

blood cell called memory cell stays in the blood after the infection so if the same infection attacks again you have immunity to that particular infection until the memory cells pass out of your bloodstream.

Thus Vaccinations is one of the best ways to get treated beforehand and this is because when you are given a vaccine [e.g. flu], it is a vaccine, which injects a dead/weakened form of the pathogen, and this stimulates the white blood cells to produce the correct antibody against the pathogen. If you are exposed to the pathogen again, the memory cells multiply rapidly and produce the antibodies in large amounts to kill the pathogen quickly so you do not get any of the symptoms. Vaccines are usually injected into the body, but the mouth can take some too. The body reacts to the vaccination by producing antibodies. Each antibody is effective against one microbe so doctors have a different vaccine for each microbe. Antibodies are tiny proteins that isolate germs to attack, so that phagocytes can engulf them. They are produced by white blood cells-lymphocytes.

Pathogens and other harmful microorganisms are identified when your body's immune system recognizes protein on their surface and it is classified as an antigen. Human beings generate per person ten billion different antibodies. You also can have other forms of immunity such as acquired immunity that means you only suffer once from some infections such as chickenpox. This is how vaccinations work too. Allergies are reactions that take place in your body when too many antibodies are produced or when they are produced to attack harmless antigens. Autoimmune diseases are ones in which the body forms antibodies against its own tissue cells. If your body couldn't produce antibodies, you would be vulnerable to infections and you'd have to remain in a sterile environment.

Inflammation is the consequence of an injury or infection, it is the occurrence of redness, swelling, heat and pain. During an inflammatory response, blood vessels widen, causing swelling and redness, while special white blood cells destroy the infection. When the body is damaged, nearby cells release histamine and other chemicals. These chemicals increase blood flow to the area, widening local blood vessels and causing redness and heat. The chemicals attract the special white blood cells called leucocytes, which destroy the infection. In some people, inflammation may occur when there has been no injury and this is where the body attacks its own tissues, this is an autoimmune disease just like arthritis. Inflammation may very depending on whether it is acute- which is a sudden reaction or chronic which is slower reaction and lasts up to several months.