



## A Review on Immunity and Vaccination: Basic Principle

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In our body immune system is an extremely important process and it acts as a defence mechanism about identifying the foreign organism and destroying it. The process of immunisation prevents disease by responding more rapidly to attack on foreign body and increasing the immune response against particular organisms. The largest one is the skin; it acts as a strong physical barrier for foreign bodies to not enter into the skin [1]. But some organisms are able to penetrate and enter into the undamaged skin. Some other physical barriers and a different chemical defences are actively involved in this system.

On the basis of the mechanism, the immune system is divided into two main types. These are the innate immune system and it is also known as the general resistance system. The second type of immune system is the adaptive immune system. These two innate system and the adaptive system rapidly interact with foreign body to protect our body from infection [2-5]. During the immune response progresses, the active plasma cells will begin producing IgG antibodies to specific antigens. However, IgM is the first antibody produced against antigen and it is a much larger antibody than other antibodies. IgG is also called neutralizing antibody. IgG binds more strongly to the antigen.

A passive immunity transfer from mother to newborn baby through the placenta. Adults can also get passive immunity by products such as immune globulin, also called antibody-blood products, such type of products can be given when immediate protection from a specific infection is needed. The advantage of passive immunity is it gives immediate protection, but active immunity it will take time to develop the immunity against the infection. The vaccine can directly increase the activation of innate immunity. The antibody responses are very strong by taking live vaccines that are naturally adjuvanted. After taking vaccine it will take

several weeks for a vaccine to help protect your baby against infection. Some evidence shows that in all types of infections, Vitamin A deficiency is associated, with both the innate and adaptive immune systems. However, it is associated with intake of healthy diet that influences immune responses in children is poorly understood and complex ways. Likewise, the relationship between obesity and immunity system is still poorly understood. The chronic inflammation linked with obesity might affect the vaccine-induced immunity. But practitioners should clearly understand the relationship between malnutrition or obesity and immune responses by conducting different experiments using different parameters of innate immune response and adaptive immune responses can be evaluated by new genetic technologies, including the use of advanced molecular biology. Recent studies show that, develop vaccines against global pandemic infections for example such as infection with human immunodeficiency virus (HIV) is failed because there is no clear understanding mechanism and immunological process by which type of vaccines can be more effective against human immunodeficiency virus.

### References

1. Almutairi H (2020) Herd Immunity without the Frail Sheep. *Epidemiol Sci* 10: 38
2. Yadav SI (2020) Immunity: Entry of Antigens making the Immune System more Defensive. *4(2)*: 125
3. Lu ZW, Hua JQ, Han LT, Zhang TT, Wei WJ, et al. (2019) IL-10 Restores MHC Class I Expression and Interferes Tumor Immunity in Papillary Thyroid Cancer with Concomitant Hashimoto's Thyroiditis. *Diagn Pathol Open* 4: 152.
4. Ahmad M, Dhole T, Kunwar A, Vishwakarma R, Soni GK, et al. (2018) Intestinal Mucosal Immunity against Polioviruses in Adolescent and Adult Populations: A Community Based Cross-sectional Study in India. *J Mucosal Immunol Res* 2: 111.
5. Kim SC (2017) How to Grow Immunity? *J Tradit Med Clin Natur* 6:e139.

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