

PEROSH news

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



*Dr. Sergio Iavicoli,
INAIL*

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).

The lunch workshop was chaired by PEROSH Chairman Didier Baptiste and opened by Palle Ørbæk, Vice-chairman of PEROSH and Director of the NRCWE with the an overview of the output of the Seminar on Working Environment challenges of the future. The seminar was held in 2009 in Copenhagen together with international and European experts. Dr. Ørbæk presented the main challenges for the working environment and the research priorities for OSH for the longer term that came out of the Seminar.

Sergio Iavicoli, Director of the INAIL Occupational Medicine department looked into how to identify and set research priorities in Occupational Safety and Health. He stressed the importance of a participative model to involve stakeholders in the process of priority setting and the need for an integrated multidisciplinary and interdisciplinary approach in order to identify current and future priorities and to implement already available knowledge.

Eusebio Rial-Gonzalez, Head of the Prevention and Research Unit of the European Agency for Safety and Health at work (EU-OSHA) presented the activities of the EU-OSHA in terms of OSH research and research coordination and emphasised the continuous need and efforts to integrate OSH priorities into the other policy areas. In 2012, the Agency will work towards a review of the 2005 Research priorities report in order to provide input to the new EU strategies until 2020.

Raili Perimäki of the Central Organisation of Finnish Trade Unions (SAK) called for a greater interaction between research and the stakeholders at the workplace level in order to be able to grasp

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better the challenges at the workplace. Also a translation of research into comprehensible conclusions and recommendations is needed. Research should be very sensitive to signs of change in the working life. She also claimed that more valid data are needed to integrate in negotiations and regulations on national and EU level.

Kris De Meester, chair of BusinessEurope's Health and Safety Working Group made an appeal for an integrated approach of OSH taking into account all target groups and a focus on a holistic lifestyle concept including private as well as working life. In order to get the message across, a better understanding of the needs of companies, especially SMEs, is crucial.

Intervention studies and an enhanced evaluation of policies on OSH, improved methods for impact assessments of OSH interventions and valid key performance indicators are needed to assess what works in the field. The research community and companies should work more closely together in order to transfer existing state-of-the-art knowledge to the work floor and to pass on the needs of the companies to the research community. Finally, also policymakers should communicate more often their ideas and priorities for future prevention and research.

The presentations can be downloaded via the PEROSH website: <http://www.perosh.eu/p/OHSworkshop>

INRS "Nano 2011" Conference



The recent international scientific conference "Nano 2011" organised by INRS in association with PEROSH took place in Nancy (France) on 5, 6 and 7 April 2011 and brought together, more than 450 people, from 20 countries, with 24 oral presentations and 80 poster presentations. The conference served as a forum for researchers, experts, and OSH specialists from different backgrounds to share their latest knowledge and their research needs in the following fields:

- Assessment of health effects of nanomaterials.
- Characterisation of nanomaterials.
- Exposure measurement and assessment.
- Emission control and protective equipment.
- Risk assessment and risk management.

Download the conference proceedings:
<http://www.perosh.eu/p/8J2NL4>

Events

2 – 4 April 2012: INRS Occupational Health Research Conference: Health risks associated with mixed exposures

The conference is organised by the Institut National de Recherche et de Sécurité (INRS) in association with PEROSH. The interdisciplinary conference will mainly address the occupational health risks associated with mixed exposure. It will bring together researchers, experts and practitioners from different backgrounds with the aim of sharing information on the latest knowledge and discussing research needs on the following topics:

- Exposure to noise and ototoxic agents
- Multiple chemical interactions
- Physical activity and occupational exposure

The deadline for abstract submission is 15th of October 2011.

Further information:

<http://www.inrs-mixed-expo2012.fr>

21-23 May 2012: 2nd international Conference on Well being and Work

The conference will take place in Manchester, UK, from 21 to 23 May 2012.

