### **BBC** NEWS

#### 'Anger control' key to recovery

# Learning to control your anger may also speed up the healing process after surgery, US research suggests.

The Brain Behavior and Immunity study indicates stress has a major impact on the body's ability to repair itself. Nearly 100 participants were asked to rate how well they could control their temper, and the speed at which they recovered from a blister was monitored. Hotheads were more than four times likely to take more than four days to heal than mild-mannered counterparts.

The team at Ohio State University gave participants blisters on one of their arms and then monitored how the wound healed over the course of eight days. They were asked to fill in a questionnaire which looked at how anger was expressed - whether externally, by shouting at others, for instance, or internally, when one rages insides but keeps a cool exterior. They were also asked to judge their general ability to manage their anger.

## Whether one directed one's anger externally or internally proved to have no bearing on recovery - what was crucial was just how much control the individual was able to exert over their feelings.

Those with low anger control produced higher levels of the stress hormone cortisol, which was in turn, associated with delayed healing. "Such stress-induced delays in healing could increase the susceptibility to infection at the wound site, a process that fuels further decrease in the speed of repair," the team, led by Jean-Philippe Gouin, wrote.

They suggested that therapeutic strategies such as relaxation, or even cognitive therapy, could help those at risk make a swifter recovery.

#### **Bedside manner**

The team sought to ensure the association between anger control and healing was not explained by other health factors by taking into account sleep, amount of physical activity and alcohol consumption. Four participants ended up being excluded because these details were missing, but for the rest of them, anger control still proved to be the most significant factor affecting recovery.

The findings also tally with others in the field of stress and recovery. One study for example found women caring for a spouse or parent with dementia took on average 24% longer to heal a wound than a control group. Another found that even marital spats could slow down recovery from a simple wound.

Steve Bloom, professor of metabolic medicine at Imperial College, London, said stress was now increasingly recognized as a factor in recovery rates. "Your body prioritises and sorts one thing out at a time, so if you are stressed - angry in this case - your body works through that before it gets on with the process of healing. "We've yet to see a study that categorically proves having an attentive, calming presence by your bedside actually speeds up your recovery, but the evidence is certainly pointing that way."

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