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Published research:

[Hypnosis as a modulator of cellular immune dysregulation during acute stress.](#)

By Kiecolt-Glaser, Janice K.; Marucha, Phillip T.; Atkinson, Cathie; Glaser, Ronald
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Hypnosis May Prevent Weakened Immune Status, Improve Health

COLUMBUS, Ohio - Researchers here have determined that hypnosis and related relaxation techniques can actually prevent the weakening of the immune response that often follows periods of acute stress.

A new study suggests that hypnosis may even slightly enhance the immune status in some people compared to similar individuals who don't use these interventions. If true, the findings could have important health implications for patients facing surgeries.

The research, reported in the *Journal of Consulting and Clinical Psychology*, is the latest to test whether people can protect themselves from immune system changes that normally accompany increased stress.

Lead author Janice Kiecolt-Glaser describes using hypnosis in this research as something like "hitting a reset button" for the participants in the study.

"We're really talking about being able to shut out a lot of distracting thoughts. And it varies according to how anxious a person is at the time," said Kiecolt-Glaser, a professor of psychology and psychiatry at Ohio State University.

"Our goal was to really get people to focus on the task at hand."

Along with colleagues Phillip Marucha, an associate professor of periodontology, and Ronald Glaser, a professor of molecular virology, immunology and medical genetics, Kiecolt-Glaser chose medical and dental students facing examinations as the test bed for this work.

This group of researchers has done numerous studies in the last decade using these students as subjects since the exams they face are known to be highly stressful events.

At the end of this project, students who had not used self-hypnosis as a relaxation technique prior to their academic tests showed a 26 to 39 percent difference in the levels of two immunological assays utilized to measure the activity of certain white blood cells -- T-Lymphocytes - important to the immune response.

This approach uses two compounds prepared from plants called Con-A and PHA. Measuring the activity of these cells serves as a measure of a healthy immune response.

Glaser said these two plant compounds are used by researchers as "surrogates" to gauge how readily certain white blood cells - T-lymphocytes - multiply in one of the most important stages of an immune response.

Earlier studies had looked at whether immune status could be improved by the use of hypnosis. This

group wanted to determine if the frequency of the technique - how often they practiced it - and the hypnotic susceptibility of the individuals tested played a role in their immune status at test time.

Thirty-three medical and dental students at Ohio State were selected for the study. All had completed two tests to determine how susceptible they were to hypnosis.

Half of them were taught to use self-hypnosis as a relaxation technique while the remaining students served as a control group. Students in the hypnosis group were required to attend a minimal number of sessions and advised to practice self-hypnosis regularly.

Initial blood samples were taken from all students to determine a baseline of immune status markers prior to the start of the study. A second set was taken three days before the exams.

Once the samples were analyzed, they showed that:

-- When tested for exposure to Con-A, T-Lymphocytes from students in the control group showed a 24 percent decrease in T-lymphocyte proliferation compared to a 2 percent increase in the hypnosis group;

-- The cells that were exposed to PHA showed that in control group students, T-lymphocyte proliferation dropped 33 percent compared to an 8 percent increase of T-lymphocyte proliferation in the hypnosis group;

-- The more frequently the students in the hypnosis group practiced their technique, the better their immune response was, based on these tests.

"If you look at individuals who continue to practice (hypnosis), they will continue to have enhanced immune function," Marucha said. "Those who don't, won't."

The researchers said that for patients, the study shows hypnosis - or other intervention techniques - is only useful when patients practice it.

"If you have no compliance, then there is no real intervention," Marucha said.

Kiecolt-Glaser said that intervention techniques can have a real practical value to patients facing surgery, since anxiety about a coming test is no different than anxiety over impending surgery. If the immune response can be maintained - if not enhanced - then recovery from the surgery should be less problematic.

"Patients should do these techniques and do them consistently," she said.

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