



## Complete Summary

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### GUIDELINE TITLE

Use of back belts to prevent occupational low-back pain. Recommendation statement from the Canadian Task Force on Preventive Health Care.

### BIBLIOGRAPHIC SOURCE(S)

Use of back belts to prevent occupational low-back pain. Recommendation statement from the Canadian Task Force on Preventive Health Care. CMAJ 2003 Aug 5;169(3):213-4. [22 references] [PubMed](#)

### GUIDELINE STATUS

This is the current release of the guideline.

A complete list of planned reviews, updates and revisions is available under the What's New section at the [Canadian Task Force on Preventive Health Care \(CTFPHC\) Web site](#).

## COMPLETE SUMMARY CONTENT

SCOPE  
METHODOLOGY - including Rating Scheme and Cost Analysis  
RECOMMENDATIONS  
EVIDENCE SUPPORTING THE RECOMMENDATIONS  
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS  
IMPLEMENTATION OF THE GUIDELINE  
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT  
CATEGORIES  
IDENTIFYING INFORMATION AND AVAILABILITY  
DISCLAIMER

## SCOPE

### DISEASE/CONDITION(S)

Low-back pain

### GUIDELINE CATEGORY

Assessment of Therapeutic Effectiveness  
Prevention

### CLINICAL SPECIALTY

Family Practice  
Internal Medicine  
Physical Medicine and Rehabilitation  
Preventive Medicine

### **INTENDED USERS**

Occupational Therapists  
Physicians

### **GUIDELINE OBJECTIVE(S)**

To develop recommendations for the use of back belts to prevent occupational low-back pain

### **TARGET POPULATION**

Adults at-risk for occupational low-back pain

### **INTERVENTIONS AND PRACTICES CONSIDERED**

Use of back belts

### **MAJOR OUTCOMES CONSIDERED**

Incidence and/or duration of lost time of reported low-back pain among workers who wore back belts compared to those who did not

## **METHODOLOGY**

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

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

### **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

The published English literature to June 2002 was identified with a computerized search of MEDLINE, CINAHL, EMBASE, and HEALTHSTAR databases using the following keywords: back, lumbar, spine, belts, supports, braces, orthotic devices, prevention, and occupational. Pertinent references from articles obtained from the above search were also reviewed. Studies were included if the study participants were material handlers (i.e., exposed to lifting) and outcome measures included the incidence and/or duration of lost time of reported low-back pain among workers who wore back belts compared to those who did not. No restriction was made on the style of back belt used.

### **NUMBER OF SOURCE DOCUMENTS**

10

## **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 - Research Design Rating**

**I** Evidence from randomized controlled trial(s)

**II-1** Evidence from controlled trial(s) without randomization

**II-2** Evidence from cohort or case-control analytic studies, preferably from more than one centre or research group

**II-3** Evidence from comparisons between times or places with or without the intervention; dramatic results in uncontrolled experiments could be included here

**III** Opinions of respected authorities, based on clinical experience; descriptive studies or reports of expert committees

#### **Levels of Evidence - Quality (Internal Validity) Rating**

**Good** A study (including meta-analyses or systematic reviews) that meets all design-specific criteria\* well

**Fair** A study (including meta-analyses or systematic reviews) that does not meet (or it is not clear that it meets) at least one design-specific criterion\* but has no known "fatal flaw"

**Poor** A study (including meta-analyses or systematic reviews) that has at least one design-specific\* "fatal flaw," or an accumulation of lesser flaws to the extent that the results of the study are not deemed able to inform recommendations

\*General design-specific criteria are outlined in Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow CD, Teutsch SM, Atkins D. Current Methods of the U.S. Preventive Services Task Force: A Review of the Process. *Am J Prev Med.* 2001;20(suppl 3):21-35.

## **METHODS USED TO ANALYZE THE EVIDENCE**

Systematic Review with Evidence Tables

## **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

Not stated

## **METHODS USED TO FORMULATE THE RECOMMENDATIONS**

## Expert Consensus

### **DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Evidence for this topic was presented by the lead author(s) and deliberated upon during 4 task force meetings. Expert panelists addressed critical issues, clarified ambiguous concepts, and analyzed the synthesis of evidence. At the end of this process, the specific clinical recommendations proposed by the lead author were discussed, as were issues related to clarification of the recommendations for clinical application and any gaps in evidence. The results of this process are reflected in the description of the decision criteria presented with the specific recommendations in the technical report companion document (see the "Companion Documents" field).

The Canadian Task Force recognizes that in many cases patient specific factors need to be considered and discussed, such as the value the patient places on the clinical preventive action; its possible positive and negative outcomes; and the context and/or personal circumstances of the patient (medical and other). In certain circumstances where the evidence is complex, conflicting or insufficient, a more detailed discussion may be required.

The Task Force recognizes that in clinical practice, caregivers dealing with individual patients must make binary decisions -- "do it" or "don't do it". It also recognizes, however, that for many preventive interventions, the scientific evidence does not lend itself to such simple two-dimensional alternatives. The particular characteristic that distinguishes the Task Force methodology from traditional approaches to decision-making on prevention issues is that **evidence takes precedence over consensus**. Refer to the "Companion Document" field for "CTFPHC History/Methodology".

### **RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

#### **Recommendations Grades for Specific Clinical Preventive Actions**

- A** The CTF concludes that there is **good** evidence to recommend the clinical preventive action.
- B** The CTF concludes that there is **fair** evidence to recommend the clinical preventive action.
- C** The CTF concludes that the existing evidence is **conflicting** and does not allow making a recommendation for or against use of the clinical preventive action, however other factors may influence decision-making.
- D** The CTF concludes that there is **fair** evidence to recommend against the clinical preventive action.
- E** The CTF concludes that there is **good** evidence to recommend against the clinical preventive action.

