	Type of Vaccine	Dose	When or Time	Mode of Administration	Site	Sensitivity
BCG	live freeze-dried vaccine which must be reconstituted	0.05 ml	within a few days of being born	Intra-dermally	At the deltoid region on the left side	Light Sensitive
DTP	a liquid vaccine which contains vaccine components against diphtheria, Pertussis, and tetanus	0.5 ml	- Three doses are needed for full protection, - at least four weeks apart. (2, 4, 6 months)	intramuscularly	Antero-lateral, right thigh or upper arm	Heat sensitive; must not be frozen
OPV	a liquid vaccine comprising 3 serotypes of live attenuated poliovirus	2 drops	- 3 OPV + 1 IPV - age of 6 weeks, - at least four weeks apart between the OPV doses.	orally	-	Heat sensitive; must be kept within the cold chain
Measles vaccine	a live attenuated freeze-dried vaccine	0.5 ml	-	subcutaneously	at the right arm	Once the vaccine has been reconstituted, it must be protected from the light and kept as cool as possible.

	Type of Vaccine	Dose	When or Time	Mode of Administration	Site	Sensitivity
MMR vaccine	a liquid vaccine which contains three live viruses which have been weakened against measles, mumps and rubella	0.5 ml	- It is offered to all children aged 12 months and over. - A second dose is offered at the time of the pre-school booster, if not before.	subcutaneously	At the right arm	Heat sensitive; must not be frozen
Hepatitis B vaccine	liquid vaccine	0.5 ml	- three doses, at least four weeks apart. - at the same time as each dose of DTP.	intramuscularly	generally given in the arm	Heat sensitive; must not be frozen
Notes						
BCG	❖ If given correctly, the injection raises a small "bleb" which looks like the peel of an orange. ❖ Potency of BCG ➢ only 50%-80% effective against these forms of childhood TB ➢ some protection against leprosy ➢ its protection against adult forms of tuberculosis is uncertain. ➢ Booster doses of BCG are not recommended by WHO					
DTP	❖ Other variations of DTP include: ➢ DT (with a full diphtheria component), ➢ TT (tetanus toxoid alone) for women of childbearing age ➢ Td (with a reduced diphtheria component) for adults. ➢ Some countries have substituted acellular pertussis vaccine (aP) for the whole cell pertussis component.					

Notes	
OPV	❖ Once opened, vials of OPV can be stored and re-used provided they are kept within the cold chain and not used beyond the expiry date. ❖ Since 1996, the phased introduction of "Vaccine Vial Monitors" (VVMs) on vials of OPV ensures that health workers can determine whether vaccine has been damaged by heat or is still safe to use ❖ There are two kinds of polio vaccine: ➢ An inactivated injectable polio vaccine (IPV) originally developed in 1955 by Dr Jonas Salk, ➢ A live attenuated oral polio vaccine (OPV) developed by Dr Albert Sabin in 1961. ➢ Although both are highly effective against all three types of poliovirus, there are significant differences in the way each vaccine works. ❖ OPV is the vaccine of choice for eradication of poliomyelitis. WHY? 1. It is less expensive (IPV costs five times as much) 2. and easier to administer than an injectable vaccine. 3. But the overriding reason is its ability to induce immunity in the gut - the key site where poliovirus multiplies, can be shedded in feces for 6 weeks
IPV	❖ IPV provides individual protection against polio paralysis, but is not capable of preventing the spread of wild poliovirus, since it induces only very low immunity in the gut. Thus, IPV cannot be used to eradicate polio.
Measles vaccine	❖ Any doses remaining in an opened vial at the end of a vaccination session must be discarded. ❖ Vitamin A supplement, as part of EPI, is given along with measles vaccine
Hepatitis B vaccine	❖ Two kinds of vaccine are available: 1. an inactivated plasma-derived vaccine (available since 1981) 2. and a more expensive genetically engineered (DNA recombinant) vaccine (on the market since1986).

Notes	
Hepatitis B vaccine	❖ Hepatitis B vaccine 1. Hepatitis B vaccine is the first vaccine to be developed against a form of cancer (liver cancer) 2. More than 2 billion people alive today have at some time in their lives been infected with hepatitis B virus 3. Of these, about 350 million remain chronically infected carriers - a ticking time bomb that can transmit the disease for many years before going on to develop cirrhosis of the liver or liver cancer. 4. Every year there are about 4 million acute clinical cases of hepatitis B and about a million deaths. Primary liver cancer caused by hepatitis B is now one of the principal causes of cancer death in many parts of Africa, Asia, and the Pacific Basin.

اعداد: محمود بركات