

Meticillin-Resistant *Staphylococcus aureus* (MRSA) Fact Sheet



What is Meticillin-resistant *Staphylococcus aureus* (MRSA)?

Staphylococcus aureus is a bacterium that cause a range of superficial infections of the skin, such as septic spots, boils, abscesses and impetigo and can also cause serious infections including osteomyelitis, septicaemia, endocarditis and pneumonia. *Staphylococcus aureus* is an important cause of healthcare-associated infections, in particular surgical wound, soft tissue infections and blood stream infections.

MRSA is meticillin-resistant *Staphylococcus aureus*, a type of bacteria that is resistant to certain widely used antibiotics. This means that infections with MRSA can be harder to treat. It is also commonly known as a 'superbug'.

MRSA lives harmlessly on the skin of around 1 in 30 people, usually in the nose, armpits, groin, or buttocks. This is known as 'colonisation' or 'carrying' MRSA.

Getting MRSA on your skin will not make you ill, and it may go away in a few hours, days, weeks, or months without you noticing. But it could cause an infection if it gets deeper into your body.

What are the symptoms?

Having **MRSA** on your skin does not cause any symptoms and does not make you ill. You will not normally know if you have it unless you have a screening test before going into hospital. If MRSA gets deeper into your skin, it can cause:

- Redness, but this may be less visible on darker skin.
- Swelling
- Painful
- Warm to the touch
- Full of pus or other drainage
- A high temperature
- Chills
- Aches & pains



How does it spread?

MRSA infections mainly affect people who are staying in hospital because:

- They often have a way for the bacteria to get into their body, such as a wound, burn, feeding tube, drip into a vein, or urinary catheter.
- They may have other serious health problems that mean their body is less able to fight off the bacteria.
- They're in close contact with many people, so the bacteria can spread more easily.

Routes of transmission in care homes:

- Direct spread via hands of staff or residents
- Equipment that has not been appropriately decontaminated.
- Environmental contamination (*Staphylococci* that spread into the environment may survive for long periods in dust).

Healthy people, including children and pregnant women, are not usually at risk of MRSA infections.

Residents at risk of infection from MRSA

- Residents with an underlying illness.
- Older people – particularly if they have a chronic illness.
- Those with open wounds or who have had major surgery.
- Residents with invasive devices, such as urinary catheters.

Removing MRSA from the skin

**If screening finds MRSA on the skin, this may need treatment to remove it.
This is known as decolonisation.**

This usually involves:

- Applying antibacterial cream inside the nose 3 times a day for 5 days.
- Washing with an antibacterial wash every day for 5 days.
- Changing towels, clothes and bedding every day during treatment – the laundry should be washed separately from other residents' laundry and at a high temperature.
- Treatment is normally done at home but may be started after going into hospital if a resident needs to be admitted quickly.





MRSA infections:

- MRSA can be treated with antibiotics.
- More serious infections may need to be treated in hospital with antibiotics given by injection, or a drip into the vein in the arm. Antibiotics may be given for a few days or up to a few months, depending on how serious the infection is.

Infection Prevention & Control Precautions	
<i>Please use this form to apply IPC precautions to reduce the spread of MRSA within the care setting</i>	
Standards	Actions
Resident placement /Assessment of risk.	<ul style="list-style-type: none"> • Residents with an active MRSA infection should be isolated until they are symptom free (usually after a course of antibiotics). • Residents with MRSA can share a room unless they or the person sharing the room has wounds, catheters, or any other invasive device. • Residents with MRSA can visit communal areas, e.g., dining room, lounge, and can mix with other residents. • If a resident requires hospital admission, the receiving department/hospital staff should be informed of the resident's MRSA status. This will enable a risk assessment to be undertaken to determine whether the resident should be isolated on admission. Transfer documentation e.g. patient passport must be completed for all transfers, internal or external and whether the resident presents an infection risk or not. • Residents should not be prevented from visiting day centers, etc. and may socialize outside the care home. • There is no need to restrict visitors, but they should be advised to wash their hands or use alcohol gel on arriving and leaving.
Hand Hygiene	<ul style="list-style-type: none"> • Colonisation with MRSA may be long term, therefore, good hand hygiene practice and standard infection control precautions should be always followed by all staff, to reduce the risk of transmission of infection. • Hands should be cleaned after removing and disposing of each item of personal protective equipment, e.g., pair of gloves, apron. • Hand hygiene is essential after direct contact with a resident or their surroundings using either liquid soap and warm running water or alcohol gel. • Residents should be encouraged to wash their hands or use wipes after using the toilet and before meals.
Personal protection equipment	<ul style="list-style-type: none"> • Disposable apron and gloves should be worn when in contact with body fluids.
Safe management of the care environment	<ul style="list-style-type: none"> • Whilst a resident is isolated due to an MRSA active infection, enhanced cleaning of their room using a bactericidal product effective against MRSA or a general-purpose neutral detergent followed by a chlorine-based disinfectant solution at a dilution of 1,000 parts per million (ppm) or equivalent product, as per manufacturer's instructions. Alternatively, a combined '2 in 1'

