

Anesthesiology reading passage

Anesthesiology

- A. Man has pursued natural medication for pain, since the beginning of time. Between the 40 and 60 A.D medicinal properties of plants and minerals were studied by a Greek physician, Dioscorides who travelled with Roman armies. For physicians his book *De materia* which was published in five volumes and translated into at least seven languages was the fundamental reference source for over Sixteen centuries. Anesthesiology has evolved from a list of medicinal plants and makeshift treatments to one of the most significant fields in medicine.
- B. Many of the early pain medications were based on superstitions and did little to alleviate an ill or injured person's misery. One of the first plants to be used as an anesthetic was the mandragora (now known as the mandrake plant). People in the Middle Ages believed that the person who plucked the mandrake from the ground would either die or go insane because of the plant's apparent wailing when it was dragged from the ground. This myth may have arisen because the mandrake's split root resembled a human figure. In order to draw it from the ground the plant collector would loosen the root and connect the stem to an animal. It was believed that uprooting a mandrake was safer when done in the moonlight, and that the best animal to utilise was a black dog. In his manual, Dioscorides recommended boiling the root with wine and having a man drink the potion to remove sensation before cutting his flesh or burning his skin. Later, to induce sleep prior to painful procedures or to alleviate the agony of disease Opium and Indian hemp were used. Other treatments, such as cocaine, caused more harm than help to the patient, with many people dying as a result of their addictions. President Ulysses S. Grant became addicted to cocaine before he died of throat cancer in 1885.
- C. The modern field of anesthetics dates to the incident when nitrous oxide (more commonly known as laughing gas) was accidentally discovered. A discovery was made by Humphrey Davy, the inventor of the Miner's lamp, that inhaling the deadly substance caused a weird exhilaration, followed by fits of laughter, weeping, and sometimes unconsciousness. Laughing gas first came into use to ease pain during a tooth extraction by Horace Wells, a dentist from the United States in the year 1844. After two years the first anesthetic machine was invented by Dr. William Morton. This device was a simple glass globe with an ether-soaked sponge inside. Because the numbing effect of ether lasted far longer than that of nitrous gas, Morton thought it was a good alternative to nitrous oxide. Whenever the pain became severe, his device permitted the patient to inhale vapours. Likewise, A tumour was effectively removed from a man's jaw area while he was anesthetised with Morton's machine during a trial experiment in Boston in 1846.
- D. The first use of anesthesia in the obstetric field was employed by Dr. James Simpson in Scotland. To reduce pain of childbirth Simpson administered chloroform instead of ether, which he considered irritating to the eyes. Simpson sprinkled chloroform on a handkerchief and permitted labouring women to inhale the fumes voluntarily. Following this, Queen Victoria agreed to use chloroform during the delivery of her eighth child in

1853. Soon thereafter, the use of chloroform during childbirth became acceptable and even fashionable. However, as chloroform grew in popularity as an anesthetic its knowledge of its toxicity emerged, and it was soon rendered obsolete.

- E. Numerous advancements were made in the field of anesthetics after World War II. Previously inconceivable surgical procedures were then being performed with minimal or no pain felt by the patient. Rather than physicians or nurses who administered pain relief as part of their profession, anesthesiologists became specialists in suppressing consciousness and alleviating pain. Today, anesthesiologists are categorised as perioperative physicians, which means they care for patients before, during, and after surgical procedures. An anesthesiologist must complete over eight years of schooling and four years of residency before being qualified to practise in the United States. These professionals have been trained to administer general, local, and regional anesthetics. General anesthesia is used to induce temporary unconsciousness in a patient. Moreover, only the affected area is treated with local anesthetic, which causes a loss of sensation. Regional anesthesia is used to numb a larger portion of the body's sensations and possibly its movement. In addition to controlling the patient's pain levels before and during an operation, anesthesiologists are responsible for monitoring and regulating the patient's vital functions during the procedure and evaluating the patient's medical needs in the post-operative room.
- F. The number of anesthesiologists and the success of operative care have doubled since the 1970s in the United States. In addition, anesthesiology-related complications have decreased dramatically. Over 40 million anesthetic procedures are performed annually in the United States, with only 1 in 250,000 resulting in death.

Anesthesiology reading questions

Questions (1 - 7)

Do the following statements agree with the information given in the Reading Passage?
Write

TRUE if the statement agrees with the information

FALSE if the statement contradicts the information

NOT GIVEN if there is no information on this

1. Dioscorides' book, *De materia medica*, fell out of use after 60 A.D.
2. Mandragora was used as an anesthetic during the Middle Ages.
3. Nitrous oxide can cause the user to both laugh and cry.
4. During the second half of the 19th century, most dentists used anesthesia.
5. Anesthesiologists in the United States are required to have 12 years of education and training.

6. There are lower anesthesiologists in the United States now than in the past.
7. In order to extract mandrake from the ground, the plant collector would affix the root and stem to an animal.

Questions (8 - 10)

Answer the questions below.

*Write **NO MORE THAN THREE WORDS AND/ OR A NUMBER** from the passage for each answer.*

8. Which sort of anesthetic was administered to a single body part?
9. How many years of schooling and residency must an anesthesiologist complete before becoming qualified to practise in the United States?
10. Which alternative was offered by Morton due to nitrous oxide's shorter anesthetic effect?

Questions (11 - 13)

Look at the following 11 to 13 and the list of statements below.
Match each statement with the correct one.

Write the correct letter A-E on your answer sheet.

- A. General Anesthetic
- B. Chloroform
- C. Nitrous Oxide
- D. Opium
- E. Mandrake

11. used by sprinkling on a handkerchief
12. used by boiling with wine
13. used first during a dental procedure