

American Cancer Society

What is immunotherapy?

Immunotherapy is also sometimes called *biologic therapy* or *biotherapy*. It is treatment that uses certain parts of the immune system to fight diseases such as cancer. This can be done in a couple of ways.

- Stimulating your own immune system to work harder or smarter to attack cancer cells
- Giving you immune system components, such as man-made immune system proteins

For a long time doctors suspected that the immune system had an effect on certain cancers. Even before the immune system was well understood, William Coley, MD, a New York surgeon, first noted that getting an infection after surgery seemed to help some cancer patients. In the late 1800s, he began treating cancer patients by infecting them with certain kinds of bacteria, which came to be known as *Coley toxins*. Although he had some success, his technique was overshadowed when other forms of cancer treatment, such as radiation therapy, came into use.

Since then, doctors have learned a great deal about the immune system. This has led to research into how it can be used to treat cancer, using many different approaches. In the last few decades immunotherapy has become an important part of treating several types of cancer.

Immunotherapy includes a wide variety of treatments that work in different ways. Some seem to work by boosting the body's immune system in a very general way. Others help train the immune system to attack cancer cells specifically.

Immunotherapy seems to work better for some types of cancer than for others. It is used by itself to treat some cancers, but for many cancers it seems to work best when used along with other types of treatment.

As researchers have learned more about the body's immune system in recent years, they have begun to figure out how it might be used to treat cancer more effectively. Newer treatments now being tested seem to work better and will have a greater impact on the outlook for people with cancer in the future.

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