

Trimestrial newsletter from PEROSH, Rue Gachard 88/4, 1050 Brussels, Belgium, newsletter@perosh.eu

PEROSH news

Letter to the European Commission on European research collaboration in OSH

On the occasion of the ending of the NEW OSH ERA-project funded under the 6th Framework Programme, PEROSH has sent a letter to the European Commission.

With this letter, PEROSH wishes to stress the importance of joint research efforts on a European level and to convey its commitment to continue its joint R&D efforts in line with the strategy of the European Commission to work towards a European research area and joint programming. Furthermore, PEROSH wanted to emphasise its belief in the need for innovation of the OSH research and the necessity to give the OSH research a stronger European voice and visibility in order to promote the benefits for employees, enterprises and societies of healthier, longer and more productive working lives.

More information: www.perosh.eu

News from the members

INRS: Maintenance organisation and safety



Various bibliographic studies by INRS have shown that the way maintenance is organised has undergone change in recent years:

- maintenance activities are being handled by the production teams (shared or integrated maintenance);
- modes of organising maintenance in the firm are changing (geographic maintenance, development of multi-skilling);
- maintenance activities are being outsourced in a variety of forms; and
- after-sales service is developing.

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After focussing on relations between safety and in-house maintenance organisations, INRS is seeking to develop understanding of how both in-house and outsourced maintenance work really takes place. A study is in progress for observing such work in firms and then for analysing the distribution of the maintenance work between in-house and outsourced operators, and the means for co-ordinating that work. The aim of the study is to propose ways of re-arranging these working situations so as also to take account of the consequences that outsourcing of maintenance work has on in-house maintenance.

More information about the study in progress: <http://www.perosh.eu/p/85MHX5>

IFA: Feasibility study into use of the CUELA system for assessment of musculoskeletal stress in milking parlours



The feasibility study shows that the CUELA system (with extension for the recording of hand and arm postures) is suitable for use in milking parlours. The data, which were measured objectively and reproducibly, were suitable for use with any desired assessment method (e.g. RULA, OCRA, key indicator method). Although the test design was not intended to deliver statistically valid load information, the measurements were suitable for demonstration, by way of example, of a large number of stressing tasks, relating to the most diverse of load factors (statics, repetition, unfavourable joint postures, etc.). In a further step, the CUELA system was used in a degree thesis in which more comprehensive measurements were performed. These permitted comparison of the musculoskeletal load on milkers in the various different designs of milking parlours.

For future studies in milking parlours, the shoulder sensors of the CUELA system should preferably be reduced in size in order for them to be better suited to the physically constrained conditions in some milking parlours.

The project was carried out by the following partners: IFA, Germany; Forschungsanstalt Agroscope Reckenholz-Tänikon ART, Switzerland

More information: <http://www.perosh.eu/p/85MJVE>

FIOH: The Economic Dimension of Occupational Safety and Health, a EU Framework Programme Project

Jos Verbeek



Injuries at work and ill-health resulting from exposure at work are still a considerable burden for workers and the society at large. Therefore, the EU has formulated an active policy to improve the uptake of preventive policy. It is generally believed that economic mechanisms can enhance the uptake of prevention in work organisations but these mechanisms are not very well understood. It was one of the objectives of the Economics of Occupational Safety and Health project to bring researchers and stakeholders together to further elucidate the economics of safety and health at work. To this end, we organised three workshops on respectively the business case for OSH, the measurement of costs and benefits and on economic incentives. The project was undertaken with five partners: the Finnish Institute of Occupational Health and Safety, the Belgian Institute Prevent, the Polish Institute of Occupational Medicine NOFER, the department of Health Technology Assessment of the Vrije Universiteit Amsterdam and the Coronel Institute of Occupational Health from the University of Amsterdam.

The business case for OSH consists of arguments that will convince decision makers, in this case the management of the work organisation, to approve of investments for OSH. A case study presented at the workshop in Helsinki showed that it involves professionals from several disciplines, such as accounting, human resources and OSH to elucidate where the costs of injuries and occupational ill-health are located in a firm. Moreover, there is a great variation in OSH measures with a great variation in costs and benefits. It is therefore concluded that the business case for OSH will always contain a mixture of economic, legal and moral arguments. The workshop resulted in three publications in the Scandinavian Journal of Work Environment and Health (1).

