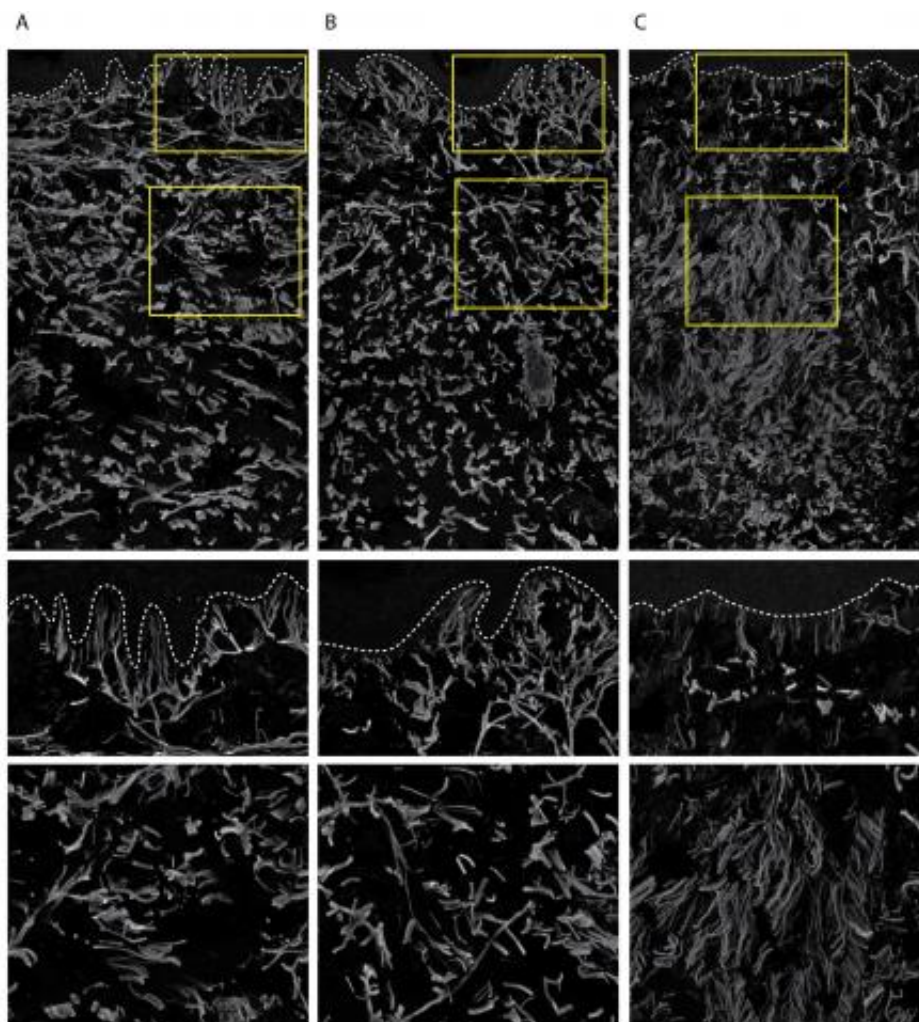


Stretch mark science: What happens to your skin when pregnancy gives you a stretch mark?

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In control skin from the hip (A) and normal-appearing skin from the abdomen (B), elastic fibers responsible for skin elasticity are intact, forming an intricate mesh-like network. In stretch marks that have recently formed during pregnancy

(C), elastic fibers are lost and replaced by disorganized, thin fibrils, or “strands,” that persist without forming a normal elastic network. The middle and bottom panels magnify the identified areas of the top panels.

Don't believe the hype when you see those creams and ointments promising to prevent or reduce pregnancy stretch marks. Dermatologists are still learning about what causes stretch marks in the first place, and skin stretching is not the only risk factor.

"Most of the existing products aren't based on solid scientific research," said Frank Wang, M.D., assistant professor and dermatologist at the University of Michigan Health System. "Very few to none of the items touted to prevent or fix stretch marks really work."

For a new study in the *British Journal of Dermatology*, Wang's team investigated what could be causing stretch marks at the molecular level.

Wang has spent more than eight years studying stretch marks, a field that hasn't received much research attention because they're not viewed as medically dangerous.

"Because stretch marks may compound the stress of new motherhood for many women, it's important to learn more about them," Wang said. "Some women feel like their self-esteem, quality of life and willingness to engage in certain activities are affected."

The line-shaped lesions also known as striae gravidarum affect 50 percent to 90 percent of women. However, some women are at higher risk than others, due to factors like family history, how much weight they gain in pregnancy, whether it's a single or multiple birth and whether they've had stretch marks before for another reason like obesity.

Researchers studied [skin](#) samples from 27 [pregnant women](#) who had recently-formed stretch marks, comparing the stretch mark skin to both nearby stretched skin on the abdomen and to less-stretched skin on the hip.

Wang and his colleagues found the elastic fiber network in the dermis gets disrupted in a stretch mark. After giving birth, this network remains disrupted. Elastic fibers give skin its elasticity, or the ability to "snap back," after stretching. The skin tries to repair the disrupted elastic network but it does not appear to be effective, which in turn promotes the lax, loose skin seen in more mature stretch marks.

Unfortunately, [present research](#) of topical treatment options doesn't find anything currently available to effectively repair those disrupted elastic fibers.

"It may, therefore, make more sense to focus on preserving the [elastic fibers](#) you have rather than repairing damaged ones within stretch marks," Wang said. "Regardless, it's more complicated than just rubbing something on your stomach."

Looking forward, Wang is already continuing his research with the end goal of helping pregnant women prevent or effectively improve the appearance of stretch marks. Another study in the works examines changes in collagen in stretch marks. Collagen is what gives skin its strength and support.

Wang's team is also studying changes in more established stretch marks that have become less visible, and finishing a survey study of about 200 pregnant women to learn more about the effect on quality of life.

The authors see the potential for expanding this knowledge to other reasons people get stretch marks, such as obesity, growth spurts or

steroid usage.

More information: F. Wang et al. Marked disruption and aberrant regulation of elastic fibres in early striae gravidarum, *British Journal of Dermatology* (2015). [DOI: 10.1111/bjd.14027](https://doi.org/10.1111/bjd.14027)

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