

# City Health Information

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The New York City Department of Health and Mental Hygiene

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## PREVENTING COLORECTAL CANCER

New York City-Specific Guidelines for Colorectal Cancer Screening

**MOST PEOPLE 50 YEARS OF AGE AND OLDER SHOULD UNDERGO:**

### **COLONOSCOPY EVERY 10 YEARS**

**Annual fecal occult blood testing (FOBT) is an acceptable, although not optimal, alternative for those unwilling or unable to undergo colonoscopy.**

**Persons at high risk for colorectal cancer should begin screening with colonoscopy at age 40 or earlier.**

**C**olorectal cancer causes more cancer deaths among nonsmokers than any other form of cancer. It is estimated that 250,000 New Yorkers age 50 and over have undetected colon polyps. Without early detection and treatment, up to 20,000 of these New Yorkers will develop cancer in the next 20 years. Screening methods able to detect early colorectal cancer include colonoscopy, sigmoidoscopy, fecal occult blood testing (FOBT), double contrast barium enema, and computer tomographic colonoscopy (virtual colonoscopy).<sup>1</sup>

**Colonoscopy** is the most sensitive and specific of these screening methods; it visualizes the entire colon and rectum and enables the physician to identify and remove precancerous polyps and *in situ* carcinomas during a single examination. Although colonoscopy is relatively expensive, it remains cost-effective<sup>1</sup> because it is highly sensitive and may be performed as infrequently as every 10 years. New York City's excellent medical institutions have extensive capacity and potential.

**FOBT** also screens the entire colon and rectum, but it produces more false-positive and false-negative results than other methods. When FOBT is performed annually on 3 consecutive stool samples, it can reduce colon cancer mortality by 18%.<sup>2</sup>

**Flexible sigmoidoscopy** can examine the rectum and distal colon but is unable to examine the proximal colon. Patients who undergo this procedure often require a second procedure to remove or biopsy lesions. Flexible sigmoidoscopy can identify 70% of patients with

advanced neoplasia, assuming that all patients with an adenoma in the distal colon subsequently undergo complete colonoscopy.<sup>3</sup>

The **double contrast barium enema** and **virtual colonoscopy** are more costly and not as well studied as other screening methods. In addition, they are less sensitive in detecting early lesions.

**The New York City Department of Health and Mental Hygiene (NYC DOHMH) recommends colonoscopy every 10 years as the preferred colorectal cancer screening test, with annual FOBT of 3 consecutive stool samples as an acceptable, although not optimal, alternative for those patients unable or unwilling to undergo colonoscopy. Persons at high risk for colorectal cancer should begin screening with colonoscopy at age 40 or earlier.** Our recommendations are not intended to negate other guidelines; any screening is better than no screening at all.

The NYC DOHMH will continue to monitor the impact of these recommendations on screening rates, safety, and the incidence of advanced colon cancer. Guidelines will be modified as needed, based on these findings.

Clinician recommendation remains one of the most powerful determinants of whether a patient undergoes colorectal cancer screening.<sup>1</sup> Most New Yorkers are not undergoing a recommended schedule of optimal screening and, each year, approximately 1,500 New Yorkers die from colorectal cancer. Physicians can prevent most of these deaths.

## **Nine Questions Frequently Asked about Colorectal Cancer Screening and Prevention**

### **1. Does colorectal cancer screening reduce cancer mortality?**

YES. In addition to the role colorectal cancer screening plays in detecting early-stage cancer, studies show that the removal of premalignant polyps reduces both cancer incidence and mortality. Moreover, colorectal cancer screening is as cost-effective as most other widely-used cancer screening tests.<sup>4</sup> Widespread use of the NYC DOHMH guidelines could prevent more than 80% of colorectal cancer cases in New York City,<sup>1</sup> preventing more than 1,000 deaths each year.

