Could heartburn meds spur growth of drug-resistant germs in your gut?

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(HealthDay)—Common heartburn meds may foster the growth of

antibiotic-resistant bacteria in the gut, a new research review suggests.

In an analysis of 12 past studies, researchers found that, overall, the evidence supports a link: People who use acid-suppressing medications—particularly proton pump inhibitors (PPIs)—are more likely than nonusers to harbor antibiotic-resistant bacteria in the gut.

The findings do not prove that PPIs—which include popular brands such as Prilosec (omeprazole), Prevacid (lansoprazole) and Nexium (esomeprazole)—are the cause, experts said.

But they are the latest to raise safety questions about the top-selling prescription and over-the-counter medicines.

In recent years, studies have linked long-term PPI use to increased risks of heart and kidney disease, stomach cancer and certain infections—as well as deficiencies in calcium, magnesium and vitamin B12.

That said, PPIs are generally safe to use, according to Dr. Todd Lee, an associate professor of medicine at McGill University in Montreal.

But, he said, it's known that doctors overprescribe the drugs and that many people take them longer than necessary. So any safety concerns underscore the importance of using PPIs only when appropriate.

"This is more evidence for why we want to use PPIs judiciously," said Lee, who wrote an editorial accompanying the study, which was published online Feb. 24 in *JAMA Internal Medicine*.

Dr. Roel Willems, lead author on the analysis, agreed.

"PPIs should only be used when absolutely necessary," said Willems, of Amsterdam University Medical Center in the Netherlands.

"Unfortunately, inappropriate use is common, and PPIs are freely available at drugstores without any medical [supervision]."

PPIs work by blocking the enzyme system that creates stomach acid. They are commonly prescribed for gastroesophageal reflux disease (GERD), in which stomach acid chronically escapes into the esophagus (the tube connecting the mouth and stomach).

But doctors sometimes prescribe them for vague abdominal complaints, according to Lee.

"I think they want to help patients and will say, 'Take this PPI and see if it goes away,'" Lee said. "The problem is, the symptoms do get better—but they might have gone away on their own anyway."

And because stopping a PPI can cause temporary "rebound" acid reflux, Lee noted, people can end up thinking they need to continue the medication.

Even in cases of true GERD, people can often come off their PPI after damaged tissue in the esophagus heals. Lee said many do well with "pulse therapy," in which the drugs are taken for a short period when symptoms flare.

For the review, Willems' team combined results of 12 studies that involved more than 22,300 people in all—about 8,500 of whom used acid-suppressing drugs. That meant PPIs or H2 blockers, which include medications like Tagamet (cimetidine), Pepcid (famotidine) and Zantac (ranitidine).

Overall, people on the medications were 74% more likely to harbor bacteria that were resistant to multiple antibiotics. The risk appeared largely confined to PPIs.

The studies looked only at whether people carried antibiotic-resistant bacteria—not whether the bugs caused any health issues. But, Willems said, harboring those bacteria may put people at increased risk of antibiotic-resistant infections—and it perpetuates the broader problem of antibiotic resistance.

A bigger caveat is: The results do not prove PPIs were to blame. The studies tried to account for other factors, but cannot prove cause and effect.

According to Dr. C. Prakash Gyawali, a spokesman for the American Gastroenterological Association, "Antibiotic resistance in bacteria typically arise from use of antibiotics. It would have been useful to know if PPI users and nonusers had the same antibiotic exposure."

Plus, he said, the link was stronger among hospital patients on PPIs—who may be given the drugs to prevent stress ulcers—than in everyday users.

Still, Gyawali agreed that the findings "reinforce the importance of careful consideration in deciding when to use acid-suppressive medications. There's no doubt that the risk-benefit ratio favors benefit when PPIs are used appropriately."

More information: The U.S. National Institute of Diabetes and Digestive and Kidney Diseases has more on treating GERD.