

# Information regarding resistant bacteria

## What is meant by resistant bacteria?

Every individual carries bacteria, most of which do useful work. Bacteria in the gut, for example, help us digest our food intake. Bacteria on our skin prevent harmful intruders from entering our body. However, sometimes bacteria can infect us and, for example, cause cystitis or pneumonia. Infections caused by bacteria are treated with various antibiotics. Antibiotics are drugs that kill bacteria or inhibit their growth. Sometimes bacteria can become insensitive (resistant) to certain antibiotics. This means that standard antibiotics cannot help fight the infection anymore, caused by this specific resistant bacterium. These resistant bacteria are referred to as MultiDrug Resistant micro Organisms (MDRO) (BRMO in Dutch - “Bijzonder Resistent Micro-Organisme”).

## How can you acquire MDRO?

The prevalence of MDRO in the Netherlands is relatively low, compared to other countries. An infection with MDRO cannot always be prevented, because various sources can be the cause of infection. An MDRO can be transmitted via intensive contact and/or objects. The risk of acquiring MDRO is high in regions where relatively many antibiotic treatments are initiated. Several ways to develop high risk of becoming an MDRO-carrier are:

- If you have regularly been using (various) antibiotics in the past
- If you have been hospitalized outside of the Netherlands
- If you work in an intensive livestock farmer industry
- If you have travelled in less hygienic circumstances
- Because of an (as yet) unclear cause

## Do MDRO make you sick?

You do not necessarily get sick from bacteria, even MDRO. Mostly MDRO infections do not cause more severe infections than infections caused by bacteria that are more sensitive to antibiotics. It could be, however, more difficult to eradicate the bacterium, since less antibiotics will be useful. As long as you have not acquired an infection with MDRO, you will not even notice you are carrying the bacterium. This is referred to as being a carrier. It is not necessary to start treatment in carriers. It is likely that your body will eventually eradicate the bacterium by itself.

## Different types of MDRO

Multiple types of MDRO exist. Mostly MDRO are abbreviated. Examples are:

- Multiresistant bacteria (Quinolones & Aminoglycosides)
- ESBL-bacteria (Extended Spectrum Beta-Lactamase)
- CPE-bacteria (Carbapenemase Producing Enterobacteriaceae)
- VRE-bacteria (Vancomycin Resistant Enterococcus)
- MRSA (Meticillin Resistant Staphylococcus aureus)
- Other bacteria, for example: Acinetobacter

## Multidrug resistant-, ESBL-, CPE-, or VRE-bacteria

MDRO mostly occur in the intestines. In healthy individuals these MDRO almost never cause harm or symptoms. They can, however, cause infections, such as UTIs or sepsis, left untreated with standard antibiotics. These infections caused by MDRO can be a big problem in hospitals in particular.

## MRSA-bacteria

MRSA mostly lives on the skin of a carrier. An infection caused by MRSA is relatively difficult to treat. Fortunately certain antibiotics can cease its growth or even kill the bacteria. Even without symptoms, the physician can decide to eradicate MRSA in carriers.

## Acinetobacter

Acinetobacter is a bacterium that occurs in 25% of the population and lives on the skin. It almost never causes any symptoms in healthy individuals. In some cases it can, however, cause infections (such as wound infections) after surgeries.

## How to prevent spread in hospitals?

Bacteria mostly spread via direct contact and/or via objects. Most of them cannot be transmitted through the air. To prevent spread of bacteria between patients, common hygiene measures are being applied. Proper hand hygiene is an important measure in particular. In some cases additional measures are necessary to prevent transmission of MDRO. Healthcare workers will then be equipped with protective clothing (apron and gloves) during patient care. If necessary, patients will be nursed in isolation.

## Are there any restrictions for visitors of MDRO-carrying patients?

During your stay you can still be visited, also by pregnant women and children. Your visitors will have to inform the caring nurse first. Visitors will be kindly asked to first visit any other patients in the hospital before visiting you. Visitors will have to disinfect their hands after leaving the room and are asked to immediately leave the hospital afterwards.

## Are additional measures necessary at home?

At home no additional measures will have to be taken. If you are an MDRO-carrier, you can still go to work, go to school or visit friends and family. In case of home care, physiotherapy or any other ongoing healthcare, basic hygiene measures that healthcare workers have to follow at all times, are sufficient to prevent transmission to other individuals. Family members do not need to follow any additional measures.

- What if you will be admitted to another healthcare institution and you know you carry MDRO? Always inform the concerned healthcare institution. Employees may then take additional measures.
- Do you or does your roommate work in a hospital, nursing home or does one of you execute another healthcare profession? Please discuss the case with the department of working conditions services or, if present, the department of infection prevention.

### **Do you have any additional questions?**

In case of questions or problems you can contact your attending physician and/or nurse.