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## Chickenpox

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### Summary

- Chickenpox (varicella) is a highly contagious viral disease.
  - In most cases, chickenpox is mild and gets better without medical treatment.
  - The main symptom is a characteristic blistering skin rash.
  - Treatment options aim to relieve symptoms, and include bed rest, calamine lotion and lukewarm baths.
  - A vaccine is available to protect against chickenpox.
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Chickenpox (varicella) is a highly contagious viral disease caused by the varicella-zoster virus (VZV). The main symptom is a blistering, itchy skin rash. Outbreaks are more common in winter and early spring. Children and adults can be immunised against chickenpox.

Children with chickenpox should not go to school, kindergarten or childcare until the last blister has dried. You should tell your child's school, kindergarten or childcare if your child has chickenpox, as other children may need to be immunised or treated.

For most healthy people, chickenpox is mild and the person recovers fully without specific treatment. Complications do occur in approximately one per cent of cases. Chickenpox is more severe in adults and in anyone (of any age) with impaired immunity. Immunisation is the best way to prevent chickenpox.

### Symptoms of chickenpox

The symptoms of chickenpox include:

- low-grade fever
- general discomfort, illness or lack of wellbeing (malaise)
- intensely itchy skin rash – appears as small blisters surrounded by irregularly-shaped patches of inflamed skin. The blisters first form on the body and later on the head and limbs. They usually burst and develop crusts after about five days
- ulcers may develop in certain areas, including the mouth and vagina.

For chickenpox, the time from infection to the appearance of the rash (incubation period) is around 14 to 16 days. A few days before the appearance of the rash, the person may feel feverish and have a sore throat and headache. The skin may be marked for some months after the rash has cleared.

### Complications of chickenpox

The possible complications of chickenpox include:

- scarring – chickenpox can leave pockmark scars on the skin
- cellulitis – a type of bacterial infection of the skin
- pneumonia – infection and inflammation of the lung can occur in adults and can be fatal
- encephalitis – inflammation of the brain, usually mild, but sometimes severe
- bleeding disorders – these are rare, but can be fatal
- death – in rare cases.

### Complications of chickenpox during pregnancy

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Nine out of ten pregnant women have immunity against chickenpox. Although contact with chickenpox is common during pregnancy, few women become infected during pregnancy (approximately 3 in 1,000 pregnancies have complications caused by chickenpox).

If you have chickenpox for the first time during pregnancy, you can become seriously ill with conditions such as pneumonia, hepatitis and encephalitis. If a pregnant woman is infected with chickenpox in the first 20 weeks of pregnancy, there is a risk to the baby of congenital varicella syndrome, which can cause abnormalities. After 20 weeks, the risk is lower.

The complications for the unborn and newborn baby include:

- scarring of the skin, eye defects, small limbs and neurological abnormalities (if the mother is infected in the first 20 weeks of pregnancy)
- shingles in the first few years of life (if the mother is infected between weeks 20 and 36 of pregnancy)
- chickenpox in the newborn (if the mother is infected up to four weeks before the birth)
- more severe effects for the newborn (if the mother is infected within seven days of the birth).

Shingles occurs in people who have previously had chickenpox, but it does not appear to cause complications for unborn babies.

### **How chickenpox is spread**

Chickenpox is spread by:

- breathing in airborne droplets from the upper respiratory tract of an infected person (these droplets are made airborne when the infected person coughs or sneezes)
- touching the fluid from the blisters on the skin of a person with chickenpox (this is a less common way to contract chickenpox).

An infected person is contagious for one to two days (possibly five days) before the onset of the rash and remains infectious until the blisters form scabs (usually around day five of the illness).

### **High-risk groups for chickenpox**

People at increased risk of catching or having complications from chickenpox include:

- newborn babies – there is an increased risk of severe illness in the first 28 days of life
- pregnant women who have not had chickenpox or been immunised for chickenpox
- people who have a weakened immune system – such as people with leukaemia or Hodgkin lymphoma, or those taking immunosuppressive medications, are at risk of longer and more serious illness.

### **Diagnosis of chickenpox**

Chickenpox is usually diagnosed by physical examination. The diagnosis can also be confirmed using tests such as taking a sample of the blister fluid to check for the presence of the virus.

### **Treatment for chickenpox**

In cases of severe illness, treatment with an antiviral medication may be needed. In most cases, chickenpox is mild and gets better without the need for specific treatment.

