



Hepatitis B in food handlers

Medical background

It has been known for many years that hepatitis A (historically known as infectious hepatitis) and hepatitis B (historically known as serum hepatitis) are different diseases transmitted in different ways. Hepatitis A can be transmitted by the faecal-oral route. However, attempts to infect volunteers with hepatitis B by giving oral doses of infected faecal material, nasopharyngeal washings or serum from infective cases did not succeed. Injection of infected serum did result in disease.

John Neefe and coworkers concluded from their experiments that "Virus serum hepatitis, present in a pool of plasma, induced hepatitis... in a high percentage (72 percent) of normal volunteers inoculated parenterally (via the intravenous route), but failed to induce the disease in any of ten normal volunteers who were inoculated orally. Faeces obtained from volunteers with serum hepatitis failed to induce hepatitis when administered orally or parenterally.... In a preliminary study, nasopharyngeal washings and urine from volunteers with serum hepatitis also failed to induce the disease in volunteers to whom they were administered by the nasopharyngeal and oral routes"⁽¹⁾

While such experiments would no longer be considered ethical, extensive epidemiological studies since have confirmed transmission of hepatitis B is limited to very specific routes that don't include food contamination.

A recent statement from the American Centre for Disease Control ⁽²⁾(enclosed), states that "HBV is not spread through food or water, shared eating utensils, breastfeeding, hugging, kissing, hand-holding, coughing or sneezing."

Hepatitis B can, however, be spread to close contacts if open wounds in two individuals come into contact or from blood spills contaminating breaks in the skin. The risk of such transmission is minimal in normal work situations (except, for example, medical workers performing certain types of procedures), and can be prevented by covering open wounds and sores, wiping up blood spills from the person with the virus using disinfectant or bleach, and not sharing towels. These precautions should be standard hygiene practices in all workplaces for all employees. Extra precautions are not required for employees affected by hepatitis B.

Regulations

The Animal Products Act 1999 specifies notifiable diseases that can legitimately lead to exclusion from handling animal material or products. These conditions are listed in Section A of Part 1 of Schedule 1 of the Health Act. Hepatitis B is not listed in this section; it is listed in Section B, which is for other notifiable diseases.

Therefore the Animal Products Act does not allow exclusion of persons affected by hepatitis B from handling animal material or products. Furthermore, the Ministry of Health has advised practitioners that only acute hepatitis B is a notifiable disease, not chronic hepatitis B. The Ministry of Health also states that people living with hepatitis B do not have to inform employers of their condition unless they are putting others at risk (e.g some roles in health such as surgeons who are handling human body tissues).

Conclusion

There is no justifiable medical or legal reason for excluding people with chronic hepatitis B from working in food handling roles. We recommend potential employees do not volunteer their hepatitis B status because of the risk of uninformed bias against them. We also conclude that employers should not be asking potential staff members whether they have hepatitis B.

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References

1. Neefe JR, Gellis SS & Stokes J Jr. *Homologous serum hepatitis and infectious (epidemic) hepatitis*. Am J Med. 1946;1:3-22. doi: 10.1016/0002-9343(46)90017-4. PMID: 20989806.
2. Centre for Disease Control and Prevention CfDca. *Hepatitis B questions and answers for Health Professionals*. In: Services US Dept. of Health and Human Resources, editor. 2019.

