient room (48%). The commonest original reason for use of sharps by junior doctors was the taking of blood samples (42%). Among senior doctors, it was suturing (41%).
Conclusion	While ongoing training efforts need to be directed towards both junior and senior doctors, our data suggest that junior doctors are at higher risk of BBF exposures and may need particular attention in prevention strategies. An improvement in the safety culture in teaching hospitals can be expected to reduce the number of BBF exposures.

Risk of transmission from patient to HCW after percutaneous injury:

HBV	Up to 30%
HCV	1-3%
HIV	0.3%

Lower risk after mucocutaneous exposure: for HIV
0.1%

Exposure to bloodborne viruses in athletes

Risk of transmission from bleeding wound to broken skin or mucous membranes of other athlete

Higher risk in contact sports e.g. boxing , wrestling (prolonged skin contact)

Higher risk of transmission for HBV (more stable in the environment and can survive outside the body for 7 days)

**What we know about
wrestling?**

Article

July 9, 1982

An Outbreak of Hepatitis B in Members of a High School Sumo Wrestling Club

Seizaburo Kashiwagi, MD; Jun Hayashi, MD; Hideyuki Ike-
matsu, MD; et al

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JAMA. 1982;248(2):213-214.

doi:10.1001/jama.1982.03330020057030

In a one-year period hepatitis B developed in five of ten members of a high school sumo wrestling club. Source of infection was traced to a sumo wrestler with HBV, and the transmission of the virus was d

ORIGINAL ARTICLE

Risk of hepatitis B infections in Olympic wrestling

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Br J Sports Med 2007;41:306-310. doi: 10.1136/bjbm.2006.032847

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Accepted 21 January 2007

Objective: First, to investigate the prevalence of the hepatitis B virus (HBV) and occult HBV infection (OC-HBV) in Turkish Olympic wrestlers. Second, to examine the relationship between HBV DNA values in sweat and blood.

Methods: A total of 70 male Olympic wrestlers were recruited as the study sample.

Results: As a result of the standard monoclonal antibody based hepatitis B surface antigen (HBsAg) detection, none of the Olympic wrestlers carried HBsAg in this study. On the other hand, according to real time PCR for serum HBV DNA detection in this study, 9 (13%) of the wrestlers had OC-HBV infection. Eight (11%) of the participants had HBV DNA in their sweat. In addition, there was a significant relationship between HBV DNA values in the blood and sweat of the wrestlers ($r=0.52$, $p<0.01$).

Conclusions: In addition to bleeding wounds and mucous membranes, sweating may be another way of transmitting HBV infections in contact sports. An HBV test should be done and each wrestler should be vaccinated at the start of his career.

9 (13%) of the wrestlers had OC-HBV infection (HBV DNA in serum)

8 (11%) of the participants had HBV DNA in their sweat.

In addition to bleeding wounds and mucous membranes, sweating may be another way of transmitting HBV infections in contact sports.

Recommendations:

An HBV test should be done and each wrestler should be vaccinated at the start of his career.

Hepatology Research / Volume 44, Issue 10

Case Report

Sequential occurrence of acute hepatitis B among members of a high school Sumo wrestling club

Sung Kwan Bae, Hiroshi Yatsuhashi ,
Ikuko Takahara, Yoko Tamada ... [See all authors](#) >

First published: 06 September 2013

<https://doi.org/10.1111/hepr.12237>

- 2 cases of acute hepatitis B admitted to hospital
- Both Sumo wrestlers from the same club
- A coach was HBsAg+

Prevention strategies:

Education

HepatitisB vaccination in contact sport

Prompt detection and management of wounds

Dressing of wounds, abrasions and cuts

Clean blood contaminated wrestling mat (one part household bleach to 10 parts water). Gloves should always be used when cleaning up any blood spills.

Medical team should follow WHO standard precautions to prevent exposure to blood and body fluids

https://www.who.int/csr/resources/publications/EP_R_AM2_E7.pdf



AIBA 2016
MEDICAL RULES
FOR RINGSIDE DOCTORS

Version 2016.09.07

HIV, HBV, HCV testing