Blinking switches off parts of your brain

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Blinking temporarily switches off parts of your brain, according to a study published in the latest issue of Current Biology. The University College London (UCL) team found that the brain actively shuts down parts of the visual system each time you blink, even if light is still entering the eyes. Their findings could explain why you don't notice your own blinks.

Scientists from the UCL Institute of Neurology designed a special device to study the effects of blinking on the brain. The device, made with fibre optic cable, was placed in the mouth of volunteers wearing light proof goggles and lying in a functional magnetic resonance imaging (fMRI) brain scanner. The optical fibre illuminated the eyeballs through the roof of the mouth with a strong light, making the head glow red. Thus, light falling on the retina remained constant even when the volunteers blinked, enabling scientists to measure the effects of blinking on brain activity independently of the effect of eyelid closure on light entering the eye.

The study, funded by the Wellcome Trust, found that blinking suppressed brain activity in the visual cortex as well as parietal and prefrontal areas which are usually activated when people become conscious of visual events or objects in the outside world.

Davina Bristow of the UCL Institute of Neurology says: "Blinking is necessary to keep the surfaces of the eyes moist. Most people blink around 15 times a minute and a blink lasts on average 100-150 milliseconds, which means that overall we spend at least 9 days per year blinking.

“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, and this gives us an uninterrupted view of the world.

“Transiently suppressing the brain areas involved in visual awareness during blinks may be a neural mechanism for preventing the brain from becoming aware of the eyelid sweeping down over the pupil during a blink and the world going dark.”

In short, the authors suggest that when we blink, the brain may just miss it.

Source: University College London (UCL)