



# Health & Wellness

## Quality Colonoscopy

**Studies show that high-quality colonoscopy means much lower chance of colon cancer**

**By David M. Kastenberg, MD**

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The big question patients ask when they come to my office is, Have you ever had a perforation doing a colonoscopy? That's what they dread, but perforations for screening colonoscopies are extremely rare – about 0.1 percent. The question patients should be asking is, What's your adenoma detection rate? No one asks that, but since colon cancer often develops when adenomatous polyps turn malignant – most don't – a doctor's adenoma detection rate is one of the best measures of effective screening and Quality Colonoscopy. Studies have shown that patients of doctors having a high adenoma detection rate have a lower chance of developing colon cancer before their next colonoscopy.

Colon cancer occurs in about one out of 18 people. It's more common in patients from families with a history of colon cancer. Physicians and medical societies agree that screening for colon cancer is important for prevention, and the American College of Gastroenterology considers colonoscopy the best way to be screened. Every year, more than 14 million Americans have colonoscopies.

Large studies that have looked at the rate of reduction in cancer after colonoscopy vary significantly in their



findings. These discrepancies suggest that not all colonoscopies are equal. No test is a perfect test, but the skill of the colonoscopist matters, and it can be quantified with measures such as adenoma detection rate, which is closely associated with how clean the colon is after the regimen of preparation. Diagnostic accuracy of colonoscopy is tied to thorough visualization of the gastrointestinal wall, making colon cleansing a vital part of the procedure. The better the prep, the more polyps and lesions the doctor can find and remove, the lower the patient's chance of getting colon cancer.

If patients have excellent prep, or at least adequate preparation, doctors have a much higher chance of finding

polyps and cancers, especially smaller lesions. A study we did here at Jefferson showed that patients who had inadequate prep and came back for a second colonoscopy not long after the first had double the rate of missed lesions. Many of the other measures for a Quality Colonoscopy – the recommended interval to the next procedure or colonoscopy completion – follow from good preparation. That's why I've devoted a lot of my research to prep – what preparations work well, what kind of timing works best, how to minimize impact on patients' lives so a colonoscopy with prep doesn't become a two- or three-day investment but a one-day procedure.

Good prep makes the colon clean

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enough for colonoscopists to find polyps that are 5 mm or larger. Physicians used to prescribe the cleansing purgative for the day before the colonoscopy. We've found that "split dosing," giving part of the preparation the night before and the other part four hours before the procedure, works better. If your doctor is prescribing colon-cleansing prep the day before, there's a higher chance that your preparation isn't going to be as good.

I've developed a prep for a one-day procedure: patients take the first dose seven hours before, say at 5 o'clock in the morning, and the second dose four hours before the colonoscopy. They get better sleep the night before and the prep doesn't interfere with work the day before the procedure. We recently

completed a study that found that eating a low-residue breakfast and lunch the day before a colonoscopy works just as well as a clear-liquid diet. At Jefferson, we want to make getting a colonoscopy as palatable, convenient and effective as possible, so more patients benefit from the health advantages of colon cancer screening.

We're also working on the future of colon cancer screening. Jefferson is one of five centers in the U.S. studying capsule colonoscopy, a swallowed "pill cam" that travels through the colon looking for polyps and cancer. The pill "wakes up" once it reaches the colon and takes a lot of pictures. It's a remarkable technology that entails preparation that must clean out the colon immaculately and also push

the capsule from the mouth through the colon. We're looking at new preps for capsule colonoscopy. We're also exploring colon cancer prevention by developing a vaccine. Currently, we're testing a vaccine to see if it develops antibodies against glycoprotein, which changes on polyps as they morph from normal polyps to cancerous ones. It's a long-term study, and we will be following our test subjects for years.

Capsule colonoscopies and vaccines are the future of colon cancer prevention. Today, the standard colonoscopy is the best thing you can do to minimize your chances of getting colon cancer. Do it for yourself and for those who love and depend on you.



David M. Kastenberg, MD, is Professor of Medicine in the Sidney Kimmel Medical College at Jefferson and Co-Director of the Celiac Center. He is a fellow in the American College of Gastroenterology and the American Gastroenterology Association. Dr. Kastenberg's research and practice focus on colon cancer prevention and detection with special expertise on Lynch Syndrome and other inherited conditions that increase cancer risk. Much of his research deals with best practices for Quality Colonoscopy, especially preparation and making colonoscopy as convenient as possible so patients are more inclined to undergo this highly effective procedure for colon cancer screening. Kastenberg earned his medical degree from New York University School of Medicine, did his residency at Temple University Hospital and completed a fellowship at Thomas Jefferson University Hospital.