

# Basic Infection Prevention Booklet



Colorado Department  
of Public Health  
and Environment



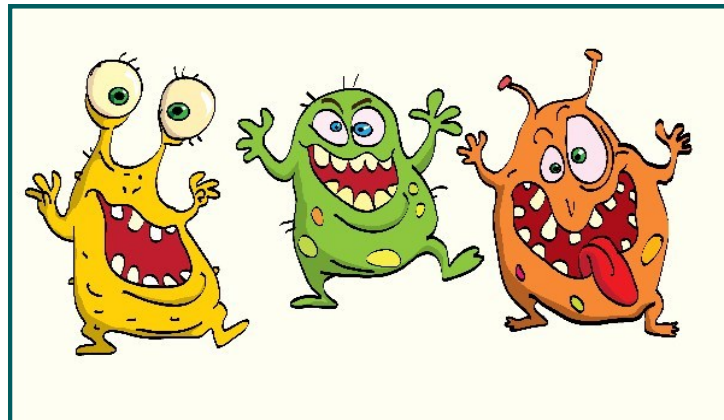
## INTRODUCTION

What is an infection? An infection occurs when germs, bacteria, or viruses get into your body and cause disease. Infections can cause many problems for you that you haven't planned for. When you get an infection you'll probably feel awful. You might even feel bad enough to miss work, school, or an important occasion. You might be put on expensive medications that may not be covered by your insurance or Medicare. You might need to spend time in the hospital or get home care (that's really expensive). You might even die. If you prepare yourself to know how to do the right things and what to watch for, you can prevent infections from happening at all! You are the first line of defense. This booklet will help you learn more about what germs do and what you can do to protect yourself.

The information has been put together with the help of concerned dialysis staff members, infection experts, and a hemodialysis patient. We hope the facts in this booklet will improve your knowledge, and motivate you to speak up if you see something that may cause an infection!

## BACKGROUND

Bacteria are found everywhere in patient care settings whether at the dialysis center or at home. They are found on our hands, our skin, in our noses, on medical staff hands and noses, and on surfaces such as the hemodialysis machines and bedside tables. In small numbers, bacteria rarely cause problems. In fact, your body always carries bacteria and some types are helpful such as those in your digestive tract. However, when bacteria grow and multiply or are overtaken by harmful bacteria, infections develop. According to the Centers for Disease Control and Prevention (CDC), infections are the second leading cause of death among dialysis patients and can at the very least cause serious complications.



## DIALYSIS PATIENTS ARE AT RISK

Bacteria and other infectious organisms (germs) such as viruses and fungi can cause infections both in the blood and around your access site, and just about anywhere else in the body including your lungs (pneumonia, flu, bronchitis) and bones (osteomyelitis). An infection around your access site is called a localized access infection. An infection of the bloodstream is called a bloodstream infection or BSI. If it is related to a dialysis catheter (not a fistula or graft), it is called a central line-associated bloodstream infection or CLABSI. The Centers for Medicare & Medicaid Services (CMS) requires that all outpatient dialysis centers track and report localized access infections, and bloodstream infections to the Centers for Disease Control and Prevention (CDC).



## DIALYSIS PATIENTS ARE AT RISK (continued)

Some reasons why patients on dialysis are at risk of infections:



You are close to other people when you are at the dialysis center. Germs can be spread through touch, through the air or through your nose and mouth.



Your skin is a natural barrier to bacteria. Every time you do a Peritoneal Dialysis exchange, or have needles put into your vascular access, that barrier is broken. If you have a dialysis catheter, your skin is never totally intact.



Some of the medications that you take may increase your risk of infection (like iron or steroids).







If you have diabetes you might be at higher risk for infections. High sugar levels in your blood can keep your body's white blood cells (cells that fight infection) from doing their job.







Cells that fight infection (antibodies) are made from protein. If you are not eating enough protein, you may be more prone to infectious disease.

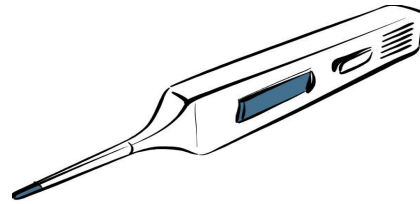
## SIGNS AND SYMPTOMS

Check your dialysis access daily and look for signs and symptoms of infection, such as:

-  Swelling at the access site
-  Redness at the access site
-  Pain or tenderness at the access site
-  Oozing, pus or drainage from around the access site

Other symptoms of a possible infection include:

-  Fever
-  Chills
-  Nausea, vomiting
-  Body aches



This hemodialysis catheter site is infected.