Abstracts are invited for talks and posters on all aspects of wellbeing at work, including case studies, wellbeing services and management, national interventions, policy drivers, vocational rehabilitation, worklessness, case studies, and worker engagement and environment. The conference welcomes abstracts on both new and published work.

The deadline for abstracts is 31st Oct 2011.

The Local Organising Committee is at the Health and Safety Laboratory, a PEROSH member institute.

For further information: <http://www.hsl.gov.uk/health-and-safety-conferences.aspx> or email: wellbeing2012@hsl.gov.uk

News from the PEROSH members

Tackling Work-Related Stress in Britain



Work-related stress is a major cause of occupational ill health, poor productivity and human error. Over the last decade, the



Dr. Nadine Mellor

need to tackle work-related stress has been increasingly recognised and a significant body of international research has shown a direct link between work characteristics and employee stress and well-being. This scientific evidence has informed development of policy at a strategic level; for instance, the World Health Organisation, the International Labor Organisation, and the European Union have

all emphasised the need to assess psychosocial risks emanating from working conditions.

Within Britain, HSL worked with the national regulator, the Health and Safety Executive (HSE), to develop the 'Management Standards for Work Related Stress', which were launched in 2004. The Management Standards are published as a free-download aimed primarily at managers in medium and large enterprises, although smaller businesses may also find it helpful. The Management Standards describe conditions that are more likely to lead to higher levels of health, well-being and organisational performance; give advice to help identify the gap between what is happening in an organisation and these ideal conditions; and help managers to develop solutions to close this gap.

HSL's lead researcher into psychosocial risk factors, Nadine Mellor, has recently worked with HSE to analyse progress by enterprises in implementing the Management Standards. The team's findings are based on data collected from over 100 public sector organisations, and show that, under supportive contexts, organisations were able to follow the approach for assessing psychosocial risks, and implementing interventions.

Their analysis identifies the main enabling factors within these organisations, for instance: 'active and visible support from senior management, human resource departments, and line managers'; and 'involvement of key stakeholders such as trade unions and employees'. It also identifies critical barriers such as: 'major or on-going organisational changes'.

Full details of this analysis are in:

Mellor, N., et al. (2011), 'Management Standards' and work-related stress in Great Britain: Progress on their implementation, *Safety Science*, doi:10.1016/j.ssci.2011.01.010

The Management Standards are available at:

<http://www.hse.gov.uk/pubns/books/hsg218.htm>

Also of interest to anyone wanting to learn more about the scientific evidence base in the area of managing psychosocial risks, is the new book:

Managing Psychosocial Risks in the Workplace: The Role of Process Issues, eds C. Biron, M. Karanika-Murray and C. Cooper.

This book includes two chapters by Nadine and co-authors. It will be published in December 2011 and is now available to order.

New leaflet on light curtains to prevent injury



Light curtains are used on machinery and plant in order to protect the fingers and hands and to safeguard danger zones. With the support of the Institute for Occupational Safety and Health of the German Social Accident Insurance (DGUV) (IFA), the Section Machine and System Safety of the International Social Security Association (ISSA) has produced a leaflet describing the main functions of light curtains and addressing the necessary function tests in practical use.

Project partners were the Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (IFA), Germany and the Section Machine and System Safety of the International Social Security Association (ISSA).

Download the leaflet:

http://www.ivss.org/Light_Curtain_2011.pdf

Genetic algorithms in exposure to noise limitation

Dr. Leszek Morzynski, CIOP-PIB



There are well known measures for limiting noise and exposure to noise in the working environment. In many cases the same, desirable effect that limits the exposure to noise can be achieved by using different measures and different costs. At the same time predicted limitation of exposure to noise which can be achieved by using of selected measures often depends on many mutually connected variables. In a given case, for choosing the best means of noise limitation and their parameters, optimization algorithms, called genetic algorithms can be used.

