

Study finds stress is higher for women in long-term relationships

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The chronic stress that builds up over decades in a relationship affects each member of the couple differently; in heterosexual couples, the woman is more likely to display negative physiological markers than her

spouse.

That's the finding of a study by Robert-Paul Juster of the Department of Psychiatry and Addiction at Université de Montréal and Yan-Liang Yu of Howard University, in Washington, D.C. Their results were [published](#) in *Psychosomatic Medicine* in a paper titled "Spousal synchrony in [allostatic load](#) among older couples in the Health and Retirement Study."

"Yan-Liang is a sociologist who has long been interested in how spouses mutually shape each other's health and well-being," said Juster, who is an expert on the physiology of stress. "He noticed that many studies show a correlation between the lifestyle of intimate partners and their mental and physical health problems but few examine how the synchronization of their mental health manifests 'under the skin,' at the physiological level."

Continuing a collaboration that began when they were postdocs at Columbia University, in New York City, Yu and Juster joined forces to study this question in adults aged 50 or older using data from the Health and Retirement Study, an ongoing longitudinal U.S. study on aging.

"Allostatic load refers to the negative consequences of stress on the body that accumulate over time," explained Juster. "Stress causes the release of cortisol, the 'stress hormone,' which triggers a cascade of adaptive responses in the body."

When stress is chronic, these adaptive responses can negatively impact the body's cardiovascular, neuroendocrine, inflammatory and metabolic systems, gradually reducing the body's ability to cope with life's pressures.

Health data for 2,338 older couples

Juster and Yu analyzed data from 2,338 different-sex older couples collected as part of the Health and Retirement Study between 2006 and 2012. They examined the allostatic load of the individuals in these couples over four of those years to determine the degree of correlation between partners, using a dyadic approach that considered social, economic and health variables, including a variety of physiological indicators.

Allostatic load was calculated based on parameters for several body systems: immune (C-reactive protein), metabolic (HDL cholesterol, total cholesterol and glycated hemoglobin), renal (cystatin C), cardiovascular (systolic and [diastolic blood pressure](#), [heart rate](#)) and anthropometric (body mass index and waist circumference).

The baseline data showed that partners' allostatic loads were significantly correlated. According to Juster and Yu, this suggests the couples were physiologically synchronized, probably due to their shared emotional, social and family environments and converging health habits.

"However, four years later, the synchronizing effect was more pronounced in the women," reported Juster. "This suggests that the female partner's well-being is more influenced by her male partner's well-being than vice versa, perhaps because women are traditionally socialized to pay more attention to interpersonal relationships."

Interestingly, the study found that the greater increase in allostatic load in women was not associated with a decrease in relationship quality.

"Our results show that not only are the physiological responses of [older couples](#) to environmental stress linked in the moment, but this association persists after four years, suggesting that the psychosocial and physiological state of each partner has long-term impacts on the other," said Juster.

More information: Yan-Liang Yu et al, Spousal Synchrony in Allostatic Load Among Older Couples in the Health and Retirement Study, *Psychosomatic Medicine* (2023). [DOI: 10.1097/PSY.0000000000001232](https://doi.org/10.1097/PSY.0000000000001232)

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