

# SEPSIS AND HAIS

## HEALTHCARE-ACQUIRED INFECTIONS

A healthcare-acquired infection (HAI) is an infection that is contracted while you are in a healthcare facility, such as an acute care hospital or a skilled nursing care facility. Even a doctor's office or clinic can be a source for an HAI.

As with any type of infection, HAIs can trigger sepsis, particularly in people who are already at risk, such as those with chronic illnesses (like diabetes), who are immunocompromised (such as those taking chemotherapy or who don't have a spleen), the very young, and the very old.

Sometimes incorrectly called blood poisoning, sepsis is the body's often deadly response to infection. Sepsis kills and disables millions and requires early suspicion and treatment for survival.

Sepsis and septic shock can result from an infection anywhere in the body, such as pneumonia, influenza, or urinary tract infections. Worldwide, one-third of people who develop sepsis die. Many who do survive are left with life-changing effects, such as post-traumatic stress disorder (PTSD), chronic pain and fatigue, organ dysfunction (organs don't work properly) and/or amputations.

## ORIGINS OF HAIs

Anyone can get an infection, but just as certain people in the community have higher risks, so do those in healthcare environments. And then there are added risks in hospitals and other healthcare facilities:

### Concentrated Exposure to Germs

If you are in healthcare facility, you're with other sick people who may have infections. You're also usually exposed to more people than you might normally be (workers, volunteers, and visitors). These people could unknowingly transfer germs from patient to patient.

### Invasive Interventions

If you have had any type of intervention that breaks the skin or introduces a piece of medical equipment inside your body, there's a new path that bacteria can follow to cause an infection. The most common interventions that can cause an infection include:

#### Central lines (also called central venous catheters) –

People who are seriously ill may be given a central line, a special type of intravenous (IV) catheter, for antibiotics or other medications and fluids. Usually, these are used in specialized units, such as the intensive care unit (ICU).

A central line is inserted into a large vein in your groin, chest, or neck. Because central lines are inserted into large veins, they can stay in place for several weeks or longer. One drawback is that these larger veins give more direct access to the heart, and infections can become serious very quickly.

An infection from a central line is called a central line-associated bloodstream infection, or CLABSI.

**Urinary catheters** – Patients in the hospital and in long-term care facilities may have a urinary catheter – a tube inserted into the urethra, which drains urine from the bladder. A catheter leaves a passage for bacteria to enter the bladder. An infection caused by a urinary catheter is called a catheter-associated UTI, or CAUTI. According to statistics, 75% of all UTIs in the hospital are CAUTIs, and they are the most common type of HAI today.

**Surgical procedures** – If you have surgery, your wound is at risk for getting infected. Surgical site infections are called SSIs.

**Assisted breathing by a ventilator** – When people are on a ventilator because they need help breathing, they are at risk for developing ventilator-associated pneumonia (VAP), an infection in the lungs. There are many possible causes for this type of infection, including exposure of the lungs (from the intubation) to bacteria that may not normally be able to reach the lungs.

Technically, any type of infection caught in a healthcare facility is an HAI, however some types of bacteria are more common in these types of places than others. These include, among others, methicillin-resistant *Staphylococcus aureus*, commonly referred to as MRSA; *Clostridioides difficile*, often called *C. difficile* or *C. diff.*; vancomycin-resistant; enterococcus; and norovirus.

## TREATMENT AND PREVENTION

Treatment can be more difficult because of pre-existing conditions and because some of the bacteria causing these infections are becoming antibiotic resistant.

The focus on HAIs is on prevention. In most cases, prevention is very basic: proper hand washing and good environmental hygiene.

The focus on HAIs is on prevention. In most cases, prevention is very basic, including proper hand washing and good environmental hygiene. This includes:

- All people who enter a patient's room or touch a patient must wash their hands before and after, even if they wear gloves.
- Patient rooms, as well as common rooms and facilities, must be properly cleaned on a regular basis.
- Medical equipment should be properly washed and sterilized (when appropriate).
- Invasive procedures should be limited as much as possible and for as short a period of time as possible.
- Healthcare providers must correctly observe sterile processes when performing procedures, such as changing wound dressings and inserting urinary catheters.
- Patients should have well-ventilated private rooms as often as possible.
- Patients should be monitored closely for any signs of infection.

You may reduce your risk of contracting an HAI by:

- Ensuring that everyone who comes into your room, either to provide care or just to visit, washes their hands.
- Washing your own hands frequently and thoroughly.
- Reporting any signs or symptoms of an infection, such as increasing redness around a wound, unexpected drainage from a wound, cloudy or foul-smelling urine, fever, or chills.
- Taking antibiotics only as prescribed and for the full duration of the prescription, even if it feels like the infection has gone away.
- Not using someone else's antibiotic to treat what you think might be an infection.

### What are the signs and symptoms of sepsis?

Sepsis is a toxic response to an infection. There is no single sign or symptom of sepsis. It is, rather, a combination of symptoms. Symptoms can include ANY of the following:

- T** **Temperature:** Higher or lower than normal
- I** **Infection:** May have signs and symptoms of an infection
- M** **Mental Decline:** Confused, sleepy, difficult to rouse
- E** **Extremely Ill:** Severe pain, discomfort, shortness of breath

**SEPSIS IS A MEDICAL EMERGENCY. IF YOU SUSPECT SEPSIS, CALL 9-1-1 OR GO TO A HOSPITAL RIGHT AWAY.**



Sepsis Information Guides are supported in part by an educational grant from Merck & Co., Inc.

The information in this pamphlet is intended for educational purposes only. Sepsis Alliance does not represent or guarantee that this information is applicable to any specific patient's care or treatment. The educational content here does not constitute medical advice from a physician and is not to be used as a substitute for treatment or advice from a practicing physician or other healthcare provider. Sepsis Alliance recommends users consult their physician or healthcare provider regarding any questions about whether the information in this pamphlet might apply to their individual treatment or care.