



# How to Keep the Hospital From Making You Sicker

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icalinfectionprevention.org, spell the recommended timing and types of antibiotics for most major surgeries. The core measures of good care include: using the recommended antibiotics, starting preventive antibiotics within the hour before making the surgical incision, and discontinuing them within 24 hours of the end of surgery.

Though the program will focus on those three measures, other guidelines include administering oxygen to patients after surgery and keeping patient body temperatures normal. Shaving a surgical site the night before, long standard practice, is now taboo; it causes microabrasions in the skin where bacteria can colonize and be driven into the patient's tissue with the scalpel. Recommended instead: removing

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hair with clippers or not removing it all and sterilizing the site alone.

## Rubbing in the Drugs

Peter Houck, who is leading the infection-prevention program for Medicare, suggests that the program may eventually reward doctors and hospitals who adhere to the recommended practices. He says surgeons have a tendency to do things their own way—such as placing antibiotics directly into a wound or rubbing the drugs into the cement of a hip joint—despite a lack of evidence such techniques work. "Doctors have been doing what they thought was right but not necessarily following what the evidence shows," Dr. Houck says. "We may in the future pay them more to practice medicine the way the evidence says they should."

In the past, doctors always assumed they could treat infections with antibiotics after the fact. So they avoided exposing patients to the added risks of taking such drugs beforehand. Now, overuse of antibiotics in recent years has rendered many strains of bacteria resistant to commonly used drugs that help fight such infections.

## Surgical Checklist

Here are some things patients can do to reduce their risk of infection from surgery

### Before Surgery

- Ask if surgery is absolutely necessary.
- Stop tobacco use at least 30 days before surgery
- Ask to keep your preoperative hospital stay as short as possible
- Avoid elective surgery if you have an existing infection; postpone any surgeries until infection is treated and resolved.
- Make sure the surgical site isn't shaved the day before; if hair must be removed, request that electric clippers be used right before operation
- Request an antiseptic bath or shower the night before surgery
- Check to see if you'll get a preventive dose of antibiotics an hour before surgery
- Ask that people in the operating room be restricted to necessary medical personnel only
- Request that operating staff follow sterilization practices—and that no one have artificial fingernails or current infections
- Make sure that the operating room will be ventilated so that air flows out but not in during surgery
- Make sure there are no plans to use reprocessed surgical blades, catheters and other single-use medical devices

### After Surgery

- Make sure your antibiotics are discontinued within 24 hours after the operation
- Advise doctor of any fever, weight loss, pain, ooze or swelling at site
- For up to two years after the operation, take antibiotics after joint surgery or invasive procedures such as dental work

That means that if an infection does strike, it may be harder to treat. In the case of artificial and knee replacements, many bacteria have become resistant to the most commonly used antibiotic, methicillin. Consequently, an in-

fection exposes patients to the risk of amputation.

The best approach now, the CDC and others believe, is to have the antibiotics active while the surgery is under way and the wound is open, but to stop the drugs soon afterward in order to prevent side effects and avoid antibiotic resistance.

## Patients at Higher Risk

Of course, it is impossible to prevent some surgical infections no matter how many precautions are taken, and some patients such as the elderly and diabetics are at much higher risk. But hospitals that began participating in the project last year are already reporting dramatic results, including those in one group led by Seattle-based Qualis Health. At Mercy Health Center in Oklahoma City, the surgical infection rate for cardiac bypass, orthopedic surgery, colon and hysterectomy surgeries was reduced by 78% in one year.

Gwinnett Hospital System in Lawrenceville, Ga., performed 402 hysterectomies without a single surgical infection over nine months and sharply reduced infections in other surgical areas as well. St. Joseph Regional Medical Center in Milwaukee cut the infection rates on Caesarean sections and colorectal surgeries by 100% and reduced infection in cardiac surgeries and vascular surgeries by 71% and 65% respectively.

## A Cleansing Shower

Patients about to undergo surgery can also take steps to decrease their chances of getting an infection. They should ask their doctor about the timing and use of antibiotics and request an antiseptic bath or shower the night before surgery, for example.

T. Forcht Dagi, a Georgia neurosurgeon who heads the peri-operative care committee of the American College of Surgeons, notes that hospitals have to report infection rates, and patients should always ask if there is a problem that might impact their surgery.

Medicare's Dr. Houck adds that patients shouldn't be afraid to ask outright what percentage of patients get infections—and how many die as a result in a particular kind of surgery.

"If the surgeon is offended or doesn't know the answer I would get a different surgeon," he says.

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## *Surgical Infections Become Harder to Treat, Prompting Stepped-Up Prevention Efforts*

**S**HORTLY AFTER Patricia Henderson Shimm had her hip replaced, the surgical site became infected. It was the start of a three-year nightmare for the New York author and early-childhood educator.

Her doctors gave her intravenous antibiotics and extracted the infected tissue. But eventually they had to remove the artificial joint itself, leaving Mrs. Shimm temporarily wheelchair-bound. After a second hip replacement followed by two years of excruciating pain, Mrs. Shimm only recently started walking without a cane. "They told me this is just one of those things that happens sometimes," she says.

### **THE INFORMED PATIENT**

*By Laura Landro*

Largely because of mounting resistance to common antibiotics, complications from surgery that were once easily treatable have become increasingly difficult to handle. The consequences are alarming: more post-surgery deaths, amputations, and other severe complications.

Patients who develop surgical-site infections are 60% more likely to spend time in an intensive-care unit, five times more likely to be readmitted to the hospital and twice as likely to die than patients who don't get infections. Such complications also add more than \$1 billion annually to the nation's health-care bill, according to federal health analysts.

But many dangerous surgical infections don't have to happen. For the past four years, the government has had in place—and almost every major surgical society has endorsed—simple guidelines to help hospitals and doctors prevent them. Yet, recent studies show that in anywhere from 25% to 50% of surgeries, doctors aren't following the most basic prevention steps, like administering the recommended antibiotics before the operation.

It is a sobering example of how medical care often doesn't adhere to evidence of what works best for patients—and it underscores the need for patients and their families, as well as hospitals themselves, to be more vigilant. Mrs. Shimm wasn't given any antibiotics prior to her surgery. Though the cause of her infection can't be known now, the guidelines clearly state that in joint-replacement

surgery, antibiotics before surgery offer the best protection from infection.

Now federal health agencies are trying to bring surgeons and hospitals into line. The Centers for Disease Control, which issued the guidelines in 1999, and the Center for Medicare and Medicaid Services have joined forces in a far-reaching prevention effort. The goal is to cut the number of surgical infections in half by 2005.

There is a "growing recognition that complications are not inevitable," says Julie Gerberding, who became director of Atlanta-based CDC last year. The job now, she says, is to get the medical community "to accept the notion that these infections aren't acceptable."

Each year as many as 780,000 patients may develop an infection from surgery, or about 2.6% of the 30 million operations performed annually. While the overall chances of getting an infection are small, infection rates can be as high as 11% for some operations. The new infection-prevention



CORBIS

*For some things you can do to reduce the risk of infection from surgery, see page D6.*

program will focus on some of the operations with the highest risk, including cardiac surgery as well as coronary artery bypass, colon surgery and joint replacement. Of about 250,000 colorectal surgeries annually, for example, there are about 15,075 surgical infections that result in 11,500 deaths.

Between 40% and 60% of surgical infections are preventable if doctors and hospitals follow the rules in the new prevention program, the health agencies say. The guidelines, available at [www.cdc.gov](http://www.cdc.gov).

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