The second workshop, held in Amsterdam in September 2009, was devoted to the measurement of costs and benefits of OSH interventions mainly in research projects. In the field of OSH, interventions are less well evaluated than elsewhere for several reasons. The measurement of costs in trials of occupational intervention studies is also less common. A systematic review identified only 34 occupational health trials that had measured costs alongside health outcomes. Moreover, the qual-

ity of the economic part of these studies was judged as low. At the workshop, guidelines for improvement of economic evaluation were discussed. The guidelines are formulated in an article in the Scandinavian Journal of Work Environment and Health (2). This workshop was organised jointly with the ROWER project, a sister project also financed by FP7 but carried out by a different consortium.

The third workshop was held in Bilbao in November 2009 and was jointly organised with the EU Agency for Safety and Health at Work because the Agency is also involved in a project on economic incentives for the uptake of OSH measures. Here, economic incentives are meant as monetary incentives provided by the state or insurers. It is believed that economic incentives are more effective and cheaper than regulation especially because in many areas it is very difficult to reinforce regulation in small enterprises where the majority of the workforce is located. If economic incentives are better indeed remains to be seen. The workshop resulted in four publications in the Scandinavian Journal of Work Environment and Health. (1)

All information gathered during the project was also published on the project website at www.ecosh.eu.

The project has certainly resulted in a stronger network of researchers involved in the economics of OSH and will probably result in a new society of professionals involved in the economics of OSH.

More information: <http://www.perosh.eu/p/85UG9C>

(1) *Scandinavian Journal of Work Environment and Health*, 2009, volume 35, Issue 6, http://www.sjweh.fillist_of_previous.php

(2) *Scandinavian Journal of Work Environment and Health*, 2007, volume 33, Issue 2, pp 122-130, http://www.sjweh.fillist_of_previous.php

NRCWE: White paper on mental health, sickness absence and return to work



A Danish white paper presents for the first time a systematic review of the international research literature on mental health problems, sickness absence, and return to work. Researchers from the National Research Centre for the Working Environment (NRCWE) in collaboration with a Danish expert group conducted the literature review. Drawing on the conclusions

of the review the white paper offers nine recommendations on how to facilitate the return to work and job retention of sick-listed employees with mental health problems.

The total cost of mental health problems in Denmark amounts to DKK 55 billion annually

Mental health problems have serious consequences for the affected persons and for society as a whole. A large proportion of sickness absence is caused by mental health problems such as depression, anxiety and somatoform disorders. Moreover, mental health problems account for an increasing share of disability pensions in Denmark. The annual cost of mental health problems amounts to DKK 55 billion. Sickness absence, early retirement and reduced functional ability account for 90 % of the total cost, whereas treatment of mental health problems only account for 10 % of the total cost.

Combining work modifications and evidence-based treatment reduces sickness absence

'The literature indicates that a return-to-work intervention combining work and health interventions reduces sickness absence of employees with mental health problems. However, it is essential that the intervention takes the employee's specific level of functioning into account and applies work modifications accordingly. Moreover, the systematic review shows that work-related consequences can be reduced by improving the quality of treatment of mental health problems. Treatment is improved by coordinating treatment and applying evidence-based guidelines which means that employees with mental health problems have access to medical as well as psychological treatment', concludes Vilhelm Borg, Senior Researcher at the NRCWE and chairman of the expert group.

Nine recommendations to prevent the negative consequences of mental health problems

1. Secure early detection and treatment of mental health problems.
2. Assess the individual level of functioning and assess how this influences the work ability.
3. Modify the work tasks according to any reduced level of functioning.
4. Coordinate and involve all relevant stakeholders in the return to work process.
5. Facilitate cooperation with the workplace by counseling the employee on sick-leave and return to work options.
6. Facilitate social reintegration when the employee returns to work.
7. Adopt and implement a company policy on sickness absence and return-to-work.
8. Develop a workplace culture that is open and shows accept of mental health problems.
9. Implement health promotion interventions at the workplace and reduce stress factors at the work.

Read more and find an English summary of the white paper

Read more about the white paper and its background and find a direct link to an English summary of the white paper which can be downloaded from the website of the NRCWE.

<http://www.nrcwe.dk/Nyheder.aspx?lang=en>

The white paper was prepared by senior researcher Vilhelm Borg and research assistants Mette Andersen Nexø, Ida Viktoria Kolte, and Malene Friis Andersen, all from the NRCWE.

Further information: Senior Researcher, Vilhelm Borg, NRCWE, vbo@nrcwe.dk

BAuA: The new Research and Development Programme 2010-2013 of the German Federal Institute for Occupational Safety and Health

Uwe Lenhardt / Wolfgang Janzen



The Federal Institute for Occupational Safety and Health (BAuA, Germany) is a governmental research institution affiliated to the Federal Ministry of Labour and Social Affairs (BMAS). BAuA advises the Ministry in all matters of safety and health at work, thus acting as an interface between science and policy making.

