

EVIDENCE-BASED PRACTICE IN FIRST AID AND PREVENTION GUIDELINES OF BELGIAN RED CROSS-FLANDERS

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BACKGROUND

In the past, first aid handbooks for lay public were primarily based on experience and specialist knowledge. The Belgian Red Cross-Flanders decided to use an evidence-based approach when **revising its first aid programme**, also containing prevention advice.

OBJECTIVES

To provide **evidence-based recommendations** in a limited time span of one year for 151 topics.

RESULTS

During a one year period, the reviewers devoted 2 full-time equivalents (FTE) to prepare the evidence summaries. No relevant evidence was found for 49 of the 151 topics and for the other topics, the available evidence was limited. Eight expert panel meetings (3-4h) were needed to finalise the recommendations.

EVIDENCE-BASED GUIDELINE DEVELOPMENT

example:
syncope

We have chosen to report here the evidence and recommendations for syncope as a sample of one of the 151 diverse topics of the guideline. The example discussed here is the prevention of syncope by leg crossing.

QUESTION

example:
syncope

In individuals who suffer from orthostatic hypotension, does leg crossing prevent transient loss of consciousness or syncope caused by acute short-term drop in blood pressure in case of feeling faint?

LITERATURE SEARCH

Systematic search strategy

- ✓ Database: GIN, NGC, The Cochrane Library, MEDLINE, BestBETs, EMBASE
- ✓ Specific search terms

example:
syncope

Outcome: syncope, orthostatic hypotension; Intervention: leg, cross(ing), ...

- ✓ Search strategy: If an eligible guideline or systematic review was found, we formulated draft recommendations based on this evidence. If not, we searched controlled intervention studies. When no study was retained, the search continued for cohort and case-control studies.
- ✓ One reviewer / topic
- ✓ Period: from date of inception of the database until November 2010

In- and exclusion criteria

example:
syncope

Evidence that describes a single or a combination of non-pharmacological counter-pressure manoeuvres – other than crossing the legs while standing – were not retained while addressing this specific question.

Data extraction

example:
syncope

TABLE 1 ► EVIDENCE FOR THE QUESTION CONCERNING LEG CROSSING TO PREVENT SYNCOPE

REF	POPULATION	STUDY TYPE	COMPARISON	KEY RESULTS (INTERVENTION VS. CONTROL)
1	88 patients with vasovagal syncope	Within subjects design	Leg crossing with muscle tension vs. standing	Significant increase of systolic and diastolic blood pressure
2	21 patients with vasovagal syncope			Significant increase of systolic and diastolic blood pressure
3	48 subjects in total: 27 patients with vasovagal syncope and 21 healthy subjects			Significant increase of systolic but not of diastolic blood pressure in both patients and healthy subjects
4	13 healthy subjects			Significant increase of mean arterial pressure
5	9 patients with orthostatic hypotension	Randomised crossover trial	Leg crossing without muscle tension vs. standing	Significant increase of systolic blood pressure
6	13 subjects in total: 5 patients with orthostatic hypotension and 8 healthy subjects			Significant increase of systolic and diastolic blood pressure in patients with orthostatic hypotension; no significant difference of systolic and diastolic blood pressure in healthy subjects
7	16 subjects in total: 8 patients with sympathetic failure and 8 healthy subjects			Significant increase of mean arterial blood pressure in patients; no significant difference in healthy subjects
8	13 subjects in total: 7 patients with orthostatic hypotension and 6 healthy subjects			Significant increase of systolic and diastolic blood pressure in patients with orthostatic hypotension; no significant difference of systolic and diastolic blood pressure in healthy subjects
9	9 healthy subjects			Significant increase of orthostatic tolerance No significant difference of systolic and diastolic blood pressure

Quality assessment of body of evidence (GRADE approach)

example:
syncope

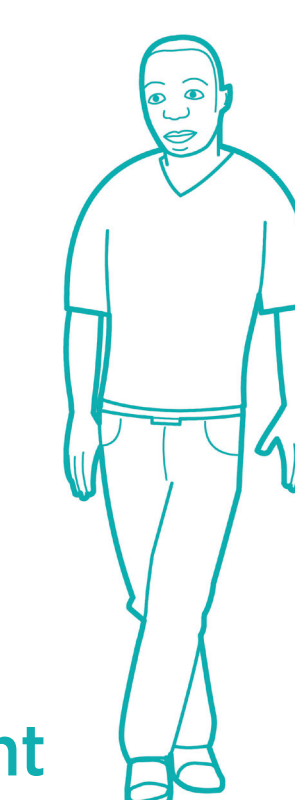
Level of evidence: moderate (limitations in study design)

FORMULATING RECOMMENDATIONS

The expert panel formulated the recommendations (by consensus) while taking into account the evidence. The health benefits, side effects, and risks have been considered when formulating the recommendations.

example:
syncope

It is recommended that leg crossing is performed to prevent syncope in case of feeling faint



VALIDATION OF THE GUIDELINE

A multidisciplinary panel of 11 experts discussed the draft recommendations. Thereafter the final recommendations of the guideline were formulated.



Revised first aid curriculum of the Belgian Red Cross-Flanders that incorporates evidence and expert judgment.

GUIDELINE UPDATE

Update in 2016.