

Study shows zinc salts offer rapid relief from gastric reflux

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(PhysOrg.com) -- In a study that could revolutionize how millions of people are treated for painful gastric acid-related diseases, a team led by Yale School of Medicine researchers has shown that zinc salts offer rapid, prolonged suppression of gastric acid secretion. Further, they do so without the side effects that sometimes accompany the use of the popular proton pump inhibitor (PPI) class of drugs. The paper appears online in the *American Journal of Gastroenterology*.

Up to 50 million Americans suffer from illnesses related to the overproduction of gastric acid secretion. One of the most common of these is gastric reflux disease, in which stomach acids back up into the esophagus, causing pain and potentially leading to esophageal lesions and cancer. Until now, [proton pump inhibitors](#), such as omeprazole and lansoprazole (marketed as Prilosec and Prevacid, respectively), have been the potent treatments of choice in inhibiting acid production. Unfortunately, as many as 74 percent of all patients on prolonged use of these agents have recurrent symptoms or “breakthrough” where they once again have signs of reflux.

But the Yale study shows that zinc salts can offer relief in much less time - sometimes minutes, compared with 24 to 36 hours for [omeprazole](#) - and without recurrent symptoms or the [side effects](#) of PPIs that may include headaches, diarrhea and dizziness.

The investigators were studying the interplay of ion transporters in the acid secretion process. In doing so, they discovered the [cellular](#)

[mechanism](#) by which zinc therapy might work, and how it inhibits acid secretion to potentially eradicate symptoms.

Researchers tested zinc therapy first on rats and isolated human glands, and then on healthy human volunteers. In both rats and humans, acid secretion was quickly and markedly reduced after oral ingestion of zinc. “Our study showed that, at the cellular level, zinc is a direct suppressor of gastric acid secretion,” said lead author John Geibel, M.D., D.Sc., professor of surgery and cellular and molecular physiology and vice chair of surgery at Yale School of Medicine. “This opens a promising new avenue of treatment for suffering patients, especially the many who continue to have symptoms of acid-related illness even after a standard dose of PPIs.”

Zinc is an important element for cell growth. But zinc levels fall in patients receiving long-term PPI therapy, and a decrease in cellular zinc levels can result in neuronal damage and digestive tract issues. “Taking zinc orally not only appears to work on its own, but may provide better, more long-lasting results when taken in conjunction with PPIs,” Geibel said.

He also explained why zinc may be better tolerated than PPIs. “[Zinc](#) is an essential component of cell function, which may be why it produces fewer side effects than other commonly used acid-inhibitory drugs.”

Provided by Yale University

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