

## Thirteen Cotton Balls

In December, Elizabeth got an ear ache. Although the doctor provided the usual treatments, after four months and a number of doctor's visits, she still had fluid in her ear and couldn't hear right. The doctor decided to slice her eardrum open to drain the fluid. After doing so, he told her that her problems were over, that he had suctioned out all the fluid, and that no more would accumulate.

Elizabeth kept waking up that night because fluid would saturate the cotton ball in her ear and dampen the pillow. The dampness against her cheek roused her. Each time this happened, she removed the soggy cotton ball, threw it on a mat beside her bed, and inserted a dry one. In the morning, there were thirteen discarded cotton balls on the mat. A week after the procedure, she saw the doctor and told him about the thirteen cotton balls.

"Oh, that's ridiculous!" he snapped. "That didn't happen!" He insisted that she was cured.

But a week later, she was back in his office with fluid in her ear. Four weeks later, after draining her ear again, he stepped away to prepare to insert a permanent drainage tube. When he returned, he stopped short, incredulous. He exclaimed, "There's more fluid in your ear!"

Suddenly, Elizabeth found herself scheduled for brain surgery. It turned out that cerebrospinal fluid had been leaking through a hole in the membrane surrounding her brain into her middle ear for nearly six months.

If the doctor had installed the tube, he would have forced open a direct and quasi-permanent channel from the outside air to the inside of her brain. She almost certainly would have developed meningitis.

When his mental model and her facts didn't match -- when she told him in April about the thirteen cotton balls -- he elected to discard the facts and hang on to his mental model. This way of thinking -- that the doctor's *theory* trumps the patient's *facts* -- could have killed her.

Adapted from *Killer Cure*  
by Elizabeth L. Bewley

# Misdiagnosis

How to Avoid it



## Are You Being Treated

*For the Wrong Condition?*

Studies of autopsies have shown that doctors seriously misdiagnose fatal illnesses about 20% of the time. So millions of patients are being treated for the wrong disease. ... Under the current medical system doctors, nurses, lab technicians and hospital executives are not actually paid to come up with the right diagnosis. They are paid to perform tests and to do surgery and to dispense drugs.

- David Leonhardt, "Why Doctors So Often Get It Wrong," *NYT*, 22 Feb 2006.

How often do autopsies turn up a major misdiagnosis in the cause of death? ... According to three studies ... the figure is about 40%. In about a third of the [cases], the patients would have been expected to live if proper treatment had been administered.

- Atul Gawande in *Complications*, 2002.

About 2,400,000 people die each year in the U.S. If the conclusions of the studies quoted by Gawande applied to all deaths then about 960,000 deaths each year involve a misdiagnosis. In about 320,000 of those cases, the people would probably have lived if they had been properly diagnosed and treated.

How reasonable is it to expect that a doctor can take your blood pressure, temperature, and pulse, and from that data alone determine which of the 68,064 recognized diagnoses applies to you?

Your Name \_\_\_\_\_

## Symptom Tracker

from [www.killercure.net](http://www.killercure.net)

Date	Time	Symptom	Description	Duration	Activity	What Helped?

### To Prevent a Misdiagnosis

1. Track your symptoms using the above chart, starting when you first think you might want to see your doctor. This might be when symptoms first appear, or when they first become troublesome, or when treatment seems to be failing.
2. Take two copies of the completed form to your doctor so that you each have a copy.
3. When your doctor provides a diagnosis, ask when you should expect to start feeling better.
4. Continue to track your symptoms after the doctor's visit.
5. If you do not start to feel better as expected, return to the doctor with the additional information that you have been tracking since the last visit. Ask the doctor whether:
  - Another treatment might work better for you, or
  - If it is possible that the diagnosis is wrong.In *How Doctors Think*, Dr. Jerome Groopman suggests asking "What else could it be?" "Is there anything that doesn't fit?" and "Is it possible I have more than one problem?"

### How to Use This Chart

1. Enter the date and time you notice a problem.
2. Write down the symptom (e.g. pain, dizziness, bleeding, wheezing).
3. Try to describe it well. If it's pain, say where it is, and whether it is sharp or dull, continuous or intermittent.
4. How long did the symptom last?
5. What were you doing when the symptom occurred? (e.g., sitting at your computer or falling off the roof of a house)
6. Did anything help make it better?