

## Men and Women Respond Differently to PTSD

Post Traumatic Stress Disorder (PTSD) is one condition that brings clients to massage therapy, and research has shown [massage relieves stress and depression](#) while boosting mood and a sense of well being.

New research indicates how a person's immune system responds to chronic PTSD depends largely on one factor: gender.

According to two new research studies, one from the San Francisco VA Medical Center ([SFVAMC](#)) and the other from the University of California, San Francisco ([UCSF](#)), men and women have very different immune system responses to chronic PTSD, with men showing no response and women showing a strong response.

According to the researchers, while a robust immune response protects the body from foreign invaders, such as bacteria and viruses, an over-activated response causes inflammation, which can lead to such conditions as cardiovascular disease and arthritis.

The researchers took blood samples from 49 men (24 with PTSD and 25 controls) and 18 women (10 with PTSD and eight controls). They then used gene microarray technology to determine which genes were activated in the subjects' monocytes, which are immune cells that regularly cross the barrier between the bloodstream and the brain, and thus give a broad picture of immune reaction in both the body and brain, according to a press release from the [Veterans Health Research Institute](#).

The researchers found no evidence of increased immune activation among the men with PTSD compared to those without PTSD. In contrast, the women with PTSD showed significant evidence of immune activation compared to women without PTSD.

"This is the first time that it's been shown that men and women respond differently to PTSD on a very basic biological level," said senior investigator Lynn Pulliam, Ph.D., chief of microbiology at SFVAMC and professor of laboratory medicine and medicine at UCSF.

Lead author Thomas Neylan, M.D., director of the PTSD program at SFVAMC and a professor in residence of psychiatry at UCSF, emphasized that because of the small sample size, particularly among the women, the results of the two studies are suggestive rather than conclusive.

The study ran in the March 2011 issue of [Brain, Behavior, and Immunity](#).

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