Treatment aims to relieve symptoms and reduce the risk of complications. Options may include:

- bed rest
- drinking extra fluids (to avoid dehydration)
- paracetamol to bring down the fever – aspirin should be avoided because of a possible increased risk of complications
- lukewarm baths with baking soda or oatmeal added to the water – a cup of oatmeal can be put into an old, clean pair of panty hose, then tied and left in the bath while the water runs
- creams or lotions, such as calamine lotion, to reduce the itching – if you have a skin problem such as eczema,

you may need to ask a health professional about other creams you can use

- avoidance of salty or citrus foods
- wearing mittens to prevent scratching – these can be worn by babies and young children.

### **Chickenpox and shingles**

As well as causing chickenpox, the varicella-zoster virus can cause shingles in some people who have had chickenpox. Following an attack of chickenpox, the virus becomes latent (lies dormant) in nerve cells in the body. The dormant virus may reactivate, causing shingles later in life. One in three adults will be affected in their lifetime. The incidence and severity increases with age.

People who have never had the chickenpox illness or have never been immunised against chickenpox can get chickenpox (not shingles) if they come into contact with the fluid in the blisters of a person with shingles.

### **Immunisation against chickenpox**

Immunisation against chickenpox can be achieved with either of two vaccines. The first is a combined vaccine containing components to protect against measles, mumps, rubella and varicella (MMRV). The second is the varicella vaccine (VV), which protects only against chickenpox.

#### **Immunisation against chickenpox – up to 14 years of age**

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

- children at 18 months – immunisation against chickenpox is given as the combination MMRV vaccine
- students in Year 7 of secondary school, or aged 12 to 13 years—who receive immunisation as the VV
- children up to and including 9 years – free catch-up vaccines are available for all children who have not been fully immunised.

If the child has already had chickenpox prior to 18 months of age, or there is an uncertain history of chickenpox, the varicella-containing vaccine (MMRV) can still be safely given.

#### **Breakthrough (mild) chickenpox disease – up to 14 years of age**

The estimated effectiveness of one dose of a varicella-containing vaccine is 95–98% against severe varicella, however only 80–85% against mild chickenpox disease in children up to 14 years of age. Therefore two doses of a varicella-containing vaccine are recommended to give increased protection and minimise the risk of 'breakthrough' chickenpox infection in children aged under 14 years.

However, the routine administration of two doses is not funded (that's why only one dose is shown in the National Immunisation Program Schedule), and a prescription is required for one of the doses. The minimum interval between doses is four weeks. Children can receive the first dose (on prescription) as a separate VV on the same day as their 12 month MMR vaccine.

#### **Immunisation against chickenpox – from 14 years of age**

From 14 years of age, two doses of vaccine are required for protection. These are given at least four weeks apart.

Before vaccinating someone from 14 years of age for chickenpox, a blood test should be done to check if the person is already protected.

Under the 'No Jab, No Pay' legislation, for children 14 to 19 years of age, two free doses of the vaccine can be accessed through an immunisation provider until the end of 2017.

If vaccination is required for people in other at-risk groups, a prescription for the two doses of the vaccine is required. At-risk groups for chickenpox include:

- people in high-risk occupations such as healthcare professionals, teachers and childcare workers
- women trying to become pregnant (to avoid congenital or neonatal chickenpox)
- women who have just given birth
- parents of young children

- people who share a house with someone who has a weakened immune system.)

The combination MMRV vaccine is not recommended for people 14 years and over, so people in this age range should be immunised with two doses of VV, at least one month apart. Ask your immunisation provider for more information.

### **Pregnancy and chickenpox immunisation**

If you are thinking of becoming pregnant or are early in your pregnancy, your healthcare professional can check your chickenpox immunity with a blood test. If you are not immune and not pregnant, you may decide to be immunised before you become pregnant. You will need two doses of VV, and must wait at least 28 days after the second VV dose before becoming pregnant.

If you are not immune during pregnancy, you should avoid contact with people who have chickenpox and you should contact your doctor, midwife or hospital as soon as possible if you are exposed to anyone with chickenpox. You will be advised to have an injection of varicella-zoster immunoglobulin (VZIG).

### **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. 13 22 29
- NURSE-ON-CALL Tel. 1300 60 60 24 – for expert health information and advice (24 hours, 7 days)
- Immunisation Section, Department of Health and Human Services, Victorian Government Tel. 1300 882 008
- Immunise Australia Information Line Tel. 1800 671 811
- Pharmacist

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

Department of Health and Human Services - RHP&R - Health Protection - Communicable Disease Prevention and Control Unit

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