

Caregiving not as bad for your health as once thought, study says

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For decades, articles in research journals and the popular press alike have reported that being a family caregiver takes a toll on a person's health, boosting levels of inflammation and weakening the function of the immune system. Now, after analyzing 30 papers on the levels of immune and inflammatory molecules in caregivers, Johns Hopkins researchers say the link has been overstated and the association is extremely small. Caregiver stress explains less than 1 percent of the variability in immune and inflammation biomarkers, they report. Their new meta-analysis was published March 10 in *The Gerontologist*.

"We're not saying that family [caregiving](#) can't be stressful, but there's a notion that it's so stressful that it causes deteriorating health and increased mortality. This can lead to fear of caregiving and a reluctance to care for loved ones in need," says first author David Roth, M.A., Ph.D., professor of medicine and director of the Center on Aging and Health at The Johns Hopkins University. "We're challenging that narrative as being too exaggerated."

According to the National Alliance for Caregiving, more than 34 million people in the U.S. provide care for a chronically ill, disabled or aged family member or friend in any given year. The value of the services provided by these family caregivers is estimated at \$375 billion annually. In 1987, a study concluded that caregivers of people with Alzheimer's disease had decreased levels of certain immune molecules. Since then, other studies have suggested that family caregivers have increased mortality and rates of psychiatric diseases, decreased immune function

and [life span](#), and slower wound healing than other people.

After noticing statistical weaknesses in a handful of recent papers on caregiving and immunity, Roth and his colleagues wanted to take a fresh look at the more than three decades of papers on these ideas. They focused their search on papers about immune or inflammatory biomarkers—molecules that can be detected through a blood test—and combed through databases of medical literature to find papers linking the chronic stress of family caregiving and these biomarkers. After reviewing 132 full texts, they narrowed the meta-analysis to 30 original, data-based papers.

In all, the papers that Roth's group studied spanned from 1987 to 2016 and reported data on 86 biomarkers from 1,848 caregivers and 3,640 noncaregivers. When the researchers began reviewing the manuscripts, Roth says they immediately noticed concerning trends—for one, the studies were quite small. Of the 30 studies, 16 had fewer than 50 caregivers, with some having as few as 11 or 14. "A lot of these are small exploratory studies that can end up over interpreting what they find," Roth says.

Roth adds that the studies tended to compare caregivers found in clinical settings with other adults recruited from senior centers, churches or other community organizations. "These people differ in many factors besides just who is a caregiver," Roth says. "Many of the so-called controls are healthy, socially active volunteers." Due to issues like this, 11 of the papers were given a "moderate" (instead of "low" or "minimal") ranking for potential bias.

When the team combined the data into a meta-analysis, it found an overall effect size of caregiving on biomarkers of 0.164 standard deviation units. While the effect was statistically significant, the researchers reported that the association was generally weak and of

questionable clinical significance. A standard deviation unit of less than 0.20, Roth says, is generally thought to indicate a small effect size.

"It's not that we didn't find anything, but it's a whisper of an effect, not nearly as large as what people have been led to believe," says Roth.

The team hopes its new look at the existing data helps encourage people to be more open to becoming caregivers. The researchers also hope it helps medical professions move away from the idea of caregivers as vulnerable.

"Caregiving, if done right, can actually be an extremely beneficial, healthy activity that enhances your life because you're engaging in pro-social behavior," Roth says.

The researchers are now conducting a large population-based study with carefully matched controls and biomarkers collected at multiple times in order to get even more detailed information on the connection—or lack thereof—between caregiving and the immune system.

More information: David L Roth et al, Is Family Caregiving Associated With Inflammation or Compromised Immunity? A Meta-Analysis, *The Gerontologist* (2019). [DOI: 10.1093/geront/gnz015](https://doi.org/10.1093/geront/gnz015)

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