



*You, your loved ones
& vaccination*

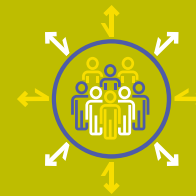

SANOFI PASTEUR
Empowering Life



VACCINATION SAVES ~5 LIVES EVERY MINUTE WORLDWIDE¹

We are often unaware of the impact that infectious diseases can have on ourselves and our loved ones. They can put us at risk of serious illness, which can lead to death.² Ongoing vaccination is a crucial cornerstone in keeping our communities healthy, especially when you consider that vaccines are often the best, if not, the only way to protect us from many serious infectious diseases at every stage of life.³

However, despite the availability of well tolerated and effective vaccines, we continue to see outbreaks of severe infectious diseases within unvaccinated or under vaccinated communities. Anyone who is not protected against vaccine preventable diseases is at risk of getting infected and consequently of spreading the disease. By getting vaccinated we not only help protect ourselves but those around us by making it more difficult for an infectious disease to spread. This is known as **“herd immunity,”** and is yet another example of the unique public health benefits of vaccination.⁴



BENEFITS OF HERD IMMUNITY

“Herd immunity/protection” happens **when a large proportion of the population is protected against a virus or bacteria through vaccination, making it difficult for a disease to spread.** As demonstrated recently in several countries around the world, when the vaccination coverage fell under a certain level, infectious disease outbreaks can occur.⁴



GLOBAL TRAVEL SPREADS DISEASE

Whilst some diseases are rare in certain parts of the world, due to routine vaccination or environmental factors, in others they continue to thrive. **As more of us travel globally, often, to areas where fewer people are vaccinated, it is important we are protected to prevent illness in ourselves, our families and transmission to those back home.**⁵



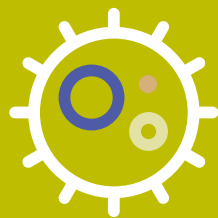
Vaccination saves lives at every stage of life

CHILDHOOD

Vaccination can help to give your infant a healthy start in life, which is why routine vaccination is recommended in most countries.

Infectious diseases for which vaccination may be recommended in your country* for all children before the age of 2 can include:

Haemophilus influenzae type b (Hib) disease; Diphtheria, Hepatitis A, Hepatitis B, Influenza, Measles, Mumps, Pertussis (whooping cough), Pneumococcal disease, Polio, Rubella (German measles), Tetanus (lockjaw), Rotavirus, Varicella (chicken pox), meningococcal diseases



As your child begins interacting with more children at day care or school, vaccinations not only help protect them from infectious diseases, but also contribute to stop the spread of infection to family and friends. Moreover, protected from the threat of vaccine-preventable diseases, immunized children have the opportunity to thrive and a better chance of realizing their full potential.⁶

Childhood vaccination programs have demonstrated real results. **Thanks to routine large scale vaccination programs, cases of diphtheria, tetanus and measles, to name but a few, have been significantly reduced over the last few decades.**⁷

* Infant and childhood mandatory and / or recommended childhood vaccination are specific to each country.

TEENAGE YEARS

In the close quarters of school campuses, our teenagers are at greater risk from certain infectious diseases and risk transmitting diseases without even realising it.


Meningococcal disease affects mainly children under 5, but outbreaks in teens and adults are frequently reported in close communities such as student accommodation, or at mass gathering events.⁸

Vaccination is the most effective way to prevent rare but unpredictable, fast evolving and severe meningococcal diseases.⁸ If left untreated, these diseases can permanently damage the health of 10 to 20% of young people infected and can cause death, even with appropriate care, in up to 10% of patients within 24-48 hours.⁸

Another important vaccination for teens is against Human Papilloma Virus (HPV). **Combined with screening programs, HPV vaccination is expected to reduce cervical cancer rates by up to 80% within 25 years.**⁹

Booster vaccinations are also important during the teenage years, to maintain protection against common infectious diseases. This includes diphtheria, tetanus and pertussis, as immunity will fade over time.¹⁰



A man and a woman are smiling and looking at a raspberry tart. The man is on the left, wearing a blue button-down shirt. The woman is on the right, wearing a striped shirt and a white apron. They are in a kitchen setting with a brick wall in the background. The tart is on a white plate and is topped with raspberries and blueberries.

The many benefits of vaccines don't end with our teenage years, but continue as we age.

ADULTHOOD

The many benefits of vaccines don't end with our teenage years, but continue as we age. During everyday life we may forget about the many benefits of vaccination, but we need protection throughout our lives to help prevent serious disease which could result, in poor health, missed work, medical bills, and not being able to care for our family.¹¹

Therefore booster vaccinations are also recommended throughout adulthood, including for pertussis (whooping cough).

Although adults suffer relatively mild complications from pertussis, it can be very serious for infants who are too young to be protected through vaccination. A recent study from the US, revealed that ~85% of infants with pertussis contracted it from a family member.¹² This also applies for flu, a highly contagious disease, which can result in serious illness and deaths within the elderly and infant population.

Most transmission occurs between children at schools and adults in the workplace, vaccination in these age groups can help reduce disease transmission to the ones at greatest risk.

HAVING A BABY

When your baby is born, his or her brand new immune system is fighting off millions of germs. But, by vaccinating yourself before and during pregnancy, you can protect yourself and pass immunity directly to your baby to give them protection.¹³

BEFORE PREGNANCY

By getting vaccinated against MMR (measles, mumps and rubella)**, you will pass this protection on to your baby. This is especially important since rubella can cause severe damage to your baby with lifelong consequences (e.g. deafness, heart defects, intellectual disability).¹⁴ This immunity only lasts for up to a year, so it is important that your baby is vaccinated at one year as well.

