Aromatherapy may make you feel good, but it won't make you well

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One of the most comprehensive investigations done to date on aromatherapy failed to show any improvement in either immune status, wound healing or pain control among people exposed to two often-touted scents.

While one of two popular aromas touted by alternative medicine practitioners – lemon – did appear to enhance moods positively among study subjects, the other – lavender – had no effect on reported mood, based on three psychological tests.

Neither lemon nor lavender showed any enhancement of the subjects' immune status, nor did the compounds mitigate either pain or stress, based on a host of biochemical markers.

In some cases, even distilled water showed a more positive effect than lavender.

The study, published online in the journal *Psychoneuroendocrinology*, looked for evidence that such aromas go beyond increasing pleasure and actually have a positive medical impact on a person's health. While a massive commercial industry has embraced this notion in recent decades, little, if any, scientific proof has been offered supporting the products' health claims.

"We all know that the placebo effect can have a very strong impact on a person's health but beyond that, we wanted to see if these aromatic

essential oils actually improved human health in some measurable way," explained Janice Kiecolt-Glaser, professor of psychiatry and psychology at Ohio State University and lead author of the study.

The researchers chose lemon and lavender since they were two of the most popular scents tied to aromatherapy. Recently, two other studies focused on these same two scents.

For the study, Kiecolt-Glaser; Ronald Glaser, a professor of molecular virology, immunology and medical genetics, and William Malarkey, professor of internal medicine, assembled a group of 56 healthy volunteers. These men and women were screened beforehand to confirm their ability to detect standard odors. Some were proponents of the merits of aromatherapy while others expressed no opinion on its use.

Each person took part in three half-day sessions where they were exposed to both scents. Participants were monitored for blood pressure and heart rate during the experiments, and the researchers took regular blood samples from each volunteer.

Researchers taped cotton balls laced with either lemon oil, lavender oil or distilled water below the volunteers' noses for the duration of the tests.

The researchers tested volunteers' ability to heal by using a standard test where tape is applied and removed repeatedly on a specific skin site. The scientists also tested volunteers' reaction to pain by immersing their feet in 32-degree F water.

Lastly, volunteers were asked to fill out three standard psychological tests to gauge mood and stress three times during each session. They also were asked to record a two-minute reaction to the experience which was later analyzed to gauge positive or negative emotional-word use.

The blood samples were later analyzed for changes in several distinct biochemical markers that would signal affects on both the immune and endocrine system. Levels of both Interleukin-6 and Interleukin-10 – two cytokines – were checked, as were stress hormones such as cortisol, norepinephrine and other catacholomines.

While lemon oil showed a clear mood enhancement, lavender oil did not, the researchers said. Neither smell had any positive impact on any of the biochemical markers for stress, pain control or wound healing.

“This is probably the most comprehensive study ever done in this area, but the human body is infinitely complex,” explained Malarkey. “If an individual patient uses these oils and feels better, there’s no way we can prove it doesn’t improve that person’s health.

“But we still failed to find any quantitative indication that these oils provide any physiological effect for people in general.”

The wound healing experiments measured how fast the skin could repair itself, Glaser said. “Keep in mind that a lot of things have to take place for that healing process to succeed. We measured a lot of complex physiological interactions instead of just a single marker, and still we saw no positive effect,” he said.

Source: Ohio State University