




## Viremia induced by influenza virus

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A mouse model of influenza A/PR/8 virus infection was adopted to investigate the blood and various tissues of intranasally infected mice for the presence of viral RNA by using the nested polymerase chain reaction. The nucleoprotein gene was detected in the red blood cell fraction from 1 to 5 days post-inoculation, while it was found in the lung and brain up to 14 days and in the liver, spleen, kidney, heart, and skeletal muscle up to 7 days. The virus-specific messenger RNA was transiently found in these organs. When mice received the uv-inactivated virus, viremia did not occur. The prior transfer of the hyperimmune serum prevented pneumonia but not bronchitis, and viremia was totally abolished. These results suggest: (1) viremia occurs during the acute phase of infection, (2) the virus is present in various organs and there the virus gene is transiently expressed, and (3) the virus enters the blood stream possibly through capillaries of the infected alveolar wall. Viremia may influence the pathogenesis of influenza.

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Influenza; viremia; serum therapy; PCR