

Test your knowledge

Australia has an enviably high rate of vaccination, but the community still has a surprising amount of ambivalence about the benefits. Doctors need to be well informed if they are to address parents' concerns effectively.

The multiple choice questions in this quiz may have more than one answer.

- Which diseases do the combined DTPa vaccines cover?
 - diphtheria, tuberculosis and polio
 - diphtheria, tetanus and polio
 - diphtheria, tetanus and pertussis
 - diphtheria, tetanus and pneumococcal disease
 - diphtheria, tuberculosis and pneumococcal disease
- Which of the following statements are true of the measles–mumps–rubella (MMR) vaccine?
 - children should be first vaccinated against measles, mumps and rubella at 12 months of age
 - the MMR vaccine contains small amounts of attenuated measles, mumps and rubella viruses
 - side effects can occur five to 12 days after the vaccination
 - possible reactions to the vaccine include lymphadenopathy, puffy eyes, rash and mild fever
 - demyelinating encephalopathy has been reported after measles vaccination
- If a pregnant woman has hepatitis B and is positive for hepatitis B surface antigen, what will be the correct immunisation schedule for her baby?
 - hepatitis B vaccine only, given at birth
 - hepatitis B vaccine only, given at one week of age
 - hepatitis B vaccine plus hepatitis B immunoglobulin, given within 12 hours of birth
 - hepatitis B immunoglobulin only
 - nothing – transmission of hepatitis B occurs *in utero* so there is no value in postpartum vaccination
- A vaccine against *Haemophilus influenzae* type B (Hib) was introduced in 1993. It has been very successful in reducing the incidence of which diseases?
 - pneumonia in teenagers
 - epiglottitis in children
 - meningitis in children
 - encephalitis
 - hepatitis
- The varicella zoster vaccine was approved for use in Australia in 2000. Which of the following are currently considered to be true for this vaccine?
 - its use is appropriate in women who have not had chickenpox and are planning a pregnancy
 - it is of use in childcare workers who have not had chickenpox
 - it should be given routinely with the MMR vaccine
 - it should be administered at the onset of adolescence
 - it should be administered in people about to receive chemotherapy
- For which of the following groups is vaccination against influenza recommended?
 - all adults
 - people over 65 years of age
 - people with chronic respiratory disease
 - health professionals exposed to people with influenza
 - residents of nursing homes
- Which of the following are true of vaccination against pneumococcal disease?
 - it is indicated in patients who have had a splenectomy
 - it is useful in reducing the risk of otitis media
 - it is useful in reducing the risk of pneumonia, particularly in people with chronic lung disease
 - it reduces the rate of influenza in people with chronic lung disease
 - it reduces the risk of rotavirus infection in infants
- For which of the following groups may vaccination against hepatitis A be indicated?
 - people with chronic liver disease due to hepatitis C
 - people with chronic liver disease due to hepatitis B
 - people travelling to areas where hepatitis A is endemic
 - homosexual men who do not have serological evidence of exposure to hepatitis A
 - all Australian children under the age of 5 years.



Reference

- Commonwealth Department of Health and Ageing. Immunise Australia program. Available at: <http://immunise.health.gov.au>

Answers appear on page 104

(to questions on page 85)

1. c

Combined DTPa vaccines cover diphtheria, tetanus and pertussis. The pertussis component is acellular, which is associated with a lower rate of adverse events than the older type.

2. a, b, c, d, e

Vaccination against measles, mumps and rubella is recommended in Australia at 12 months of age and again at 4 years. The MMR vaccine contains small amounts of attenuated measles, mumps and rubella viruses. Mild adverse reactions can occur after the vaccination, and may be delayed for 5 to 12 days. A demyelinating encephalopathy has been reported following measles vaccination (1 in 1,000,000), but the rate is much lower than that following the infection (1 in 1,000).

3. c

Hepatitis B vaccine plus hepatitis B immunoglobulin should be given, as both passive and active immunity are necessary.

4. b, c

The Hib vaccine protects children under 5 years of age against epiglottitis and meningitis due to *Haemophilus influenzae* type B.

5. a, b

Chickenpox is so common that 95% of Australians have serological infection by adulthood; therefore, vaccination of adolescents or

people about to receive chemotherapy is not appropriate. At present, routine vaccination of small infants is not suggested, but there is debate about whether this is a reasonable course in view of the disruption that a bout of chickenpox can bring to a family in which both parents work. The vaccine is appropriate for women who have not had chickenpox and are planning a pregnancy, and for childcare workers who have not had chickenpox.

6. b, c, d, e

People at increased risk of infection should be vaccinated against influenza. At this stage, the vaccination is not recommended for all adults (partly because there can be a limited supply of an appropriate vaccine at the start of the flu season) but individuals may choose to receive it.

7. a, b, c

Vaccination against pneumococcal disease is indicated in people who have had a splenectomy because they have a greatly increased risk of the infection. Vaccination reduces the risk of otitis media and pneumonia. The vaccine is currently suggested for infants, but is not a requirement of eligibility for some government benefits (e.g. Child Care Benefit, Childcare Rebate and Maternity Immunisation Allowance).

8. a, b, c, d

Hepatitis A vaccine is appropriate for people with chronic liver disease who do not have serological evidence of hepatitis A. It is also useful for people travelling overseas and for homosexual men.