

تحصين تطمين

Immunize, Be Assured

Your Guide to Immunization



A small step stands between you and a safe life yet its impact is substantial

Your vaccine is a shield for you and your loved ones Choose prevention and take the initiative to get vaccinated.



In this guide, you will find:

1- Immunization and Vaccines

2- Humans and Infection Control Throughout Time

3- The Importance of Immunization for Individuals and Communities

4- Why Do We Need Vaccines for Rare and Limited Infectious Diseases?

5- What is Immunity?

6- What is Herd Immunity?

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8- Diseases Eradicated and Epidemics Prevented Thanks to Vaccinations

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1- Immunization and Vaccines

What is the difference between immunization, vaccines, and serum?



Immunization:

It's a state of body protection against infectious diseases through vaccination and gaining immunity from infectious diseases, forming the cornerstone of public health in societies.



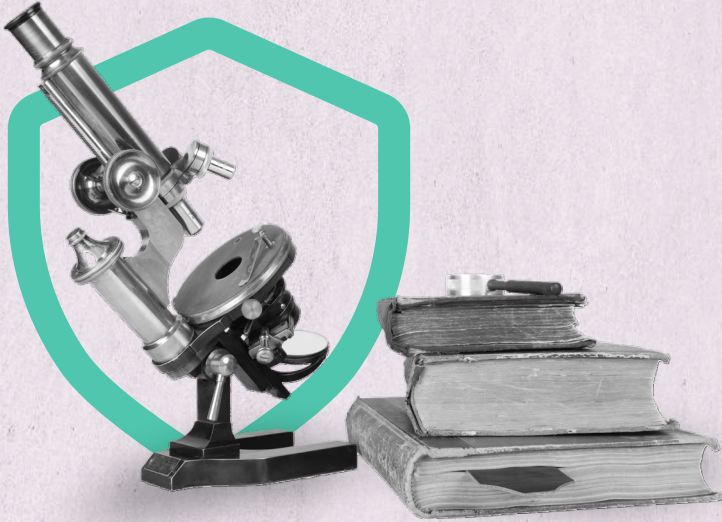
Vaccines:

Vaccines contain microorganisms (viruses, bacteria, fungi, parasites) engineered in a way to **ensure these cannot cause disease in the body. They are administered to individuals to stimulate the immune system** to recognize them, prompting the body to produce antibodies that recognize the microorganism early, thereby combating it if it enters the body again, preventing disease or reducing severe symptoms and limiting its spread.



Serum:

Individuals are given antibodies (prepared immunity) for protection against infection, especially in cases of severe immune system deficiencies due to immune diseases or immunosuppressive treatments. Usually, serums are effective for shorter periods than vaccines.



History of Immunization and Vaccines

Humans have suffered from various infectious diseases throughout past centuries, claiming many lives. However, many of these diseases were prevented and reduced because of vaccines

Examples of vaccines that help protect from diseases:

Smallpox Vaccine

Immunization against smallpox can be traced back 3,000 years. Smallpox ravaged the Gulf region in the 1930s, resulting in many deaths and related health issues like blindness. When the vaccine was developed

people started gaining immunity globally, ultimately combating the epidemic, which was declared eradicated in 1980.



Facts About Immunization

Studies have shown the positive impact of immunization on overall community health, such as reducing disease spread. This illustrates that ignoring necessary vaccines could increase the risk of infections.

Globally, vaccines help prevent more than 20 life-threatening diseases.

A 50-year study demonstrated that immunization programs targeting **14 diseases saved 154 million lives worldwide.**

Currently, immunization prevents 3.5 to 5 million deaths annually from diseases like diphtheria, tetanus, pertussis, influenza, and measles.

It is essential to educate adults and seniors on the importance of seasonal vaccines, like those for respiratory syncytial virus (RSV), influenza, and COVID-19, to protect them and their communities from severe respiratory illnesses.

The human papillomavirus (HPV) vaccine **helps prevent** genital warts and most cervical cancer cases, and protects against some HPV strains.



**Throughout history, the world has
harnessed science to develop
vaccines, controlling infections
and limiting their spread**



2. Humans and Infection Control Throughout Time

Humans have attempted to control infections through various means, such as **isolating the infected** to reduce the spread, and another method called **variolation for smallpox**. This involved applying a small amount of infectious secretions from an infected person and exposing these to a healthy individual through minor scratches, followed by isolation for two weeks to prevent spreading the infection to others.



3. The Importance of Immunization for Individuals and Communities



Reduces the incidence of serious infectious diseases

Prevents disease spread among families and communities

Decreases hospitalization rates

Reduces the severity of symptoms if the disease occurs, speeding recovery

Reduces treatment costs for diseases

Ensures safe travel and comfortable mobility

Promotes the healthy growth of newborns

Contributes to lowering mortality rates

Just as healthy food and exercise maintain your health, vaccines protect you from diseases and **boost your immunity.**



4. Why Do We Need Vaccines for Rare and Limited Infectious Diseases?

Several factors necessitate continued vaccination against diseases once considered eradicated:

- Activity in specific areas may expose the population to uncommon diseases, such as the Gulf region, a hub for religious pilgrimages and tourism. It's expected that individuals from all over the world may interact.
- A few might not have an adequate immune response to childhood vaccines.
- Tourism and travel, especially to countries with outbreaks or without available vaccines, increase the risk of contracting infectious diseases.

Studies show a measles patient can transmit the infection to about 15 unvaccinated individuals.

Child Vaccinations

A solid foundation for robust immunity and a healthy, disease-free life in the future.

Immunization has globally reduced child mortality rates by 40%, providing hope in countries like Africa.





5. What is Immunity?

Immunity is the body's ability to resist diseases and infections via the immune system, comprising cells, tissues, and organs working together to protect against harmful microbes. Immunity is categorized into two main types:

Innate Immunity: Present from birth.

Acquired Immunity: Develops due to microbe exposure or vaccinations.



6. What is Herd Immunity?

Herd immunity refers to protecting the community from infectious diseases when a sufficient number of individuals gain immunity through vaccinations, reducing disease spread and protecting those unable to receive vaccines, such as infants or people with health conditions. This helps reduce disease spread and boosts public health.





**Remember, believing false
rumors about vaccinations
is a costly trap!**
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7. False Vaccine Rumors

Learn About Them



1- Can my child develop autism if they get vaccinated?

Previously, it was rumored that vaccines could cause autism, **based on an incorrect and falsified study published in 1998**. Numerous studies have shown no connection between vaccines and autism.

2. Is infection better than vaccination?

When an individual contracts an infection, the immune system combats the pathogen (viruses, bacteria, fungi, parasites) for weeks, leading to negative consequences like:

1. Prolonged suffering from symptoms.
2. Long-term spreading of infection to others.
3. Possible overactive immune response causing other side effects.

Conversely, with appropriate vaccination:

1. The immune system fights the pathogen quickly (within days), as seen with respiratory infections.
2. Reduces microbe presence in the body.
3. Reduces symptoms.
4. Limits disease spread in the community.

3. Can vaccination cause the disease itself?

Acquired immunity from vaccination takes weeks to develop fully. During this period, individuals might become infected before immunity formation or after vaccination, **but** the risk of severe symptoms is much lower than in those unvaccinated. Hence, **#ImmunizeBeAssured**



Vaccinations
are the community's
security and the first line of
defense against epidemics!

8. Diseases Eradicated Thanks to Vaccinations

The Gulf region faced many epidemics, notably when smallpox swept through in the 1930s, causing numerous deaths and health issues like blindness



Consequently, Gulf governments intervened by introducing and mandating smallpox vaccinations to control the outbreak.

This consistent approach ensured the smallpox-safe region today.

9. Commit to Vaccination Together for Community Health and Protection

Receiving recommended vaccines safeguards you, your family, and the community, protecting those who cannot be vaccinated due to health conditions. **Let's all become a solid shield for our community, through immunization, we rest assured.**



Refusal to vaccinate can lead to the resurgence of controlled serious diseases, threatening your health and those you love.



Immunization is a shared responsibility, protecting generations and building a healthy and safe society.

- Avoid delaying your child's vaccination doses, as it might risk disease exposure since full immunity forms after receiving all doses.
- Seniors are more vulnerable to chronic diseases, so educate them about vaccines to reduce the risk of chronic infection complications.





**Immunization has doubled survival
rates across all age groups**
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10. Important Guidelines When Receiving Vaccinations



Become aware of the recommended vaccines to protect your health and your family's from serious infection-related repercussions.

Adhere to scheduled vaccination appointments without delay.

Consult a specialist for booster shots.

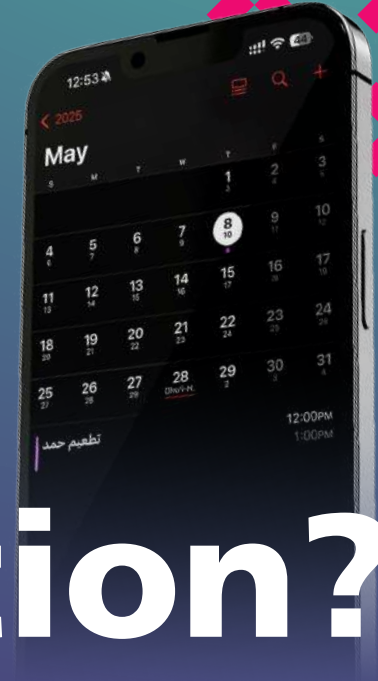
Educate yourself on the importance of vaccinations and explain them to your children.

Should you have allergies, consult your doctor before vaccination.

Paracetamol can be used for fever, following the dosage instructions.

Vaccination might cause mild side effects for a short duration, such as arm pain for a couple of days.

11. When to Delay Immunization?



Immunization can be delayed under the following conditions:

Severe illness



High fever



Those receiving immunosuppressive drugs or treatments (chemotherapy or radiation)



12. Types of Vaccines and How They Work



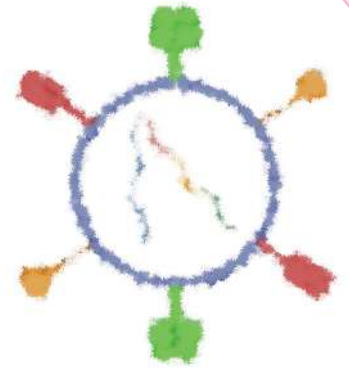
Attenuated Viruses:

Mechanism: Isolating a weakened version of an infectious virus, then injecting it into a healthy person to combat it and develop immunity, enabling them to face the active virus if exposed.

Advantage: This type provides robust and long-lasting protection compared to vaccines based on inactivated viruses.

Examples:

- Chickenpox Vaccine
- Measles, Rubella
- Mumps, Tuberculosis, Typhoid
- Polio is administered orally.



Active virus



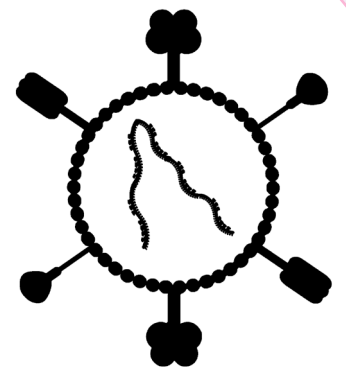
Inactivated Viruses:

Mechanism: Completely destroying the virus (inactivating or, in layman's terms, killing the virus) and injecting it as a complete unit.

Advantage: This type helps your body build suitable immunity, readying it to confront the real virus and eliminate it swiftly upon exposure.