### **2. Why is the NYC DOHMH recommending colonoscopy as the preferred colorectal cancer-screening exam?**

Approximately 25% of persons over the age of 50 have colorectal polyps, a proportion of which have the potential to become cancerous.<sup>5</sup> Colonoscopy is not only the best endoscopic procedure for detecting small polyps, but it also allows for immediate biopsy and removal of such lesions. For persons at average risk of colorectal cancer, a colonoscopy only needs to be performed every 10 years; persons at high risk should undergo testing every 5 years.

Colonoscopy is relatively expensive and carries a small risk of bleeding, infection, or perforation (risk of perforation is less than 1 in 1,000).<sup>6</sup> When complications do occur, they are generally managed without the need for surgery or hospital care. In contrast to the small risk of complications from colonoscopy, the cumulative lifetime risk of colorectal cancer is approximately 6%.<sup>1</sup>

Colonoscopy does cause discomfort. In nearly all cases, however, this is easily controlled with conscious sedation.

### **3. Won't most of my patients be too embarrassed or afraid to undergo colorectal cancer screening?**

It is important to recognize that similar concerns were raised and successfully addressed when mammography was introduced.<sup>1</sup> The majority of your patients will undergo colorectal cancer screening if you recommend it.<sup>7</sup> Educate your patients on the benefits and risks of screening. Older patients may need only 1 full colorectal exam in their lifetime. Moreover, clinicians need to

undergo colorectal cancer screening themselves, if indicated, and should communicate their decision to be examined to their patients.

### **4. Which of my patients will benefit the most from colorectal cancer screening?**

At present, the standard of care is for every person 50 years of age and older to undergo colorectal cancer screening.<sup>1</sup> Higher colorectal cancer rates exist in persons 65 years of age and older, males, African-Americans, and persons of Ashkenazi Jewish descent, but there is no group in New York City that is free of risk.<sup>5,8</sup> No guideline can substitute for a physician's prudent clinical judgment. Factors such as family history, patient demand, the clinical condition of a patient, and available resources may influence a physician's decision on how to screen a patient for colorectal cancer.

### **5. What factors raise a patient's risk of early-onset colorectal cancer?**

Patients at increased risk include those with a personal or family history of familial adenomatous polyposis, hereditary nonpolyposis colorectal cancer, or another hereditary cancer syndrome, as well as those with a history of inflammatory bowel disease, colon polyps, prior colorectal cancer, or a history consistent with a hereditary cancer syndrome.<sup>1</sup> However, only 20% of colorectal cancer patients report a family history of the disease.<sup>9</sup> Physicians should consider confirming a patient's family history with his or her relatives, as a recent study suggests that this increases the accuracy of the information.<sup>10</sup>

Some experts recommend that patients with a family history of colorectal cancer or polyps should begin screening either at age 40 or 10 years before the age that their first-degree relative was diagnosed with colorectal cancer. In rare cases, colon polyps and early cancers can cause symptoms. Therefore, persons with fatigue, anemia, gastrointestinal symptoms, rectal bleeding, or changes in weight or bowel habits need to undergo a diagnostic evaluation.

### **6. Is it sufficient to screen for colorectal cancer by only performing an FOBT exam during a physical examination?**

No. To date, there is no evidence that FOBT testing performed during physical examinations lowers colorectal cancer mortality. Trauma from the digital rectal exam and lack of dietary preparation can produce a false-positive result.

**Objectives:**

At the conclusion of the course, the participants should be able to:

1. Counsel patients appropriately on colorectal cancer screening options and encourage informed, eligible patients to undergo a proper screening regimen.
2. Identify factors in their patients that are associated with an elevated risk for colorectal cancer.
3. Identify effective methods of colorectal cancer prevention.
4. Identify the benefits and risks of the various methods of colorectal cancer screening.
5. Know the new, simplified guidelines suggested by the NYC DOHMH and be able to implement them in their practice.

