



Focus on the Patient

What is the context?



- Vaccines are a powerful tool against infectious diseases.
- Different vaccine designs, each with different advantages and limitations, can be applied for protection against a particular disease .
- Vaccines may have side effects. The risks associated with their administration are outweighed usually by their individual and societal benefits.
- Awareness about vaccine key concepts such as live-attenuated, non-live, inactivated, subunit, or adjuvants would help to understand the mode of action, benefits, risks, and real-life impact of vaccines.

What is new?



Key aspects are highlighted on vaccine designs including on:

- Immunology: vaccine mode of action, adaptive immune mechanisms involved, immune memory, direct and indirect protection, herd protection, pregnancy and maternal immunization, immunization of immunocompromised individuals,...
- Vaccine technology: live-attenuated vaccines, non-live vaccines, inactivated vaccines, subunit vaccines, protein vaccines, virus-like particles, toxoid vaccines, polysaccharide/polysaccharide conjugate vaccines, adjuvants.
- Vaccine profile: stability, immunogenicity, booster doses, protection duration, tolerability, safety profile, reactogenicity.
- Targeted diseases: tetanus, diphtheria, pertussis, polio, measles, mumps, rubella, varicella, herpes zoster, rotavirus, influenza, hepatitis A/B, human papillomavirus, meningococcus A/B/C/W/Y, pneumococcus, *Haemophilus influenzae* type b, rabies, yellow fever, Japanese encephalitis, cholera, malaria.

What is the impact?



An improved knowledge and understanding of the main vaccine designs and concepts of protection

- should support the appropriate use and expectations of vaccines,
- increase confidence in the science of vaccination,
- and help reduce vaccine hesitancy.