Examples:

- Seasonal Influenza Vaccine (injections)
- Polio (injectable)
- Pertussis and Hepatitis A Vaccine.



Active virus



13. Types of Vaccines and How They Work



Active virus



Microbial components
(from a virus)



Active bacteria



Microbial components
(from bacteria)



Microbial Subunit Vaccines (from Bacteria or Viruses):

Mechanism: Vaccinations based on isolating a specific part of a virus or bacteria responsible for the disease and injecting only that part into humans.

Advantage: This type allows the body to engage with the foreign viral or bacterial component, developing immunity against it. When exposed to the virus or bacteria containing that component, the body swiftly and efficiently combats the pathogen.

Examples:

- Meningitis Vaccine
- Hepatitis B Vaccine

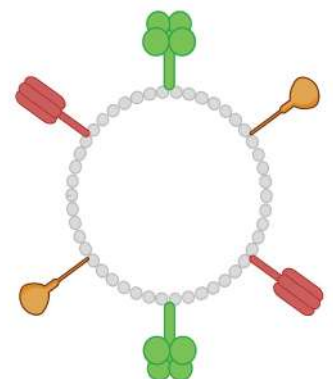
Virus-like and Active Microbial Subunit Vaccines:

Mechanism: Isolating immune components from viruses after removing DNA, adhering to virus-like structures, thus granting immunity absence of reproduction, infection, or disease.

Advantage: This type induces recognition upon injection and builds immunity before exposure to the actual virus.

Examples:

- Hepatitis B
- Human Papillomavirus (HPV)



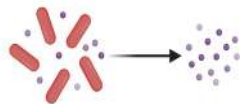
Active virus



14. Types of Vaccines and How They Work



Microbial
components
(from bacteria)



Microbial
components (from
bacteria)



Toxoid Vaccines (Inactivated Toxins for Immunization):

Mechanism: Bacteria secrete toxins, like the tetanus and diphtheria toxins. Scientists develop and inactivate these toxins, stripping them of toxicity before injection so the immune system can develop immunity.

Advantage: This type prepares the immune system to fight effectively against bacterial events, like consuming contaminated food. The immune system will fight it effectively, reducing its complications and deadly toxicity. It is one of the vaccines currently used for prevention.

Examples:

- Tetanus
- Diphtheria

Active
virus



Components derived
from viral nucleic acid



Microbial
components



Nucleic Acid Vaccines (Derived Viral DNA Segments):

