



Complete Summary

GUIDELINE TITLE

Prevention and screening of colorectal cancer.

BIBLIOGRAPHIC SOURCE(S)

Finnish Medical Society Duodecim. Prevention and screening of colorectal cancer. In: EBM Guidelines. Evidence-Based Medicine [Internet]. Helsinki, Finland: Wiley Interscience. John Wiley & Sons; 2005 Feb 23 [Various].

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Finnish Medical Society Duodecim. Prevention and screening of colorectal cancer. Helsinki, Finland: Duodecim Medical Publications Ltd.; 2004 Mar 6. Various p.

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SCOPE

DISEASE/CONDITION(S)

Colorectal cancer

GUIDELINE CATEGORY

Prevention
Screening

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Preventive Medicine

INTENDED USERS

Health Care Providers
Physicians

GUIDELINE OBJECTIVE(S)

Evidence-Based Medicine Guidelines collect, summarize, and update the core clinical knowledge essential in general practice. The guidelines also describe the scientific evidence underlying the given recommendations.

TARGET POPULATION

- Patients with symptoms of adenomatous polyps or colorectal cancer
- Asymptomatic persons with increased risk for colorectal cancer

INTERVENTIONS AND PRACTICES CONSIDERED

Screening/Prevention

1. Detection and follow-up of adenomas for symptomatic patients and asymptomatic persons at increased risk
 - Colonography
 - Colonoscopy
 - Polyp removal as indicated
2. Preventive measures (e.g., diet)
3. Screening family members of cancer patients
4. Examination of symptomatic patients

Interventions considered by not specifically recommended:

1. Population-based screening with faecal occult blood testing (FOBT)
2. Preventive strategies such as dietary fibre, garlic, dietary calcium, and antioxidant supplements

MAJOR OUTCOMES CONSIDERED

- Mortality from colorectal cancer
- Neoplasms, adenomas, and malignancies detected through screening
- Screening adherence rates
- Harmful effects of screening
- Effectiveness of preventive strategies

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The evidence reviewed was collected from the Cochrane database of systematic reviews and the Database of Abstracts of Reviews of Effectiveness (DARE). In addition, the Cochrane Library and medical journals were searched specifically for original publications.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence

- A. Strong research-based evidence. Multiple relevant, high-quality scientific studies with homogenic results.
- B. Moderate research-based evidence. At least one relevant, high-quality study or multiple adequate studies.
- C. Limited research-based evidence. At least one adequate scientific study.
- D. No research-based evidence. Expert panel evaluation of other information.

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The levels of evidence [A-D] supporting the recommendations are defined at the end of the "Major Recommendations" field.

Detection and Follow-up of Adenomas

- Screening is justified on the basis of the assumption that removing adenomatous polyps from symptomless individuals reduces the incidence of and mortality from colorectal cancer
- The prevalence of adenomas in unselected autopsy series is as high as 30%.

Symptomatic Patients

- If a polyp is detected, the whole colon should be examined and all polyps removed.
- If colonography suggests a polyp not exceeding 5 mm in diameter in a patient above 75 years of age, there is no absolute indication for colonoscopy and polyp removal.
- Suspicion of a polyp in a young patient or a polyp exceeding 5 mm in diameter is always an indication for colonoscopy.

Asymptomatic Persons

- The use of colonoscopy for screening of asymptomatic individuals is indicated only in cases with marked familial susceptibility to cancer or if an adenoma has earlier been removed endoscopically.
- Follow-up after the initial investigations is not indicated in persons with a single small tubular adenoma in the rectum or in patients above 75 years of age.
- Individuals with a history of one large adenoma or several adenomas of any type should undergo screening colonoscopy at 3 to 5-year intervals.

Preventive Measures

Although diet is considered to be a major environmental cause of colorectal cancer, there is insufficient evidence to recommend dietary changes for

prevention. On the other hand, the diet suggested for prevention, with a reduced content of fat and energy along with an increased content of fruit and vegetable fibre, is in accordance with recommendations for the treatment and prevention of other diseases.

