

Multidrug-Resistant Organism (MDRO) Infections

What are multidrug-resistant organisms (MDROs)?

Multidrug-resistant organisms (also called MDROs) are germs that have developed a resistance to treatment by one or more types of antibiotics. This makes MDRO infections difficult to treat and a threat to public health. Common MDROs include:

- Methicillin-resistant *Staphylococcus aureus* (MRSA)
- Extended-spectrum beta-lactamase (ESBL)-producing Enterobacterales
- Carbapenem-resistant Enterobacterales (CRE)
- Carbapenem-resistant *Acinetobacter baumannii* (CRAB)
- Carbapenem-resistant *Pseudomonas aeruginosa* (CRPA)
- *Candida auris* (*C. auris*)

How are MDRO germs spread?

MDROs can live outside the human body. They may be found in hospital environments, such as on bed rails, bathroom fixtures, and medical equipment. MDRO germs can spread from person to person on dirty equipment and on the hands of patients, doctors, nurses, other healthcare workers, and visitors.

Who is most likely to get a MDRO infection?

In the hospital, people who are more likely to get a MDRO infection are:

- People who have other health conditions making them sick, especially those with weakened immune systems
- People who had surgery recently, or who have temporary medical devices (like urinary catheters, central lines, or endotracheal tubes)
- People who've been treated with antibiotics

- People who've been in the intensive care unit (ICU) or long-term healthcare settings
- People who've received recent medical care in another country

Can MDROs be treated?

- MDRO infections can be treated, but the antibiotics that will work against them are limited. To figure out the best antibiotic to treat an MDRO infection, your doctor may order a test to decide which antibiotics can be used against the MDRO.
- Treatment with the wrong antibiotic, or not following your provider's instructions for taking antibiotics, can lead to a slow recovery and make the infection harder to cure.
- Some infections might be treatable by draining the infection.
- The MDRO germ may stay in your body even after your infection is gone. This is called **colonization**. People who are colonized with MDROs do not need to take antibiotics, and they can return to their normal routine.

What are some of the things that my doctors and nurses are doing to prevent MDRO infections while I am in the hospital?

- Doctors and nurses clean their hands before and after caring for you and other patients. This can prevent MDRO and other germs from being passed from one patient to another.
- Hospital rooms and medical equipment used for patients with MDRO are carefully cleaned with the appropriate cleaning products.
- If you have an MDRO infection or a history of MDRO infection, doctors and nurses will use Contact Precautions and wear a gown and gloves while taking care of you. A green sign will be posted outside your room.
 - Your nurse will give you the "Contact Precautions" patient education handout so you can read more information about Contact Precautions.

- Healthcare providers will only give you antibiotics when it is necessary.
- Any temporary medical devices you have will be removed as soon as possible.
- Your doctor may order a test to see if you have MDRO colonization.
- If you have a MRSA infection, you may be treated with a nose ointment and skin wipes (also called MRSA decolonization treatment) to kill any MRSA in your nose or on your skin.

What can I do to help prevent MDRO infections?

- Tell your doctor or nurse if you have had a recent hospital stay in another healthcare facility or country.
- Follow guidelines for Contact Precautions including staying in your room and cleaning your hands often, especially after using the bathroom and before eating.
- Ask that all staff clean their hands before and after caring for you.
- Ask your family members, friends, and visitors to clean their hands before and after visiting with you.
- Only take antibiotics as prescribed by your doctor.

If I have a MDRO infection, can my family and visitors get a MDRO infection when they visit me?

The chance of getting a MDRO infection while visiting a patient in the hospital is very low. To decrease the chance of getting a MDRO infection, your visitors should:

- Read and follow the instructions on any signs posted outside your door.
- Clean their hands before they enter your room and as they leave your room.

- Wear a gown and gloves if they will be participating in patient care activities. Wearing a gown will reduce the spread of germs out of the room on their clothing.

What do I need to do when I go home from the hospital?

Once you are home, you can return to your normal routine. Your MDRO infection will usually be better or completely gone before you go home. This makes giving MDRO to other people less likely. There are a few things you and your caregivers can do to decrease the chances spreading MDROs:

- If you receive a prescription to treat an MDRO infection, take the medications exactly as prescribed by your doctor. Do not take half doses or stop before you use all prescribed doses.
- Wash your hands often, especially after going to the bathroom and before preparing food.
- People providing care for you at home should wash their hands often, especially after contact with wounds, after handling temporary medical devices, after helping you use the bathroom, and after cleaning up stool (poop).
- Follow any other instructions your doctor has given you.

If you have questions, please ask your doctor or nurse.

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