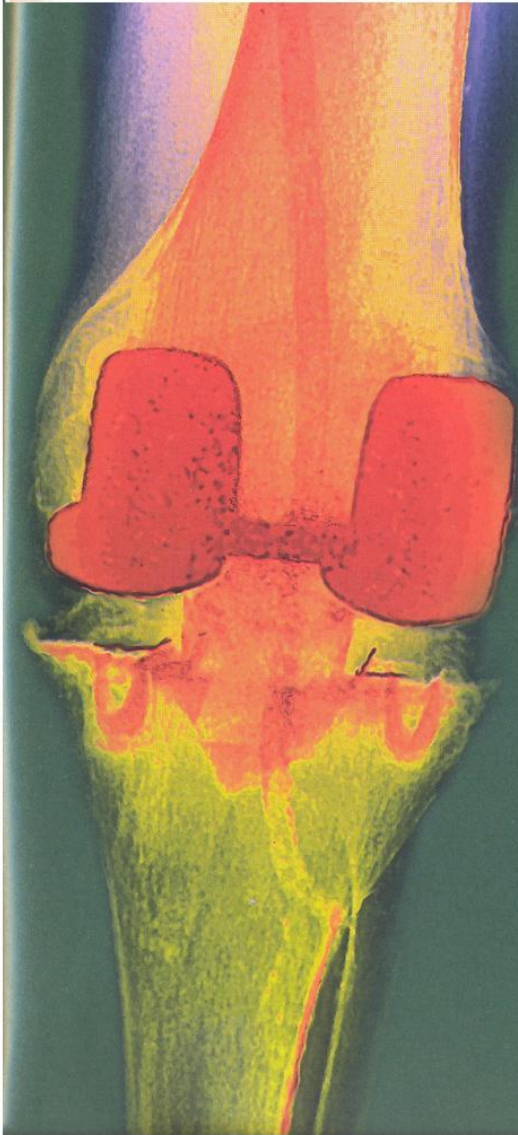


Amazing Medical Breakthroughs

by Lou Ann Walker



Have you ever watched a science-fiction movie in which a scientist replaces a person's lost limb with a special arm or leg that looks like the real thing? Have you read about sheep and pigs being altered by science? Did you know that deaf people are able to communicate with hearing people by using the Internet?

These amazing events are really happening. Replacement limbs may seem to belong only in science fiction, but in fact, devices such as these are **accommodating** the needs of many people today. There are artificial devices that can be used to replace a missing part of the body. Such a device is known as a prosthesis. A prosthesis, also called a prosthetic device, can be an artificial hand, leg, or eye. A prosthetic device might be used to replace a body part lost by illness or injury or a body part that was missing at birth. People with physical disabilities can lead active lives thanks to prosthetic devices.

Many people who benefit from prosthetic devices are athletes. Some of these athletes are able to run using prosthetic legs. Other athletes use prosthetic arms to row boats, ride bikes, swim, or play golf. You will read about the achievements of some of these remarkable athletes in this book.

Some scientists are performing research on animals to help find cures for human diseases. In researching the ways in which animals can help humans, scientists have cloned, or produced identical copies, of different animals. They have cloned sheep, goats, mice, and cats. You'll read about the technique of cloning and how the process is **expanding** to produce more cloned animals.

There are also devices that help people with a hearing or vision impairment to communicate with others and to lead more independent lives. The Internet, electronic talking equipment, and surgically inserted computer chips are just a few of these helpful devices.

In the late 1990s, a science-fiction series called *Star Trek: The Next Generation* was introduced on television. In this series about space exploration in the distant future, one of the main characters is blind. However, he wears a special device over his eyes in order to “see.” He actually senses outlines and colors rather than truly sees objects. Here on Earth today, a device has been developed that a blind person can wear over his or her eyes to “see” also. Remarkable! Sometimes, life does imitate art.

The ideas that you will read about in the following pages may seem completely incredible, such as inventing a talking hand or growing a human ear on a mouse’s back. However, the field of medical breakthroughs already includes inventions and techniques that once seemed unbelievable. Inventors and scientists know that anything is possible. That’s why they continue to work on even more amazing medical breakthroughs.

