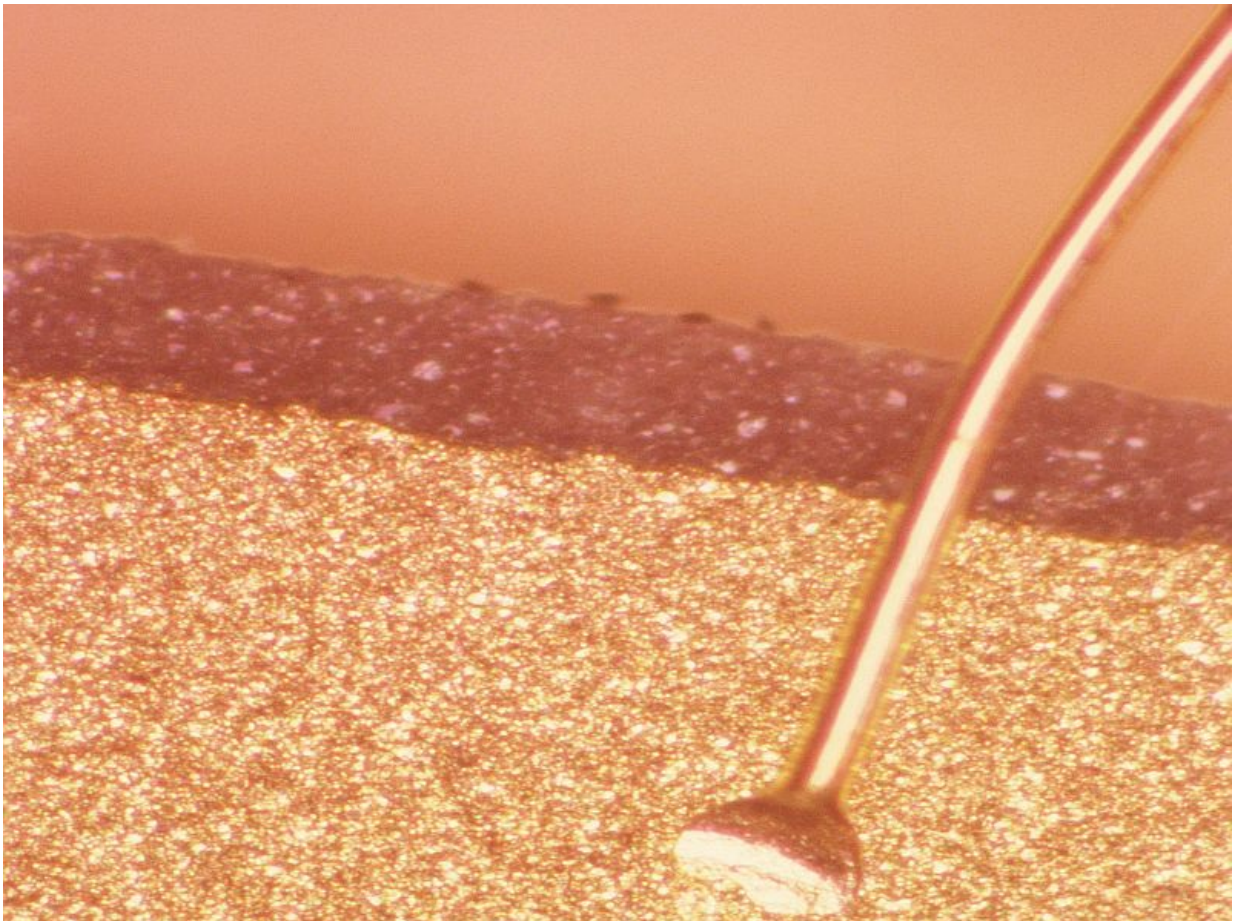


# Uptake of topical compounds higher with thermal coagulation

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(HealthDay)—Microchannels surrounded by a coagulation zone (CZ),

generated by ablative fractional laser, have higher uptake of topical compounds than those without a CZ, according to a study published online Feb. 9 in *Lasers in Surgery and Medicine*.

Christina Skovbølling Haak, M.D., Ph.D., from the University of Copenhagen in Denmark, and colleagues used Franz Cells to examine [skin](#) uptake and permeation of fluorescent labeled polyethylene glycols (PEGs). They generated microchannels with CZ thicknesses ranging from 0 to 80  $\mu\text{m}$  and evaluated skin uptake of PEGs with mean molecular weights of 350, 1,000, and 5,000 Da into CZ and dermis by fluorescence microscopy at skin depths of 150, 400, and 1,000  $\mu\text{m}$ .

The researchers found that uptake of PEGs was highest through microchannels surrounded by CZ versus channels with no CZ. CZ thickness impacted PEG distribution in skin. Significantly higher mean fluorescence intensities inside CZ areas were favored with a thin CZ-20 versus CZ-80 (PEG 350, 1,000, and 5,000; P

"CZ thickness influences PEG distribution, with highest PEG uptake achieved from microchannels surrounded by a thin CZ," the authors write.

The study was funded in part by a grant from the Novo Nordisk Foundation.

**More information:** [Full Text \(subscription or payment may be required\)](#)

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