

Prevention of work-related MSDs – The benefit of international cooperations

Dr. Rolf Ellegast

IFA – Institute for Occupational Health and Safety of the
German Social Accident Insurance, Germany

Outline

- **Introduction: Work-related MSDs in Europe and Germany**
- **International cooperation on work-related MSD prevention**
 - Common strategies to prevent occupational diseases
 - Joint research programs and technical developments
 - Coping with new emerging risks
- **Conclusions**
 - Benefits of international cooperation on MSD prevention
 - Future offers and needs

Work-related MSDs in Europe



- Work-related MSDs represent the main occupational disease category in the EU.
- 1/3 of all European workers suffer from work-related MSDs.*
- Exposures to physical hazards have not changed since 10 years:**
 - 1/3 of EU workers are carrying heavy loads
 - 23 % of EU workers are exposed to vibrations
 - 46 % of EU workers are working in awkward postures

*European Foundation for the Improvement of Living and Working Conditions (EFILWC, 2008).
**5th European Working Conditions Survey (EWCS, 2011)

Work-related MSDs in Germany



- Approx. 24 % of all sick leave due to MSDs*
- Approx. 26.000 new invalidity pensions due to MSDs*
- Costs of loss of production -caused by MSDs - are estimated to be 9.5 Bn €*

→ MSD prevention is one of the OSH objectives in the „Common German Occupational Safety and Health Strategy“ – „GDA“

→ DGUV prevention campaign on MSD in 2013

*German OSH Report 2008

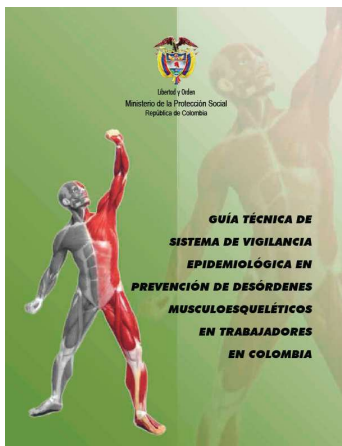
MSDs as occupational diseases in Germany



- Upper limb:
 - Diseases due to overstraining tendon sheaths, peritendineum or muscular and tendonous insertions (2101)
 - Osteoarticular diseases of the hands and wrists caused by mechanical vibration (2103)
 - Carpal Tunnel Syndrome CTS (21XX)
- Spine:
 - Intervertebral disc-based diseases of the lumbar or cervical spine (2108, 2109, 2110)
- Lower limb:
 - Meniscus lesions (2102)
 - Knee osteoarthritis (2112)

International cooperation on work-related MSD prevention

Common strategies to prevent occupational diseases



- CTS was introduced as occupational disease in Colombia since several years.
- 45 % of all MSDs are due to CTS.
- Experiences with associated risk factors and affected professions/tasks exist.
- Ongoing prevention activities in Colombian companies

Common strategies to prevent occupational diseases



- Cooperation project in the Colombian Floriculture Sector with **ARP | Sura**
- > 90.000 employees in the Colombian Floricultural sector
- Ergonomic intervention study to improve workplaces and the understanding of CTS risk factors
- Application of common risk assessment tools, e. g. CUELA measurements

→ Presentation of Yanet Zapata Tamayo

Common strategies to prevent occupational diseases



CTS Database

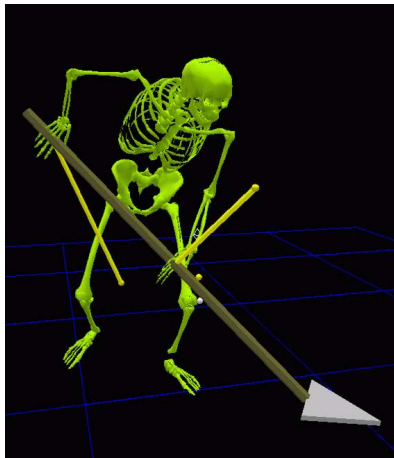
- Future aim: Development of common international exposure data bases
- Cooperation with Lund University Hospital, Sweden
- Similar structure of risk factors and associated tasks
- Interfaces to other MSD exposure databases, e. g. vibrations, spinal loads

