

## Signs of Surgery in Ancient Egypt

In November of 2001, in the shadow of the first royal pyramid at Saqqara (built around 2630 B.C.E. not far from Cairo), archaeologists made an amazing discovery. Under more than 16 feet (5 meters) of sand was a tomb that had been hidden since 2000 B.C.E. The hieroglyphs— ancient Egyptian writing— on the walls of the tomb indicated that surgery was practiced in ancient Egypt. This is the first possible hard proof that surgery was actually performed so early. The tomb belonged to Skar, the chief physician of one of Egypt’s rulers of the 5th dynasty. It contained about 30 bronze medical implements, the oldest ever found, including scalpels, needles, and a spoon.

First Proof of Surgical Knowledge Egyptologists— historians who study ancient Egyptian culture— have known for a long time that Egyptians possessed the knowledge of surgery. The first suggestion that surgery may have been practiced in ancient times was discovered in the Egyptian city of Luxor in 1862. In the 19th century, the American trader Edwin Smith spent much of his time in the Luxor markets. He was always looking for ancient artifacts that he could sell for an easy profit. Smith even described himself as “an American farmer of Luxor.” Many Egyptologists consider him to have been a dishonorable character. Often, Smith was quite happy to buy a well-made fake, and he did not worry about reselling it as the real thing. However, he knew his business, and he treated one ancient Egyptian document, a papyrus that looked genuine (real), very differently. Since he was able to read hieroglyphs, he could see that this was a description of medical practices and therefore highly unusual. Although he could have gotten a good price for the papyrus, for unknown reasons Smith decided to keep it, and it remained in his family for more than 70 years. It was only when it was fully translated in the 1930s that its full significance was recognized. Today, it is known as the Edwin Smith Surgical Papyrus.

This papyrus is a detailed— although incomplete— summary of surgical treatments for wounds, starting with head injuries and working down the body. There are 48 case studies recorded in the papyrus, and a modern surgeon would be familiar with the way each case is described. The papyrus goes into great detail describing each individual trauma: how one would look at it, diagnose it, examine it, and finally treat it. It describes how to sew together a wound. For liquid-filled tumors, it recommends cauterization, the use of heat to destroy damaged tissue and close up blood vessels. Today, a similar technique is used, with an electric current taking the place of heat. Even more important are the neurological insights that the Edwin Smith papyrus gives: it contains the first descriptions of the meninges (the membranes that cover the brain), the external surface of the brain, and the brain-spine fluid. It also notes that brain injuries are connected with changes in the function of other parts of the body, especially in the legs. The papyrus was copied in about 1700 B.C.E. from an ancient composite manuscript. In addition to the original author’s text, written between 3000 and 2500 B.C.E., the papyrus contained 69 explanatory notes added a few hundred years later. The scribe who copied it made many errors, some of which he corrected in the margins. He had copied at least 18 columns of it, when, at the bottom of a column, he paused in the middle of a word and left the papyrus unfinished for all time.

Other Clues Relating to Ancient Egyptian Surgery Other clues that tell us that the Egyptians had discovered the principles of surgery can be found in the way they prepared their dead. For instance, the mummy of the great pharaoh Ramses II, now in Cairo Museum, was surgically altered by having a small bone and a quantity of seeds inserted into his nose. In life, this had been his most prominent feature. The Egyptian surgeons ensured that, in death, it remained just as prominent. The mummy of Queen Nefertiti was also enhanced. Her cheeks and belly were stuffed with bandages, resin, and a cheesy substance. Today, plastic surgeons would use materials such as silicon to fill out various body parts. So the Egyptians used surgery on the dead. And, as the Edwin Smith papyrus shows, they had the skills to perform such operations on the living. But did they? The mummies don’t reveal any evidence that proves this one way or the other.

### Understanding the Text

A. Answer as many questions as you can without looking at the text. Discuss your answers with a partner.

1. Where is the papyrus from?
2. What does the papyrus describe?
3. Whom do we know the Egyptians practiced surgery on?

B. Write T for True and F for False according to the text.

1. Skar was a ruler of the 5th dynasty. T F
2. Edwin Smith was always looking for ancient artifacts that he could sell for an easy profit. T F
3. Edwin Smith sold the papyrus as soon as he found it. T F
4. The papyrus is a detailed summary of surgical treatments for wounds. T F
5. The principles of surgery cannot be found in the way the Egyptians prepared their dead. T F

### Understanding the Topic, Main Idea, and Supporting Details

A. Text.

B. Answer the questions and discuss your answers with a partner.

- a. What is the topic of the text?
- b. What is the main idea of the text?
- c. Are your answers for the topic and main idea here the same as the ones you determined after you previewed the text, or are your answers different?

B. Paragraphs.

Write MI for Main Idea and SD for Supporting Detail. Discuss your answers with a partner.

1. What is the topic of paragraph 4 ?
2. What is the main idea and which are the supporting details ?
  - a. Edwin Smith described himself as “an American farmer of Luxor.”
  - b. Edwin Smith spent a lot of time in the Luxor markets looking for artifacts he could sell for an easy profit.
  - c. Many Egyptologists consider Edwin Smith to have been a dishonorable character.
3. What is the topic of paragraph 8?
4. What is the main idea and which are the supporting details of paragraph 8?

- a. The papyrus describes how to stitch together a wound.
  - b. The papyrus describes how to use heat to destroy damaged tissue and close up blood vessels.
  - c. The papyrus describes medical injuries and their treatments.
5. What is the topic of paragraph 11?
6. What is the main idea and which are the supporting details of paragraph 11?
- a. The mummy of the great pharaoh Ramses II was surgically altered.
  - b. Other clues that tell us that the Egyptians had discovered the principles of surgery can be found in the way they prepared their dead.
  - c. The Egyptian surgeons ensured that, in death, pharaoh Ramses II's nose remained just as prominent as it had been in life.