

# Adults demonstrate modified immune response after receiving massage, researchers show

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Researchers in Cedars-Sinai's Department of Psychiatry and Behavioral Neurosciences have reported people who undergo massage experience measureable changes in their body's immune and endocrine response.

Although there have been previous, smaller studies about the health benefits of [massage](#), the Cedars-Sinai study is widely believed to be the first systematic study of a larger group of healthy adults.

The study is published online at <http://www.liebertonline.com/loi/acm>. It also will be published in the October printed edition of the [Journal of Alternative and Complementary Medicine](#).

"Massage is popular in America, with almost 9 percent of adults receiving at least one massage within the past year," said Mark Rapaport, M.D., chairman of the Department of Psychiatry and Behavioral Neurosciences. "People often seek out massage as part of a healthy lifestyle but there hasn't been much physiological proof of the body's heightened immune response following massage until now."

In the study, 29 subjects received 45 minutes of Swedish massage and 24 received 45 minutes of light touch massage. Each participant underwent informed consent, a physical and mental evaluation and was deemed to be physically healthy and free of any mental disorder. Massage therapists were trained in how to deliver both Swedish and light touch using

specific and identical protocols.

Prior to the massage, study participants were fitted with intravenous catheters in order to take blood samples during the study session. Then participants were asked to rest quietly for 30 minutes. Following the rest period, blood samples were collected from each person five minutes and one minute before the massage began. At the end of the 45-minute massage session, [blood samples](#) were collected at one, five, 10, 15, 30, and 60 minutes after the massage.

"This research indicates that massage doesn't only feel good, it also may be good for you," said Rapaport, the principal investigator of the study and the Polier Family Chair in Schizophrenia and Related Disorders. "More research is ahead of us but it appears that a single massage may deliver a measurable benefit."

Among the study's results:

- People in the Swedish massage group experienced significant changes in lymphocytes ,(lymphocyte numbers and percentages white blood cells that play a large role in defending the body from disease.
- Swedish massage caused a large decrease (effect size -.74) in Arginine Vasopressin (AVP) a hormone believed to play a role in aggressive behavior and linked to helping cause increases in the stress hormone cortisol.
- Swedish massage caused a decrease in levels of the stress hormone cortisol.
- Swedish massage caused a notable decrease in most cytokines

produced by stimulated white blood cells.

Provided by Cedars-Sinai Medical Center

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