

PRESS RELEASE

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Subject line: **Ready for a close-up: The science behind face massage rollers**

(Tokyo, November 9) **Facial massaging using a roller can increase skin blood flow for more than ten minutes after the massage. It can also improve vasodilation — the widening of blood vessels, — in the long-term, according to a study by researchers in Japan.**

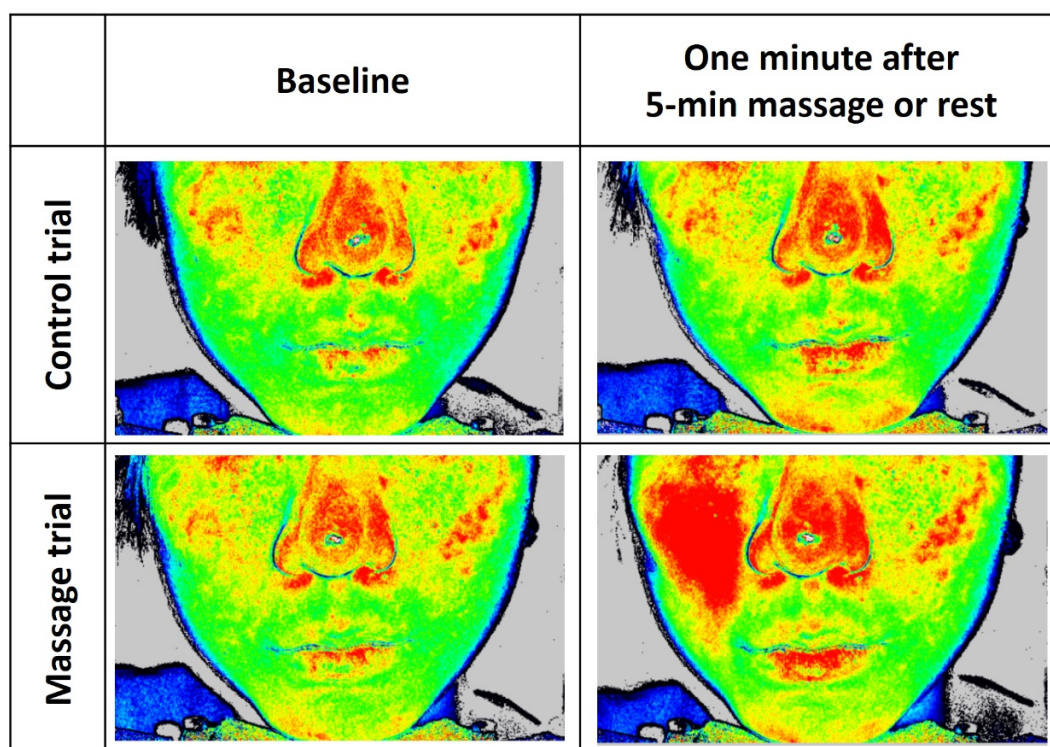


Figure 1. Visualization of changes in skin blood flow

Imaging using laser-speckle flowgraphy revealed red colors, indicating higher skin blood flow, in the massaged area.

Beauty experts rave about them, and millions of us buy them, but what do scientists make of face massage rollers? Few studies have so far investigated the effects of using facial massage rollers over time.

To address this gap, Naoyuki Hayashi of the Institute for Liberal Arts, Tokyo Institute of Technology (Tokyo Tech) and colleagues at Tokyo Healthcare University and the Research and Development Center, MTG Co. Ltd., conducted short- and long-term

experiments involving participation of healthy male and female volunteers to examine the effects of using a massage roller on facial skin and blood flow.

In the short-term experiment, even a five-minute massage can significantly increase facial skin blood flow in the massaged cheek, with a relative change of up to around 25%. Visualization of the change in blood flow was achieved using a non-invasive technique called laser speckle flowgraphy (see Figure 1).

One surprising outcome was the duration of the effect immediately after the five-minute massage. “The increase in skin blood flow after applying the massage roller persisted much longer than we had expected,” the researchers say in their study published in *Complementary Therapies in Medicine*. “Short-term mechanical stimulation by a facial massage roller increased skin blood flow for more than ten minutes solely in the massaged cheek.”

In the long-term experiment, the researchers examined the effects of daily massage on the right cheek over a five-week period. They also examined the reactivity of facial blood vessels to a heat stimulus, involving application of a heating probe set at 40°C, in order to test whether there were any changes in vascular dilation response.

Findings from the long-term study suggested that using a roller improved blood flow response, or the so-called vasodilatory response, to heat stimulation. One explanation for this could be that endothelial cells in the massaged area produce more nitric oxide, which is known to be a potent vasodilator.

References

Akane Miyaji^{a,b}, Kaori Sugimori^c, Naoyuki Hayashi^b, *, Short- and long-term effects of using a facial massage roller on facial skin blood flow and vascular reactivity, *Complementary Therapies in Medicine* **41**, 271–276 (2018),

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Affiliations:

^a Division of Medical Nutrition, Faculty of Healthcare, Tokyo Healthcare University

^b Institute for Liberal Arts, Tokyo Institute of Technology

^c Research and Development Center, MTG Co. Ltd.

*Corresponding author’s email: naohayashi@ila.titech.ac.jp

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Contact

Emiko Kawaguchi
Public Relations Section,
Tokyo Institute of Technology
E-mail: media@jim.titech.ac.jp
+81-3-5734-2975

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