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Vaccination for Kids: it is useful or harmful

**Introduction**

Nothing is more heartbreaking than a young life that has been taken through infection of a killer disease. There are different significant infections including smallpox and rinderpest that are fatal. Many diseases are related to the bacteria that are entering the body and affecting different areas of the body. Some diseases are related to viruses that attack the immune system and other living cells. As children have a weak immune system, so they are more vulnerable to these infections (van Delden et al., 5562–5566). Common diseases that require vaccinations for prevention include Diphtheria, Pertussis, Mumps, Tetanus, Smallpox, Measles, Rubella, Congenital rubella syndrome, and Paralytic poliomyelitis. There are no federal vaccination laws of the United States, but many states have made their laws that students should need to have a specific vaccination before entering a public school. These students must be vaccinated by DTaP vaccine (to stay safe from pertussis, diphtheria, and tetanus), IPV vaccine (for polio), varicella (for chickenpox), and MMR vaccine (for rubella and measles).

**Discussion**

For many years, immunizations have lowered the number of deaths and saved lives. Immunizations lead towards the less spread of diseases as they controlled these diseases in the first place. Vaccinations are the means of providing specific protection against several diseases that are common and deadly. They stimulate the immune system by creating T-cells that provide cell-mediated immunity and produce humoral antibodies that fight against specific pathogens. Vaccines act by inducing the development of antibodies that develop the immunity to the particular disease. It is notable to mention that there are two types of immunity, acquired immunity and innate immunity. Acquired immunity develops after a person is being exposed to vaccinations while the innate immunity develops when a person is exposed to the disease organism (Minor 473). There are further two types of the acquired immunity, active immunity, and passive immunity. Active immunity is developed when an individual is exposed to an antigenic stimulus. When an individual is given a direct infection than passive immunity develops. Extensional sources establish that passive immunity through injection of either sera or immunoglobulin. Therefore, the type of immunity extracted through vaccines is active immunity. Vaccinations provide active immunity that offers an individual with long-term protection.

It is notable to mention that vaccinations work with a proper principle. An immune system of eth host is developed when a pathogenic infectious agent results in disease in a person. The immune system produces antibodies that provide continued protection to a person from the same pathogen for an extended period. Therefore, vaccinations work behind this particular principle as they destroyed viruses and bacteria that results in any infections and provide long-term protection to a person from the same type of disease (Wynia 2-5). Vaccinations help to introduce the antigens in the body, which mimic the original pathogens. These antigens do not cause any disease but trigger the immune response resulting in either humoral or cell-mediated which stimulated the T helpers lymphocytes series (St Leger 197–205). There are two series of T helper lymphocytes, Th1, and Th2 series. Th1 series results in the lymphocytic response while Th2 series results in the humoral response. Additionally, there are several factors upon which the timing of vaccinations depends and most prominent of them is the susceptibility of the disease (Minor 473). Due to the absence of maternal immunity, a child can be exposed to polio and tuberculosis at birth, so the infant is given with the OPV and BCG vaccines at birth. Given vaccines control the maximum reactogenicity and protection against tetanus, pertussis, and Hemophilus influenza.

The benefits of vaccines are, so each country has developed their policies regarding the adoption of vaccination. In children and infants, vaccinations are of utmost importance as these provide reasonable protection against the infectious disease (Jass & Massey). Newborn and children are much more vulnerable towards any disease as their immune system is not developed at that time. The course of the disease is usually mild through vaccinations and recovery is speedy (Minor 473). The immune system becomes more stable due to attenuated vaccinations as they activate all phases of the immune system, which make the immune system effective and efficient in dealing with particular diseases. Majority of the attenuated vaccines are cheap and do not need any boosters as they develop the immunity quickly. The World Health Organization (WHO) and the Centers for Disease Control and Prevention have classified many diseases that are potentially preventable or vaccine preventable. In the past few diseases, there has been seen the reemergence of the vaccine-preventable diseases even in those countries which have broader access to the vaccines and have high living standards (St Leger 197–205). In the United States, the outbreak of vaccine-preventable diseases happens when travelers who came from another country are not vaccinated imposed the infection to people as well as a result of underimmunization among adults and children (Viruell-Fuentes, Miranda, & Abdulrahim 2099–2106). There are five main vaccines preventable diseases, which are globally out broken in the society including polio, mumps, rubella, measles, and diphtheria. These diseases attacked a person’s body from exposure to a percentage of immune persons (St Leger 197–205). When the coverage of vaccination about a particular disease achieves the HIT in population than even those people who are not vaccinated in the society stays safe from any getting any deadly disease in the society (Fauci 1079–1085). However, if a significant percentage of the population is unvaccinated that even those people who are previously vaccinated have the risk of getting these diseases back through the intersection with these people by extraordinary means. Therefore, herd immunity is generally only as good as the vaccine coverage in a given area (Viruell-Fuentes, Miranda, & Abdulrahim 2099–2106). It is difficult for a country to determine a minimum HIT as it is dependent over the heterogeneity of population and the infectivity of the agent.

**Conclusion**

In a nutshell, vaccinations provide significant protection against several infectious diseases that are common and deadly. The World Health Organization identified certain diseases that are preventable by vaccines. Vaccines are essential for a community to achieve herd immunity. Vaccinations are beneficial to protect people who are vaccinated against particular disease along with those who have weak immune systems such as children and older adults. Parents have the responsibility to vaccinate their children to contribute towards herd immunity.

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