

**The following article describes a recent study about what happens in our brains when we blink. Before you read the article, take this quiz covering some of the vocabulary that you will encounter. When you are finished with the quiz, read the text and answer the questions below.**

Parts of the brain are temporarily "switched off" when we blink, scientists have found. Writing in the journal *Current Biology*, a team from the University College London says that this is true even if light is still entering the eyes. The researchers said this could explain why people do not notice their own blinking, allowing us to have an "uninterrupted view of the world."

A blink lasts for between 100 and 150 milliseconds. We automatically blink 10 to 15 times a minute to moisten and oxygenate the cornea. During a blink, although no light enters the eyes, we do not consciously recognize that everything has momentarily gone dark.

The UCL team set out to discover why humans are not disturbed by these "mini blackouts". They used a specially-designed device that was placed in the mouths of volunteers while they were lying in a magnetic resonance imaging (MRI) scanner. MRI scanners allow brain activity to be monitored.

The device emitted a strong light that lit up the eyeballs through the roof of the mouth. Because of this, the light falling on the eye remained constant even when the participants blinked. This meant that the scientists were able to measure the effects of blinking on the participants' brain activity independently of the amount of light hitting the eye.

In the experiment, the researchers found that blinking suppressed brain activity in certain parts of the brain, in particular the visual cortex and other areas which are usually activated when people become conscious of visual events or objects in the outside world.

Davina Bristow, who led the research, said: "We would immediately notice if the outside world suddenly went dark, especially if it was happening every few seconds. But we are rarely aware of our blinks, even though they cause a similar reduction in the amount of light entering the eye. Transiently suppressing the brain areas that are involved in visual awareness during blinks may be a neural mechanism for preventing the brain from becoming aware of the world going dark with every blink."

### **1. Why don't we see darkness when we blink?**

- Because blinking is so fast that the brain does not have time to truly "see" any change in the amount of light.
- Because even when we blink there is constant light falling on the eyes.
- Because parts of the brain shut down when we blink to keep us from noticing the darkness.
- It is impossible to say based on this article.

### **2. What did the scientists learn when they examined the patients by MRI?**

- That the activity of some brain regions drops when we blink.
- That there is always some light falling on the eyes.
- That blinking alters the amount of light hitting the eyes.
- That darkness causes the activity of certain brain regions to change.

### **3. What was the purpose of the “device” described in the third paragraph of the article?**

- To improve the quality of the MRI scanning.
- To make it possible for the participants to blink without it affecting the amount of light reaching the eyes.
- To make it unnecessary for the participants to blink.
- To induce blinking in the participants.

### **4. What would happen if you were in a room and the lights went out for just 100 milliseconds?**

- You wouldn't notice it.
- You would blink.
- There would probably be a reduction in the activity of certain regions of your brain.
- You would be aware of the sudden change in light.

### **5. Why do we normally blink?**

- To allow our brain to rest occasionally.
- To keep our eyes from drying out.
- To prevent too much light from entering the eyes.
- All of the above.

**Now that you've read the article and answered the questions, here's another quiz to confirm your understanding and memory of the vocabulary from the text.**

*Ms. Bouhaddad*