BAuA has recently published its new medium-term Research and Development Programme for the years 2010-2013. This programme shall assure that all R&D activities of BAuA are in line with its long term strategic orientation. This also includes a clearer delimitation between research, which aims at creating fundamental scientific knowledge about working conditions and their influences on workers' health and safety, and development, which shall provide specific recommendations and solutions needed for national and/or European OSH policy making (including regulation) as well as for improving company practice in the area of safety and health.

The new programme shall contribute to giving R&D, as the essential basis for performing BAuA's advisory tasks, a secure perspective, in spite of limited resources. It is an important measure to prepare R&D systematically for future challenges. Research, in particular, is to be developed in such a way that its quality and innovativeness fully and enduringly meet the standards of the international scientific community.

In the area of research, BAuA will concentrate on three focal topics which are, or will be, of outstanding importance for health and safety at work:

1. the effects of new technologies (e.g. "ambient intelligence") on safety and health at work,
 2. psychological demands related to new forms of work, and
 3. the multifactorial etiology of work-related diseases (coronary vascular diseases, musculo-skeletal diseases).
- Based on state-of-the-art scientific knowledge, BAuA's development activities will focus on the following issues:
1. methods for workplace risk assessment,
 2. information and guidance on safe and healthy products,
 3. corporate health management and occupational health physicians' practice, and
 4. concepts for assessment and regulation of chemical risks.

A detailed description of BAuA's Research and Development Programme 2010-2013 (in German language) can be found on the website of the Federal Institute for Occupational Safety and Health.

More information: <http://www.perosh.eu/p/85MKEQ>

IFA: Focus on IFA's work



The information sheets «Focus on IFA's work» shortly report about the institutes interesting activities. By now, there have been 24 supplements with a total of 325 information sheets



so far (in German) and they are completed regularly two times a year. The double-sided information sheets also inform about further literature and contact persons. One hundred and fifty-eight information sheets have been translated into English yet; further are to come.

Users may subscribe to an automatic information service on new supplements. The latest translated supplements are:

- Occupational safety at workplaces involving collaborative robots (No. 0293)
- Hand-arm vibration: risk analysis of oscillating knives (No. 0294)
- Hand-arm vibration: hazard analysis of reciprocating saws (No. 0295)

- Do surgical masks also provide protection to medical personnel? (No. 0296)
- Exposure to environmental tobacco smoke in German hospitality venues (No. 0297)
- Using virtual reality to prevent occupational accidents (No. 0299)
- The use of VDUs at drivers' workplaces (No. 0300)
- Ultrafine aerosols and nanoparticles at the workplace (No. 0302)
- Safety testing on abrasive products (No. 0089)
- Hygiene investigations aboard sea-going vessels (No. 0251)

More information: www.dguv.de/lifa, Webcode e21252

TNO: European figures on safety and health at work



In 2007 in Europe 3.2% of the employees experienced an accident at work, 8.6% was affected by a work-related disorder, 41% was exposed to physically strenuous working conditions and 28% to mental stress. These figures come from a TNO analysis made for Eurostat of the statistical data collected in 2007 in Europe on accidents at work, work-related disorders and work risks.

TNO's main source was the Labour Force Survey carried out by Eurostat each year in 29 European countries. In 2007 this survey also contained a module with questions concerning safety and health. Apart from key figures, trends, risk factors and determinants were identified through a comparison with data from 1999 and other statistics.

Differences per country

Unfortunately, little can be concluded in terms of differences per country. This is due to the considerable differences in actually carrying out the survey in and questions posed by each country. In order to prevent this situation in future, TNO has been asked to act as expert in preparing the new survey in 2013.

Publications

TNO has generated three publications in this project:

- A short brochure containing the key figures published in the Eurostat Statistics in Focus series

- A TNO report describing the study and its results
- A joint publication by Eurostat and DG Employment (in preparation).

These documents can be downloaded from the TNO website (www.tno.nl; search term: European figures). Data will also become available on the Eurostat website in mid 2010.

