

Neuroscientist says brain training could heal a broken heart

Self-control exercises may help stop repeated texting Lovesick have been told to 'take two aspirin' for pain

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The indignity of being dumped has rarely been helped by a clumsy poem or a drunken text sent after closing time, but the work of a neuroscientist could bring hope to the heartbroken.

Instead of making things worse with a helping of humiliation, the best response to unrequited love might be to train our brains to hold back from actions we might regret, says Barbara Sahakian, professor of clinical neuropsychology at Cambridge University.

Sahakian is exploring the ability of computerised tests to strengthen people's self-control. The simple procedure flashes up arrows to which people must respond when a buzzer sounds.

Her experiments have focused on reducing impulsive behaviour in people with mental health disorders, but in training part of the brain called the prefrontal cortex to exert more control, the program might also help the lovelorn.

"The frontal lobes exert control in many different situations, whether in a brain-training task or in stopping people ruminating on lost love," said Sahakian, who is the author of a book called *Sex, Lies and Brain Scans*. "It's like exercising a muscle and it might stop someone who is heartbroken from repeatedly texting their ex-partner. The brain would have the tools to put a stop to that."

Sahakian said people could become compulsive about the object of their desires. And, while that may be valuable for marriage and having children, when a relationship breaks down, our reaction can be what Sahakian calls "maladaptive."

If Sahakian's approach works, people might be able to restrain their impulses in the same way that physical strength benefits from regular sessions at the gym. It could take a lot of commitment to make the intervention work, though. If other brain training experiments are a guide, a freshly dumped partner might be faced with eight hours of arrow tests a month to rein in their impulses.

Until the test has been proven to work, the lovelorn may turn to other findings from psychology research. In 2012, Naomi Eisenberger, a psychologist at the University of California in Los Angeles, found evidence that taking paracetamol dulled the pain of a broken heart. The drug seemed to be effective because the sensations of heartbreak are thought to piggyback on the same brain circuits that produce a sense of physical pain.

But other work has questioned the value of taking paracetamol for the pain of being rejected. One study into the effects of the drug in 2015, by researchers at Ohio State University, found that the paracetamol not only dulled emotional pain, but all emotional responses. Overall, the drug had a negative effect on people's emotions because their feelings of happiness were marginally suppressed.

Walter Mischel, a US psychologist and author of a book on self-control called *The Marshmallow Test*, advises people not to brood on a breakup, but instead to take two aspirin for the pain and then

do their best to distance themselves from the event to improve their perspective. Brooding over a broken relationships often makes the pain worse, he says.

On this, Sahakian agrees. “The worst thing someone can do after getting their heart broken is to stay at home alone ruminating on the same cycle of thoughts about their happy memories from their relationship.”