

# **Living with MDR-GNR**

**Learning how to control the spread of  
Multi-Drug Resistant Gram-Negative Rods**

**IMPORTANT**

MDR-GNR is a serious infection that may become life-threatening if left untreated. If you or someone in your family has been diagnosed with MDR-GNR, there are steps you can take **now** to avoid spreading it to your family and friends.

This booklet was developed to help you understand and manage your MDR-GNR infection. Follow the recommendations and practice good hygiene to take care of yourself. MDR-GNR may cause physical pain and emotional stress, but keep in mind that it can be managed. For more information on your MDR-GNR infection, please contact your health care provider.

**Learning about MDR-GNR**

What are Multi-Drug Resistant Gram-Negative Rods (MDR-GNR)? . . . 2  
 What type of infections do MDR-GNR cause? . . . . . 2  
 How do I know if I have MDR-GNR? . . . . . 2  
 If I get MDR-GNR, will I always have it? . . . . . 3  
 How are MDR-GNR spread from one person to another? . . . . . 3  
 What if I have MDR-GNR while I am in a health care facility? . . . . . 3

**Treatment**

What is the treatment for MDR-GNR? . . . . . 4

**Prevention**

How can the spread of MDR-GNR be prevented in health care facilities? . . . . . 5  
 How can I prevent spreading MDR-GNR (and other germs) at home? . . . . . 6  
 What is good hand hygiene? . . . . . 7  
 What is the proper way to wash my hands? . . . . . 8  
 What is the proper way to clean? . . . . . 8  
 What is the proper way to wash clothes and other fabrics? . . . . . 9  
 What is the proper way to clean dishes? . . . . . 9

**Resources**

Shopping List . . . . . 9  
 Things to remember about living with MDR-GNR . . . . . back cover

**What are Multi-Drug Resistant Gram-Negative Rods (MDR-GNR)?**

*Gram-Negative Rods* are bacteria normally present in the human intestines and are often found in health care settings. These bacteria can sometimes cause infections. Antibiotics are medicines that are often used to treat infections caused by *Gram-Negative Rods*. In some cases, *Gram-Negative Rods* have become resistant to certain antibiotics and are called multi-drug resistant (MDR-GNR). More MDR-GNR infections occur among people who are hospitalized, and people may still have the infection after they leave the health care facility.

**What type of infections do MDR-GNR cause?**

MDR-GNR can live in the human intestines without causing disease. This is known as being colonized with MDR-GNR. However, sometimes MDR-GNR can be the cause of infections of the urinary tract, bloodstream, or in wounds.

**How do I know if I have MDR-GNR?**

If your doctor thinks you have a MDR-GNR infection, he or she will collect blood, urine or fluid from a wound for testing. He or she will want to know if the strain of bacteria infecting you is resistant to any antibiotics.

**If I get MDR-GNR, will I always have it?**

People with an active infection can be treated with antibiotics (medicine) and the infection may go away. People that are colonized with MDR-GNR may have it for a long time. Talk to your health care provider for more information.

**How are MDR-GNR spread from one person to another?**

MDR-GNR are passed from person to person most commonly by people whose hands have become contaminated by stool, urine, or fluid from a wound of a person infected or colonized with the bacteria. They can also spread by touching contaminated surfaces where the germs can survive for weeks. If someone touches the surface before it is cleaned and disinfected, they may get MDR-GNR. Washing your hands and keeping surfaces clean is the best way to prevent the spread of MDR-GNR.

**What if I have MDR-GNR while I am in a health care facility?**

If you know you have MDR-GNR, please let the health care staff know immediately so they can provide the appropriate care. Most health care facilities are aware of the risk of MDR-GNR during a patient stay. The facility may follow special guidelines for MDR-GNR infections.

### What is the treatment for MDR-GNR?

Most MDR-GNR infections can be treated with antibiotics (medicine). It is important for your doctor to know which strain of bacteria is causing the infection and what he or she can treat you with because MDR-GNR oppose the action of certain antibiotics, rendering them ineffective.

People colonized with MDR-GNR will usually not require treatment, but you may still spread MDR-GNR if you do not practice good hand hygiene.

### How can the spread of MDR-GNR be prevented in health care facilities?

Doctors, nurses, and other health care professionals should:

- wash their hands thoroughly with soap and water or use an alcohol-based hand sanitizer before and after caring for every patient. This will prevent MDR-GNR from being passed from patient to patient. Please ask your doctors, nurses and other health care workers to wash their hands before they care for you.
- wear gloves and a gown over their clothing when caring for a patient with MDR-GNR.
- remove their gown and gloves and wash their hands before leaving the room of a patient with MDR-GNR.
- make sure that patient rooms and medical equipment are thoroughly cleaned before being used by other patients.

