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# Preventing a Surgical Site Infection

A risk of any surgery is an infection at the surgical site. The surgical site is a cut the surgeon makes in the skin to do the surgery. Surgical site infections can range in type. It may be a minor skin infection. Or it may be severe and include tissue under the skin or other organs. In some cases, a severe infection can cause death. This sheet tells you:

- About surgical site infections
- What hospitals do to prevent them
- How they're treated if they do occur
- What you can do to prevent an infection



## What causes a surgical site infection?

Germes are everywhere. They're on your skin, in the air, and on things you touch. Many germes are good. Some are harmful. Surgical site infections occur when harmful germes enter your body through the incision in your skin. Some infections are caused by germes that are in the air or on objects. But most are caused by germes found on and in your own body.

## Who is at risk for a surgical site infection?

Anyone can have a surgical site infection. Your risk is higher if you:

- Are an older adult
- Have a weak immune system
- Have other health conditions such as diabetes

- Take certain medicines, such as steroids
- Are a smoker
- Have certain types of surgery, such as abdominal surgery
- Have poor nutrition
- Are very overweight
- Have a surgery that lasts longer than 2 hours

## What are the symptoms of a surgical site infection?

An infection often shows up as skin redness, pain, and swelling around the incision that gets worse. Later a cloudy or greenish-yellow fluid may come from the incision. The fluid may smell bad. The incision may pull apart or open up. You are likely to have a fever and may feel very ill.

Symptoms can appear any time. They may happen from hours to weeks after surgery. Implants such as an artificial knee or hip can become infected at any time after the surgery.

## How is a surgical site infection treated?

- A surgical site infection is treated with antibiotics. The type of medicine you get will depend on what may be causing the infection. Most serious wound infections need wound care. In some cases, surgery may be needed on the infected wound.
- An infected skin wound may be reopened and cleaned. A deep wound may need to be packed with gauze. The gauze is changed often until the wound starts to heal from the inside out. Your healthcare provider will decide the best way to treat your infection.
- If an infection occurs where an implant is placed, the implant may be removed.
- If you have an infection deeper in your body, you may need surgery to treat it.

## What hospitals do to prevent surgical site infections

Many hospitals take these steps to help prevent surgical site infections:

- **Handwashing.** Before the surgery, your surgeon and all surgery staff scrub their hands and arms with an antiseptic soap.
- **Clean skin.** The site where your incision is made is carefully cleaned with an antiseptic solution.
- **Sterile clothing and drapes.** The surgical team wears medical uniforms. These are known as scrub suits. They wear long-sleeved surgical gowns, masks, caps, shoe covers, and sterile gloves. Your body is fully covered with a large sterile sheet (sterile drape). There is an opening in the sheet where the incision is made.
- **Clean air.** Operating rooms have special air filters. They use positive pressure airflow to prevent unfiltered air from entering the room.

- **Careful use of antibiotics.** Antibiotics are given no more than 60 minutes before the incision is made. They are generally stopped within 24 hours after surgery. This depends on the type of surgery. This helps kill germs but prevents problems that can occur when antibiotics are taken longer.
- **Controlled blood sugar levels.** Your blood sugar level may rise. This can be because of the stress of the surgery. Your blood sugar level is watched closely to make sure it stays within a normal range. High blood sugar delays wound healing. This increases the risk of infection.
- **Controlled body temperature.** A lower-than-normal temperature during or after surgery prevents oxygen from reaching the wound. This makes it harder for your body to fight infection. Hospitals may warm IV fluids, increase the temperature in the operating room, and provide warm-air blankets.
- **Safe hair removal.** Any hair that must be removed is clipped right before the incision, not shaved with a razor. This prevents tiny nicks and cuts where germs can enter.
- **Wound care.** After surgery, a closed wound is covered with a sterile dressing for 1 to 2 days. Open wounds are packed with sterile gauze and covered with a sterile dressing.

## What you can do to prevent a surgical site infection

- Ask questions. Learn what your hospital is doing to prevent infection.
- If instructed, shower or bathe with plain soap the night before and the day of your surgery. Follow all instructions you're given. You may be asked to use a special cleanser that you don't rinse off.
- If you smoke, stop as long as possible before and after the surgery. Ask your healthcare provider about ways to quit.
- Take antibiotics only when your healthcare provider tells you to. Using antibiotics when they're not needed can create germs that are harder to kill. Finish the entire prescription of your antibiotics. Take them even if you feel better.
- Ask healthcare workers to clean their hands with plain soap and water or with an alcohol-based hand sanitizer before and after caring for you. Don't be afraid to remind them.
- After surgery, eat healthy foods. Care for your incision as directed by your healthcare team.

## When to call your healthcare provider

Call your healthcare provider if you have any of these:

- Pain at the surgical site that gets worse
- A red streak, worse redness, or puffiness near the incision
- Yellowish, cloudy, or bad-smelling fluid from the incision
- Stitches that dissolve before the wound heals

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- Fever of 100.4° F ( 38°C ) or higher, or as advised by your healthcare provider
  - A tired feeling that doesn't go away