

3 Specific Ways That Helping Others Benefits Your Brain

Neuroimaging suggests that giving social support to others has more brain benefits than receiving support.

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A new study suggests that giving social support to others may benefit the giver more than the receiver on a neurobiological level. The researchers used fMRI brain imaging to pinpoint three specific brain benefits of giving social support to others.

The February 2016 study, "[The Neurobiology of Giving Versus Receiving Support: The Role of Stress-Related and Social Reward-Related Neural Activity \(link is external\)](#)," was published in *Psychosomatic Medicine: Journal of Biobehavioral Medicine*. The lead researchers of this study were [Tristen Inagaki \(link is external\)](#), Ph.D., from the University of Pittsburgh and [Naomi Eisenberger \(link is external\)](#), Ph.D., of University of California, Los Angeles (UCLA).

For this study, participants were asked about various scenarios in which they either gave or received social support. For example, having "someone to lean on" or "looking for ways to cheer people up" when they were feeling down.

As would be expected, both giving and receiving social support correlated to lower reported negative psychosocial outcomes. However, when the researchers conducted a series of fMRI neuroimaging tests to explore the neural mechanisms of how specific brain areas were affected by giving versus receiving social support, they found that giving ultimately had greater brain benefits than receiving.

In a dog-eat-dog world, that often seems to be driven by machiavellian behavior, it's reassuring to know that from an evolutionary perspective our brains are wired to feel rewarded more for magnanimity and selflessness than for meanness and selfishness.

Brain Areas That Benefit From Giving Social Support

1. Reduced **stress-related activity** in dorsal anterior cingulate cortex, right anterior insula, and right amygdala.
2. Greater **reward-related activity** in left and right ventral striatum.
3. Greater **caregiving-related activity** in septal area.

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In all of these brain areas, fMRI scans showed specific activation when a participant was giving support, but not when receiving support. For example, the researchers found that while performing a stressful mental math task, participants who gave the most support had reduced activation in brain areas related to stress responses. However, the person receiving support on a math problem didn't display activation in stress-related brain regions.

Also, giving social support was associated with increased activity in a brain area that functions as part of the reward system during an "affiliative" task. These changes within the brain help to explain why altruism and giving support has multiple **health** benefits.

On a neurobiological level, this research pinpoints specific ways that when you help others, you're also helping yourself. The rewards of giving and receiving social support creates the ultimate win-win situation. When someone in need receives help, he or she benefits directly from the social

support; simultaneously, the giver benefits in specific brain regions associated with stress, reward, and caregiving. In a press release, the authors stated,

"These results add to emerging literature suggesting that support giving is an overlooked contributor to how social support can benefit health. The findings question the conventional idea that the health benefits of social support mainly reflect received support.

At the level of the brain, only support giving was associated with beneficial outcomes by reducing activity in stress-and threat-related regions during stressful experiences. Giving support, on the other hand, allows an individual to control when and how support is given...[and] may result in more effective stress reduction."

For example, If you put yourself in the shoes of the two rock climbers in the photo at the top of the page, which person would you rather be? After reading this study, I look at this image with a new appreciation for why the person lending life-saving support is probably benefitting more on a neurobiological level than the rock climber receiving support.

Conclusion: Generosity and Gratitude Create an Upward Spiral of Well-Being

The findings of this new study suggest that the overall health benefits of giving social support have specific roots in various brain regions. The findings also suggest that giving support is part of a feedback loop that makes giving social support rewarding to the giver. This is a generous biological design that is probably key to our survival and well-being as a species.

As Bill Withers reminds us in his classic song, "[Lean on Me \(link is external\)](#)," there are times in each of our lives when we'll need the help of others, and there are times that we're in a position to offer social support. Withers sings, "*Lean on me when you're not strong. And I'll be your friend, I'll help you carry on. For it won't be long, 'til I'm gonna need somebody to lean on.*" Ideally, the yin-yang of giving and receiving support balances itself throughout each of our lifespans.

Obviously, it would be unbalanced to constantly be giving social support without ever graciously receiving help, and vice versa. Another study from September 2015, "[Neural Correlates of Gratitude \(link is external\)](#)," found that gratitude has very distinctive brain benefits for the receiver of social support. The University of Southern California (USC), researchers used fMRI brain imaging to map the neurobiological correlates of gratitude and found that gratitude correlated with brain activity in the anterior cingulate cortex and medial prefrontal cortex.

It's always encouraging when the latest [neuroscience](#) confirms the possibility of creating an upward spiral of well-being for all parties involved through prosocial acts of loving-kindness, generosity, and feelings of gratitude.

To read more on this topic, check out my *Psychology Today* blog posts.

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