Population-based Screening

The results of large trials involving screening for faecal occult blood indicate a reduction in mortality from colorectal cancer (Towler et al., 1998) **[A]**, but such screening results in colonoscopy being performed on a large proportion of the screened population. The cost-effectiveness of screening is controversial. Only about 50% of those invited can be expected to attend screening (Vernon, 1997; The Database of Abstracts of Reviews of Effectiveness (DARE)-971223, 1999) **[B]**.

Screening Family Members of Cancer Patients

Always obtain a thorough family history from a patient with colorectal cancer. If there are cases of colorectal cancer or other adenocarcinomas (e.g., of the breast, uterus, or ovaries) in the family, consider the possibility of familial cancer and screening of the relatives (Brewer et al., 1994; DARE-954069, 2001) **[C]**.

Examining a Symptomatic Patient

Patients with colorectal cancer often present with non-specific gastrointestinal problems. Because both the sensitivity and specificity of faecal occult blood are rather poor, a negative result does not exclude colorectal cancer in a symptomatic patient.

Related Evidence

- The presence of neoplasms in the distal colon increases the risk of advanced neoplasia in the proximal colon; however, about 50% of patients with proximal advanced neoplasms have no distal polyps (Lieberman et al., 2000; Imperiale et al., 2000) **[A]**.
- The potential benefits of dietary fibre in the prevention of colorectal adenomas and carcinomas are not evident in randomized controlled trials with 2 to 4 year follow up (Asano & McLeod, 2002) **[C]**.
- High dietary garlic consumption seems to be associated with decreased risks of laryngeal, gastric, colorectal, and endometrial cancers and adenomatous colorectal polyps, but evidence from controlled studies is lacking (Agency for Healthcare Research & Quality [AHRQ], 2000; Health Technology Assessment Database: HTA-20010948, 2004) **[D]**.
- Daily intake of 1 gram dietary calcium may have moderate protective effect on development of colorectal adenomatous polyps, but the evidence is insufficient to recommend general use of calcium supplements to prevent colorectal cancer (Weingarten, Zalmanovici, & Yaphe, 2003) **[C]**.
- Antioxidant supplements cannot be recommended for gastrointestinal cancer prevention. The potential cancer preventive effect of selenium should be studied further (Bjelakovic et al., 2004) **[A]**.

Definitions:**Levels of Evidence**

- A. Strong research-based evidence. Multiple relevant, high-quality scientific studies with homogenic results.
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- C. Limited research-based evidence. At least one adequate scientific study.
- D. No research-based evidence. Expert panel evaluation of other information.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS**REFERENCES SUPPORTING THE RECOMMENDATIONS**

[References open in a new window](#)

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

Concise summaries of scientific evidence attached to the individual guidelines are the unique feature of the Evidence-Based Medicine Guidelines. The evidence summaries allow the clinician to judge how well-founded the treatment recommendations are. The type of supporting evidence is identified and graded for select recommendations (see the "Major Recommendations" field).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS**POTENTIAL BENEFITS**

Appropriate screening may help detect colorectal cancer and reduce the incidence of or mortality from colorectal cancer.

POTENTIAL HARMS**Harmful Effects of Screening Include**

- The physical complications of colonoscopy (perforation or haemorrhage)
- Disruption to lifestyle
- Stress and discomfort of testing and investigations
- The anxiety caused by false positive screening tests

IMPLEMENTATION OF THE GUIDELINE**DESCRIPTION OF IMPLEMENTATION STRATEGY**

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2002 Apr 27 (revised 2005 Feb 23)

GUIDELINE DEVELOPER(S)

Finnish Medical Society Duodecim - Professional Association

SOURCE(S) OF FUNDING

Finnish Medical Society Duodecim

GUIDELINE COMMITTEE

Editorial Team of EBM Guidelines

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Primary Authors: Editors

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

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GUIDELINE AVAILABILITY

This guideline is included in "EBM Guidelines. Evidence-Based Medicine" available from Duodecim Medical Publications, Ltd, PO Box 713, 00101 Helsinki, Finland; e-mail: info@ebm-guidelines.com; Web site: www.ebm-guidelines.com.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on December 17, 2002. The information was verified by the guideline developer as of February 7, 2003. This summary was updated by ECRI on July 15, 2004, and June 10, 2005.

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