ISPESL: The ISPESL contribution to sustainable and responsible Nanotechnology in Italy: The White Book On Occupational Exposure To Engineered Nanomaterials

lavicoli S, Mirabile M, Boccuni F, ISPESL – Dept. of Occupational Medicine, Italy



Since the beginning of the 21st century the nanotechnologies (NT) have grown enormously, judging simply by the number of products now on the market and the funds dedicated to research and development (R&D). It is expected that by 2020 approximately 20% of all goods manufactured around the world will be based to some extent on the use of nanotechnology and in 2014 there may be as many as ten million people - about 11% of the total manufacturing sector's workforce - employed in processes using NT. However, against the background of these forecasts of NT becoming everyday items in the next five years or so, publications, patents and expenditure all indicate that R&D and research into the environmental, socio-economic, health and safety aspects of the NT, referred to by the United States Government's National Nanotechnology Initiative as Environmental, Health and Safety (EHS) issues, are moving at different speeds.

In the face of this imbalance between scant knowledge of the health risks related to NM, and the rapid growth forecast for NT in coming years, research on environmental, health and safety aspects must be boosted, particularly on risk analysis for exposed workers; critical points must be identified and OSH policies established as the NT progress, with all efforts aimed at achieving a responsible, sustainable approach to their use.

In this background, the Italian working group for identifying prevention and protection measures related to occupational exposure to NM has been created in 2008 by the National Institute for Occupational Prevention and Safety (ISPESL). Its main aims are:

- to strengthen and consolidate nation-wide collaboration in studies of the risks of occupational exposure to NM, through a survey of needs, priorities and financing possibilities;
- to develop a multidisciplinary approach to risk assessment by fostering integrated research;
- to identify the best means of communicating and transferring knowledge in the sector.

The working group is made up of ISPEL researchers dealing with different health and safety aspects of NM in the workplace, and representatives of universities and official organizations that have proved sensitive to the question, on the national level: INFN (National Institute of Nuclear Physics), ISS (National Institute of Health), FSM ("Salvatore Maugeri" Foundation) and the universities of Trieste, Parma, Milan, Rome (Cattolica and Tor Vergata), with Nanotec IT as the national reference point for NT in industry, public research and institutions.

First output of this work is the White Book on occupational exposure to engineered NM, that will be published in 2010. Its main objectives are: to define the state of the art of Italian research, development and production of engineered NM, to focus on key questions for development of research in the occupational health and safety field and to define strategies for policy impact on responsible and sustainable nanotechnology. In a first phase, the plan and schedule of this paper have been defined. In a second phase, after an editorial review and the final drafting of the book, a process for identifying National stakeholders active in this field, with different approach to the matter is started. The stakeholders involvement in a consultation process allows to obtain the contribution from institutional, business and research subjects who take part in responsible and sustainable nanotechnology development.

The White Book, as tool finalized through this process, will propose a complete "state of the art" of problems, gaps, needs and perspectives about the NT development and the related risks at workplaces. This path will lead to begin a discussion for defining regulations and policies that ensure a NT development in balance between the need of competitiveness and the need of prevention in occupational settings.

FIOH: Overtime is bad for the heart



Working overtime is bad for the heart according to results from a long-running study following more than 10,000 civil servants in London (UK): the Whitehall II study.

The research found that, compared with people who did not work overtime, people who worked three or more hours longer than a normal, eight-hour day had a 60% higher risk of heart-related problems such as death due to heart disease, non-fatal heart attacks and angina.

Dr Marianna Virtanen, an epidemiologist at the Finnish Institute of Occupational Health said: "The association between long hours and coronary heart disease was independent of a range of risk factors that we measured at the start of the study, such as smoking, being overweight, or having high cholesterol.

"Our findings suggest a link between working long hours and increased CHD [coronary heart disease] risk, but more research is needed before we can be confident that overtime work would cause CHD. In addition, we need more research on other health outcomes, such as depression and type 2 diabetes."

The Whitehall II study started in 1985 and recruited 10308 office staff aged 35-55 from 20 London-based civil service departments. Data have been collected at regular intervals and in the third phase, between 1991-1994, a question on working hours was introduced. This current analysis looks at the results from 6014 people (4262 men and 1752 women), aged 39-61, who were followed until 2002-2004, which is the most recent phase for which clinical examination data are available.

During the average 11.2 years of follow-up, Dr Virtanen and her colleagues in Finland, London and France, found that there had been 369 cases of fatal CHD, non-fatal heart attacks (myocardial infarctions) or angina. After adjusting for sociodemographic factors, they found that working three to four hours overtime (but not one to two hours) was associated with a 60% higher rate of CHD compared with no overtime work. Further adjustments for a total of 21 risk factors made little difference to these estimates.

There could be a number of possible explanations for this association between overtime and heart disease. The results showed that working overtime was related to type A behaviour pattern (people with type A behaviour tend to be aggres-

sive, competitive, tense, time-conscious and generally hostile), psychological distress manifested by depression and anxiety, and possibly with not enough sleep, or not enough time to unwind before going to sleep.

Other possible explanations include: high blood pressure that is associated with work-related stress but is “hidden” because it doesn’t necessarily show up during medical check-ups; “sickness presenteeism” whereby employees who work overtime are more likely to work while ill, ignore symptoms of ill health and not seek medical help; and, finally, it is possible that people in jobs where they have more freedom or latitude over their work-related decisions may have a lower risk of CHD despite working overtime. However, the findings were independent of all of the above factors.

The senior author of the study, Professor Mika Kivimäki: “At the moment there is no research on whether reduction in overtime work reduces CHD risk. Our own future research will include analysing data over periods of time to examine whether working long hours predicts changes in life style, mental health and traditional risk factors, such as blood pressure, blood glucose and cholesterol. We will also examine whether overtime work increases the risk of depression, as recent research suggests that depression increases the risk of coronary heart disease.”

This text is written on the basis of the Press Release of European Heart Journal on 12 May 2010.

Full article: Marianna Virtanen, Jane E. Ferrie, Archana Singh-Manoux, Martin J. Shipley, Jussi Vahtera, Michael G. Marmot, Mika Kivimäki. Overtime work and incident coronary heart disease: the Whitehall II prospective cohort study. European Heart Journal doi:10.1093/eurheartj/ehq124.

INSHT: News from the INSHT facilities in Barcelona



The National Centre for Working Conditions (CNCT), located in Barcelona, is one of the four National Centres belonging to the INSHT. It is aimed at being the national level reference in the field of working conditions.

The main functions this center performs are:

- To research on strategic aspects in the field of occupational safety and health, such as the establishment of criteria for the development of occupational standards both at the national and European levels as, for instance, the Occupational Exposure Limit Values.
- To provide information and technical guidance in the whole field of occupational risk prevention and for the improvement of working conditions.
- To provide training intended for professionals, employers, teachers, etc., including the updating of the experts’ skills in the occupational risk prevention field.
- To prepare and publish technical information on working conditions, with different approaches and sizes according to the public they are addressed to. The Technical Guides for the application of the Spanish regulations, the Technical Prevention Notes and publications for school teachers, are a few examples.

The research topics in working conditions are mainly focused on:

- Mechanical risks, risks derived from physical, chemical and biological agents, with special attention to carcinogens, and the risk of major accidents.
- Standardised methods for analysis of contaminants in air and in biological fluids, and development of advanced and specialised toxicological analyses.
- Workplace ergonomics and specifically manual handling, repetitive movements and forced positions.
- Psychosocial conditions and work organization for the improvement of occupational quality of life in balance with the personal life, pointing at emergent risks and groups of workers with specific needs.
- Advanced management systems for the improvement of working conditions and health promotion as a factor for efficiency.

Finally, these activities are developed in a collaborative frame among the personnel of all departments, called Technical Units. There are 6 Technical Units:

- Air and Biological Analyses.
- Working Material Conditions.
- Documentation.
- Ergonomics and Psychosociology.
- Information and Dissemination.
- Occupational Medicine.

These programs are given support by the Centre logistic and administrative services as well as those in the INSHT Central Offices.



About PEROSH

PEROSH is a cooperation of European working environment research institutes aiming to collaborate and to coordinate their research and development efforts for healthier, longer and more productive working lives.

Member Institutes

- Federal Institute for Occupational Safety and Health (BAuA), Germany, www.baua.de
- Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA), Germany, www.dguv.de/ifa
- Central Institute for Labour Protection - National Research Institute (CIOP-PIB), Poland, www.ciop.pl
- Finnish Institute of Occupational Health (FIOH), Finland, www.ttl.fi
- Health and Safety Laboratory (HSL), United Kingdom, www.hsl.gov.uk
- Institut National de Recherche et de Sécurité (INRS), France, www.inrs.fr
- Instituto Nacional de Seguridad e Higiene en el Trabajo (INSHT), Spain, www.insht.es
- National Institute for Occupational Safety and Prevention (ISPESL), Italy, www.ispesl.it
- National Research Centre for the Working Environment (NRCWE), Denmark, www.nrcwe.dk
- Institute for Occupational Safety and Health (Prevent), Belgium, www.prevent.be
- National Institute of Occupational Health (STAMI), Norway, www.stami.no
- Netherlands Organisation for Applied Scientific Research (TNO), Netherlands, www.tno.nl
- Occupational Safety Research Institute (VUBP), Czech Republic, www.vubp.cz

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