

## “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 <sup>1</sup> \_\_\_\_\_ defenses such as the <sup>2</sup> \_\_\_\_\_ in his nose had been passed, it was too late to do anything. Brian soon experienced <sup>3</sup> \_\_\_\_\_, or an elevated temperature, and swelling from <sup>4</sup> \_\_\_\_\_. Now it was up to the <sup>5</sup> \_\_\_\_\_ response to fight the invading viruses.

White blood cells called <sup>6</sup> \_\_\_\_\_ and <sup>7</sup> \_\_\_\_\_ carry out the specific immune response. Both types of cells were involved in defending Brian's body against the measles virus. <sup>8</sup> \_\_\_\_\_ engulfed or surrounded the virus particles. The viruses' outer surface contained protein <sup>9</sup> \_\_\_\_\_ that were foreign molecules to Brian's body which triggered his immune response. The B cells produced specific <sup>10</sup> \_\_\_\_\_ that could bind to the virus antigens, which also triggered the <sup>11</sup> \_\_\_\_\_ 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 <sup>12</sup> \_\_\_\_\_, but was told this chemical would be ineffective.

However, after he recovered, Brian was <sup>13</sup> \_\_\_\_\_ 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 <sup>14</sup> \_\_\_\_\_ to prevent contracting it. Since the preparation was made using part of the virus instead of antibodies, this injection will be a type of <sup>15</sup> \_\_\_\_\_ immunity. Although he was now protected from the measles virus, he still caught a cold the day before his math final exam.