Genetic algorithms

Genetic algorithms (Goldberg 1998) are algorithms which allow to find the best solution of a given problem, basing on a process of natural selection, known from biological systems. Set of parameters that solve the problems are coded in genes of so called "individuals" (Fig. 1b). Genetic algorithms process set of individuals called population by performing cyclic operations of evaluation, selection, crossover and mutation (Fig. 1a). So called "fitness function", used for evaluations of individuals, is crucial for proper work of genetic algorithms. Results of evaluation are used for selection of individuals. Like in natural processes, solutions with good "fitness" go through, whereas bad solutions are rejected.

Research

A research project aiming at developing genetic algorithms which can be used for limitation of exposure to noise was carried out in the Central Institute for Labour Protection – National Research Institute. The project concentrated on genetic algorithms which can be used for:

- proper arrangement of work equipment and/or work stands in the working environment that allows to minimize the worker's exposure to noise,
- optimization of workers rotation between work stands that allows to minimize the worker's exposure to noise (appropriate work schedules with adequate periods).

In the first case parameters of solution (which are coded in individuals) are coordinates of equipment and/or of work stands in working environment. In the second case genetic algorithm processes schedules which describe workers rotation between work stands. For each algorithm a method of coding param-

eters in individuals and fitness function were defined. In the fitness function cost of solution can be also considered. During the research work basic computer applications (Fig. 2), which incorporated described algorithms, were elaborated. In this application an appropriate model of working environment can be designed and an optimization process with the use of genetic algorithm can be performed. Computer applications were used for testing and verification of elaborated genetic algorithms for different parameters of modelled acoustic environment and parameters of algorithms. The carried out tests showed that elaborated algorithms operate well. Arrangement of work equipment, work stands and schedules of workers rotation between work stands achieved during optimization by genetic algorithms allowed to minimize exposure to noise of workers.

Fig. 1: Genetic algorithm (a) and used structures.

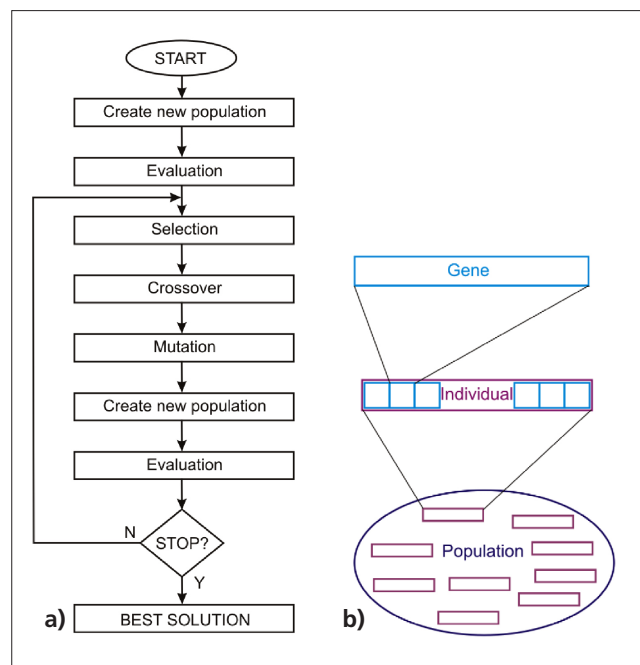
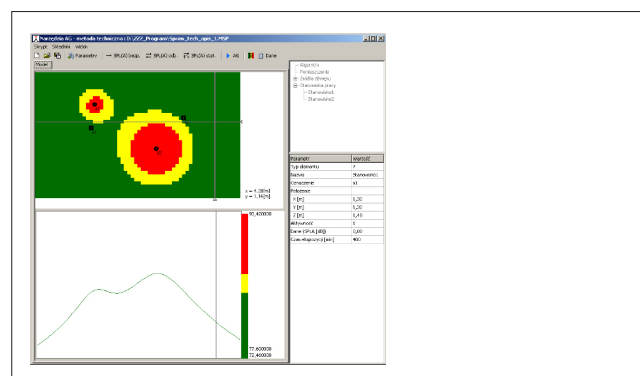


Fig. 2: Computer application for optimization of work equipment and work stands arrangement with the use of genetic algorithm.



