

# Forget all about it: Traumatic memories can be erased

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It is well known that fear memories are permanent. However, a recent paper in *Science*, evaluated by three Faculty Members for F1000, reports an extraordinary finding that supports the use of a drug to control recollections of traumatic incidents.

The researchers demonstrated that, in mice, proteins known as extracellular matrix [chondroitin](#) sulfate proteoglycans form 'neural nets' in the brain that protect against the erasure of memory. They also reported that, when these mice were given a drug called chondroitinase ABC, fear memories were more likely to disappear than for those mice in the control group.

This finding has important therapeutic implications for sufferers of [anxiety disorders](#), as it could allow doctors to erase the memories of patients who have had extremely traumatic experiences, such as survivors of war.

In his review for F1000 Medicine, David P. Wolfer said, "The identification of cellular mechanisms that ... control the stability of fear memories is extremely important for the development of new and better therapies for anxiety disorders".

The article was also evaluated by Gregory Quirk, an anxiety disorders expert, who said, "Once we know how perineuronal nets are regulated, it may be possible to ... allow fears in adults to be erased by extinction-based therapies."

More information: The full text of this article is available free for 90 days at [www.f1000medicine.com/article/ ... 1qfd7kctz/id/1165039](http://www.f1000medicine.com/article/...1qfd7kctz/id/1165039)

Source: Faculty of 1000: Biology and Medicine

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