	<p>detergent and chlorine-based disinfectant solution can be used (ensure it meets BS EN 1276).</p> <ul style="list-style-type: none"> • A deep clean of the resident's room is required at the end of the isolation period for a resident with an active MRSA infection.
Safe management of care equipment	<ul style="list-style-type: none"> • Single use equipment should be used as required once and discarded. • Communal equipment i.e. wheelchairs, hoists, commode should be decontaminated between each use/between residents using approved detergent wipes / or • Care equipment should be cleaned at regular predefined intervals as part of an equipment cleaning protocol using approved detergent wipes / or a chlorine based cleaner (made according to manufacturer's instructions and meets BS EN 1276), before being stored clean and dry. • Use normal utensils. Wash in a dishwasher.
Safe management of healthcare linen	<ul style="list-style-type: none"> • Normal laundry procedures are adequate. However, if laundry is soiled with urine or faeces, it should be treated as infected. Items that are soiled should be washed at the highest temperature the item will withstand.
Safe Management of blood and body fluids.	<ul style="list-style-type: none"> • Any infected wound or skin lesion should be covered with an appropriate dressing as advised by a healthcare professional, e.g., GP, Tissue Viability Nurse, Community Nurse. The dressing should be checked frequently for signs of leakage and replaced accordingly until the wound is dry. • A resident with colonization of MRSA in their urine who is not catheterized and is continent with no symptoms of a urinary tract infection is very unlikely to present a risk to others.
Safe disposal of waste (including sharps)	<ul style="list-style-type: none"> • Waste contaminated with body fluids should be disposed of as infectious waste.
Occupational safety / managing prevention of exposure (including sharps)	<ul style="list-style-type: none"> • If staff are MRSA positive, they typically do not need to be off work unless medically advised. • Avoid unnecessary use of sharps. • Use safer sharps or needle free equipment where possible. • Dispose of sharps immediately at the point of use in an approved container. <p>Never</p> <ul style="list-style-type: none"> • Re sheath used needles • Pass sharps hand to hand • Store sharps containers on the floor • Fill containers more than ¾ full

How to take a nasal swab for MRSA screening

How to take a nasal swab for MRSA screening	
	<ul style="list-style-type: none">• Wash hands and apply apron and non-sterile gloves.• Place a few drops of either sterile 0.9% sodium chloride or sterile water onto the swab taking care not to contaminate the swab.
	<ul style="list-style-type: none">• Place the tip of the swab inside the nostril at the angle shown.• It is not necessary to insert the swab too far into the nostril.
	<ul style="list-style-type: none">• Gently rotate the swab ensuring it is touching the inside of the nostril.• Repeat the process using the same swab for the other nostril.
	<ul style="list-style-type: none">• Place the swab into the container.• Dispose of gloves and apron and clean hands after removing each item of PPE, e.g. pair of gloves, apron.• Complete resident details on the container and specimen form. Request 'MRSA screening' under clinical details on the form.

Please click the link for further information

Panton-Valentine Leukocidin (PVL)

Panton-Valentine Leukocidin (PVL) is a toxin produced by less than 2% of *Staphylococcus aureus* (SA) It is associated with an increased ability to cause disease. PVL-SA causes recurrent skin and soft tissue infection but can also cause invasive infections in otherwise healthy young people in the community. Staff who develop recurrent skin and soft tissue infections should seek medical advice.

PVL-SA infections can be spread easily in settings where individuals are in close physical contact or may share personal items for example towels. These groups include.

- families/households
- care homes
- educational settings
- military personnel/barracks
- gyms

How does it spread?

- Direct spread, i.e. skin-to-skin contact with someone who is already infected.
- Equipment that has not been appropriately decontaminated.
- Environmental contamination.

PVL-SA can cause harm if it enters the body, for example through a cut or graze.

- Skin and soft tissue infections
- Boils
- Folliculitis
- Cellulitis
- Purulent eyelid infections
- Osteomyelitis
- Septic arthritis
- Pyomyositis
- Necrotising pneumonia – after an influenza infection
- Sepsis

How will it be diagnosed?

A microbiology swab is taken from the infected site (i.e. pus or exudate (oozing fluid) from an abscess or other lesions on the body, the nose, the groin, and any other relevant sites. Occasionally a sputum or urine sample is sent if clinically required by the doctor. These swabs/ sputum/ urine samples are tested for the presence of PVL-SA.

A doctor may also ask for testing if they suspect Panton Valentine Leukocidin (PVL-SA) if a skin infection is recurrent or severe, or if it occurs in several members of a household.

IPC precautions

IPC precautions are the same as for MRSA (please see the above).

PPE- A fluid resistant surgical mask is recommended if the resident has confirmed or suspected PVL-SA pneumonia.

How is PVL-SA treated?

Most infections will be treated with antibiotics. In addition, a five-day course of an antibacterial solution for body and hair skin treatment (washes) and nasal treatment (cream), will be necessary to reduce the likelihood of repeated infections.