Research conducted in CIOP-PIB showed, that the genetic algorithms can be successfully utilized for limitation of exposure to noise in working environment. Elaborated genetic algorithms can be a base for development of professional computer programs which will be used in the area of occupational health and safety.

The described project was carried out by the Department of Vibroacoustic Hazards of CIOP-PIB, within the scope of the first stage of the National Programme "Improvement of safety and working conditions" partly supported by the Ministry of Labour and Social Policy. The Central Institute for Labour Protection - National Research Institute is the Programme's main co-ordinator.

Reference:

Goldberg D. E., *Genetic Algorithms in Search, Optimization and Machine Learning*, Addison-Wesley Longman Publishing, Boston, MA, USA, 1989.

Contact: Dr. Leszek Morzynski, lmorzyns@ciop.pl

Guide to «ergonomics and office chairs» for use in the field



As the number of office workplaces grows, lack of movement increases in significance as a risk factor for musculoskeletal disorders. One possible preventive approach is that of promoting movement at the workplace. This includes the use of ergonomic office chairs embodying a range of design concepts which are intended to promote dynamic sitting. In a comparative ergonomic study of dynamic office chairs the Institute for Occupational Safety and Health of DGUV (IFA) had studied a range of office chair principles. During the associated laboratory and field studies, significant observations were gathered which may be very useful to companies during the procurement of office chairs. At the initiative of the VBG (the institution for statutory accident insurance and prevention in the administrative sector), the findings were therefore to be compiled. A VBG Info-Map was produced with the title: "Spoilt for choice: how do I purchase the right chair"/"Assistance and criteria for the selection of office chairs". Besides tips and information on ergonomics, cost-effectiveness and individual use, the Info-Map also contains an overview of test and quality marks for office chairs. An overview of different design principles of office chairs, including particularly dynamic office chairs, is also provided and describes their characteristic prop-

erties. In addition, an information sheet has been produced with the title (in German): "Which lever should I start with?". Its purpose is to facilitate ergonomic adjustment and use of the office chair.

More information:

<http://www.dguv.de/webcode.jsp?q=d112810>

TNO: "Traffic safety has to be part of health and safety policy"



'Each year 50 to 60 fatalities in business traffic'

Each year on the roads an estimated 50 to 60 working people die and a further 750 employees end up in hospital with injuries. Traffic safety gets too little attention in the health and safety policy of companies in the Netherlands, while abroad this is being taken very seriously by employers. If we do something about this, many lives could be saved.

Paulien Bongers, Innovation Director for Work and Employment at TNO suggested this much prior to the Safety Conference 2011 of the Dutch Association of Safety Experts. On the basis of Dutch and foreign studies, TNO is making a gesture to companies to improve safety. "If employers get down to tackling safety on the road, this will have a positive effect not only on the employer and his employees but also, through exemplary behaviour in traffic, on traffic safety nationwide."

Bongers: "At least a third of the traffic accidents occur during journeys to meetings and customers. Most hospitalised victims had been driving a car (38%)."

While there has been no unequivocal Dutch study of the relationship between accidents and traffic, TNO has made an inventory of many studies and has drawn conclusions from them.

Commercial vans

Bongers: "Commercial vans are involved in nearly one in every five traffic accidents during work." Employers can significantly improve safety through a few simple measures. "Employers often have no idea of the costs involved in traffic accidents, let alone the harm it can do to your company's image if a truck

bearing your logo is the cause of a fatal accident.”

