

# THE WALL STREET JOURNAL.

HEALTH  
WELLNESS

## PERSONAL JOURNAL.

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**Courage:** A five-foot-long snake helped identify a brain region associated with courage, according to a study in *Neuron*. One at a time, researchers placed 39 snake-fearing participants and 22 control subjects at one end of a long conveyor belt. On top of the belt, the researchers secured either a (non-poisonous) corn snake or a toy bear. Participants could move the snake or toy bear closer or further by pressing a button. Meanwhile, a functional magnetic resonance imaging scanner recorded the oxygen levels, which correspond to neuron activity, of various regions of their brains. When participants moved the snake closer despite their fears, activity in the subgenual anterior cingulate cortex (sgACC) increased more than in other parts of the brain. When they instead moved the snake further away, or when they moved the toy bear in any direction, sgACC activity didn't spike. Previous studies have linked the sgACC with the emotions accompanying "negative autobiographical memories," arachnophobia and other fearful responses. A better understanding of the biological basis of courage could lead to more-effective therapies for overcoming fear the researchers wrote.

**Caveat:** It's unknown if other forms of courage have a similar influence on sgACC activity. Though the brain scans point to regions of interest, they can't reveal the type of signals being transmitted.

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*This research, which used snakes and functional magnetic resonance imaging (fMRI) to identify the neural mechanisms associated with fear and courage, was conducted by Prof. Yadin Dudai and Dr. Uri Nili of the Department of Neurobiology, Weizmann Institute of Science. Their work provides new insight into what happens in our brains when we are faced with distressing situations, and may lead to new treatments for overcoming fear.*