

# Explainer: What is dreaming?

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A boy and his dog are sleeping. And they're both dreaming. Dreaming may have important effects on memory and learning. Photo from Getty Images

For a long time, dreams have been considered important. For most of history, dreams were thought to show us things about ourselves, others and even the future. They were thought to serve as sources of wonder and signs of things to come.

So what do we think about them now? What is dreaming? What does science say? And what mysteries remain?

In most of the world, dreams are not considered as important as they were 100 years ago. This is because of how scientists learn things. Scientists rely on evidence they can see for themselves and measure using tools. But there are no tools that allow scientists to see people's dreams. As a result, dreams have become less and less important to our understanding of the brain.

## **Dreams May Affect Learning**

However, the study of dreaming has recently made a comeback. New scientific evidence shows that dreaming may have important effects on learning and memory.

Historically, dreams have been very important in some societies. In some religions, people believe dreams allow them to talk to family "spirits." In others, people view dreams as a way for gods to communicate with them.

Dreams were also a very important part of psychoanalysis. Psychoanalysis was a method for treating mental illness. It was very popular in the early 1900s. As its popularity eventually declined, dreams were increasingly looked at through a scientific lens.

In the 1950s, doctors Eugene Aserinsky and William Dement made an important discovery about dreams. They found that people's bodies did certain things when they were dreaming. People who were dreaming had rapid eye movements (REM) and special brain waves.

## **Studying People Deep In Sleep**

For the next 20 years there was a huge amount of dream science. Scientists were able to determine when someone was dreaming. In studies, they would wake people up during different stages of sleep and ask them questions. People woken from dreaming reported feelings that were quite different from those reported by people who were not dreaming.

These studies confirmed many beliefs about dreaming. In terms of brain waves, dreaming was very similar to being awake. However, in other ways it was very different. Dreaming was more visual, and led to ideas that were stranger and more oddly connected.

From the late 1970s until the early 2000s, dream science shrank to a small field. It was regarded by many as outdated.

However, in recent years the study of dreams has returned. Two basic types of sleep have been identified. They are called dream sleep (REM) and Slow Wave Sleep (SWS). They play different parts in helping us recover after being awake. SWS helps heal people's bodies, while REM helps heal people's minds.

Scientists have linked memories and learning to brain activity during dream sleep. This has led to a whole new field of REM sleep science. Studies have linked the quality and quantity of dream sleep to memory and learning.

## **Finding Links With Mental Health**

Finding these links is important. The next generation of dream science may finally find a link between dreams and mental health. The study of dreams may even be helpful in the study of illnesses like depression. The next 20 years promise a very new and exciting period for studying REM sleep.

Modern science reflects some patterns from history. We still look at dreams as a different state of consciousness that is somewhat like being asleep and somewhat like being awake. We also still believe dreams can affect how we understand the world.

New technology has found support for ideas from generations ago. For example, we now know that our brains contain information passed down from early humans. This shows that our brains reflect the experiences of people who came before us. This was an idea suggested by the scientist Carl Jung 100 years ago.

One can only wonder what we might learn about our dreams 1,000 years from now.

## Quiz

- 1 Which paragraph in the section "Dreams May Affect Learning" explains how dreams were used as a way to understand a person's mental health?
- 2 Based on information in the article, which of these statements is TRUE?
- (A) People's bodies react the same whether they are dreaming or not.
  - (B) The study of dreams is more important today than it was a century ago.
  - (C) Scientists have found that people who have more dreams are healthier.
  - (D) The study of dreams may help doctors develop treatments for depression.
- 3 Which two of the following are MAIN ideas of the article?
- 1. *In some societies, dreams historically have been very important.*
  - 2. *The scientific viewpoint of dreams continues to change.*
  - 3. *Doctors have found rapid eye movement (REM) when people dream.*
  - 4. *Scientists think REM sleep helps people remember and learn.*
- (A) 1 and 2
  - (B) 1 and 3
  - (C) 2 and 4
  - (D) 3 and 4
- 4 Which sentence from the article is MOST important to include in its summary?
- (A) New scientific evidence shows that dreaming may have important effects on learning and memory.
  - (B) In the 1950s, doctors Eugene Aserinsky and William Dement made an important discovery about dreams.
  - (C) Dreaming was more visual, and led to ideas that were stranger and more oddly connected.
  - (D) For example, we now know that our brains contain information passed down from early humans.