

Negative thoughts 'make you ill'

Having negative thoughts really could make you more illness-prone, say scientists.

A study in the journal Proceedings of the National Academy of Sciences links "negative" brain activity with a weakened immune system.

Researchers from the University of Wisconsin-Madison studied people with high levels of brain activity in a region linked to negative thoughts.

Those with the highest activity levels responded worse to a flu vaccine.

Scientists already knew that pessimists - people rated as more sensitive to negative events - show more activity in a part of the brain called the right pre-frontal cortex.

More activity in the left pre-frontal cortex is linked to positive emotional responses.

Happy thoughts

Dr Richard Davidson, who led the research, studied 52 people aged between 57 and 60.

Each of them was asked to recall one event which made them feel very happy, and one which left them feeling sad, afraid or angry.

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Dr Richard Davidson, University of Wisconsin-Madison The electrical activity in these parts of the brain was measured to check whether their left or right pre-frontal cortex was more active.

Afterwards, each volunteer was given a standard flu vaccine shot.

Vaccines work by eliciting an immune response which should hopefully persist and help the body tackle a genuine infection threat if it should arrive.

Each research subject was tested over the following six months to gauge the success of the vaccine by measuring the levels of antibodies generated by the vaccine.

Those who had shown the most powerful right pre-frontal cortex activity also had the worst immune reactions.

The reverse was true for those who had the most powerful reactions in their left pre-frontal cortex, the side associated with happy reactions.

Dr Davidson said: "Emotions play an important role in modulating bodily systems that influence our health.

"We turned to the brain to understand the mechanisms by which the mind influences the body."