

Shingles (Herpes zoster)

Shingles is caused by the Varicella-zoster virus which also causes chickenpox. After having chickenpox, the virus becomes “dormant” and resides within cells of the nervous system. Reactivation of the virus causes shingles.

Incidence:

It is estimated that 32% or about a third of persons in the United States will experience shingles during their lifetimes. The incidence increases with age.

Risk factors:

1. Age, especially after age 50
2. Physical trauma
3. Cancer
4. Chronic lung disease
5. Chronic kidney disease
6. Immunocompromise
 - a. Transplant recipients
 - b. HIV infections
 - c. Rheumatoid arthritis, lupus, etc
 - d. Inflammatory bowel disease

Signs and symptoms:

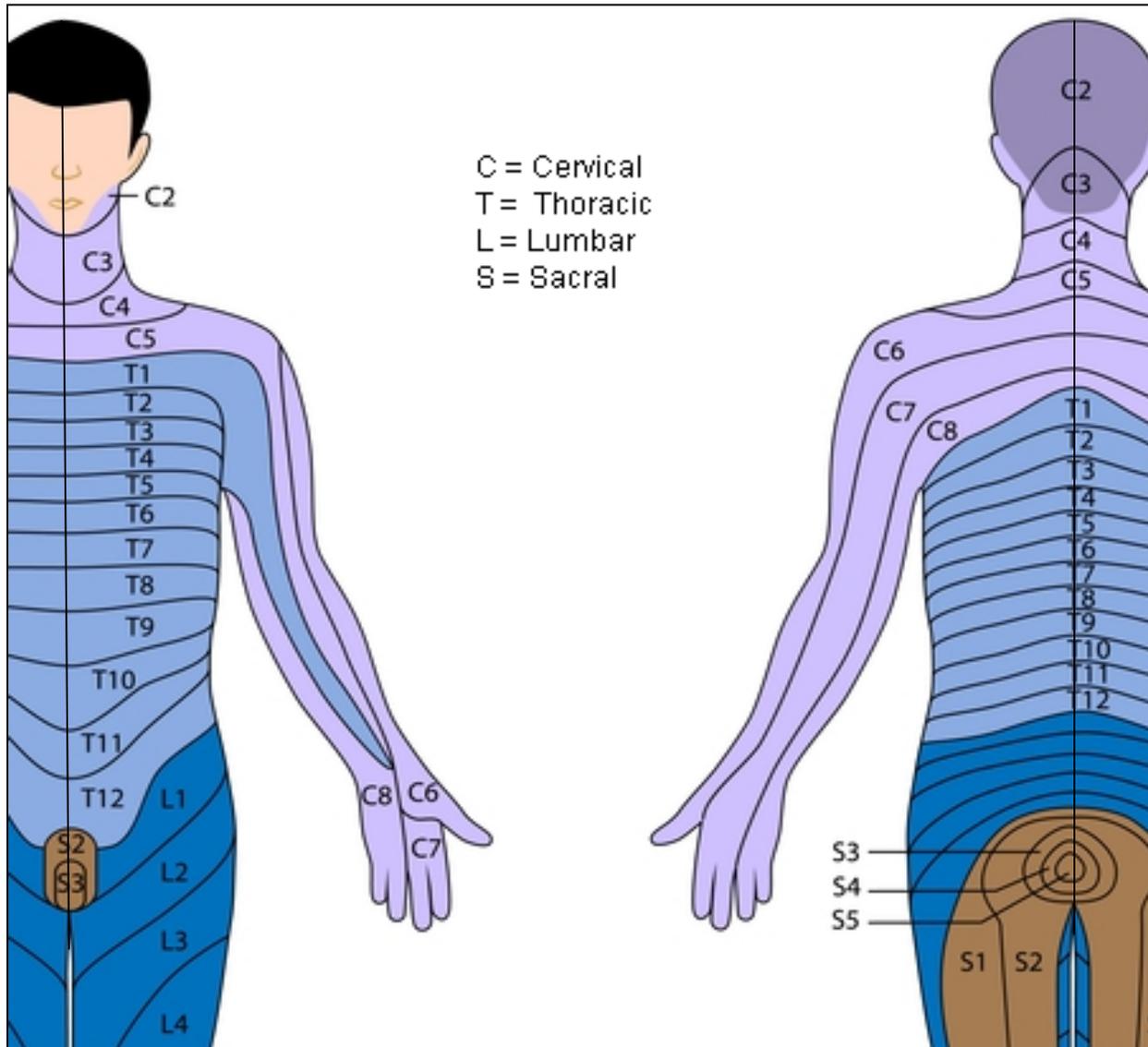
When the virus reactivates, it affects the area of the body along the nerve where it had been residing. This area is called a dermatome (see illustration and explanation on page 2).