Four simple measures

Good experience abroad has been gained in using four simple measures:

1. A regular eye test is one. Good sight is essential in traffic. People tend not to visit an optician for years.
2. Offer employees a course in ‘The new way of driving’. Also good for the environment.
3. Be critical in selecting lease and company cars. Employees tend to opt for the fun or fast car, so draw up a selection of safe, well built cars for them to choose from.
4. Also give employees a discount on service checks. That will prevent many technical problems on the road.

Fatigue management

Transport companies would be well advised to implement fatigue management, Bongers feels. “That keeps the driver fit in terms of health and alertness. And, as a company, be prepared to replace a colleague that complains of fatigue en route by a fresh colleague. Such measures should make the Dutch at work a model for good, proper road behaviour, making the traffic safer for all of us.”

Electromagnetic fields at workplaces. A new scientific approach to occupational health and safety



This report provides an in-depth analysis of the physical and physiological background for an effective protection of the health and safety of workers with respect to occupational exposure to electric, magnetic and electromagnetic fields (EMF), based on current scientific knowledge.

Answers are given to the concerns being raised by stakeholders and to shortcomings within Directive 2004/40/EC. Therefore, information provided in this report, especially the figures and tables in section 4.1 and 4.2, can serve as a sound base for a review of the risk-related provisions of Directive 2004/40/EC.

Project partners were IFA, BAuA, BG ETEM, Lower Saxony Water Management, Coastal Defence and Nature Conservation Agency; 2h-engineering & -research (all Germany).

Download the report via: www.perosh.eu/p/8J3D6G

INSHT creates a tool for vibration exposure assessment



To facilitate these risk evaluation procedures, the INSHT (Centro Nacional de Verificación de Maquinaria) has developed a tool which provides a mechanical-vibrations database and let the users calculate their specific vibration exposure levels.

This evaluation tool is based on a compilation of field vibration quantitative assessments, from real work situations, which were collected by the INSHT, territorial OSH Administrations, companies and other organisms.

In Spain the Directive 2002/44/EC was transposed in 2005 when a national legislation was launched (RD 1311/2005 de 4 de noviembre sobre la salud y la seguridad de los trabajadores contra los riesgos derivados o que puedan derivarse de la exposición a vibraciones mecánicas). This regulation establishes that the vibration exposure must be evaluated and, based on results of the risk assessment, technical or organizational measures should be taken by the employer in order to reduce risks. In the regulation an exposure assessment by estimation, using working methods observation, is allowed.

Once some required identification parameters have been provided to the system (machine type, model, trade-mark), the results from a variety of different specific assays are available for the users to choose their particular situations. Finally, a calculator gives back a fairly accurate exposure value. This program offers, for users and companies, an approximate vibration exposure measurement in specific workplaces when real assessments are scarcely carried out.

The INSHT encourages those OSH bodies and enterprises, which have worked on vibration assessments and measurements, to join this project in order to exchange experiences which, undoubtedly, will improve the usefulness and value of this tool.

Database is available at: <http://vibraciones.insht.es>

More information:

Centro Nacional de Verificación de Maquinaria,
cnvminsh@mtin.es

Safety culture and children: experimenting a multimedia interactive performance

M. Castriotta – INAIL, Department of Organizational Processes
ex ISPESL



The project entitled "Surely ... safe! – health and safety enter libraries" is developed around the concept of linking schools and libraries as privileged places to transmit educational values to children, fostering the promotion of the principles of safety that will be important all along their lives.

The project aims at creating and experimenting didactic tools that will be delivered to teachers to recreate in their classrooms "attracting" occasions of promotion of safety culture among children.

A characteristic that makes the project innovative is the involvement of libraries targeted at children, where the experimentation takes place; these kind of libraries are the peculiar places of easy access to information where children enter in contact with various knowledge tools (not only books) and can socialize and play together. Teachers accompany their pupils to the library and participate in a safety culture session together with librarians and OSH researchers.

The core of the session consists in an interactive performance, where situations of common life are represented by actors and where children can easily recognize their family and school



context. Connecting play and reality is very effective to indicate, easily and naturally, safe behaviours and to warn against dangerous ones.

