



A STUDY ON THE IMPORTANCE OF VACCINATION IN PROBLEM

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❖ ABSTRACT

Vaccination is one of the most effective preventive strategies in modern medicine it plays a crucial role in controlling infectious diseases and reducing modified and mortality rates world vaccines stimulate the immune system to develop protection against specific pathogens without causing the actual disease this article highlights the importance of vaccination, its mechanism of action benefits public health, and its role in disease populations.

❖ INTRODUCTION

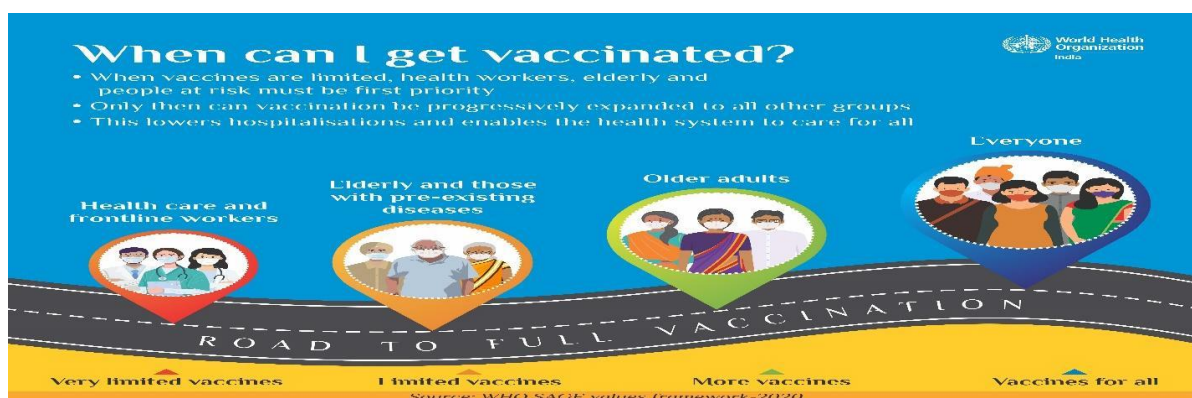
Infectious diseases have been a major cause of death throughout human history. The introduction of vaccination has significantly reduced the burden of many life-threatening disease vaccination is a cost –effective and reliable method of preventing infections such as. measles rubella, polio tetanus, and hepatitis, it not only protects individuals but also contributes to community health by reducing disease transmission.

❖ MECHANISM OF VACCINES

Vaccines contain weakened inactivated purified components of disease-causing microorganism. When administered, these components stimulate the immune system to produce antibodies and memory cells this immune memory enables body to respond to the actual pathogens the future by preventing illness or reducing disease severity.



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❖ **BENEFITS OF VACCINATION**

Vaccination provides numerous health benefits it prevents serious infectious diseases and their complications immune reduce hospitalization rate and health care costs vaccines also protect high-risk groups such as infants’ pregnant women, elderly individuals and Additionally, vaccination helps archive herd immunity, which pro cannot be vaccinated.





❖ Role of vaccination in child health

Children are highly susceptible to infection due to the developing immune systems. Childhood immunization program plays a vital role in reducing child mortality and morbidity. Vaccines such as BCG, DPT, OPV and MMR protect children from potentially fatal diseases and support healthy growth and development.

❖ Public health impact

Vaccination programs have successfully eradicated or controlled several diseases globally. Smallpox has been eradicated, and polio cases have drastically decreased due to effective immunization strategies. Mass vaccination helps prevent outbreaks, long-term public health security, and ensure



❖ **CONCLUSION**

Vaccination is a cornerstone of preventive healthcare and an essential tool in disease control. It has significantly improved life expectancy and quality of life across the world

❖ **REFERENCE**

1. World health organization [WHO]immunization and vaccines.
2. Centers for disease control and prevention [CDC]-vaccine information.
3. Katzung B.G, basic and clinical pharmacology.
4. Tripathi K.D, essentials of medical pharmacology.