**Accreditation:**

The CME activity is open to physicians (MDs, DOs) and physician assistants. The New York City Department of Health and Mental Hygiene is accredited by the Medical Society of the State of New York to sponsor continuing medical education for physicians. The New York City Department of Health and Mental Hygiene designates this continuing medical education activity for 1.0 hour in Category One credit toward the AMA/PRA (Physician's Recognition Award). Each physician should claim only those hours of credit that he/she actually spent on the educational activity.

The Continuing Nursing Education (CNE) activity is open to nurses. This educational activity is presented by the NYC Department of Health and Mental Hygiene, which has been approved as a provider of continuing education by the NYSNA's Council on Continuing Education, which is accredited by the ANCC Commission on Accreditation as an approver of continuing education in nursing. A total of 1.2 contact hours will be awarded to nurses for participation in this activity.

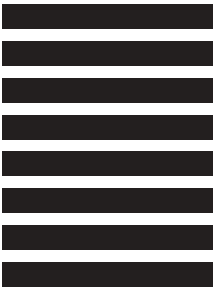


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## **7. I am not a prevention expert and I do not have the time to review the pros and cons of the different colorectal cancer screening exams with my patients. What should I do?**

Try distributing brochures on colorectal screening and implementing a system of phone or e-mail reminders. (Brochures can be obtained from the resources list on page 4 and at [nyc.gov/html/doh/html/alerts/alert1.html](http://nyc.gov/html/doh/html/alerts/alert1.html).) Some practices utilize nurse practitioners and/or physician assistants to educate eligible patients and perform screening procedures.

Patients should be informed that Medicare and Medicaid now cover screening colonoscopy.<sup>1</sup> Colonoscopies can cost \$400–1,000 or more, and the cost will be higher if procedures such as polypectomy are needed.

## **8. What should I tell my patients about how to reduce their risk of colorectal cancer?**

Modifiable risk factors with the strongest associations to colorectal cancer are obesity, physical inactivity, and tobacco use.<sup>1</sup> Chronic constipation,<sup>11</sup> a typical Western diet (refined sugar and flour, high fat from red meat, and low fiber), and high alcohol consumption may also increase colorectal cancer risk.<sup>1</sup> Folic acid supplementation, calcium supplementation, aspirin and other non-steroidal anti-inflammatory drugs are promising, but unproven, colorectal cancer prevention agents.<sup>1</sup>

It could be argued that the most powerful risk factor for colorectal cancer death in New York City is to be under the care of a physician who does not recommend colon cancer screening.

## **9. What actions are being taken by the NYC DOHMH to inform the public on the advantages of undergoing colorectal cancer screening?**

The NYC DOHMH is working with a broad coalition of citywide organizations to promote colorectal cancer screening. The Department is also analyzing colonoscopy capacity in New York City in anticipation of a significant increase in demand over the next 3 years.

### **References**

1. Levin B, Smith RA, Feldman GE, et al. Promoting early detection tests for colorectal carcinoma and adenomatous polyps – A framework for action: the strategic plan of the national colorectal cancer roundtable. *Cancer*. 2002;95:1618-1628.
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3. Lieberman DA, Weiss DG. One-time screening for colorectal cancer with combined fecal-occult blood testing and examination of the distal colon. *N Engl J Med*. 2001;345:555-560
4. Frazier AL, Colditz GA, Fuchs CS, Kuntz KM. Cost-effectiveness of screening for colorectal cancer in the general population. *JAMA*. 2000;284:1954-1961.
5. Tomeo CA, Colditz GA, Willett WC, et al. Harvard report on cancer prevention. Volume 3: Prevention of colon cancer in the United States. *Cancer Causes and Control*. 1999;10:167-180.

**1. A 68-year-old grandfather of 3 goes to his primary care physician's office complaining of several months of diarrhea, bloating, and weight loss. (Check one)**

- A.** The physician should promptly provide a referral to a gastroenterologist.
- B.** The physician should perform a full history and physical, then screen the patient for colorectal cancer using a take-home FOBT kit.
- C.** The physician should take a thorough family history, do a rectal exam, and, if the patient's stool FOBT is negative in the office, the physician should consider the patient appropriately screened until the following year.
- D.** The physician should recognize that the patient should undergo a diagnostic evaluation, as he is not a candidate for screening.