The product "Lalla e la sua casa nel Paese di Sicurlandia" (Lalla and her home in

Safeland) tries to transmit, following an innovative and enjoyable approach, quite complex and articulate contents, concerning aspects of prevention and safety, to a peculiar target: preschool aged children. With the use of an interactive technique, the characters of Lalla and Ciccio Pasticcio are a young girl and a young boy experimenting some possible risks at home. At crucial moments, when a message of safety has

to be fixed in an authoritative way, Lalla's mother takes part in the performance to explain the correct behaviour. The use of a "theatrical" technique mixed with a number of video spots reaches the objective of maintaining children attention threshold very high, offering an educational tool entirely made with internal resources.

Domestic environment is very relevant in accidents prevention; namely, it is a peculiar environment if compared to productive sectors, where legislation and norms identify specific responsibilities and provide for safety measures. At home people feel safe and therefore can lose their level of attention against risks. This is why the number of domestic accidents is still increasing. If children are educated to correct behaviours since their tender age, this trend can be changed; it has been observed that "educated" children can become an effective way to introduce safety messages at home and in the family context.

At the end of the performance, children are divided in small groups to participate in three to four so-called "safety laboratories", where they can practice correct behaviours through different plays, that pose again the situations represented. Here children become proactive subjects of the educational activity.

Small presents and gadgets are then delivered by Lalla and Ciccio Pasticcio to all the children participating in the session, as well as a personal certificate of acknowledgment of the status of "Citizen of Safeland".

More info:

Ms. M. Castriotta, m.castriotta@inail.it

New exhibition: Nano! Benefit, value and vision of a new technology

Monika Röttgen, Federal Institute for Occupational Safety and Health (BAuA), Germany

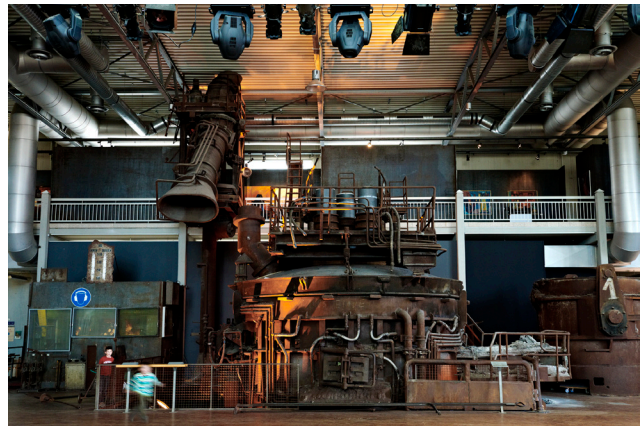
:DASA

Working World Exhibition

The DASA Working World Exhibition recently opened a temporary exhibition on nanotechnology (27 February to 9 October 2011): let's enter the secret world of atoms and molecules. In this world natural laws do not seem to apply. The journey starts in the great kingdom called nature, which has already used nano-components for million of years. An elevator leads down into the depths of the world of nanotechnology, where participation-stations and experiments explain the basics, applications and tools of nanotechnology. New occupational fields are emerging, but which consequences will «Nano» have for us?

Nano has already made its way to the consumers, especially in the areas of materials and surfaces. It is extremely strong and light as a feather; flexible and stable at the same time. Nano makes it possible. Furthermore, nanotechnology is also of great importance in the areas of medical technology / engineering, diagnostics and therapies. But where will this technology lead to? The exhibition considers both chances and risks.

The exhibition is made by the TECHNOSEUM, State Museum for Technology and Working in Mannheim (Germany). Guided tours are offered in German and English language.



