Measles

Measles is a contagious viral illness that causes a skin rash and fever. Serious and sometimes fatal complications include pneumonia and encephalitis (brain inflammation). Measles is also known as rubeola, not to be confused with rubella (German measles). Worldwide, measles is the fifth highest cause of illness and death in children.

Measles is rare in Australia because of the widespread use of the measles vaccine. It is important to continue immunising children in Australia, because there is a risk that the infection can be brought in by people arriving or returning from overseas.

Symptoms of measles

The signs and symptoms of measles may include:

- fever
- general discomfort, illness or lack of wellbeing (malaise)
- runny nose
- dry cough
- sore and red eyes (conjunctivitis)
- red and bluish spots inside the mouth (Koplik's spots)
- red and blotchy skin rash that appears first on the face and hairline, and then spreads to the body.

Complications of measles

Possible complications of measles include:

- otitis media – inflammation of the middle ear
- diarrhoea and vomiting – may cause further complications such as dehydration
- respiratory infections – such as bronchitis, croup or laryngitis
- pneumonia – a type of lung inflammation that causes about 60 per cent of measles deaths
- pregnancy problems – if a pregnant woman contracts measles, she risks miscarriage or premature labour
- encephalitis – or brain inflammation, affects about one person with measles in every 1000. About 10 to 15 per cent of people with encephalitis die and 15 to 40 per cent of survivors have permanent brain damage to varying degrees
- subacute sclerosing panencephalitis (SSPE) – occurs in about one in every 100,000 cases of measles. SSPE is an extremely rare progressive inflammation of the brain that causes loss of personality and intellectual problems. SSPE usually begins about seven years after the measles infection.

Causes of measles

Measles is most commonly spread when someone swallows or inhales the cough or sneeze droplets from an infected person. The measles viruses are carried inside mucus or saliva droplets and remain alive for several hours. Infection can also occur if someone touches contaminated surfaces or objects and then touches their own mouth or nose or eats before washing their hands. Symptoms usually occur about 10 to 12 days after infection.

Measles is very contagious. Estimates suggest that a person with measles will infect about nine in every 10 people they have contact with who have not been immunised or previously infected with measles.

High-risk groups

Measles is rare in Australia because of the immunisation program, but cases still occur. Anyone who hasn't been immunised, particularly children and healthcare workers, are at high risk of infection.

People who are at increased risk of potentially fatal measles complications include:

- anyone with a chronic illness
- children younger than five years
- adults.

Diagnosis of measles

Tests used to diagnose measles may include:

- medical history, including immunisation status and travel history
- physical examination
- blood test.

Treatment for measles

A case of measles without complications usually lasts about 14 days and most people make a full recovery. Antibiotics don't work because the illness is viral. Treatment aims to ease symptoms and reduce the risk of complications. Options may include:

- bed rest
- plenty of fluids
- paracetamol to reduce pain and fever
- isolation to reduce the risk of transmission.

Occasionally, measles develops into a serious disease that requires urgent treatment and can even be life threatening. Sometimes, people can die from complications even if they receive prompt medical attention.

Treatment depends on the complication but may include:

- hospitalisation
- supportive care – for example, to maintain hydration, and to check for fever and infection
- antibiotics – to treat bacterial infection.

Contact with someone with measles

If you've been in contact with someone with measles and you are not immune to measles (have not been immunised or have not had a measles infection), there are different treatment options. Speak with your doctor about your options.

Depending on your situation, these may include:

- Contact in the last 72 hours – have a measles immunisation immediately.
- Contact in the last three to seven days – immunoglobulin can be given for interim protection. This is known as passive immunisation. Measles vaccination, or active immunisation, should be given later to prevent further risk of infection, but not until three months after you received the immunoglobulin. Normal human immunoglobulin is given as an injection.

Immunisation against measles

Immunisation is the best protection against measles. A person who receives the recommended two doses of a measles vaccine has 99 per cent immunity against measles infection. If you have been infected with measles, you will usually have lifelong immunity.

There are two types of measles vaccine. In the first type, the vaccine is a combined measles, mumps and rubella (German measles) vaccine and is commonly known as the MMR vaccine. In the second type (available from July 2013), the vaccine is a combined measles, mumps, rubella and varicella (chickenpox) vaccine and is commonly known as the MMRV vaccine.

Protection against measles is available under the National Immunisation Program Schedule. In Victoria, immunisation against measles is free of charge for:

- Children at 12 months – the first dose of measles vaccine is given as the MMR combination vaccine.
- Children at 18 months of age – the second dose of measles vaccine is given as the MMRV combination vaccine.
- Children at four years of age – the second dose of measles vaccine can also be given as the MMR vaccine, if the child was not given the second dose (in MMRV) at 18 months of age.
- Children up to and including nine years – catch-up immunisations are available for children who have not been fully immunised.
- Women planning pregnancy or after the birth of their child – two doses of MMR are available for women who have low immunity or no immunity to rubella.
- Aboriginal and Torres Strait Islander people, refugees and asylum seekers – catch-up immunisations are available for people who have not been fully vaccinated.

Immunisation is also recommended for adults born during or since 1966, unless you have evidence of having received two doses of MMR. If you have not received the vaccine, ask your doctor about catch-up doses. The MMRV vaccine is not recommended for people aged 14 years and over.

People who should not be immunised against measles

Not everyone is a suitable candidate for a measles vaccine. A person with an impaired immune system should not be immunised.

Some of the possible causes of impaired immunity include:

- infection with human immunodeficiency virus (HIV) or the presence of acquired immunodeficiency syndrome (AIDS) from an HIV infection
- taking certain medications, such as high-dose corticosteroids
- receiving immunosuppressive treatment including chemotherapy and radiotherapy
- having some types of cancer, such as Hodgkin's disease or leukaemia
- having an immune deficiency with extremely low levels of antibodies (hypogammaglobulinaemia, multiple myeloma or chronic lymphoblastic leukaemia).

If you have an impaired immune system, speak with your doctor about what options might be available.

Pregnancy and MMR immunisation

You should not be given the MMR vaccine if you are already pregnant. Pregnancy should also be avoided for 28 days after the immunisation. The MMRV vaccine is not recommended for people 14 years and over.

Where to get help

- Your doctor
- In an emergency, always call triple zero (000)
- Emergency department of your nearest hospital
- Local government immunisation service
- Maternal and Child Health Line (24 hours) Tel. 132 229
- NURSE-ON-CALL Tel. 1300 60 60 24 – for expert health information and advice (24 hours, 7 days)
- Immunisation Program, Department of Health, Victorian Government Tel. 1300 882 008
- National Immunisation Information Line Tel. 1800 671 811
- Pharmacist
- SAEFVIC Tel. 1300 882 924 – the line is attended between 10 am and 3.30 pm and you can leave a message at all other times

Things to remember

- Measles is a very contagious viral illness that causes a skin rash and fever.
- Measles can cause serious, sometimes fatal, complications including pneumonia and encephalitis. Measles is rare in Australia because of the widespread use of the measles vaccine but vaccination is important because people coming from overseas can carry the virus.

This page has been produced in consultation with, and approved by:

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