**I** The CTF concludes that there is **insufficient** evidence (in quantity and/or quality) to make a recommendation, however other factors may influence decision-making.

## **COST ANALYSIS**

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

## **METHOD OF GUIDELINE VALIDATION**

Comparison with Guidelines from Other Groups  
External Peer Review

## **DESCRIPTION OF METHOD OF GUIDELINE VALIDATION**

**Comparison with Guidelines from Other Groups.** Recommendations from the Canadian Centre for Occupational Health and Safety, the United States National Institute for Occupational Safety and Health, and the United States Occupational Safety and Health Administration were reviewed.

**External Peer Review.** After final revision, the manuscript was sent by the Task Force to 2 experts in the field (identified by Task Force members at the meeting). Feedback from these experts was incorporated into a subsequent draft of the manuscript.

# **RECOMMENDATIONS**

## **MAJOR RECOMMENDATIONS**

Recommendation grades (**A-I**) and levels of evidence (**I, II-1, II-2, II-3, III; good, fair, poor**) are indicated after each recommendation. Definitions for these grades and levels are provided following the recommendations.

The Canadian Task Force on Preventive Health Care concludes that the existing evidence is conflicting and does not allow the task force to make a recommendation for or against the use of back belts to either prevent occupational low-back pain or to reduce lost work time due to occupational low-back pain (**grade C recommendation**) (Walsh & Schwartz 1990 [**I, fair**]; van Poppel et al. 1998 [**I, fair**]; Alexander et al. 1995 [**I, fair**]; Kraus et al. 2002 [**I, fair**]; Wassell et al. 2000 [**II-2, good**]).

### **Levels of Evidence - Research Design Rating**

**I** Evidence from randomized controlled trial(s)

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### **Recommendations Grades for Specific Clinical Preventive Actions**

**A** The CTF concludes that there is **good** evidence to recommend the clinical preventive action.

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**C** The CTF concludes that the existing evidence is **conflicting** and does not allow making a recommendation for or against use of the clinical preventive action, however other factors may influence decision-making.

**D** The CTF concludes that there is **fair** evidence to recommend against the clinical preventive action.

**E** The CTF concludes that there is **good** evidence to recommend against the clinical preventive action.

**I** The CTF concludes that there is **insufficient** evidence (in quantity and/or quality) to make a recommendation, however other factors may influence decision-making.

### **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

*Maneuver:* Use of back belts in the workplace to prevent the incidence of occupational low-back pain, or time lost from work due to low-back pain.

*Level of Evidence:*  
I, fair; II-2, good

Refer to the "Major Recommendations" field.

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

- Reduction in occurrence or recurrence of low-back pain (LBP)
- Reduction in time lost from work owing to low-back pain

### POTENTIAL HARMS

- Rubbing, pinching or bruising of ribs; hampered sitting and driving; excessive sweating
- False sense of security
- Laboratory studies show increases in blood and intra-abdominal pressure, back muscle weakening, and abdominal hernia

## 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

### **BIBLIOGRAPHIC SOURCE(S)**

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### **ADAPTATION**

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

### **DATE RELEASED**

2003 Aug 5

### **GUIDELINE DEVELOPER(S)**

Canadian Task Force on Preventive Health Care - National Government Agency [Non-U.S.]

### **SOURCE(S) OF FUNDING**

The Canadian Task Force on Preventive Health Care (CTFPHC) is funded through a partnership between the Provincial and Territorial Ministries of Health and Health Canada.

### **GUIDELINE COMMITTEE**

Canadian Task Force on Preventive Health Care (CTFPHC)

### **COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

Not stated

### **FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

Not stated

### **GUIDELINE STATUS**

This is the current release of the guideline.

A complete list of planned reviews, updates and revisions is available under the What's New section at the [Canadian Task Force on Preventive Health Care \(CTFPHC\) Web site](#).

## **GUIDELINE AVAILABILITY**

Electronic copies: Available in Portable Document Format (PDF) from the [Canadian Task Force on Preventive Health Care \(CTFPHC\) Web site](#).

Print copies: Available from Canadian Task Force on Preventive Health Care, Clinical Skills Building, 2nd Floor, Department of Family Medicine, University of Western Ontario, London, Ontario N6A 5C1, Canada.

## **AVAILABILITY OF COMPANION DOCUMENTS**

The following are available:

- Stachenko S. Preventive guidelines: their role in clinical prevention and health promotion. Ottawa: Health Canada, 1994. Electronic copies available from the [Canadian Task Force on Preventive Health Care \(CTFPHC\) Web site](#).
- CTFPHC history/methodology. Ottawa: Health Canada, 1997. Electronic copies available from the [Canadian Task Force on Preventive Health Care \(CTFPHC\) Web site](#).
- Quick tables of current recommendations. Ottawa: Health Canada, 2002. Electronic copies available from the [Canadian Task Force on Preventive Health Care \(CTFPHC\) Web site](#).
- Ammendolia C, Kerr MS, Bombardier C, with the Canadian Task Force on Preventive Health Care. The use of back belts for prevention of occupational low-back pain: systematic review and recommendations. CTFPHC Technical Rep no 02-1. London (ON): Canadian Task Force; 2002. Print copies available by contacting the Task Force at [ctf@ctfphc.org](mailto:ctf@ctfphc.org).

## **PATIENT RESOURCES**

None available

## **NGC STATUS**

This NGC summary was completed by ECRI on March 18, 2004. The information was verified by the guideline developer on March 25, 2004.

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