

Immunisation & Vaccination Notes for OPRA Exam

Basics of Immunisation & Vaccination

- **Immunisation (IMZ):** The process of inducing immunity against an infectious disease using a vaccine.
 - **Vaccination (VX):** The administration of a vaccine to stimulate an immune response.
 - **Passive Immunity (PI):** Temporary immunity via antibodies (e.g., maternal antibodies, immunoglobulin therapy).
 - **Active Immunity (AI):** Long-term immunity via vaccination or infection.
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Types of Vaccines (VX) & Abbreviations

Vaccine Type	Examples	Notes
Live Attenuated Vaccines (LAVs)	BCG, MMR, Varicella, Yellow Fever	Strong response, contraindicated in immunocompromised
Inactivated Vaccines (IVs)	HepA, IPV (Polio), Rabies	Require boosters for immunity
Subunit, Recombinant, Polysaccharide, Conjugate Vaccines (SRPCVs)	HepB, HPV, PCV, MenACWY	Target-specific, fewer side effects
Toxoid Vaccines (TXV)	Tetanus (TT), Diphtheria (DT)	Prevents toxin effects rather than infection
mRNA Vaccines (mRNAVX)	COVID-19 (Pfizer, Moderna)	Newer technology, no live virus
Viral Vector Vaccines (VVVX)	COVID-19 (AstraZeneca, J&J)	Use a modified virus as a carrier

Australian Immunisation Schedule (AIS) – Key Vaccines & Abbreviations

Age Group	Vaccines (VX)	Abbreviations
Birth	Hepatitis B	HepB
6 Weeks	DTPa-HepB-Hib-IPV, PCV, Rotavirus	Infanrix-hexa®, PCV13, Rotarix®
4 Months	DTPa-HepB-Hib-IPV, PCV, Rotavirus	Infanrix-hexa®, PCV13, Rotarix®
6 Months	DTPa-HepB-Hib-IPV, PCV	Infanrix-hexa®, PCV13
12 Months	MMR, MenACWY	Priorix®, Nimenrix®
18 Months	MMRV, DTPa, Hib	Priorix-Tetra®, Infanrix®, ActHIB®
4 Years	DTPa-IPV	Infanrix-IPV®
Adolescents (12-13y)	HPV, dTpa	Gardasil-9®, Boostrix®
Adults (≥50y)	Zoster (Shingles)	Shingrix®
65+ years	Pneumococcal, Influenza	PCV, FluVX
Pregnancy	dTpa (Boostrix), Influenza	Boostrix®, FluVX

Special Considerations

Pregnancy:

- **Recommended:** Influenza, dTpa (Boostrix)
- **Contraindicated:** Live vaccines (e.g., MMR, Varicella, Yellow Fever)

Immunocompromised Patients:

- **Avoid LAVs (e.g., BCG, MMR, Varicella, Yellow Fever)**
- **Give inactivated vaccines (e.g., HepB, PCV, MenACWY)**

Travelers:

- **Yellow Fever (YF-VX):** Required for endemic areas
- **Typhoid (Ty-VX):** Recommended for travelers to high-risk regions
- **Rabies (R-VX):** For high-risk exposure (e.g., animal handlers)

Healthcare Workers (HCWs):

- **Mandatory:** HepB, Influenza, dTpa, MMR, Varicella
- **Optional (depending on exposure):** COVID-19, TB (BCG)

Common Vaccine-Preventable Diseases &

Abbreviations

Disease	Vaccine	Abbreviation
Hepatitis B	HepB Vaccine	HepB
Diphtheria	DTPa Vaccine	D
Tetanus	DTPa Vaccine	T
Pertussis (Whooping Cough)	DTPa Vaccine	P
Poliomyelitis	Inactivated Poliovirus Vaccine	IPV
Haemophilus Influenzae Type B	Hib Vaccine	Hib
Pneumococcal Disease	PCV/PPSV Vaccine	PCV13, PPSV23
Meningococcal Disease	MenACWY, MenB	MenACWY, MenB
Measles	MMR Vaccine	M
Mumps	MMR Vaccine	M
Rubella	MMR Vaccine	R
Varicella (Chickenpox)	Varicella Vaccine	VZV
Rotavirus	Rotavirus Vaccine	RV
Human Papillomavirus	HPV Vaccine	HPV
Influenza	Influenza Vaccine	FluVX
COVID-19	COVID-19 Vaccines	Pfizer, Moderna, AstraZeneca, J&J

Vaccine Administration Routes & Abbreviations

Route	Examples	Abbreviation
Intramuscular (IM)	HepB, DTPa, HPV, Flu	IM
Subcutaneous (SC)	MMR, Varicella, Zoster	SC
Oral (PO)	Rotavirus, Typhoid	PO
Intradermal (ID)	BCG	ID
Intranasal (IN)	Live Attenuated Influenza Vaccine (LAIV)	IN

Adverse Effects & Management

Adverse Event	Vaccine Type	Management
Local reaction (pain, swelling)	Most vaccines	Cold compress, paracetamol
Fever	DTPa, MMR, PCV	Hydration, paracetamol
Anaphylaxis (rare)	Any vaccine	Adrenaline 0.5 mg IM, emergency care
Guillain-Barré Syndrome (GBS)	Influenza, COVID-19 (rare)	Supportive care
Febrile Seizures	MMR, DTPa	Self-limiting, reassurance

Key Vaccine Policies & Cold Chain Management

Cold Chain Storage:

- Live vaccines (MMR, Varicella, Yellow Fever): -50°C to -15°C
- Most vaccines (DTPa, HepB, HPV, PCV): 2°C to 8°C
- Do NOT freeze inactivated vaccines (e.g., HepB, IPV, Influenza)

Vaccine Wastage Prevention:

- Do not pre-draw vaccines
- Monitor expiration dates
- Store in the middle shelf (not on the fridge door)

National Immunisation Program (NIP):

- Free vaccines for eligible groups
- Funded by government programs

Summary of Key Abbreviations

- **IMZ** = Immunisation
 - **VX** = Vaccine
 - **LAV** = Live Attenuated Vaccine
 - **IV** = Inactivated Vaccine
 - **TXV** = Toxoid Vaccine
 - **PCV** = Pneumococcal Conjugate Vaccine
 - **MenACWY** = Meningococcal ACWY Vaccine
 - **HepB** = Hepatitis B Vaccine
 - **MMR** = Measles, Mumps, Rubella Vaccine
 - **VZV** = Varicella-Zoster Virus Vaccine
 - **RV** = Rotavirus Vaccine
 - **IN** = Intranasal Administration
 - **PO** = Oral Administration
 - **SC** = Subcutaneous Injection
 - **IM** = Intramuscular Injection
 - **ID** = Intradermal Injection
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