

**Review of the History of Hepatitis A Transmitted by Transfusion**

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**Hepatitis A Virus**

- Non-enveloped RNA virus
- Almost always transmitted by fecal-oral route
- Rare cases of transmission by blood/blood products has been reported
- Causes only acute infections

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**Reported Cases of Transfusion-Associated Hepatitis A**

Year	Product	Cases	Asymptomatic	Adult	Newborn
1981	Blood	28	7	1	5 mo 10
1982	Blood	15	29	1	Adult No
1984	Fresh frozen plasma	7	30	1	Adult 2
1984	Packed RBCs	7	Asymptomatic	11	Newborn 55

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**Increased Risk of HAV Infection by Clotting Factor Concentrates**

- Purification process
  - lower levels of HAV antibodies after high-purity processing
- Change in viral inactivation techniques
- Change in epidemiology of HAV infections
  - declining HAV infections in developed countries

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**Implication for Hemophiliacs**

- Increased risk of death in patients with chronic liver disease:
- 95% of US hemophilia patients ages 21 to 40 years are infected with HCV
  - 8% are chronically infected with HBV

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**Conclusion**

HAV can be transmitted by high -purity solvent-detergent treated clotting factor concentrates.

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**Improving Product Safety for  
HAV**

- Vaccination against HAV in anti-HAV negative hemophiliacs
- Terminal heat treatment of factor VIII
- Use of recombinant factor VIII without the use of plasma derived materials

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- Screening of plasma pools for HAV-RNA
- Development and implementation of viral inactivation steps that are effective against nonenveloped viruses (filtration, gamma irradiation and chemical treatments with iodine)

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