DURING PREGNANCY

Vaccination against pertussis during pregnancy is recommended in certain countries to help your body create protective antibodies to provide early, short-term protection against pertussis for your baby.

A flu vaccination during pregnancy can reduce the chances of your newborn contacting flu, too young to be vaccinated until 6 months and prevent flu complications for yourself.¹⁵

** MMR vaccines are contraindicated for pregnant women and therefore need to be administered before pregnancy.





LATER IN LIFE

Vaccination against diseases such as flu, pneumococcal disease and shingles can help protect your loved ones later in life.¹⁶

This is especially important as aging is associated with a higher prevalence of chronic conditions like diabetes and cardiovascular disease, which can be worsened by infectious diseases. For example, people aged over 65 are also at a higher risk of severe flu complications, with the majority of deaths from influenza occurring in this age group, making it even more important to be vaccinated throughout and later in life.¹⁶

At Sanofi Pasteur, we believe in a world where no one suffers or dies from a vaccine preventable disease.

Up to 3 million lives are saved every year thanks to vaccination, however, an additional 1.5 million deaths could be avoided with improved vaccination coverage.¹⁷ For over a century, our vaccines have helped to protect millions of people against life-threatening infectious diseases, at every stage of life. Hand in hand with the public health community, we seek to extend the protective power of vaccination as broadly as possible whilst striving to develop new and improved vaccines to improve health and wellbeing.

REFERENCES

- 1 Rappuoli R, Pizza M et al. Vaccines, new opportunities for a new society. 2014, Proceedings of the National Academy of Sciences of the United States of America, Vol. 111, pp. 12288-12293.
- 2 Andre FE, Booy R, et al. 2, s.l.: Vaccination greatly reduces disease, disability, death and inequity worldwide. WHO. Bulletin of the World Health Organization, 2008, Bulletin of the World Health Organization, Vol. 86, pp. 81-160.
- 3 CDC. Centers for Disease Control and Prevention. Understanding How Vaccines Work. (Online) 2016. (Cited: 26 September 2017.) <https://www.cdc.gov/vaccines/hcp/conversations/downloads/vacsafe-understand-color-office.pdf>
- 4 Vaccines Today. What is Herd Immunity? (Online) 2015. (Cited: 20 November 2017.) <https://www.vaccines.today.eu/stories/what-is-herd-immunity/>
- 5 CDC. Centers for Disease Control and Prevention: Measles Cases and Outbreaks. (Online) 2017. (Cited: November 2017). <https://www.cdc.gov/measles/cases-outbreaks.html>
- 6 WHO. Global Vaccine Action Plan 2011-2020. (Online) 2011. (Cited: 22 December 2017.) http://www.who.int/immunization/global_vaccine_action_plan/GVAP_doc_2011_2020/en/
- 7 UNICEF. Vaccines bring 7 diseases under control. (Online) 1996. (Cited February 2018) <https://www.unicef.org/pon96/hevaccin.html>
- 8 WHO. Meningococcal vaccines: WHO Position Paper: November 2011. Weekly Epidemiological Records. 2011, Vol. 47, pp. 521-540.
- 9 Smith M, Canfell K. Projected impact of HPV vaccination and primary HPV screening on cervical adenocarcinoma: Example from Australia. Papillomavirus Research, 2017, Vol. 3, pp. 134-141.
- 10 CDC. Pertussis Prevention. (Online) 2017. (Cited: 25 September 2017). <https://www.cdc.gov/pertussis/about/prevention/index.html>
- 11 CDC. Adult Vaccines. (Online) 2017. (Cited: 25 September 2017). <https://www.cdc.gov/vaccines/adults/rec-vac/index.html>
- 12 Skoff TH, Kenyon C, Cocoros N, et al. 4,s.l. : Sources of infant pertussis infection in the United States. Pediatrics, 2015, Pediatrics, Vol. 136, pp. 635-641.
- 13 CDC. Pregnancy and Vaccination Factsheet. (Online) September 2016. (Cited: 28 September 2017). <https://www.cdc.gov/vaccines/pregnancy/downloads/pregnancy-vaccination.pdf>
- 14 CDC. CDC Factsheet: Rubella and Pregnancy. (Online) 2017. (Cited: 20 November 2017). <https://www.cdc.gov/rubella/pregnancy.html>
- 15 Myers E R, Misurski DA and Swamy, G K. Influence of timing of seasonal influenza vaccination on effectiveness and cost-effectiveness in pregnancy American Journal of Obstetrics and Gynecology, 2011, Vol. 204, pp. Supplement S128-S140.
- 16 Toumi M, and Ricciardi W. The economic value of vaccination. Journal of Market Access and Health Policy, 2015, Vol. 3, p. 3402.
- 17 WHO. WHO Immunization Coverage Factsheet. (Online) July 2017. (Cited: October 10, 2017). <http://www.who.int/mediacentre/factsheets/fs378/en/>



www.sanofipasteur.com
14 Espace Henry Vallée
69007 Lyon - France

@Sanofi / iStockphoto / Milan Marjanovic | @Gallery stock | @Sanofi / iStockphoto / knape | @Sanofi / iStockphoto / Ababsolutum
| @Grant SquibbGallery stock | @Sanofi Pasteur / VDMTV | @Sanofi / iStockphoto / Geber86