

PANTON VALENTINE LEUKOCIDIN STAPHYLOCOCCUS AUREUS (PVL-SA) SKIN INFECTION



WHAT ARE THE AIMS OF THIS LEAFLET?

This leaflet has been written to help you better understand Panton Valentine Leukocidin Staphylococcus Aureus (PVL-SA) skin infection. It tells you what it is, what causes it, the symptoms, what can be done about it and where you can find more information.

WHAT IS PVL-SA SKIN INFECTION?

Our bodies are hosts to many different organisms, including germs. Staphylococcus aureus (SA) is a common germ that lives harmlessly on the skin of many people. However, some types of SA produce a toxin called Panton Valentine Leukocidin (PVL). When this happens, the germ is called PVL-SA.

The PV toxin can damage white blood cells, which are part of the immune system. This can cause skin infections, and in rare cases, more serious problems to the skin, deeper tissues and internal organs.

It is found in about one in three people. SA usually lives on moist surfaces such as the nostrils, armpits and groin.

WHO CAN GET PVL-SA?

PVL-SA infections can affect all ages but are more common in young, healthy individuals – including children, teenagers, and young adults (usually between 5 and 30 years old).

Infections often happen in places where people are in close contact, such as:

- schools and nurseries
- sports clubs and gyms
- shared living spaces.

The germ can spread easily by touching the skin or sharing towels, razors, clothes, or bedding.

If the PVL-SA toxin enters the body through a graze or wound, it can attack the skin. Rarely, it can enter the bloodstream, causing more serious problems.

WHAT CAUSES PVL-SA INFECTIONS?

You are more likely to get a PVL-SA infection if:

- You have close skin contact with someone who has it. This can happen when you play sports, dance, or share towels, clothes or bedding. These items can carry the germs if they have been in contact with someone who has the infection.
- You don't wash your hands or shower often.
- You have a cut or sore, which lets the germ in.

WHAT DOES PVL-SA SKIN INFECTION FEEL AND LOOK LIKE?

PVL-SA skin infections can cause:

- Painful boils on the skin that keep coming back. They often appear in more than one place and may not improve even after antibiotic treatment.
- Red, swollen and inflamed skin, sometimes with pus.
- The infection can look different in each person. Commonly, this includes:
 - Boils or abscesses (lumps filled with pus which can keep coming back)
 - Cellulitis (red, swollen, tender skin)

- In rare cases, PVL-SA can lead to more serious infections like pneumonia or infections in the bones and joints.

How will it be diagnosed?

A doctor or nurse will usually take a swab from the infected skin to check for PVL-SA. They might also take swabs from other areas, such as inside your nose or under your arms. This is because the bacteria can live there too. The samples are then sent to a laboratory for testing.

A doctor may suspect PVL-SA if:

- A skin infection is severe or keeps coming back.
- Several people who are close to each other (for example, family members or people in the same sports team) have similar infections.

Can PVL-SA skin infection be cured?

Yes. PVL-SA can be treated and usually clear up with the right care. Sometimes the infection can come back, but it can be treated again.

How can PVL-SA skin infection be treated?

The treatment depends on how serious the infection is. Your healthcare professional will decide the best course of action for you.

Minor skin infections

- If the infection is superficial (slightly red and tender skin, but no abscess), it can often be treated with antibiotics taken by mouth.
- If you have an abscess (a painful lump filled with pus), do not squeeze or cut it yourself. These lumps sometimes need to be drained by a doctor or nurse using sterile tools to remove the pus safely. Trying to treat it yourself can make the infection worse or spread it to other parts of your body.

Moderate skin and soft tissue infections

- You may still develop an abscess, which will need to be drained by a healthcare professional.
- You may also be given antibiotics by mouth. The type of antibiotic will depend on which ones work best against the bacteria.

Severe skin and soft tissue infections

- If the infection is more serious and you feel very unwell, you may need hospital care. A doctor will advise you, or you might need to go to A&E in an emergency.
- At the hospital, you may be given antibiotics through a drip. This means a small tube placed into a vein in your arm to deliver the medicine directly into your bloodstream.

How do I stop PVL-SA bacteria from spreading?

Even if the infection on the skin has been resolved, the PVL-SA bacteria may still be living on your body. To help clear them completely, your healthcare professional might prescribe:

- A special body wash (like chlorhexidine) to wash with. This helps kill bacteria on your skin.
- A special cream to put inside your nose. This is because bacteria often live there without causing symptoms.

You will need to use both for 5 to 7 days. This process is called decolonisation, which means removing bacteria from your body to stop them from coming back or spreading to others.

People who live with you or spend a lot of time close to you might also need treatment, even if they feel fine. PVL-SA bacteria can spread easily in shared spaces like homes.

PVL-SA can survive in infected environment for months. To help stop it from spreading you should also:

- Use a clean towel every day and not share towels with others.
- Change your bed sheets daily.
- Keep your home clean, especially the sink and bath.
- Avoid going to the gym or swimming pool until your infection until your skin is fully healed and there are no open spots or scabs. If you're not sure your infection has gone, ask your doctor or nurse to check before you go back.
- Cover any infected areas with clean dressings.
- Wash your hands often using an emollient as a soap substitute.

DO I NEED TO REPEAT TREATMENT?

Yes, sometimes the bacteria can come back. If that happens, you might need to repeat the decolonisation steps recommended by your healthcare professional. Following the advice carefully will help reduce the risk of the bacteria spreading again.

CAN PETS SPREAD PVL-SA?

Yes. Pets such as cats and dogs can sometimes carry PVL-SA. Even if your pet looks healthy, they might still have the bacteria without showing any signs.

If someone in your household has a PVL-SA infection, your healthcare professional might suggest checking your pet.

A vet can examine your pet and give them treatment if needed to help clear the bacteria.

To help stop PVL-SA spreading:

- Always wash your hands after touching your pet.
- Do not let your pet lick any cuts, wounds, or sore skin.

WHAT CAN I DO?

- Take all medicines exactly as prescribed by your healthcare professional.
- Once your infections have healed, follow the clearance (decolonisation) steps your healthcare professional recommends.
- If the infections return, or if a new infection appears on you or a family member, contact your healthcare professional straight away.

WHERE CAN I GET MORE INFORMATION ABOUT PVL-SA?

Web links to other relevant sources:

DermNetNZ:

dermnetnz.org/topics/panton-valentine-leukocidin-staphylococcus-aureus

Jargon Buster:

www.skinhealthinfo.org.uk/support-resources/jargon-buster/

Please note that the British Association of Dermatologists (BAD) provides web links to additional resources to help people access a range of information about their treatment or skin condition. The views expressed in these external resources may not be shared by the BAD or its members. The BAD has no control of and does not endorse the content of external links.

This leaflet aims to provide accurate information about the subject and is a consensus of the views held by representatives of the British Association of Dermatologists: individual patient circumstances may differ, which might alter both the advice and course of therapy given to you by your doctor.

This leaflet has been assessed for readability by the British Association of Dermatologists' Patient Information Lay Review Panel.



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BRITISH ASSOCIATION OF DERMATOLOGISTS

PATIENT INFORMATION LEAFLET

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