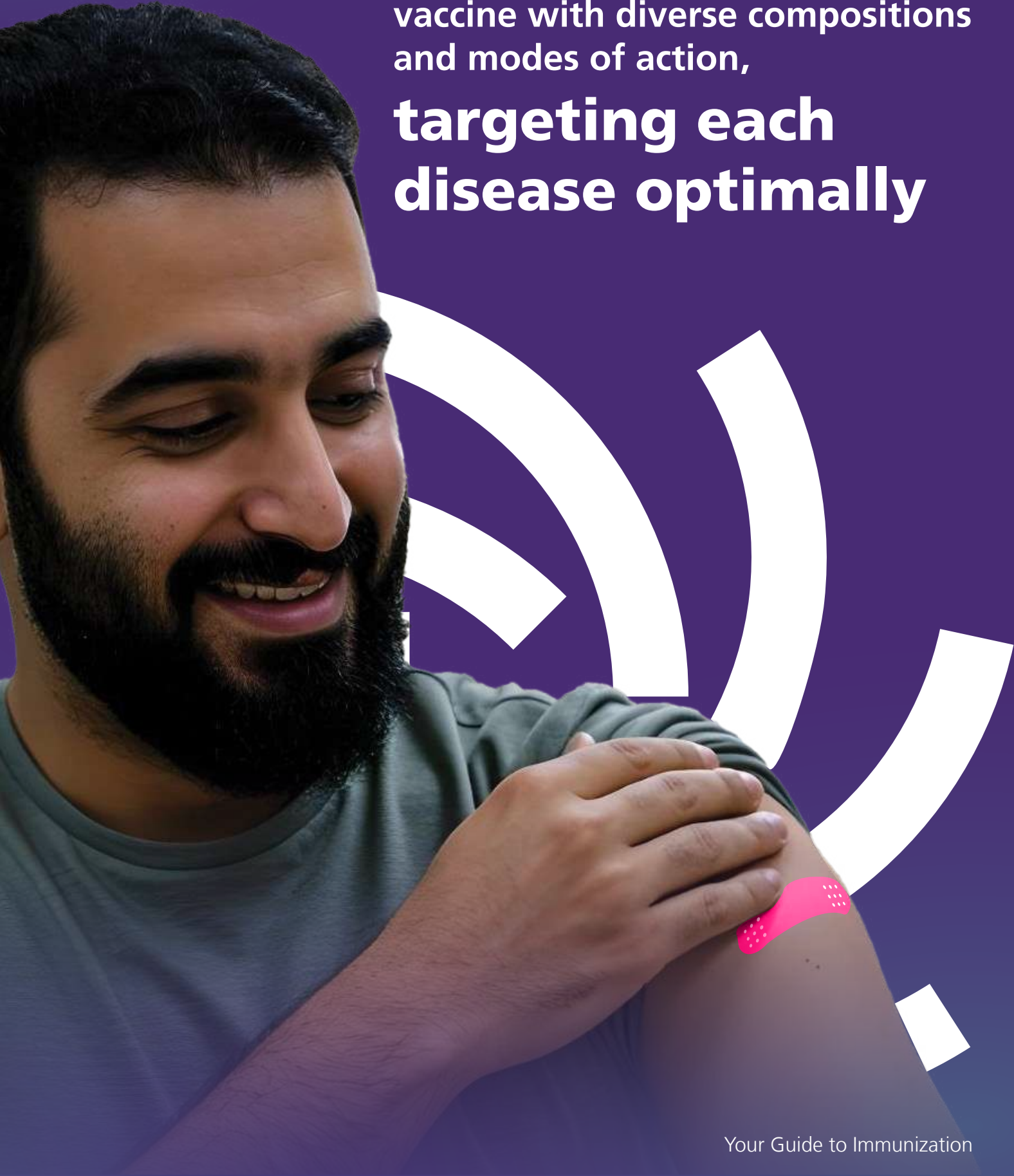
Mechanism: Recently developed vaccines based on isolating specific viral DNA parts responsible for foreign compound production in the virus. This segment is injected into the body, which recognizes it as a foreign component, developing rapid and efficient immunity.

Advantage: This type trains the body to confront viruses bearing the foreign component, facilitating quick elimination upon exposure.

Examples:

Technique employed in some COVID-19 (19-Covid) vaccinations, with potential future applications in preventing other diseases.

Each disease has its specific
vaccine with diverse compositions
and modes of action,
**targeting each
disease optimally**



13. Immunization When Traveling

Some destinations require specific vaccines, like yellow fever or hepatitis vaccines, to protect travelers and country residents from epidemic spread

Therefore, travelers should visit healthcare providers or specialized clinics six weeks before departure to receive the required vaccines for each country



14. Vaccines and pregnancy

Vaccinations are crucial for pregnant women, protecting both mother and child from infectious diseases.

The mother's acquired vaccine immunity transfers to the fetus, providing temporary protection in the first months of life.

Recommended vaccines for pregnant women include:

- Influenza Vaccine
- Tetanus, Diphtheria, Pertussis (TDAP) Vaccine





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مجلس الصحة
لدول مجلس التعاون
Gulf Health Council



Scientific studies emphasize the importance of continued vaccination

Vaccination fortifies your reassurance and protects you and your loved ones from resurging threats!

Your health and those around you are a trust entrusted to credible sources only



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