96. **What is the role of infections in MS?**

To date, despite years of research, no infection has been discovered as a cause of MS. However, several viruses have been associated with MS. Most notably and recently, Epstein-Barr Virus (EBV) has been associated with MS. This has created significant debate on whether it actually causes MS or if it is merely an association since EBV is a very common global infection that typically resolves spontaneously without any consequences. Other viruses that have been associated with MS in the past include HHV-6, measles virus, and canine distemper virus. A bacterial infection called “Chlamydia” has been associated with MS.

97. **What is the association between vaccinations and MS?**

In general, vaccination is safe in MS. Individual questions regarding vaccination and MS should be discussed with your neurologist and family doctor. Flu shots are also considered safe and should be given to MS patients if clinically indicated. Usually, elderly people, patients with weak immune systems, or patients receiving drugs that suppress the immune system may benefit from receiving the flu shot. Studies have shown that flu shots are safe in MS.

However, they may be rare exceptions. The purpose of a vaccine is to prevent a disease from occurring. However, in rare instances, vaccines have been associated with neurological symptoms that may be due to activation of the immune system as a result of the vaccine. Specific issues such as tetanus, hepatitis B or international travel immunizations should be discussed with the neurologist and the family doctor. Several factors such as the composition of the vaccine, general health of the patient, medications that the patient is receiving at the time, risk versus benefit of receiving the vaccine may determine the usefulness of vaccination in an individual patient.