**CALL YOUR HEALTHCARE PROVIDER IMMEDIATELY IF YOU OR YOUR DIALYSIS ACCESS SHOWS ANY OF THE ABOVE SIGNS AND SYMPTOMS OF INFECTION.**

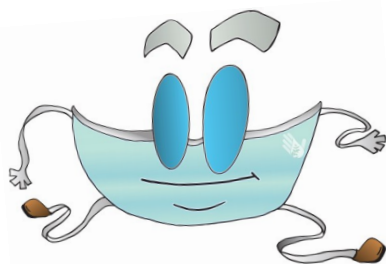
## SIGNS AND SYMPTOMS

Your body responds to infection in different ways. If your access site is infected, the redness and tenderness signals increased blood flow bringing antibodies to the area to fight the invading germs. The inflammation (redness and swelling) can cause you to have tenderness or pain in the area.


Another response by the body to invading germs is to generate a fever to inhibit germ growth. While many germs do die off with a fever, some may actually thrive and continue to multiply. These infections must be treated with medications such as antibiotics and anti-virals.


A persistent, productive cough may indicate an infection in your lungs.

If you have diabetes, examine your feet and report any redness or break in the skin.



## THINGS YOU CAN DO!




 **Speak up!** Do not hesitate to tell caregivers when you are feeling poorly or have a concern. **Always tell your caregivers** if you have any symptoms of infection no matter how small or minor they may seem. Talk to your doctor about any worries you have about your safety and ask them what they are doing to protect you. **Ask your caregivers to explain procedures and what they're doing to prevent infection.**

 **Keep your hands clean** and ask your caregivers, family and friends to do the same. If you notice someone has not washed their hands, kindly ask them to do so. All healthcare providers should clean their hands with soap and water or alcohol-based hand rub before and after caring for you or your vascular access site. Cleaning hands will help prevent the spread of germs.





## THINGS YOU CAN DO!

-  **Keep your access site clean. Always wash the site before each dialysis treatment.** Use the sink designated for patients to wash their hands and access site. If you are not sure which sink to use, ask a staff member. It is important to use a clean paper towel to dry your access and another clean paper towel to turn off the faucet. Do not replace clothing over your access after you have washed it.
  
-  **Keep your hands away from the access site.** Never scratch or pick at the site and don't remove any scabs at the site.
  
-  **Ask your caregivers if you can shower or swim in a pool.** Some access types (like catheters) do not allow for this. A wet dressing can become a magnet for germs to breed. **Inform a nurse or doctor right away if the bandage around an access site becomes wet or dirty.**

Note: Dialysis staff will change the dressing on a hemodialysis central venous catheter. It is your job to keep your dressing dry.

## HAND HYGIENE

There are 2 ways to clean your hands: using an alcohol-based cleaner or using soap and water.

When using an alcohol-based cleanser, apply enough cleanser to cover all surfaces of your hands including palms, fingers, the back of your hands, the back of your fingers and between your fingers until the cleanser is dry.

When using soap and water, be sure to wet hands first and then apply enough soap to clean all hand surfaces. Rub surfaces paying special attention to the backs of the hands, the backs of fingers and between fingers. Don't forget to clean under your finger nails. If it is before dialysis, wash your fistula or graft access using a gentle circular motion on and around it. Rinse hands and site well and dry access first, then hands with a paper towel. Use a new paper towel to turn off the faucet.











Wash your hands before every dialysis treatment, before eating, and after using the restroom. More on access site cleaning will be covered in Module 2.

See hand hygiene handouts from the World Health Organization (WHO).



# WHEN SHOULD YOU WASH YOUR HANDS?

Here are some examples of when you should wash your hands:

-  Before, during, and after preparing food
-  Before eating food
-  Before and after caring for someone who is sick
-  Before and after treating a cut or wound
-  After using the toilet
-  After changing diapers or cleaning up a child who has used the toilet
-  After blowing your nose, coughing, or sneezing
-  After touching an animal or animal waste
-  After handling pet food or pet treats
-  After touching garbage

## REMEMBER...

**YOU** are an important part of infection prevention. Keeping your hands clean whenever possible will help protect you and your access site from infections.

Module 2 will cover infection prevention related to your access site.



**NOTES:**

## QUESTIONS: