



IFA

Institut für Arbeitsschutz der
Deutschen Gesetzlichen Unfallversicherung

Systematic reviews for occupational safety and health:

The PEROSH Clearinghouse

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EPICOH 2011, Oxford

7 September 2011

Clearinghouse for Systematic Reviews

What does this mean?

- Searching reviews on topics in occupational safety and health (OSH)
- Selecting high-quality reviews
- Presenting them to the public

→ Overview of reviews

Background: What is PEROSH?



- Partnership for European Research in Occupational Safety and Health (PEROSH)
- Network of OSH institutes from 12 European countries
- Joint collaboration on OSH topics

→ Efficient use of resources and knowledge

→ www.perosh.eu

Perosh

Network of European research institutes aiming at strengthening European research in occupational safety and health

Chairman:
Didier Baptiste (INRS), France

Vice-Chairman:
Palle Ørbæk (NRCWE), Denmark

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The partnership for European Research in Occupational Safety and Health (PEROSH)



PEROSH coordinates and cooperates on European research and development in occupational safety and health. It is a high-level research network aiming at improving the quality and dissemination of working life research via joint collaboration on priority topics, sharing of knowledge and resources and a proactive dialogue with the EU, national and international partners. The network comprises 13 Occupational Safety and Health (OSH) institutes, all playing key roles in their national affiliations to governments/authorities and health and

accident insurance systems.

[Read More...](#)

- Executive Committee
- Scientific Steering Group
- Steering Committee
- The European Affairs Coordinator

Proceedings Lunch Workshop 'Future OSH Priorities and the role of research'

On the 20th of June, PEROSH held a lunch Workshop entitled 'Future OSH Priorities and the role of research' within the context of OH&S Forum 2011 in the Hanasaari Cultural Center in Espoo (Finland).

[Read More...](#)

Proceedings PEROSH Seminar Research in Action



On 25 November 2010, European researchers and policymakers came together to reflect on how to improve the transfer of evidence-based research with regard to the working environment and the practical implementation at the workplace.

[Read More...](#)

News

- [INRS Occupational Health Research Conference 2012: Health risks associated with mixed exposures \(23-06-2011\)](#)
- [Newsletter N°5 - June 2011 \(22-06-2011\)](#)
- [21 - 23 May 2012: 2nd International Conference on Well-being and Work \(21-06-2011\)](#)
- [PEROSH Workshop on 'Future OSH Priorities and the role of research' \(19-05-2011\)](#)
- [Newsletter N°4 - March 2011 \(16-03-2011\)](#)
- [INRS Occupational Health Research Conference 2011: Risks associated to Nanoparticles and Nanomaterials \(02-03-2011\)](#)

Members

PEROSH comprises 13 Occupational Safety and Health institutes in 12 Member states.

Belgium: Prevent - Institute for Occupational Safety and Health

Czech Republic: Occupational Safety Research Institute (VUBP)

Denmark National Research Centre for the Working Environment (NRCWE)

Finland Finnish Institute of Occupational Health (FIOH)

France: Institut National de Recherche et de Sécurité (INRS)

Germany Federal Institute for Occupational Safety and Health (BAuA)

Germany Institute for Occupational Safety and Health of the German Social Accident insurance (IFA)

Italy National Institute for Occupational Safety and Prevention (ISPESL)

Netherlands TNO Work and Employment

Norway National Institute of Occupational Health (STAMI)

Poland Central Institute for Labour Protection - National Research Institute (CIOP-PIB)

Spain: Instituto Nacional de Seguridad e Higiene en el Trabajo (INSHT)

United Kingdom: Health and Safety Laboratory (HSL)

**PEROSH:
13 members**

**Clearinghouse:
8 members**

Clearinghouse of Systematic Reviews



Studies



Reviews



High quality reviews

--> overview of reviews

Clearinghouse of Systematic Reviews

Objectives:

- Exchange of expert knowledge among partner institutions on experiences with systematic reviews
- Improving methodology for writing systematic reviews
- Easy access to reviews on relevant OSH topics

Clearinghouse of Systematic Reviews

Target group:

- Practitioners
- Professionals
- Researchers
- Policy makers



Clearinghouse of Systematic Reviews

Status quo:

Clearinghouse methods document was developed including

- Recommendations for searching reviews **Example**

Example: Extract from methods document

Recommended search strategy in PubMed:

(meta-analysis as topic[mh] OR meta-analysis[pt] OR meta-analysis[tiab] OR review[pt] OR review[tiab]) NOT (letter[pt] OR editorial[pt] OR comment[pt]) NOT ((animals[Mesh:noexp]) NOT (humans[Mesh]))



(Extract from methods document)

Clearinghouse of Systematic Reviews

Status quo:

Clearinghouse methods document was developed including

- Recommendations for searching reviews
- List of literature databases and sources for OSH reviews
- Definition of selection/inclusion criteria for systematic reviews

Systematic OSH Reviews: Inclusion Criteria

- A clearly defined question with reference to **P**articipants, **I**nterventions or exposure, **C**omparisons, **O**utcomes and **S**tudy design (PICOS)
- Research question on the following aspects of occupational diseases and injuries are included and categorized:
 - Intervention: therapy and prevention
 - Prognosis
 - Diagnosis
 - Etiology
 - Prevalence/incidence
- Inclusion of an electronic search of at least one database
- Publication date 2000 to present
(unless the type of exposure warrants older reviews)

Clearinghouse of Systematic Reviews

Status quo:

Clearinghouse methods document was developed including

- Recommendations for searching reviews
- List of literature databases and sources for OSH reviews
- Definition of selection/inclusion criteria for systematic reviews
- Forms for searching, selection and evaluation

Clearinghouse of Systematic Reviews

Method paper was developed based on:


Quality assessment and critical appraisal of systematic reviews

- **SIGN** <http://www.sign.ac.uk> → SIGN Checklist
Scottish Intercollegiate Guidelines Network



- **PRISMA** <http://www.prisma-statement.org/>
Preferred Reporting Items for Systematic Reviews and Meta-Analyses
→ evidence-based minimum set of items for reporting in systematic reviews and meta-analyses



		Methodology Checklist 1: Systematic Reviews and Meta-analyses	
Study identification <i>(Include author, title, year of publication, journal title, pages)</i>			
Guideline topic:		Key Question No:	
Checklist completed by:			
Section 1: INTERNAL VALIDITY			
<i>In a well conducted systematic review</i>		In this study this criterion is:	
1.1	The study addresses an appropriate and clearly focused question.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.2	A description of the methodology used is included.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.3	The literature search is sufficiently rigorous to identify all the relevant studies.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.4	Study quality is assessed and taken into account.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.5	There are enough similarities between the studies selected to make combining them reasonable.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
SECTION 2: OVERALL ASSESSMENT OF THE STUDY			
2.1	How well was the study done to minimise bias?		

SIGN Checklist



Expanded SIGN Methodology Checklist of Systematic Reviews and Meta-Analyses for the PEROSH Clearinghouse Reviews

Clearinghouse of Systematic Reviews

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Preferred Reporting Items for Systematic Reviews and Meta-Analyses
→ evidence-based minimum set of items for reporting in systematic reviews and meta-analyses
- **AMSTAR** Assessment of Multiple Systematic Reviews (Shea et al. 2009)
- **Jos Verbeek: Experience from Cochrane OSH Group**
- **Experience of working group**
- **Literature**



Clearinghouse of Systematic Reviews

Status quo:

Methods document was developed

Reviews on certain major OSH topics have been selected

→ referring review citations are on the PEROSH website

Database of Systematic Reviews of Occupational Safety and Health

Here you can find answers to your question by type of question (intervention, etiology etc), type of worker involved, type of intervention or exposure or type of outcome involved. By clicking on the number of reviews you get access to the full references and documentation.

