

Antibiotic Resistant Organisms (AROs)

What are antibiotic resistant organisms?

We all have bacteria living on our skin and in our bowels which normally do not cause any problems. However, under certain circumstances these bacteria may reproduce in large amounts and cause infections. When that happens, the infections need to be treated with antibiotics.

In recent years some bacteria have developed resistance to the antibiotics that used to be effective in treating them. These bacteria have become antibiotic resistant organisms (AROs). Common types of antibiotic resistant organisms are methicillin resistant *Staphylococcus aureus* (MRSA), vancomycin resistant *Enterococcus* (VRE), and extended spectrum beta-lactamase (ESBL)-producing bacteria.

Clostridium difficile (*C. diff*) is not an antibiotic resistant organism but is mentioned here because it is similar to AROs in how it is spread and how it is controlled. *C. diff* most often causes symptoms for people with specific risk factors who are using antibiotics.

How does antibiotic resistance develop?

Bacteria have a natural ability to change and mutate over time. When antibiotics are overused or misused, as they have been for years, bacteria change and mutate in ways that help them to resist the antibiotics used to treat them.

How do AROs spread?

AROs live in and on the bodies of people who are **colonized** or **infected**.

- **Colonized** means the antibiotic resistant bacteria are present in or on someone's body but are **not** causing that person to be ill. This person is a carrier of the antibiotic resistant organisms and can spread them to someone else, who in turn may become sick if he/she has the risk factors for developing an infection
- **Infected** means that bacteria have reproduced in high enough amounts to invade the tissues and make the person sick

When people who are colonized or infected with an ARO touch their face or go to the bathroom, their hands may become contaminated with the ARO. If they do not wash their hands, they could spread these germs. AROs can survive on surfaces (e.g., counters, door knobs). They can be picked up by other people when they touch the contaminated surface and then touch their skin or mouth and swallow the bacteria. Surfaces do not have to be visibly soiled to be contaminated since bacteria are invisible to the naked eye.

Who is at risk of getting an ARO?

Healthy people are usually **not** at risk of becoming infected with an ARO. However, the following risk factors may make a person more susceptible to acquiring an ARO:

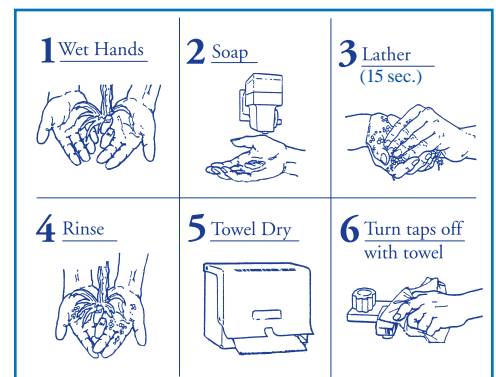
- Residing in a long-term care home
- Experiencing prolonged or frequent hospitalization, especially if in a critical care area
- Being admitted to or visiting a hospital
- Undergoing a surgical procedure
- Having a catheter or tube inserted
- Having an open wound
- Being exposed to a colonized or infected person
- Using antibiotics frequently
- Being over the age of 65 or under 6 months
- Having a weakened immune system
- Having a severe or chronic disease

What can be done to stop the spread of AROs?

1. Practice good hand hygiene. This is the most effective way to stop the spread as AROs are mainly spread by unwashed hands.

a. Wash hands frequently for at least 15 seconds using the 6-step method, and especially:

- After visiting the washroom
- Before handling, preparing, serving or eating food
- When hands look or feel dirty
- After blowing your nose, coughing or sneezing
- When providing care to an ill person
- When visiting a hospital or long-term care home



OR

b. Use a hand sanitizer when handwashing facilities are not available and hands are not visibly soiled. When using a hand sanitizer, apply enough to wet the entire hand and rub solution into hands until completely dry.

2. Clean the environment. In addition to practicing good hand hygiene, thoroughly clean the person's environment (bedroom, bathroom, equipment) to prevent further spread of the organism. Use an all purpose household cleaner and follow the directions on the label.

Be sure to:

- Remove any visible feces (stool) **prior** to starting the cleaning process
- Always clean in the direction of **least soiled to heaviest soiled areas**
- Wet the surface well and clean using good **friction**
- Pay special attention to frequently touched surfaces and areas that may be soiled with feces such as the toilet and sink. For heavily soiled areas you may want to disinfect the area using a solution of 5 ml (1 teaspoon) of household bleach mixed with one litre of water. Apply the solution to the surface after cleaning and allow surface to air dry

Note: No special precautions are required for handling dishes or waste

For further information, please call:
York Region Health Services Health Connection | 800-361-5653
www.york.ca



3. Clean Clothes/Fabric. Wash clothes/fabric separately if they are heavily soiled with feces:

- Rinse off feces
- Clean in a hot water cycle with soap
- Dry items in the dryer on high heat if possible
- Dry clean where appropriate

4. Use Antibiotics Wisely. To limit the development of new antibiotic resistant organisms, we all have to use antibiotics properly. It is important to:

- **Finish any antibiotics prescribed for you**, even if you feel better before they are gone. If you do not take all of your antibiotics, some of the stronger bacteria will not be killed and these may develop antibiotic resistance
- **Use antibiotics only for serious bacterial infections.** Antibiotics do not kill viruses like influenza (the “flu”) and the common cold, and so you should not take antibiotics for them. By taking an antibiotic when it is not needed, you could be helping the bacteria in your body to develop resistance to that antibiotic
- **Only take antibiotics prescribed for you;** do not share them with others who have a similar illness

Can people with AROs have visitors?

Yes. Restrictions on activities or visitors at home or in the community are not necessary.

- If you are visiting a person with an ARO in hospital or a long-term care home, you may be asked by staff to wear gloves and gown before having contact with the person or his/her environment. This will reduce the chance of your spreading the germ to others. It is very important to perform hand hygiene after visiting these facilities. Wash your hands using the six-step method or use a hand sanitizer if hands are not visibly soiled
- When visiting health care providers in the community (doctor, nurse, physiotherapist), tell them about your ARO so they can take the appropriate precautions (e.g. handwashing, use of gloves)