**2. A slim, 34 year-old, nonsmoking, vegetarian, female marathon runner with no family history or predisposing factors for colorectal cancer wants to be screened for colorectal cancer after watching a televised news magazine special on the subject. (Check one)**

- A.** The physician should complete a full risk assessment of the patient and explain to her that all expert groups recommend starting screening at age 50.
- B.** The physician should refer her for a colonoscopy and a Pap test.
- C.** The physician should further explore the patient's reasoning for wanting to be screened for colorectal cancer and, if the patient is willing to pay for the test out-of-pocket, the physician should recommend that a colonoscopy be performed every 3 years.
- D.** None of the above.

**3. The approximate perforation rate of colonoscopy is less than: (Check one)**

- A.** 1 out of every 10 procedures
- B.** 1 out of every 100 procedures
- C.** 1 out of every 300 procedures
- D.** 1 out of every 1,000 procedures

**4. Which of the following is NOT a risk factor for colorectal cancer? (Check one)**

- A.** Cigarette smoking
- B.** Advanced age
- C.** Physical inactivity
- D.** High folate intake
- E.** A family history of colorectal cancer

**5. Which of the following statements regarding the current NYC DOHMH screening guidelines for colorectal cancer is TRUE?**

- A.** The guidelines are inconsistent with current guidelines from other major expert organizations, but they have been recognized by the federal government as the standard of medico-legal care.
- B.** The guidelines are intended to focus clinician attention on screening more patients under the age of 40 for colorectal cancer.
- C.** The guidelines are intended to help busy clinicians screen more patients for colorectal cancer and to emphasize colonoscopy as the preferred modality, based on recent indirect evidence.
- D.** The guidelines were drafted in response to recent studies that cast serious doubt on the ability of colorectal screening tests to prevent colorectal cancer.

**6. How well did this continuing education activity achieve its educational objectives?**

- A.** Very well
- B.** Adequately
- C.** Poorly

Name \_\_\_\_\_

Degree \_\_\_\_\_ Telephone # \_\_\_\_\_

Address \_\_\_\_\_

E-mail address \_\_\_\_\_

# CME/CNE Activity

This issue of *City Health Information*, including the continuing education activity, can be downloaded (but not for electronic response) in the publications section at [nyc.gov/health](http://nyc.gov/health).

## Instructions

1. Read this issue of *City Health Information* for the correct answers to questions.
2. Complete all information on the response card, including your name, degree, mailing address, telephone number, and E-mail address.

## PLEASE WRITE CLEARLY.

3. Select your answers to the questions, and check the corresponding boxes on the response card provided. **To receive continuing education credit, you must answer 4 of the first 5 questions correctly.**
4. Return the response card or a photocopy of the card postmarked no later than September 30, 2003. Mail to CME/CNE Administrator, NYC Department of Health and Mental Hygiene 161 William Street, 5th floor, CN-29C, New York, NY 10038.

## References (continued)

6. Tran DQ, Rosen L, Kim R, Riether RD, Stasik JJ, Khubchandani IT. Actual colonoscopy: what are the risks of perforation? *Am Surg.* 2001;67:845-847.
7. Leard LE, Savides TJ, Ganiats TG. Patient preferences for colorectal cancer screening. *J Fam Pract.* 1997;45:211-218.
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10. Glanz K, Grove J, Le Marchand L, Gotay C. Underreporting of family history of colon cancer: correlates and implications. *Cancer Epidemiol Biomarkers Prev.* 1999;8:635-639.
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## RESOURCES

**National Cancer Institute**  
1-800-4cancer [www.cancer.gov](http://www.cancer.gov)

**American Cancer Society**  
1-800-ACS-2345 [www.cancer.org](http://www.cancer.org)

**National Colorectal Cancer Research Alliance**  
1-800-872-3000 [www.nccra.org](http://www.nccra.org)

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