Related Pages

- Clearinghouse methods
- Clearinghouse of Systematic Reviews on Occupational Safety and Health
- Contact PEROSH
- How to contribute to the Clearinghouse database?

Question	Question Type	Type of workers	Intervention	Exposure	Prognosis	Outcome	Reviews
Does physical work lead to coxarthrosis?	Etiology	Any		Physical work		Osteoarthritis	7 reviews
What interventions are effective in preventing early retirement in older workers?	Intervention	Older	Any			Early retirement	1 review
What factors predict prognosis of sick leave in workers with musculoskeletal disorders?	Prognosis	Musculoskeletal Disorders			Any	Sick Leave	13 reviews
Psychosocial stress at work and cardiovascular disease	Etiology	Any		Psychosocial stress		Cardiovascular disease	5 reviews
How can needlestick injuries in health workers be prevented?	Prevention	Health care workers	Any	viral infections		Needlestick injuries	3 reviews
Is aggression more frequent among health care workers compared to other workers in public function?		Health care workers				Aggression	3 reviews

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Psychosocial stress at work and cardiovascular disease	Etiology	Any		Psychosocial stress		Cardiovascular disease	5 reviews
How can needlestick injuries in health workers be prevented?	Prevention	Health care workers	Any	viral infections		Needlestick injuries	3 reviews
Is aggression more frequent among health care workers compared to other workers in public function?		Health care workers				Aggression	3 reviews

◀ Example

Research question: Psychosocial stress at work and cardiovascular diseases

Recommend list of systematic reviews

(according to the methodology of the PEROSH Clearinghouse of Systematic Reviews)

Number	Reference	Study grading*	Link or PubMed ID
1	Eller NH, Netterstrøm B, Gyntelberg F, Kristensen TS, Nielsen F, Steptoe A, Theorell T. Work-related psychosocial factors and the development of ischemic heart disease: a systematic review. <i>Cardiol Rev.</i> 2009 Mar-Apr;17(2):83-97	+	19367150
2	Kivimäki M, Virtanen M, Elovainio M, Kouvonen A, Väänänen A, Vahtera J. Work stress in the etiology of coronary heart disease--a meta-analysis. <i>Scand J Work Environ Health.</i> 2006 Dec;32(6):431-42	+	17173200
3	Mann SJ. Job stress and blood pressure: A critical appraisal of reported studies. <i>Current Hypertension Reviews</i> , Volume 2, Number 2, May 2006 , pp. 127-138(12)	-	
4	Netterstrom B, Kristensen TS. <i>Ugeskr Laeger.</i> Psychosocial factors at work and ischemic heart disease. 2005 Nov 14;167(46):4348-55	++	16287517
5	Belkic KL, Landsbergis PA, Schnall PL, Baker D. Is job strain a major source of cardiovascular disease risk? <i>Scand J Work Environ Health.</i> 2004 Apr;30(2):85-128	++	15127782

Study grading (according to the adopted [SIGN Checklist](#) for PEROSH Clearinghouse of Systematic Reviews):

++ All or most of the criteria have been fulfilled. Where they have not been fulfilled the conclusions of the study or review are thought very unlikely to alter.

+ Some of the criteria have been fulfilled. Those criteria that have not been fulfilled or not adequately described are thought unlikely to alter the conclusions.

- Few or no criteria fulfilled. The conclusions of the study are thought likely or very likely to alter.

For search details see the [Search Documentation Form](#)

Related Pages

- Clearinghouse methods
- Clearinghouse of Systematic Reviews on Occupational Safety and Health
- Database of Systematic Reviews of Occupational Safety and Health
- How to contribute to the Clearinghouse database?

Clearinghouse of Systematic Reviews

Future:

- Improvement of methodology
- More overview of reviews on OSH topics
- More members in working group
- Platform for open calls for review projects
- More collaboration of PEROSH members



- Better answers to research questions
- Transfer of knowledge from science to practice
- Evidence-based policy making in OSH



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Thank you!