

Gastric feeding tubes may raise pressure ulcer risk

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This is an elderly patient with a gastric feeding Tube. Credit: Michael Cohea/Brown University

A new study led by Brown University researchers reports that percutaneous endoscopic gastric (PEG) feeding tubes, long assumed to help bedridden dementia patients stave off or overcome pressure ulcers, may instead make the horrible sores more likely to develop or not improve.

The analysis of thousands of nursing home [patients](#) with advanced [dementia](#) appears in the May 14 edition of the [Archives of Internal Medicine](#).

"This study provides new information about the risks of feeding tube

insertion in people with advanced cognitive impairment," said lead author Dr. Joan Teno, a [gerontologist](#) and professor of health services, policy, and practice in the Public Health Program at Brown. "We see a substantial risk of people developing a stage II and higher pressure ulcer. We believe these risks should be discussed with family members before a decision is made to insert a feeding tube in a hospitalized nursing home resident with advanced [cognitive impairment](#)."

In the new study, Teno and her team asked two basic questions: "How does having a gastric feeding tube affect the chances of preventing a stage II or greater pressure ulcer?" and "Does having a gastric feeding tube help heal an existing pressure ulcer?"

Previous studies, which were much smaller in scope, had produced inconclusive findings. By using a combination of federally gathered data from nursing homes and Medicare claims, the researchers essentially mimicked a [randomized controlled trial](#) through the use of "propensity match cohort" study. Over a particular timeframe, they compared thousands of patients with and without ulcers who received a feeding tube to three times as many statistically similar patients with and without ulcers who did not get a tube.

The risk of feeding tubes

What they found was that among patients who did not start with an ulcer, 35.6 percent of those with a feeding tube ended up with at least a stage II ulcer, while only 19.8 percent of patients without a feeding tube did. After statistical adjustment, they found that the chance of getting an ulcer was 2.27 times higher for people with feeding tubes than for those without. The risk of developing a more serious stage IV ulcer was 3.21 times higher for those with feeding tubes compared to hospitalized nursing home residents without a feeding tube.

Meanwhile, among patients who already had an ulcer, the researchers found that 27.1 percent of patients with a feeding tube saw short-term improvement, but 34.6 percent of those without a [feeding tube](#) experienced healing in a comparable timeframe. The adjusted odds of an ulcer getting better for people with a tube were 0.7 times as high for people without a tube, meaning their chances for improvement with a tube were less than for people without a tube.

The conventional wisdom among physicians — three-quarters of them according to one study — is that if anything, the nutrition delivered by feeding tubes should help patients resist ulcers. Perhaps with the idea of such a benefit in mind, physicians frequently don't discuss the risks of feeding tubes with patients' families, Teno has found.

The study did not measure how feeding tubes could cause ulcers, but Teno and her co-authors posit that because many patients become agitated by having a tube, they are often physically restrained and sedated with drugs. At the same time, feeding tubes can also increase the incidence of diarrhea. These circumstances, she said, may account for the development and worsening of [pressure ulcers](#).

The new findings should lead doctors and families to ask more questions about whether feeding tubes are appropriate treatments, compared to careful hand feeding, for patients who have become so cognitively impaired that they can no longer eat independently, Teno said.

"To me this article is a game changer," Teno said. "It provides solid evidence that there is a risk and that we need to discuss it. I'm hoping that people now can use this study to make better decisions in light of a patient's goals and values."

Provided by Brown University

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