

IN BRIEF

What lies behind the female habit of 'tending and befriending' during stress

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Behavior and biology both suggest that females respond to environmental stress by redoubling efforts to care for offspring and creating social support networks, said psychologist Shelley E. Taylor, PhD, at a Nov. 13 lecture, presented as part of the National Institutes of Health (NIH) behavioral and social sciences research lecture series. The talk was given to NIH staff to inform them about a potential paradigm shift in stress research. According to Taylor, who published her "tend and befriend" theory in the July 2000 issue of *Psychological Review* ([/pubs/journals/rev](http://pubs/journals/rev)), (Vol. 107, No. 3), this pattern of behavior makes for a significant contrast to the "fight or flight" paradigm that has dominated stress response theory for the last 50 years.

In a review of rodent, primate and human studies, Taylor made the case that evolutionary biology led males and females to develop somewhat different responses to environmental stress. While fleeing from a predator may be an adaptive behavior for males, running away may not be tenable for a nursing mother, or one who is taking care of infants, she said. Because our ancestors left the bulk of infant care to females, she explained, females have evolved stress responses that protect not only themselves, but also their young.

Additionally, research shows that women tend to affiliate in times of stress, while men do not, said Taylor. In his classic studies of affiliation, Stanley Schachter, PhD, found that when female research participants are told that they will soon experience electric shock in the course of an experiment, they choose to wait with other participants. Males, on the other hand, choose to wait by themselves. "Women find that social interaction tends to ameliorate stress," said Taylor. By forming coalitions to respond to threats, this instinct to socialize may serve to protect mothers and their young, she suggested.

Processes in the neuroendocrine system may undergird female responses to stress, she added. In particular, the pituitary hormone oxytocin, which downregulates the sympathetic nervous system activation that is characteristic of "fight or flight" reactions to stress, is released when females engage in nurturing and affiliative behavior, said Taylor. Men also produce oxytocin, she noted, but androgens--male sex hormones--tend to lessen its effects. Estrogen, on the other hand, seems to amplify the calming effect of the hormone, Taylor explained.

These different hormonal responses could spur men and women to respond to stress in different ways, said Taylor, though socialization, cognition and other higher processes mediate the effect of hormones on behavior.

"It's not the case that men don't tend and befriend," said Taylor. "They just don't do it to the same degree, in the same ways or in response to the same biological forces."

--S. DINGFELDER

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