

THE PATHCARE NEWS

ADULT IMMUNISATION

The recent COVID-19 pandemic renewed the focus of the role of vaccination in the prevention of infection across all ages and in all communities.

Apart from reducing infectious episodes in individual patients, vaccination is an often-overlooked strategy to also combat the emergence and spread of bacterial resistance¹, as the burden of antimicrobial usage can be significantly lessened by preventing specific and secondary bacterial infections.

The CDC offers regularly updated recommendations for the vaccination of healthy adults (>18 years)². When adapted to add to our local childhood vaccination schedule, these recommendations can be summarised as follows:

- One dose of **influenza vaccine** annually across all ages
- Re-vaccination against **tetanus, diphtheria, and pertussis (DPT)** followed by a booster every 10 years
- Two or three doses of **Human Papilloma Virus (HPV)** vaccine for males and females (depending on the vaccine product), preferably before age 27
- Ensure **hepatitis B** vaccination was done and completed
- Two doses of **varicella** vaccine if not previously vaccinated or infected
- One dose of herpes zoster vaccination for patients >60 years
- 1 or 2 doses of **Measles, Mumps and Rubella (MMR)** for patients between 18 and 65 years of age can be recommended
- For all patients >65 years or earlier, if at risk for serious **pneumococcal infection**: 1 dose Pneumococcal 15-valent conjugate vaccine (PCV15) followed by Pneumococcal 23-valent polysaccharide vaccine (PPSV23) at least one year later, OR 1 dose Pneumococcal 20-valent conjugate vaccine (PCV20).

Some special considerations for pneumococcal vaccination:³

The interval between PCV15 and PPSV23 can be reduced to 8 weeks in adults with an **immunocompromising condition, cochlear implant, or cerebrospinal fluid leak**, to provide protection against infection with invasive strains.

Adults who have previously received PPSV23 only may receive either PCV20 or PCV15 ≥ 1 year after their last PPSV23 dose. When PCV15 is used in those with history of PPSV23 receipt, it does not need to be followed by another dose of PPSV23.

In adults who have previously received PCV13, the current recommendation is to complete the previously recommended PPSV23 series. One dose of PCV20 may be used if PPSV23 is not available.

Other vaccines to be considered, depending on each patient's medical, occupational, lifestyle or other risk factors, are:

- Hepatitis A (2 – 3 doses depending on type of vaccine)
- *Haemophilus influenzae* type b (1 or 3 doses)
- One dose of herpes zoster vaccine for individuals > 50 years can be considered under special circumstances
- **Asplenic patients**, notwithstanding their age, should always be vaccinated against the capsulated bacteria such as *S. pneumoniae*, *H. influenzae* and *N. meningitidis* in addition to the standard recommendations for adult patients

More detail regarding each of the vaccines listed can be found on the CDC website². A schedule of vaccinations specific to patients with other special conditions such as pregnancy, various forms of immune deficiencies, chronic heart, lung or kidney disease is also provided.

References:

1. Jansen KU, Knirsch C, Anderson AS. The role of vaccines in preventing bacterial antimicrobial resistance. *Nat Med.* 2018 Jan 9;24(1):10-19. doi: 10.1038/nm.4465. PMID: 29315295.
2. Recommended Adult Immunization Schedule for ages 19 years or older 2022. <https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html>
3. Use of 15-Valent Pneumococcal Conjugate Vaccine and 20-Valent Pneumococcal Conjugate Vaccine Among U.S. Adults: Updated Recommendations of the Advisory Committee on Immunization Practices — United States, 2022. <https://www.cdc.gov/mmwr.volumes/71.wr.mm7104a1.htm>