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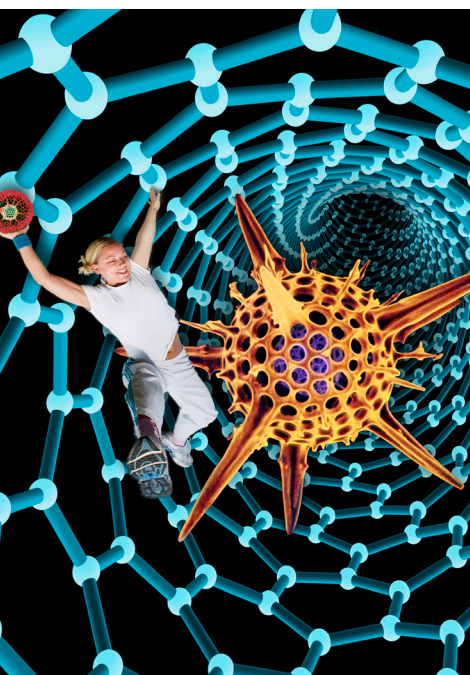
A world of experience for all the senses

The DASA Working World Exhibition is an experiential exhibition inviting to active participation on 13,000 square metres. As part of the Federal Institute for Occupational Safety and Health (BAuA), more than 180,000 people visit the DASA in Dortmund every year. Finding rooms, objects and experiments, which show two centuries of working experience, the DASA does not only offer exciting experiences but it is also designed in an innovative manner that stimulates understanding. The exhibition provides a wide range of activities aiming to incorporate the concept of safety and health at work into a comprehensive solution to problems relating to competitiveness, social compatibility and sustainability and to present a convincing and viable concept for the future. The focus is man, his health, his physical, mental and spiritual well-being. All your senses are called into play when it comes to discovering visions of tomorrow's world of work – today.

More information:

www.dasa-dortmund.de

Contact: DASA visitor's office,
besucherdienst-dasa@baua.bund.de



Copyright: Frank Ketterl, TECHNOSEUM, Landesmuseum für Technik und Arbeit in Mannheim, unter Verwendung der Abbildungen Radiolarien © medicalpicture/Institut Kage, Kohlenstoffnanoröhrchen © medicalpicture/SPM-Gruppe und Tänzerin © fotosearch

Toxic risks of bisphenol A



Bisphenol A (BPA) is a chemical compound used for manufacturing numerous products such as bottles, food packaging, heat-sensitive paper, medical equipment, paints, and adhesives.

Its impact on worker health is still ill-known, in particular as regards skin absorption. In the working environment, percutaneous absorption is the exposure pathway that ranks second after inhalation.

INRS researchers have used an experimental system for estimating skin absorption of BPA in humans. By working *ex vivo* on rat skin samples and human skin samples, they have obtained findings close to the value at which toxic effects have been observed in animals in other studies. Experimentations conducted *in vivo* on rats show that these findings can be extrapolated to the whole body of the animal.

The work should, in particular, contribute to raising awareness in occupational physicians. Skin penetration of BPA should also be taken into account in medically monitoring workers who handle the substance. This is a necessary precaution pending new findings on the toxicity of the substance in humans.

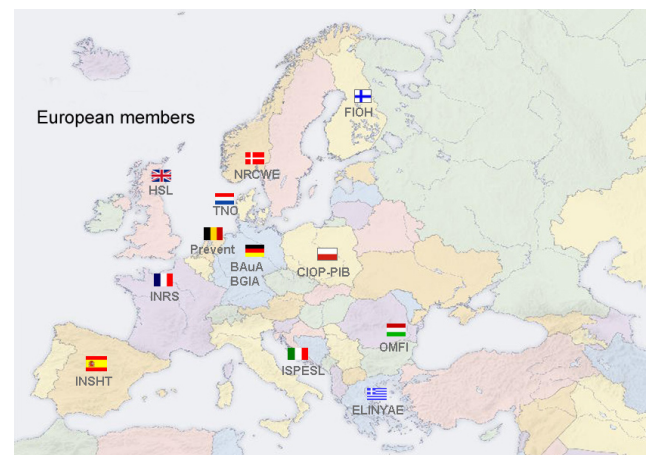
Further information: <http://www.inrs.fr/actus/BPA.html>

