



## VA research on

# GASTROINTESTINAL HEALTH

*Gastroenterology is a medical specialty that deals with the diagnosis and treatment of disorders of the digestive system. Such disorders may involve the digestive tract, pancreas, liver, or gallbladder.*

## ABOUT GASTROINTESTINAL HEALTH

- Gastrointestinal problems are among the illnesses reported by many Gulf War Veterans. These problems include irritable bowel syndrome, which is marked by chronic cramping, bloating, and diarrhea.
- More than 1 million Americans have inflammatory bowel disease, which includes Crohn's disease and ulcerative colitis. Crohn's disease affects the entire gastrointestinal tract, while ulcerative colitis is limited to the colon.
- Frequent heartburn, or gastroesophageal reflux disease (GERD), is a common gastrointestinal issue. About one in 10 Americans experiences GERD symptoms at least once a week.
- Colorectal cancer is the third most common cancer in the United States.

## VA RESEARCH ON GASTROINTESTINAL HEALTH: OVERVIEW

- VA researchers are exploring new techniques to treat *Clostridium difficile* (*C. difficile*) infections, such as doses of non-toxic *C. difficile* spores and fecal transplantation. *C. difficile* is often resistant to standard treatments such as antibiotics.

- Researchers from three VA sites developed new guidelines for screening and managing precancerous cells that could develop into colon cancer in patients with inflammatory bowel disease.
- VA has made it a priority to screen its patients aged 50 years or older for colon cancer. Evidence from the American Cancer Society suggests that screening efforts have helped lower the number of deaths from colon cancer in recent years.
- VA researchers are looking for potential drug therapies to help Veterans with gastrointestinal problems such as stomach ulcers, *C. difficile* infections, irritable bowel syndrome, inflammatory bowel disease, colon cancer, and GERD. They are also exploring less invasive treatments and seeking supportive strategies for Veterans during and after treatment.

## SELECTED MILESTONES AND MAJOR EVENTS

- 1950s** – Greatly expanded, through the work of [Dr. Morton I. Grossman](#), the understanding of the physiology and regulation of gastrointestinal secretions
- 1977** – Received the Nobel Prize in physiology or medicine ([Dr. Rosalyn Yalow](#)), for developing a new way to measure insulin and other hormones in the blood

**2004** – [Found](#) that the open technique is superior to the laparoscopic technique for mesh repair of primary hernias

**2013** – [Learned](#) that treatment with the drug infliximab and an immunomodulator significantly reduces the risk of hospitalization and surgery

**2013** – [Determined](#) that weight is not a factor in whether proton-pump inhibitors can successfully treat gastroesophageal reflux disease

**2015** – [Found](#) that giving spores of non-toxic *C. difficile* by mouth can stop repeated bouts of infection

## RECENT STUDIES: SELECTED HIGHLIGHTS

- **Giving spores of non-toxic *C. difficile* by mouth** can stop repeated bouts of *C. difficile* infection, found an international team of researchers led by Dr. Dale Gerding of the Edward Hines, Jr. VA Hospital. *C. difficile* is an intestinal bacterial infection that is often difficult to treat and frequently reoccurs. ([Journal of the American Medical Association](#), May 5, 2015)
- **A procedure called fecal transplantation, which may date back thousands of years**, can effectively battle *C. difficile* infections, according to a systematic review by VA and University of

*(Continued on back)*



Minnesota researchers. This procedure involves inserting stool containing healthy bacteria into sick patients to combat the infection. ([Annals of Internal Medicine](#), May 5, 2015)

• **Taking the drug infliximab (sold as Remicade) together with an immunomodulator** significantly reduces the risk of hospitalization and surgery after one year in men with inflammatory bowel disease, found researchers from the Michael DeBakey VA Medical Center in Houston and Baylor College of Medicine. ([Clinical Gastroenterology and Hepatology](#), October 2013)

• **A study of more than 666,000 Veterans of Iraq and Afghanistan** showed that those with PTSD were more likely to have autoimmune disorders such as inflammatory bowel disease. The study was led by researchers at the San Francisco VA Medical Center. ([Biological Psychiatry](#), Feb 15, 2015)

• **About 1 in 10 Americans experiences GERD symptoms at least once a week.** People who are obese

are more likely to have GERD. A study of patients treated at the Kansas City, Mo., VA Medical Center and the University of Kansas showed that weight was not a factor in the success of the strongest treatment available for frequent heartburn, the proton-pump inhibitor esomeprazole. ([Journal of Clinical Gastroenterology](#), September 2013)

• **Current antibiotic therapies to treat H. pylori bacteria**—a major cause of ulcers—may be obsolete, because the bug is now resistant to many common antibiotics. VA's Dr. David Graham and two non-VA colleagues suggest that improving counseling and education for patients, reviewing the patient's personal history with antibiotics, and taking into account local patterns of antibiotic resistance can boost the effectiveness of antibiotic regimens. ([Clinical Gastroenterology and Hepatology](#), February 2014)

• **A quarter of patients with low-risk benign tumors** received follow-up colonoscopies too early, and more than half of patients with high-risk benign tumors received follow-up

colonoscopies too late or not at all, according to a study by Durham VA and University of North Carolina researchers. System-level improvements are needed so that Veterans receive colonoscopies at the appropriate time, say the researchers. ([Clinical Gastroenterology and Hepatology](#), March 2016)

• **Multi-target stool DNA testing is significantly more sensitive** at detecting colorectal cancer and precancerous lesions than a fecal immunochemical test, according a team led by to researchers at the Center for Innovation at Roudebush Veterans Affairs Medical Center in Indianapolis, Ind. However, multi-target stool DNA testing gives more false positives than fecal immunochemical testing. ([New England Journal of Medicine](#), April 3, 2014)

**For more information on VA studies on gastrointestinal health and other key topics relating to Veterans' health, please visit [www.research.va.gov/topics](http://www.research.va.gov/topics)**

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