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Marital Stress Linked to Heart Disease

By Karen Pallarito
HealthDay Reporter
Tuesday, October 23, 2007; 12:00 AM

TUESDAY, Oct. 23 (HealthDay News) -- When married couples lose their cool with one another, it may take a toll on their hearts, too, researchers have found.

What's more, the damage that's wrought may depend on how they lose it, according to study leader Tim Smith, a professor of psychology at the University of Utah.

For women, hostility appears to be the culprit. Wives who were hostile in disagreements with their spouses were more likely to have atherosclerosis, often referred to as hardening of the arteries, Smith and his colleagues discovered. Levels of calcification were particularly high among those women whose husbands also were hostile.

Among husbands, atherosclerosis was more common when either they or their wives acted in a controlling manner, the research team said.

Whether it's social conditioning or some other factor that causes women to be influenced by hostility and men by issues of control is uncertain, Smith said. It's hard to separate biological, psychological, and social/cultural processes, he explained, but social conditioning "would certainly play a role."

Smith and his colleagues first presented their research at a meeting of the American Psychosomatic Society.

"There are well-documented differences in the ways that men and women talk and relate to one another, so finding gender-linked differences related to heart risks makes sense to me," said Janice Kiecolt-Glaser, professor and director of the Division of Health Psychology at Ohio State University College of Medicine.

She and husband Ronald Glaser, an Ohio State professor of molecular virology, immunology and medical genetics, have collaborated on a series of studies over the years examining the ways stress can affect the human immune system. Some of their work has focused on the body's ability to heal from wounds after exposure to stressful situations.

One study, for instance, found that a married couple's typical argument can delay wound healing by at least a day. Highly hostile couples healed at rates that were 60 percent lower than those with lesser hostility levels. Blood samples taken from those highly hostile couples showed increased levels of certain "cytokines," or proteins, including interleukin-6, which stimulates the healing process but also has been linked to long-term inflammation.

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"And sustained elevated levels of pro-inflammatory cytokines have been linked to a variety of age-related diseases, including cardiovascular disease, so our data support their [Smith and colleagues] findings," Kiecolt-Glaser said.

Smith's study involved 150 healthy married couples between 60 and 70 years of age who were paid \$150 to participate and received free CT scans of their coronary arteries to check for any calcification that could lead to future risk of heart attack. Couples were recruited through newspaper advertisements and a polling firm.

The couples were videotaped while discussing a sensitive subject in their marriage, such as money, children, vacations or household duties. Graduate students later coded those conversations to reflect how friendly or hostile the couples were and how submissive or controlling.

Two days after the discussions, the couples had CT scans yielding a score for each person indicating the amount of plaque build-up in the arteries that supply the heart.

The finding: "In our data, it [marital discord] was as large an effect [for atherosclerosis], statistically, as traditional risk factors like smoking, cholesterol, blood pressure, activity level, etcetera, but smaller than the effect for age and sex," Smith said.

So, add marital stress to the risk factors people should be aware of as they consider their overall risk for heart disease, Smith explained.

"Besides all the usual and very important biomedical and behavioral risk factors people should consider in evaluating their level of risk, and any possible risk-reducing plan, they should consider chronic stress and negative emotions," he advised.

More information

Visit the American Heart Association for more on [stress and heart disease](#).

SOURCES: Tim Smith, Ph.D., professor, psychology, University of Utah, Salt Lake City; Janice Kiecolt-Glaser, Ph.D., professor and director, Division of Health Psychology, Department of Psychiatry, Ohio State University College of Medicine, Columbus

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