Shingles often begins with unusual sensations such as itching, burning, or tingling in one area of the skin. Some people develop a fever, headache, or do not feel well in general. Within 1 to 2 days, a rash appears.

Rash:

- Band-like pattern on only one side of the body (dermatome)
- Starts as red spots, progresses to fluid filled blisters
- In 7 to 10 days, blisters crust over and are no longer infectious
- Generally disappears within three to four weeks
- Scarring and changes in skin color can occur.

The trunk (chest, upper or lower back) is usually affected by the shingles rash but it can be seen on the buttocks, going down the leg, or the head. If it affects the face near the eye, it can permanently affect vision.



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Dermatomes of the body

A dermatome is an area of skin that is mainly supplied by a single nerve coming out of the spine. There are eight cervical nerves (C1 being an exception with no dermatome), twelve thoracic nerves, five lumbar nerves and five sacral nerves. The dermatomes, as depicted in the illustration above, are labeled with a letter and number to represent the area of body each serves. For example, T1 refers to the first thoracic nerve.

Each nerve sends sensations such as pain from that area of skin to the brain. The body is split into two halves. This is because each nerve runs from one side of the spine in the back to the middle of the front of the body and does not cross this midline. This is important when considering the rash of shingles. The rash will occur in a dermatome and will not cross the midline of the body either in the front or the back.

Pain:

There is usually pain associated with the infection. This pain is sharp, stabbing or burning. It can be mild or severe. The pain may begin several days before the rash appears and is limited to the area affected by the rash.

Complications:

Complications are more likely to occur in older adults and those with a weakened immune system. Complications occur in about 12% of all individuals with shingles.

1. Pain – the pain that remains after the rash resolves is called postherpetic neuralgia. It is the most common complication and can be mild or severe. It is often described as a burning pain. In most individuals, this pain improves over time but it can last for months to years.
2. Skin infection – the sores can become infected which delays healing.
3. Eye complications:
 - a. Inflammation: causes fever, headache, decreased vision, a droopy eyelid, and a feeling of being unwell. There is also pain and sensitivity to the eye, forehead, and top of head.
 - b. Retinal inflammation: damage to the retinal can occur. This usually begins as blurry vision and pain in one eye. This can lead to permanent loss of vision.
4. Ear inflammation (Ramsay Hunt Syndrome) – causes ear pain, weakness of the facial muscles of the affected side and blisters in the ear canal. Vertigo or dizziness frequently occurs.

Is shingles contagious?

- It is not possible to catch shingles from another person
- If someone has never had chickenpox (or the chickenpox vaccine), it is possible to develop chickenpox after direct (skin to skin) contact with a shingles blister or by inhaling the virus in the air.
- If someone has had chickenpox (or the chickenpox vaccine), being near a person with shingles will not cause shingles to develop.

Recurrence

Recurrence is uncommon but can occur. Having three or more episodes in the same individual is very rare. Immunocompromised people are at a higher risk for recurrence.

Treatment

Treatment usually involves an antiviral medication as well as pain-relieving medications. The area of the rash should be kept clean and dry. Putting on creams or other products can increase the chance of developing an infection.

- Antiviral medications: Acyclovir (Zovirax®), famciclovir (Famvir®) and valacyclovir (Valtrex®)
 - These stop the virus from multiplying, speed healing, and reduce the severity and duration of pain
 - Are recommended for everyone with shingles and are most effective if started within 72 hours after the rash appears.
- Pain medications: prescription narcotics are often needed (such as hydrocodone) as the pain can be severe. Topical lidocaine patches are also sometimes used.

Prevention

- A vaccine (Zostavax®) is now available to reduce the chance of developing shingles. This vaccine is given after age fifty and has the highest efficacy in persons between ages 60 and 69 years.
- If someone does get shingles after getting the vaccine, the infection will most likely be less severe and there will be a smaller chance of developing postherpetic neuralgia.