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**Vaccines**

Vaccines are the biological preparation which develops active acquired immunity for the particular syndrome. The administration of vaccines is known as vaccination. Variolae vaccinae is the word from which words “vaccination” and “vaccines” are derived. Variolae vaccinae term was used by Edward Jenner while studying about the cowpox. Vaccines acquire agent which are identical to the microorganism causing the disease in individuals. Vaccines are highly researched and verified and therefore effective for diseases like influenza, HPV, chicken pox and others. The basic role of the agent is to kill the active microorganism in the body, for the purpose typically weakened microbe are used for the preparation of the vaccines. It is the most active way to prevent infectious diseases. The dead or weak microbe help the immune system to recognize the threat in the body. The immune system responds to the threat and encounter the active microorganism present in the body. Vaccines not only helps in curing the disease but it also provides the body immunity to prevent such diseases in the future (*Vaccine Basics - Importance of Vaccines*).

Effectiveness of vaccines depends on the number of factors like age, ethnicity, the strain of the vaccine, genetic predisposition, and whether the schedule of vaccination has been properly taken. Vaccines sometimes does not perform for instance, an idiosyncratic response to the vaccine. It means the body of some individuals does not a response to the particular vaccine or their body does not generate the antibodies to fight with the active microbe. There are various types of vaccines include; attenuated, inactivated, subunit, toxoid, heterotypic, an experimental vaccine, conjugate, and valence vaccine. It is risky to use two or more vaccine at the same time because vaccines can interfere.

Vaccines have some side effects same as other medical products have. The side effect of vaccines is called an adverse event. Most of the adverse event occurs with the babies, therefore, a monitoring system is established in America to analyze the adverse event in order to find out whether the adverse event is directly linked to the vaccination or not. Vaccination side effects are mostly linked to the type of vaccine. For instance, the Hib vaccine can cause swelling, redness, and fever. Smallpox vaccine can cause a mild rash, fever, tenderness of lymph nodes, and blister on the body. Archiness, redness, fever, and rash are the common side effects associated with almost every vaccine. To cope with the effects, doctors provide a handout that provide knowledge about the symptoms and precaution for the side effects.

Vaccination benefits are more than its side effect therefore, are widely used worldwide. Diseases like whooping cough, measles, and mumps may result in hospitalization and death and therefore are a big threat. Vaccination for such disease is the most effective cure. Vaccines are formulated after complete research and undergo careful review by the physicians, scientists, and government. Besides being safe vaccination is cost-effective. The organizations like the Centers for Disease Control and Prevention and the American Academy of Pediatrics recommend vaccination to protect children from serious diseases. Therefore, from birth hospitals set the schedule for the newborn for vaccination. The vaccination protects them and increases their immune system to protect from diseases while growing. Parents should complete the vaccination schedule to prevent diseases like paralysis of limbs, brain damage, amputation of legs or arms, convulsion, hearing loss, and death. When parents decide not to vaccinate their child it can increase the risk of preventable diseases. Therefore, vaccination is useful to prevent diseases even before it attacks the body. Vaccination makes the immune system able to detect and fight with the microbe in the body.

# Works Cited

*Vaccine Basics - Importance of Vaccines*. http://www.vaccineinformation.org/vaccines-save-lives/. Accessed 17 May 2019.