

Hand disinfection in 30 seconds



Rub in a handful of hand disinfectant
(3 – 5 ml = 2 – 3 dispensers) until dry.



Wet your entire hand with the disinfectant
for at least 30 seconds.



Particularly important: fingertips and thumbtips,
palms and spaces between the fingers.

Contact person / presented by:

The **mre-netz regio rhein-ahr** is a network set up by the health authorities to prevent and control multi-resistant pathogens (MRE). The coordination and advice center is located at the University Hospital Bonn.

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Information

for patients and relatives

MDR-GNB

Multidrug-resistant
gram-negative bacteria

Multidrug-resistant gram-negative bacteria (MDR-GNB)

What does MDR-GNB mean?

In the intestine – and also on the skin and mucous membrane – people have numerous different bacteria. Some of these bacteria are identified by their appearance under the microscope as gram-negative rod bacteria. These include intestinal bacteria (enterobacteria such as *E. coli*, *Klebsiella*, etc.) and other germs from the environment (e.g. *Acinetobacter baumannii* and *Pseudomonas aeruginosa*), which are resistant against many antibiotics. In this case, they are called Multi-Resistant Gram-Negative rod bacteria (short: MDR-GNB). Bacteria which are resistant to 3 groups of certain antibiotics are called 3MDR-GNB; bacteria resistant to 4 groups of certain antibiotics are called 4MDR-GNB.

When does it become dangerous?

A mere colonization (which means no symptoms) of the intestines or skin with these bacteria is not dangerous for healthy people or people you are in contact with. It becomes dangerous when the MDR-GN bacteria in the intestines or the skin affect wounds, the bloodstream or other parts of the body where they normally do not occur and when they actually cause illness there. These type of infections are particularly difficult to treat because there are only few antibiotic options left and many reserve antibiotics have lower efficiency or are less well tolerated.

When should treatment be given?

You will only receive special medical treatment if you are ill with symptoms. A treatment of an MDR-GNB colonization without symptoms of a disease is not necessary. An “intestinal cleansing” or “decolonization” is not possible.

As an MDR-GNB patient you have to be prepared for the following

In the hospital

Hand disinfection is particularly important in order to avoid further spread of these germs. Patients with 4MDR-GNB are usually treated in “isolation” within all areas of the hospital. This means, if patients with 3MDR-GNB are situated on a high risk ward (e.g. intensive care units or cancer wards) they will be isolated in a single-room on that ward. On other wards they won't be situated in a single-room, but only contact precautions might be applied in certain situations.

If your doctor has ordered patient isolation...

- » You should only leave your room after consultation with the staff
- » Visitors must report to staff before entering the room and follow specific hygiene measures
- » Staff wear protective clothing (e.g. gown, gloves) to avoid transmission to other people during treatment
- » In case you have a 4MDR-GNB colonization/infection, staff may also wear mouth and nose protection

In care facilities

Good basic hygiene, especially hand hygiene, is important as an essential measure to prevent the spread of MDR-GNBs. Senior care home (retirement homes) and other care homes are generally not considered as risk area. Patient isolation is only required in exceptional cases.

How can you acquire MDR-GNB?

3MDR-GNB can be detected in many healthy people, often even after visits abroad with contact to healthcare facilities or after antibiotic treatment. Foods such as raw poultry can also contain MDR-GNB. 4MDR-GNB however, is more of a consequence of a serious illness with prolonged and various antibiotic treatments.

How are MDR-GN bacteria transmitted?

High concentrations of MDR-GN bacteria can occur in the stool, in urine and can sometimes be present in open wounds. *Acinetobacter baumannii* and *Pseudomonas aeruginosa* can also remain on the skin and mucous membranes (e.g. gut). From there they will be transferred from the hands to other people. A transmission is possible if colonised wounds are not covered or the rules of basic hygiene are not sufficiently taken into account.

What is our objective and how do we achieved it?

The primary goal is to prevent further dissemination of MDR-GNB which means the spread from patient to patient. The most important measure is correct hand hygiene.



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