

MEDfacts

An Educational Health Series From National Jewish Health®



Multi-Drug Resistant Organisms (MDRO)

What are multi-drug resistant organisms?

Multi-drug resistant organisms (MDRO) are common bacteria (germs) that have developed resistance to multiple types of antibiotics. These bacteria are present on the bodies of many people, including on the skin, in the nose or other moist areas of the body, and in secretions. Antibiotic resistance often occurs following frequent antibiotic use or frequent exposure to a health care setting. For most healthy people, these bacteria don't cause a problem.

MDRO can enter the body and cause infection. MDRO are most likely to enter the body if:

- There is an open wound in the skin
- There is an IV, catheter or other invasive device in place
- The person has a suppressed immune system.

What does MDRO mean?

MDRO stands for Multi-Drug Resistant Organisms. Most types of bacteria can be treated with antibiotics. Over time, some types of bacteria have become resistant to certain antibiotics. This means the antibiotic does not work to treat the bacteria. Another antibiotic will need to be used to treat the bacteria. MDRO can be more difficult to treat, because they are resistant to certain antibiotics.

Examples of MDRO include:

- Methicillin resistant staphylococcus aureus (MRSA)
- Vancomycin resistant enterococcus (VRE)
- Pseudomonas aeruginosa resistant to multiple antibiotics.

What is the difference between colonization and infection?

Colonization means MDRO are present in or on the body but are not causing illness. Healthy people may carry MDRO without becoming ill. Infection means MDRO are present in or on the body and are causing illness. Symptoms of infection with MDRO vary depending on the part of the body that is infected.

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Infection can occur in any part of the body, including the skin, lungs, urinary tract or bloodstream.

How are MDRO diagnosed?

A culture of the suspected infected areas may be sent to the lab to identify the bacteria and to test for what antibiotics will be effective against the bacteria.

How are MDRO spread?

MDRO are commonly spread by direct contact between people or with contaminated surfaces in the environment. This means MDRO are often spread by the hands when patients, visitors or health care workers do not clean their hands. MDRO can be contracted in the hospital or community setting. A patient can also develop an MDRO through antibiotic use, especially if the antibiotics are inappropriately prescribed or inappropriately taken.

How are MDRO treated?

MDRO can be difficult to treat, depending on the antibiotics to which the bacteria are resistant. Even when the infection is treated, MDRO are often still present on the skin or in the nose (colonization).

What is done to prevent the spread of MDRO at National Jewish Health?

When you visit National Jewish Health, let the health care providers know if you/your child has an MDRO.

Standard precautions are taken with every patient to prevent the spread of MDRO and other infections at National Jewish Health. For all patients, our health care workers:

- Clean their hands with soap and water or alcohol-based hand rub before and after contact with each patient.
- Clean high-touch surfaces with a disinfectant that kills MRSA and other bacteria and viruses often found in health care settings.
- Educate and encourage patients to keep their hands clean and to keep coughs and sneezes covered.
- Wear personal protective equipment such as gloves, gowns and/or masks to protect their skin, clothing, eyes, mouth and nose when performing certain tasks.

When it is known that a patient has an MDRO infection, several additional precautions may be taken:

- Health care workers may wear a gown when working with you.
- If you are an inpatient or day patient, you may be isolated in a room by yourself.
- Some pediatric patients with MDRO infections are not allowed to participate in group activities.

How can you and your health care team keep hands clean?

Clean hands often, especially before touching the face, before eating and after going to the bathroom. Health care workers are to clean hands before and after contact with every patient. To ensure hands are clean:

- If using soap and water: wet hands, scrub with soap for 15-20 seconds ensuring to cover all surfaces (front, back, between fingers and fingertips), rinse with clean water, dry using a paper towel, and use the paper towel to turn off the faucet.
- If using an alcohol-based hand rub: put product on hands and rub together until the product dries ensuring to cover all surfaces (front, back, between fingers and fingertips).

What do visitors/family members need to know while at National Jewish Health?

In general, healthy people are at low risk for getting infected with MDRO. Good hand hygiene is recommended for family and visitors before leaving the room of a person infected with MDRO. Visitors may be asked to wear a gown and gloves under certain circumstances.

What precautions should be taken at home?

To prevent the spread of MDRO to others:

- Take medications as prescribed to you by your provider.
- Clean your hands often, especially after any contact with the area of your body where the MDRO has been found.
- Caretakers, people living with you and visitors should also clean their hands often.
- Avoid sharing personal items such as towels or razors.
- Wash and dry clothing, bed linens and towels in the warmest temperatures recommended on labels.
- Keep your environment clean by using household cleaners and disinfectants following label instructions.
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Note: This information is provided to you as an educational service of LUNG LINE® (1-800-222-LUNG). It is not meant to be a substitute for consulting with your own physician.

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