

Fear study reveals mental processes

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(Medical Xpress) -- Researchers studying how our minds develop fears in response to danger found that people can quickly learn to recognise a threat even when they are unaware of it.

However, they also found that this learning is swiftly forgotten. In contrast, when people are aware of the threat, they take longer to learn to be afraid of it, but retain the fear in the long term.

Scientists from the University of Edinburgh and New York University, who carried out the study, say the finding may be a key insight into the differences between conscious and nonconscious [mental processes](#).

Researchers measured physiological [fear](#) responses - the amount of [sweat](#) on the [fingertips](#) - in groups of people who looked at pictures and were given mild electric shocks whenever one of these pictures was shown.

All the people who participated in the study saw the pictures with just one eye. But whereas some of them were allowed to see the pictures clearly, the researchers suppressed the pictures from other subjects' awareness by showing colourful, dynamic images to the other eye.

The study found that subjects who were prevented from consciously seeing the pictures learned to be afraid of the image associated with a shock more quickly than those who were allowed to see them without suppression.

However, these subjects quickly forgot this association between the images and the electric shocks as the experiment continued.

In contrast, those subjects who were allowed to see the image clearly formed a stronger association over time.

"How the brain reacts to threats is key to understanding how human beings function. This study shows that we are capable of learning very rapidly that something is a threat even when we don't perceive it consciously. Such learning, however, is fleeting," said David Carmel, Researcher, Department of Psychology.

Provided by University of Edinburgh

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