

A4.5 Questions about the need for immunisation

Isn't natural immunity better than immunity from vaccination?

While vaccine-induced immunity may diminish with time without boosters (vaccine or contact with wild-type infection), 'natural' immunity, acquired by catching the disease, is usually life-long, with the exception of pertussis. The problem is that the wild or 'natural' disease has a higher risk of serious illness and occasionally death. Children or adults can be revaccinated (with some, but not all, vaccines) if their immunity from the vaccines falls to a low level or if previous research has shown that a booster vaccination is required for long-term protection. It is important to remember that vaccines are many times safer than the diseases they prevent.

Diseases like measles, polio and diphtheria have already disappeared from most parts of Australia. Why do we need to keep vaccinating children against these diseases?

Although these diseases are much less common now, they still exist. The potential problem of disease escalation is kept in check by routine vaccination programs. In countries where vaccination rates have declined, vaccine-preventable diseases have sometimes reappeared. For example, Holland has one of the highest rates of fully vaccinated people in the world. However, in the early 1990s, there was a large outbreak of polio among a group of Dutch people who belonged to a religious group that objected to vaccination. While many of these people suffered severe complications like paralysis, polio did not spread into the rest of the Dutch community. This was due to the high rate of vaccination against polio, which protected the rest of the Dutch community.

There have been recent outbreaks of whooping cough, measles and rubella in Australia, and a number of children have died. Cases of tetanus and diphtheria, although rare, still occur. Thus, even though these diseases are much less common now than in the past, it is necessary to continue to protect Australian children, so that the diseases cannot re-emerge to cause large epidemics and deaths.

Also, many of the diseases against which we vaccinate our children are still common in other areas of the world. For example, measles still occurs in many Asian countries, where many people take holidays or travel for business. Therefore, it is possible for non-immune individuals to acquire measles overseas, and, with the speed of air travel, arrive home and be able to pass measles onto those around them if they are unprotected. Measles is highly infectious and can infect others for several hours after an infected person has left a room. Vaccination, while not 100% effective, can considerably minimise a person's chance of catching a disease. The more people who are vaccinated, the less chance there is that a disease, such as measles, will spread widely in the community. This is referred to as 'herd immunity'.

Why do some children get the disease despite being vaccinated?

This is possible because a small proportion of those who are vaccinated will remain susceptible to the disease. However, in the cases in which illness does occur in vaccinated individuals, the illness is usually much less severe than in those who were not vaccinated. The protection provided by the same vaccine to different individuals can differ. For example, if 100 children are vaccinated with MMR, 5 to 10 of the 100 fully vaccinated children might still catch measles, mumps or rubella (although the disease will often be less severe in vaccinated children). If 100 children are vaccinated with a full schedule of pertussis-containing vaccines, 20 of the children might still get whooping cough, but, once again, the disease is often less severe in these vaccinated children. To put it another way, if you do not vaccinate 100 children with MMR vaccine, and the children are exposed to measles, all of them will catch the disease with a risk of high rates of complications like pneumonia or encephalitis. The reason why fewer children become infected than these figures suggest is due to the high vaccine coverage rates in the community. If there are high coverage rates, there is less chance of contact with the infection and, although some children may be susceptible, they have a low chance of contact with the infection (this situation is also called 'herd immunity').

What about homeopathic 'immunisation'?

Homeopathic 'immunisation' has not been proved to give protection against infectious diseases; only conventional vaccination produces a measurable immune response. The Council of the Faculty of Homeopathy, London, issued a statement in 1993, which reads: 'The Faculty of Homeopathy, London, strongly supports the conventional vaccination program and has stated that vaccination should be carried out in the normal way, using the conventional tested and proved vaccines, in the absence of medical contraindications'.¹¹

A4.6 Further information about vaccination

More information about vaccination can be found in the following publications produced by the Australian Government Department of Health and Ageing:

- *Understanding childhood immunisation*
- *Immunisation myths and realities – responding to arguments against immunisation: a guide for providers.*

The following two websites include further publications, fact sheets, etc. and are recommended for both immunisation service providers and the general public:

- Immunise Australia website www.immunise.health.gov.au
- The National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases (NCIRS) website www.ncirs.edu.au.

Also, check with your local state or territory Public Health Unit or local council, maternal child health nurse or public health vaccination clinic for more information (see Appendix 1 *Contact details for Australian, state and territory government health authorities and communicable disease control*).

References

A full reference list is available on the electronic *Handbook* or website www.immunise.health.gov.au