Immunization: The practical details

MANY SERIOUS DISEASES can be prevented by immunizing a child before it is a year old. Here is a diagram to help you remember what immunizations children need to prevent them suffering from measles, polio, tuberculosis, diphtheria, tetanus and whooping cough. The diagrams show you how many doses are needed and where they are given. The injection sites may vary a little in different countries.

It is important to give the immunization in the correct part of the body. If a mother forgets her record card for the child, ask where the child has received injections before and how many have been given.

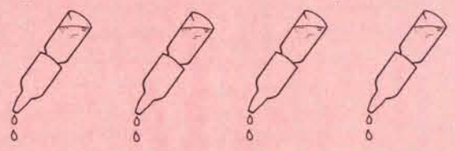
Children should be immunized before they are in danger of catching the disease. If a child does not come for vaccination at the correct age, immunization can be started at any time following the correct intervals.

When a child is born, it will have antibodies for a short time from the mother which will give protection against some diseases. These antibodies will stop some vaccines from working. Vaccines must be given when these antibodies have gone.

There are many rules on immunization which must be followed if an immunization programme is going to be effective. These can be obtained from the Expanded Programme on Immunization in your country.

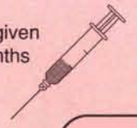
Polio

Four doses of 2 drops given at birth and at 6 weeks, 10 weeks and 14 weeks by mouth. (Schedules will vary a little between different countries.)



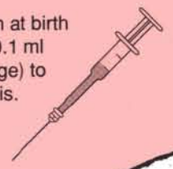
Measles

One injection given at about 9 months or soon after.



BCG

One injection given at birth or any time after (0.1 ml after one year of age) to prevent tuberculosis.



DPT

Three injections given at 6 weeks, 10 weeks and 14 weeks to protect against diphtheria, whooping cough and tetanus. (Schedules will vary a little between different countries.)

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Except where marked otherwise, the diagrams on this page are taken from the book *Immunization in Practice* produced by WHO. Used with kind permission of Oxford University Press.

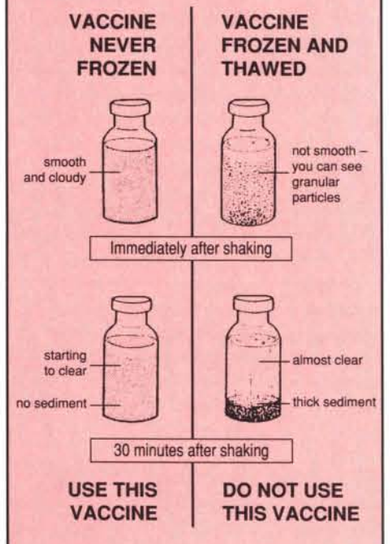
What if the baby is ill before or after the injection?

Unless the baby is obviously very ill, it is generally better to give the injection, rather than risk the baby not completing the full course of immunization. Vaccines, especially DPT, often make babies a little miserable the next day. Talk about this with the mothers so that they are not worried if their child is miserable or has a slight fever. This shows that the vaccine is working. If a baby has diarrhoea when the polio vaccine is given, it is a good idea to try and make sure that an extra dose is given at least four weeks later.

Are the vaccines effective?

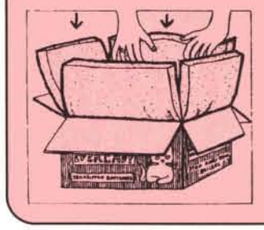
Vaccines are very delicate. They can easily be damaged if they are not kept at the right temperature the whole time. Never ever use a vaccine which may not be effective. Not only will you put babies' lives at risk – you may destroy people's confidence in immunization. It is better to throw away the vaccine and tell people to return for another clinic.

Here is a simple test for DPT or TT vaccine...



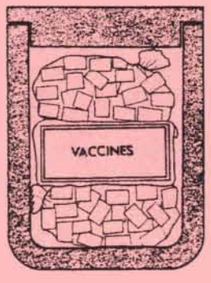
Keep vaccines cold

Vaccines must be kept in a fridge at the correct temperature the whole time, until they are taken out to use in clinics. For mobile clinics a cold box is essential. If your clinic is unable to buy a proper cold box, here is a way to make a simple one. This will keep vaccines cold for just a few hours – no longer.



Use a strong cardboard or wooden box with a lid. Line the bottom and the sides with insulation, making sure every part is covered, including the corners. You can use foam rubber, Styrofoam (what radios are packed in), dry grass rolled up or many layers of old paper. Paint the outside of the box white to reflect the sun and keep the box cooler.

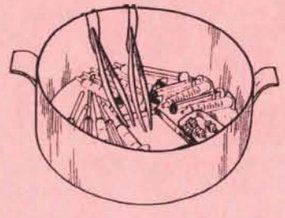
Cover the inside with plastic. Use more insulation to make a cover and cover this with plastic as well. Now vaccines can be packed in the cold box with 'cold packs'. These can be bought and should be frozen and then packed tightly together in the cold box around the vaccines. If you are unable to buy these you can use plastic or metal containers, ideally rectangular in shape and all the same size, filled nearly full of water and then frozen. Place ice cubes in plastic bags all around the vaccine. Always keep your cold box in a cool, shady place.



Diagrams from *Helping Health Workers Learn.*

One syringe, one needle for each injection

Never re-use the same needle for another child until it has been sterilised. It might save you time and effort, but instead of protecting that baby with vaccine, you may be passing on AIDS, hepatitis or another disease. Always make sure that needles are clean and sterile for each baby. Either dispose of the needles if you have good supplies, or rinse and then boil the needles for 20 minutes before re-using.



Keep careful records

These are essential for a successful immunization programme. You need to keep good records of the supplies of vaccine and the age of the vaccine. You must have a good system of record cards for both mother and clinic. It is also useful to keep records of the number of immunizations given at each clinic (tally cards).

Keep needles sterile

Never handle needles with your fingers – always use sterile forceps. Again, make sure that the needle is not touched when filling with vaccine. Needles touched by fingers may cause abscesses. Mothers will lose confidence in the immunization programme if this happens.