

Human pathogen information sheet – hygiene keeps you safe!

What are MRSA?

MRSA means *methicillin-resistant Staphylococcus aureus*. Bacteria of the *Staphylococcus aureus* type occur on the skin and the mucous membranes of many healthy people. These bacteria may be resistant, i.e. insensitive, to the antibiotic *methicillin* and most other antibiotics.

MRSA usually only settle on persons without making them sick. The bacteria settle, e.g., in the nasal atrium, throat, armpits and groin. Only if these bacteria enter the body through wounds or mucous membranes can an infection occur. Since MRSA are (multi-)resistant to many antibiotics, the disease may be severe.

MRSA occur where antibiotics are used often, mostly in hospitals. In Germany, about 20% of all *Staphylococcus aureus* bacteria investigated in hospitals used to be multi-resistant. In recent years, a decline in the proportion of MRSA has been observed.

How do MRSA spread?

Person-to-person

Most frequently, the pathogens are passed on by direct contact between people. The main path of transmission is the hands.

Both *MRSA patients* and *MRSA carriers*, i.e. healthy persons with colonies of MRSA, are contagious. An MRSA carrier may also transfer bacteria to other regions on their own body, e.g. from the nasal atrium into a wound via the hands. There, they may cause the infection.

Via contaminated objects

Infection is also possible via contaminated objects such as door handles, hand rails, grips or bathing utensils. The pathogens adhere very well to plastic materials and stainless steel alloys, e.g. catheters.

Animal-to-person

Persons can also be infected by contact with affected farm animals.

What symptoms do the patients show?

Many *MRSA carriers* with colonies of the bacterium on their skin or mucous membranes exhibit no symptoms.

An actual *MRSA infection* may show itself in several ways. Possible symptoms include:

- ▶ Skin inflammation such as ulcers or collections of pus
- ▶ Wound infection, particularly after surgery
- ▶ Infection of individual organs, such as urinary tract infection, pneumonitis or blood poisoning (sepsis)

What's the incubation period – and how long are you contagious?

MRSA does not necessarily cause actual disease. Persons carrying MRSA may get sick if their immune system is weakened and the bacteria find a way into their bodies.

The sick persons are contagious as long as the pathogen can be documented.

Who is most at risk?

For healthy persons, the risk of infection is low, even if their skin or mucous membranes already carry MRSA.

Persons with the following risk factors are affected more frequently:

- ▶ Hospital patients, persons in chronic need of nursing in seniors' residences
- ▶ Dialysis patients, diabetics, persons with a weakened immune system
- ▶ Patients with foreign bodies such as catheters, an opening of the trachea to the outside, joint replacement
- ▶ Persons with skin injuries such as burns, chronic wounds

Particularly in immune-compromised older patients and infants, MRSA progression may be severe.

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in case of illness?

- ▶ **MRSA settlement on healthy persons** may disappear again on its own. Local treatment is possible: in the nasal atrium and on settled wounds with special salves or on the skin with washing lotions. Discuss whether such treatment is required in your case with your doctor.
- ▶ If **MRSA settlement is found during a hospital stay**, MRSA carriers are isolated as long as the pathogen can be found in the nasal, skin or wound swabs. The carriers are treated if required. Special hygiene measures are required to protect other patients from infection. This includes wearing mouth/nose protection when leaving the room and thorough hand hygiene. The hospital staff will also wear protective coats, head coverings and gloves to avoid carrying the pathogen elsewhere. Visitors must comply with special hygiene rules as well. The area around the patient is disinfected.
- ▶ Although the pathogen is resistant against many antibiotics, there are reserve antibiotics that usually permit effective treatment of MRSA.

How can I protect
myself?*During hospital visits:*

- ▶ **Most important:** Always observe thorough **hand hygiene!**
- ▶ **Disinfect your hands** with the provided disinfectant before and after the visit.

In everyday life:

- ▶ **Most important:** Always observe thorough **hand hygiene!**
- ▶ Wash your hands **thoroughly with water and soap.**
- ▶ Wounds and skin injuries should be covered with clean bandages or Band-Aids. This protects you from infection and prevents transfer to others. Clean your hands thoroughly before and after changing bandages!
- ▶ Avoid close physical contact with persons with open wounds.
- ▶ Use only your personal hygiene and bath articles such as flannels, washing rags or razors.
- ▶ Tell the attending nurses and physicians if you have had any contact with MRSA patients. This way, additional protective measures can be initiated if required.

Where can I find out
more?

Your local health authority can provide you with further advice and information.

More (specialist) information is also available online from the Robert Koch Institute (www.rki.de/mrsa).

For more information on how hygiene can guard against infection, please visit the Federal Centre for Health Education website (www.infektionsschutz.de).



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