



Module 1892

Chickenpox symptoms and treatment

From this pharmacy CPD module on chickenpox symptoms and treatment you will learn about:

- What chickenpox is and how it is linked to shingles
- The common symptoms seen in chickenpox
- Over-the-counter treatments used to manage these symptoms
- How to manage at-risk individuals exposed to the virus

PHILIP CRILLY, PHARMACIST

Chickenpox is a viral condition caused by the varicella zoster virus. Varicella is known to be very infectious and the World Health Organisation estimates that upwards of 90% of susceptible people will develop chickenpox if they come into contact with it.

It is a common childhood condition, with 80% of people in the UK estimated to have had chickenpox by the age of 10. Once a person has contracted the infection, they are then immune. However, they may develop shingles (herpes zoster) in later life.

Chickenpox is transmitted by close personal contact with someone who is already infected, and symptoms can take up to three weeks to appear following initial contact.

A person with chickenpox is infectious from two days before the initial rash appears until after the fluid-filled vesicles have dried and crusted over. The timing will be different for different people, but this is usually after about five days.

For the vast majority, the condition is self-limiting, with very few complications. However, more serious complications are likely to be noted in those who:

- are immunocompromised

- are pregnant
- develop chickenpox as adults.

How are chickenpox and shingles linked?

Shingles is caused by the same virus as chickenpox and is more commonly associated with adults. Once someone has recovered from chickenpox, the virus remains dormant and can reactivate years later to cause shingles.

It is possible to catch chickenpox from someone who has shingles, but it is not possible to catch shingles from someone who has chickenpox. Shingles is often associated with weaker immune systems, so those who are

stressed or who are immunocompromised are more likely to develop it.

What are the common symptoms of chickenpox?

Those working in a pharmacy should be able to recognise the common symptoms of chickenpox. These include:

- fever
- a rash
- the development of fluid-filled vesicles that eventually dry and crust over after a number of days
- an intense itch
- loss of appetite
- feeling unwell in the days leading up to the rash appearing.

A chickenpox rash usually starts on the scalp and face, before moving down to the trunk and proximal limbs. After a number of hours the fluid-filled vesicles begin to appear in crops around the body. As has been mentioned, these eventually dry and crust over after a number of days, causing a severe itch.

Chickenpox may initially present with symptoms similar to those of other viral skin infections. Pharmacy staff should ask about any recent contact the patient might have had with someone who has chickenpox. If contact has been made, and the patient is presenting with the symptoms mentioned, then it is likely that they have the condition.

For those unfamiliar with what chickenpox looks like, the relevant NHS Choices page (at [tinyurl.com/chickenpox3](https://www.nhs.uk/conditions/chickenpox/)) is a useful resource. It includes pictures that show the different stages of the infection, from initial rash and red spots to blisters and then scabs.

Who should be referred?

Chickenpox is usually self-limiting, without any major complications. Some people, however, may be more susceptible to the serious side effects of the condition and should be referred to a doctor. Those that should be referred include:



Chickenpox patients develop fluid-filled vesicles that eventually dry and crust over after a number of days

- adults
- any patients who are immunocompromised
- pregnant women
- neonates (an infant less than four weeks old).

You should also consider referring patients who smoke, who have symptoms that appear severe, or those who may be more prone to complications.

Secondary bacterial infections of the lesions can occur, and are most likely due to scratching. These are often caused by streptococcal forms and can lead to necrotising fasciitis and toxic shock syndrome. Suspected bacterial infections should be treated promptly with antibiotics.

In addition, adults are more prone than children to severe complications such as viral pneumonia or hepatitis. This is particularly the case for the immunocompromised and pregnant women.

In pregnancy, the foetus is also in danger, particularly within the first 28 weeks. There is also

a risk that if a mother contracts chickenpox in the last four weeks of her pregnancy, her baby may be infected.

A seven-day course of oral aciclovir is sometimes considered for non-immunocompromised adults and adolescents for the treatment of chickenpox, when there is a risk of serious complications.

Is there a chickenpox vaccine?

Varicella vaccines have been created from the Oka strain of the varicella zoster virus. Those currently available are Varilrix, which is administered by deep subcutaneous injection, and Varivax, which is administered by either intramuscular or deep subcutaneous injection. They are both live, attenuated vaccines. The vaccines need to be administered twice, after which they provide high protection rates (98% for children and 75% for adults and adolescents).

These vaccines are only available on the NHS



Paracetamol is a suitable treatment for relief of pain and fever, but NSAIDs should not be recommended



Secondary bacterial infections can occur and are most likely due to persistent scratching

for those who are particularly vulnerable to the complications of the condition, their close household contacts and healthcare workers. However, some pharmacy companies offer the vaccine privately. For example, Superdrug and Boots offer vaccinations in certain branches – at £65 per dose for a recommended two doses with a four- to eight-week interval.

Over-the-counter treatments

As chickenpox is a viral condition, it is frequently self-limiting and does not require any treatment to resolve it. Therefore over-the-counter treatment focuses on relieving the presenting symptoms.

