

“Measles Strikes Again!”

Brian, a college student, stopped by one afternoon to visit his friends Tom and Alicia and their 2-year-old daughter Samantha. Little did any of them suspect that Samantha was coming down with the measles. She has not yet been immunized, and she had caught the virus from a little boy in her day-care group.

Brian has never had the measles and had never been vaccinated. Once he had been exposed to Samantha and his ¹ _____ defenses such as the ² _____ in his nose had been passed, it was too late to do anything. Brian soon experienced ³ _____, or an elevated temperature, and swelling from ⁴ _____. Now it was up to the ⁵ _____ response to fight the invading viruses.

White blood cells called ⁶ _____ and ⁷ _____ carry out the specific immune response. Both types of cells were involved in defending Brian’s body against the measles virus. ⁸ _____ engulfed or surrounded the virus particles. The viruses’ outer surface contained protein ⁹ _____ that were foreign molecules to Brian’s body which triggered his immune response. The B cells produced specific ¹⁰ _____ that could bind to the virus antigens, which also triggered the ¹¹ _____ to attack and kill Brian’s own virus-infected cells. However, Brian continued to have measles symptoms while his immune system was at work. He asked his doctor for an ¹² _____, but was told this chemical would be ineffective.

However, after he recovered, Brian was ¹³ _____ to any future attack by the measles virus. Because of his experience with this virus, he suggested that his family members all get the measles ¹⁴ _____ to prevent contracting it. Since the preparation was made using part of the virus instead of antibodies, this injection will be a type of ¹⁵ _____ immunity. Although he was now protected from the measles virus, he still caught a cold the day before his math final exam.