

# IMPORTANCE OF VACCINATION



Vaccines protect against many different diseases and save millions of lives every year. We now have vaccines to prevent more than 20 life-threatening diseases, with vaccination being a key component of health care, critical to the prevention and control of disease outbreaks.<sup>1</sup>

## WHAT ARE THE VACCINE-PREVENTABLE DISEASES ?

Vaccines protect against many different diseases, including:<sup>1</sup>



## HOW DO YOU GET A COLD OR THE FLU?

Infants and children receive routine vaccinations from birth. Because it may be difficult to reduce children's exposure to environmental dangers, it is particularly important to ensure that their routine vaccinations are fully up-to-date.<sup>2</sup>

Adolescents and young adults make up the largest group of travellers and the group most likely to acquire sexually transmitted or other travel-related infections. Travellers are particularly at risk when travelling on a limited budget and using accommodation of poor standard, or when their lifestyle includes risky sexual behaviour and other risks taken under the influence of alcohol or drugs.<sup>2</sup>

**Pregnant women** can receive certain vaccines to protect both the mother's health and that of her unborn child. Your healthcare provider will be able to advise on which vaccines are recommended or not during pregnancy.<sup>2</sup>

**Elderly.** Certain infections such as influenza or COVID-19 are more severe, the older a person gets. It is therefore recommended that the elderly form one of the highest priority groups to receive influenza vaccination.<sup>2,4</sup>

**People with comorbidities.** Groups at risk of serious complications of influenza, for example, are people with chronic medical problems such as cardiovascular and/or respiratory conditions, immunosuppressive conditions or diabetes mellitus. Annual influenza vaccination is therefore recommended for these groups.<sup>2</sup>

## DO VACCINES HAVE SIDE EFFECTS?

Vaccines may sometimes cause mild side-effects: local reaction, slight fever and other systemic symptoms may develop as part of the normal immune response.<sup>2</sup> These reactions generally occur within a day or two of receiving the vaccine.<sup>2</sup>

In addition, certain components of the vaccine (e.g. aluminium or preservatives) occasionally cause reactions.<sup>2</sup>

An anaphylactic reaction following a previous dose of a particular vaccine is a true contraindication to further vaccination with that specific vaccine and a subsequent dose should not be given.<sup>2</sup> Anaphylaxis, although potentially fatal, can be treated and has no long-term effects.<sup>2</sup>

Serious reactions are rare. Health-care workers who administer vaccines have an obligation to inform recipients of known adverse reactions and the likelihood of their occurrence. However, under certain circumstances, the healthcare provider may assess the risk of a particular disease to be greater than the risk of an adverse reaction following administration of the vaccine and will therefore advise vaccination.<sup>2</sup>

## IMPORTANT PRINCIPLES OF VACCINATION

- Vaccinate on time
- Do not delay vaccinations
- Complete the recommended schedule
- Don't forget boosters if required
- Check your child is up-to-date before and during their school-going years



**Complete and timely vaccination** is necessary to achieve effective control of vaccine-preventable diseases.<sup>3</sup>

**Vaccines are developed to be administered at the specific age** at which immunity is required. If a child misses out on getting vaccines designed for a certain age, then they are left unprotected and at risk of contracting disease.<sup>3</sup>

**Some vaccines are required to be taken on a specific schedule**,<sup>3</sup> for example, meningococcal meningitis vaccine. Babies from 9 to 23 months old receive 2 doses, given 12 weeks apart. Delaying the 2nd dose will mean the child is not fully protected from meningococcal meningitis and at risk of developing the disease.<sup>2,5</sup>

**Boosters may be needed.** The protection conferred by childhood vaccinations against major vaccine-preventable diseases such as **tetanus, diphtheria, pertussis** and **poliomyelitis**, wanes over time. Without a booster dose, the adult population becomes at risk of infection.<sup>2</sup>

Some parents may delay vaccinations due to a fear of side effects or a preference to 'spread-out' injections so that not as many are administered at one time. This, however, puts an infant or child at a **longer period of risk** between the loss of maternal antibodies and protection from vaccine-induced immunity.<sup>3</sup>