Paracetamol

Due to its pain- and fever-relieving actions, paracetamol can be of use in chickenpox. It is the first-line treatment for these symptoms in those over two months, because non-steroidal

anti-inflammatory drugs (NSAIDs) are not recommended in chickenpox (see below).

Why can't NSAIDs be used?

Those under 16 years should never take aspirin, due to the risk of developing Reye's syndrome. However, other NSAIDs that could otherwise be used in children are also not recommended in chickenpox.

While the mechanism is still unclear, NSAIDs have been associated with an increased risk of severe skin reactions in children with the viral condition. Current guidance states that NSAIDs should be avoided in chickenpox, but not all manufacturer literature reflects this. It is therefore very important that pharmacy staff remain vigilant when supplying pain and fever relief to those with the infection.

Calamine lotion

Despite limited evidence of its efficacy, calamine

lotion is recommended to calm the itch associated with chickenpox. It can be applied directly to the blisters or diluted in tepid bath water.

There is some conflicting evidence that calamine lotion may actually dry the skin and increase the itch in chickenpox. For those concerned, calamine with aqueous cream may be a suitable alternative.

Antihistamines

Chlorphenamine is often used in chickenpox to relieve itching in those aged over one year. An added benefit of this antihistamine is that it can cause drowsiness, which may help aid sleep during the night.

Self-care measures

There are many self-care measures sufferers

of chickenpox can take to relieve or avoid exacerbating their symptoms. These include:

- keeping well-hydrated by drinking plenty of water – oral rehydration sachets may also be useful in replacing lost body salts. Advise patients and parents to look out for signs of dehydration, which include low urine output, tiredness and lower skin turgor (how quickly your skin returns to its normal position after being pinched)
- wearing clothing that is not too heavy (to avoid overheating) and is loose (so that it won't irritate the blisters)
- keeping the water cool when bathing and patting the skin dry instead of rubbing with a rough towel
- avoiding scratching itchy blisters and keeping fingernails short to reduce scarring. You can also advise wearing socks on hands during

the night to avoid scratching.

Managing at-risk individuals

At-risk individuals, such as pregnant women who have not or do not know if they have previously had chickenpox, may require post-exposure management if they come into contact with someone who has the infection. This involves referral to a hospital, where they will receive prompt treatment.

The preparation used in this instance is human varicella zoster immunoglobulin (VZIG). Public Health England guidance states that any pregnant woman who is varicella zoster antibody negative should be provided with VZIG if she presents within 10 days of contact.

Due to a short supply, all patients who have not previously had chickenpox are tested for the varicella antibody before being given VZIG.

Pregnant women who have had chickenpox previously, and are therefore varicella zoster antibody positive, do not require VZIG.

Contact with others

As varicella is very infectious, it is highly likely that someone with chickenpox will spread it to other susceptible people. The most infectious period is in the two days before the chickenpox rash develops. However, the sufferer will continue to be infectious until all the vesicles have crusted over. How long this takes varies for each person, but is typically around five days.

Infected individuals should make a conscious effort to avoid those susceptible to infection, such as pregnant women, immunocompromised patients and very young babies. Children at nursery or primary school should be kept at home until the vesicles have crusted over.

Chickenpox symptoms and treatment CPD

What are you planning to learn?

I want to learn more about chickenpox, including what it is, how the condition is linked to shingles, its common symptoms and over-the-counter treatments that can be used to manage these symptoms. I also want to improve my knowledge of how to manage at-risk individuals exposed to the virus.

This learning will help me to improve my knowledge of chickenpox, to confidently provide advice to patients and carers, to spot at-risk patients, and know when to refer.

How are you planning to learn it?

- I plan to read more about chickenpox in children on the Patient website at tinyurl.com/chickenpox1.
- I plan to find out more about chickenpox contact in pregnancy on the Patient website at tinyurl.com/chickenpox2.
- I plan to revise my knowledge of chickenpox vaccination on the NHS Choices website at tinyurl.com/chickenpox3.
- I plan to complete the five-minute test at www.chemistanddruggist.co.uk/update-plus to test my knowledge and confirm what I have learned.

Give an example of how this learning has benefited the people using your services.

This learning gave me confidence to provide information to patients about chickenpox and the over-the-counter treatments available.

Take the 5-minute test online

1. Over 90% of susceptible people will develop chickenpox if they come into contact with it.
True or false
2. A person with chickenpox is infectious from five days before the initial rash appears until after the fluid-filled vesicles have dried and crusted over.
True or false
3. Once someone has recovered from chickenpox, the virus remains dormant and can reactivate years later to cause shingles.
True or false
4. Chickenpox cannot be caught from someone who has shingles.
True or false
5. A chickenpox rash usually starts on the scalp and face before moving down to the trunk and proximal limbs.
True or false
6. Adults, immunocompromised patients and pregnant women with chickenpox are more prone to severe complications than children.
True or false
7. The chickenpox vaccine has a 65% protection rate in adults and children if two doses are given four weeks apart.
True or false
8. NSAIDs are the first-line treatment for relieving pain and fever in children with chickenpox.
True or false
9. Chlorphenamine can be used in chickenpox to relieve itching in those aged over one year.
True or false
10. It usually takes 10 days for the fluid-filled chickenpox vesicles to crust over.
True or false