

Blood test can detect brain damage in amateur boxers

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A blood test can now be used to detect brain damage in amateur boxers. Deterioration of nerve cells seems to occur even after a two-month break from boxing. This is shown in a new study from the Sahlgrenska Academy at the University of Gothenburg, Sweden.

The results of the study conducted by researchers at the Sahlgrenska Academy and the Erciyes University Medical School in Turkey are published in the current issue of the scientific journal *Brain Injury*.

The findings constitute further evidence that repeated blows to the head may damage the brain.

'The blows seem to lead to a deterioration of nerve cells that lasts for a relatively long time. It is important that this is made known to participants in sports that involve kicks and blows to the head and to parents who let their children participate', says Henrik Zetterberg, Reader at the Department of Psychiatry and Neurochemistry at the Sahlgrenska Academy.

The study included 44 Turkish amateur boxers, whose blood samples were collected in the beginning of a training camp after a two-month break from boxing. The results were compared to those found in a healthy control group. The researchers analysed several proteins that can be used to identify brain damage, and found that the levels of one protein, called NSE, were higher among the boxers than in the control group.

'Their levels were high even after two months off from boxing. This indicates that the harmful processes in the brain continue even if the boxers have not recently experienced head trauma', says Zetterberg.

The same team of researchers has previously been able to show that amateur boxing leads to increased levels of [brain damage](#) markers in spinal fluid.

'A [blood test](#) is much easier to take, and it would be interesting to test athletes repeatedly following matches and while they recover from knockouts to see how the levels of NSE change over time. These types of biomarkers could be useful in [sports medicine](#) to help decide when an athlete should abstain from training and competition. But the method must first be evaluated further', says Zetterberg.

Source: University of Gothenburg ([news](#) : [web](#))

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