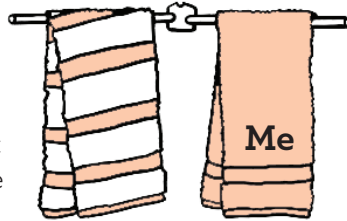


What patients and visitors can do to prevent spread:

- Patients and visitors should wash their hands often with soap and water, or use an alcohol-based hand sanitizer, especially after using the bathroom and before eating.
- As recommended by Centers for Disease Control and Prevention (CDC), patients with MDR-GNR should stay in their rooms and follow special precautions.
- Patients with MDR-GNR should not go to “common” areas of the facility such as the cafeteria and gift shop. You may be asked to shower and/or change to a fresh, clean gown before leaving your room to go into other areas of the hospital.
- Visitors should check in with the nurse’s station prior to entering the patient’s room, follow the nurse’s instructions, and always wash their hands before entering the room and before leaving the room.

### How can I prevent spreading MDR-GNR (and other germs) at home?

- Wash your hands often with soap and water, or use an alcohol-based hand sanitizer, especially after using the bathroom, before preparing food and before eating.
- If water is unavailable, alcohol-based hand sanitizer may be used when hands are not visibly soiled.
- Do not share towels. Keep your own hand towel in a separate place, so others won't use it.
- Wear disposable gloves if you expect to come into contact with stool, urine or bandages from infected wounds. Wash your hands after removing and disposing of used gloves.
- Frequently clean areas of your home, such as your bathroom, that may become contaminated with MDR-GNR.
- Keep wound dressings clean and dry.
- Change and wash linens on a regular basis, or any time they are soiled.
- Always notify health care providers if you are infected or colonized with MDR-GNR or have been in the past.



### What is good hand hygiene?

Wash your hands for at least 20 seconds (or two verses of the “Happy Birthday” song) with soap and water:

- after using the toilet or helping someone use the toilet
- after touching dirty surfaces and handling soiled laundry
- after handling items soiled by body fluids
- before and after preparing meals/snacks
- before eating meals
- before and after taking or giving medications
- after caring for a sick person
- after touching pets
- after sneezing, coughing, or blowing your nose
- any time hands are visibly dirty

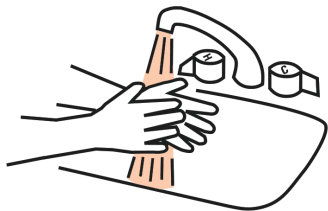
**What is the proper way to wash my hands?**

1. Wet your hands with warm, running water.



2. Add soap.

3. Rub hands together front and back, including wrists and between fingers, for 20 seconds. Clean under fingernails.



4. Rinse the soap from your hands and dry with a clean towel. As an alternative, when hands are not visibly soiled, use an alcohol-based hand sanitizer. Follow the directions on the label.

**What is the proper way to clean?**

People without diarrhea are much less likely to spread germs into the environment. However, if diarrhea occurs, use a bleach-containing cleaner for the bathroom and high-touch areas. If using bleach alone, then follow the directions on the label – generally one part bleach to ten parts water (1:10 solution) made fresh daily. Never mix bleach with other cleaners.

- Wet the surface well and clean vigorously.
- Allow the surface to air dry.
- Pay special attention to areas that may be soiled with stool, such as the toilet (don't forget the flush handle), sink, and areas that are touched frequently, such as door knobs and light switches.



**What is the proper way to wash clothes and other fabrics?**

Wash the clothing of the person with MDR-GNR separate from other laundry to prevent the germs from getting on other clothing.

Wash clothes/fabrics separately if they are heavily soiled with stool and/or body fluids.

- Rinse off stool into the toilet.
- Use the hot water cycle with soap; use bleach when fabric appropriate.
- Dry items in the dryer on high heat, if possible.



**What is the proper way to clean dishes?**

For regular cleaning, use of the dishwasher or hand washing with soap and water is very effective. Some people may prefer to final-rinse their dishes and utensils in a diluted bleach solution of one tablespoon bleach in one gallon of water, and allow them to air dry.

**Shopping List**

These items can be found at most drug stores or grocery stores:

- disposable gloves
- disinfectant
- tissues
- bleach
- soap
- plastic trash bags
- alcohol-based hand sanitizer

## **Things to remember about living with MDR-GNR:**

1. Wash your hands often, especially after using the bathroom and before preparing food.
2. Wear gloves if your hands may come in contact with body fluids or stool.
3. Frequently clean areas of the home, especially your bathrooms, that may have been contaminated with MDR-GNR.
4. Inform all your health care providers if you have been diagnosed with MDR-GNR so they may take the appropriate precautions when caring for you.
5. Talk to your health care provider if you have any questions.

## **ACKNOWLEDGEMENTS**

### **Arizona Healthcare Associated Infections (HAI) Program [www.preventHAIaz.gov](http://www.preventHAIaz.gov)**

This document was developed by the Public Education Subcommittee (PES) of the Arizona Healthcare-Associated Infection based on the work of the Department of Health Tacoma/Pierce County in Washington State. All work was guided by the best available evidence at the time this document was created. The objectives of the PES are directed at providing access to infection prevention resources for the public.