Working conditions of women – Results from a TC-OSH project



The project's results show that for the most part, occupational safety and health does not differentiate between the needs of women and men, and that despite their working conditions being demonstrably different, it is still geared too strongly to a "standard employee" - who is male. Greater consideration in occupational safety and health of the differences between the sexes would appear appropriate since women filled 59% of all new jobs in Europe between 2000 and 2009, and the proportion of women in employment continues to rise.

Women are generally employed in the education, health or retail sectors. They substantially work more frequently part-time than men (80% of all employees working part-time are women) and in informal employment. Their work is therefore frequently characterised by contact with customers or patients, which leads to women being subjected in particular measure to stress caused by the psychosocial aspects of their work. Domestic work is one of the fastest-growing sectors in Europe, and most of the associated jobs are filled by women. Informal and domestic work exposes women to a particular risk of discrimination on the basis of their sex, class or geographical origin, and of bullying and violence. Owing to their employment conditions often being unstable, women benefit less than men from occupational safety and health (OSH). OSH must address the psychosocial working conditions of women much more strongly in the future. Consideration must be given to the female anatomy during the development of ergonomic aids and personal protective equipment. Whereas women are less frequently the victims of occupational accidents, men and women face similar work-related health problems. Musculoskeletal diseases are the most significant category.



In 2009, the Topic Centre Occupational Safety and Health (TC-OSH) was set up by the European Agency for Safety and Health at Work (EU-OSHA). The TC-OSH is a consortium of 20 European institutes for occupational safety and health and is scheduled to run for four years. The IFA was, besides other projects, involved in a project concerning new risks and trends in the safety and health of women at work.

EU-OSHA plans to publish the results from this TC-OSH project in printed form and on its website. The results from the different TC-OSH projects are being incorporated into the EU Strategy on OSH.

A number of PEROSH partners were involved in the project: IFA, Bau-Berufsgenossenschaft, BAuA (all Germany); FIOH, Finland; CIOP-PIB, Poland; HSL, UK; INSHT, Spain; ISPESL, Italy;

Prevent, Belgium; TNO, The Netherlands as well as OMFI, Hungary; ELINYAE, Greece and FCTUNL, Portugal .

Further information:

<http://www.dguv.de/webcode.jsp?q=d112919>

Development of the CUELA Activity Measurement System for the measurement of physical activity



Labour-saving devices and the widespread use of computers have led to a great many workplaces being associated with low levels of physical activity. Physical inactivity and static body postures are accompanied by serious health risks. In order for physical activity at the workplace to be quantified and for the efficacy of measures taken at the workplace to be evaluated, the CUELA Activity System was developed for long-term analysis of movement behaviour.

The CUELA Activity System uses a total of seven sensor units to measure the test subject's movement behaviour. The sensors are attached by means of elastic and breathable strips to the back, both legs and the dominant arm under the subject's normal clothing. Body angles are first determined from the acceleration and gyroscope data, and serve as the basis for the data analysis. The energy expenditure is estimated from the nature of the activity, the intensity of movement and the personal data recorded beforehand (sex, age, body-mass index (BMI), heart rate at rest, activity level reported by the subject). Statistics are also generated automatically on the nature, intensity, duration and frequency of physical activity and body postures. The CUELA Activity System has already been used in a pilot study, for analysis of the effectiveness of measures intended to promote physical activity at workplaces associated with a low level of movement. Project partners were the Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (IFA), Deutsche Sporthochschule Köln, Psychologisches Institut Abt. Gesundheit & Sozialpsychologie (both Germany).

Further information:

<http://www.dguv.de/webcode.jsp?q=d113124>



About PEROSH

PEROSH is a partnership 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 (INAIL), 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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