**Incomplete vaccination schedules negatively affect the herd immunity** in the community, which means spreading of disease is made easier, contributing to the **outbreaks and epidemics** of vaccine-preventable diseases.<sup>3</sup>

**Consult your doctor or clinic nurse to discuss your or your child's vaccination needs.**

## WHAT IS VACCINATION?

Vaccination is the administration of a vaccine to protect against disease. Vaccines work by inducing protective immunity against an infectious agent so that if exposed to a specific infection, your body is able to fight it off.<sup>2</sup>

**Routine vaccination** (also sometimes called 'immunisation') programmes around the world protect children and adults from a number of infectious diseases that previously caused millions of deaths each year.<sup>2</sup>

**For travellers**, vaccination prevents people from contracting diseases that may be encountered abroad.<sup>2</sup>

## WHY IS IT IMPORTANT TO LEARN ABOUT VACCINES?

Vaccination is critical to the prevention and control of infectious-disease outbreaks.<sup>1</sup> In many instances it is better to prevent a disease than suffer from it and try to treat it.<sup>1</sup> Vaccines can be a vital tool in the fight against rising antibiotic resistance and as it is relevant now, against global pandemics, such as **COVID-19**.<sup>1,3</sup>

## TYPES OF VACCINES

Vaccines can be '**inactivated**' (the vaccine contains only killed or weakened forms of the disease-causing germ) or '**live**'.<sup>1,2</sup>

**Combination vaccines** provide protection against more than one disease in one injection.<sup>2</sup>

- Combination vaccines offer important advantages by reducing the number of injections required,<sup>2</sup> leading to more timely vaccination and better disease control.<sup>3</sup>

A **booster vaccine** restores waning immunity after a first vaccine.<sup>2</sup> Several vaccines that are routinely administered in childhood require one or several booster doses to maintain an effective level of immunity.<sup>2</sup>

**Adults** often neglect the need for booster vaccinations, particularly if the risk of infection is low. Some adults, particularly elderly people, may either have lost immunity over time or were never vaccinated.<sup>2</sup>

**For travellers**, it is important to realise that diseases such as diphtheria and polio, which have been eliminated in most countries, may be present in countries frequently visited by travellers. Pre-travel precautions should include booster doses of routine vaccines if the regular schedule has not been followed, or a full course of primary immunisation for people who have never been vaccinated. Inhabitants of areas where vaccine-preventable diseases are endemic who are travelling to non-endemic areas should be adequately vaccinated to prevent introduction/re-introduction of diseases such as polio, yellow fever, measles and rubella.<sup>2</sup>

Example: **Yellow fever vaccination** is carried out for two different reasons:<sup>2</sup>

to protect the individual in areas where there is a risk of yellow fever virus infection, and

to protect vulnerable countries from importation of the yellow fever virus.

Travellers should therefore be vaccinated if they visit a country where there is a risk of exposure to yellow fever.<sup>2</sup>

Example: Vaccination against **meningococcal disease** is required by Saudi Arabia for pilgrims visiting Mecca and Medina for the hajj or umrah as well as for seasonal workers and people at high risk.<sup>2</sup>

If you are planning to travel and need to find out more on vaccines necessary to travel, ask advice from your healthcare provider.

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**Please note:** this is an education information leaflet only and should not be used for diagnosis. For more information on *Importance Of Vaccination*, consult your healthcare professional.

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1. Vaccines and immunization. Available at: [https://www.who.int/health-topics/vaccines-and-immunization/tab\\_tab\\_2](https://www.who.int/health-topics/vaccines-and-immunization/tab_tab_2) Last accessed December 2020

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3. Hu Y, Li Q and Chen Y. Timeliness of Childhood Primary Immunization and Risk Factors Related with Delays: Evidence from the 2014 Zhejiang Provincial Vaccination Coverage Survey. *Int J Environ Res Public Health* 2017; 14, 1086; doi: 10.3390/ijerph14091086

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