Common strategies to prevent occupational diseases



- Spinal workloads: cooperation with Canadian accident insurances, IRSST, Montreal, Quebec
- Project “911”: Assessment of spinal exposures of emergency medical assistants
- Application of common risk assessment tools, e. g. CUELA measurements
- Development of preventive measures

Joint research programs and technical developments



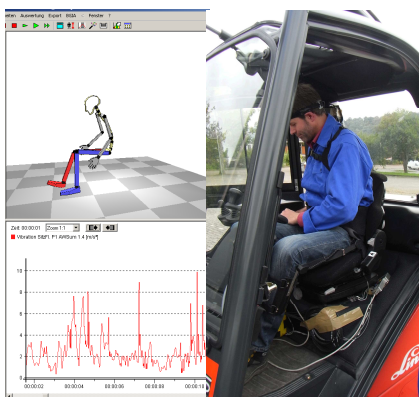
- International cooperation with accident insurances and university institutes to develop biomechanical models within joint research
- Aim: Calculation of internal musculoskeletal loads during the performance of work tasks
- On basis of the results better task specific prevention measures can be derived

Joint research programs and technical developments



- Development and calibration of measurement systems for long-term physical exposure assessment
- Cooperation with Canadian University of Sherbrooke und IRSST
- Aim: quality control of ergonomic workplace assessments

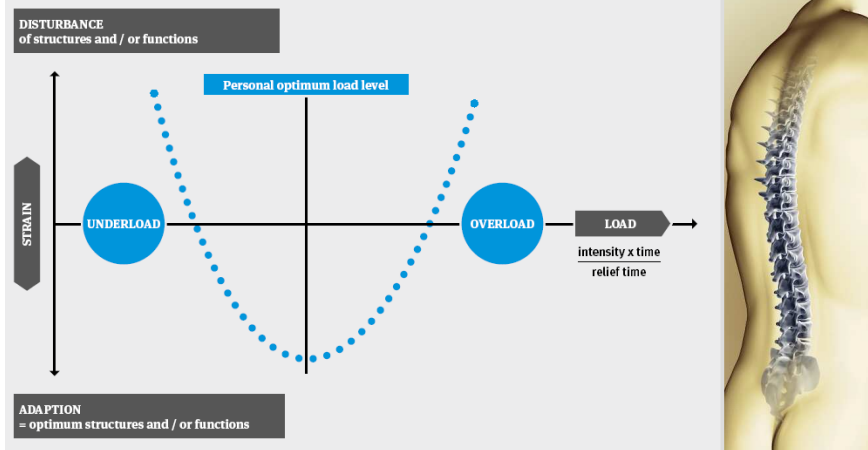
Joint research programs and technical developments



- Technical developments to tackle combined physical risks
- Cooperation with Loughborough University and INRS in France to develop and test a measuring system for combined assessment of whole body vibration and awkward postures
- Use of research results in international standardization

Coping with new emerging risks

- Example: prevention of underload at physical inactive workplaces



Coping with new emerging risks



- Increase of inactive lifestyle, 58 % of the population of industrialized countries is regularly physical inactive (WHO, 2002)
- More than 60 % of all employees in Germany are working mainly in sedentary postures (BAuA, 2008)
- Prolonged physical inactivity leads to negative effects on the musculoskeletal and cardiovascular system

Coping with new emerging risks



- Cooperation with the Dutch TNO Institute for Work and Employment 
- Development of new dynamic office concepts addressing the physical activity of office workers
- Evaluation of dynamic concepts regarding the increase of physical activity and energy consumption
- Derivation of recommendations for companies

Benefits of international cooperation on MSD prevention

- Accident insurance systems participate from the synergetic effect in
 - international exchange of experiences to prevent occupational diseases
 - joint research programs and technical developments
 - finding collective preventive measures for new emerging risks
- Avoidance of redundant work
- Common international cooperation leads to widespread and powerful prevention strategies
- Intercultural exchange

International cooperation on work-related MSD prevention

Adding Value through
International Cooperation
Conference, Dresden
June 21 to 22, 2011



Future offers and needs

- Invitation to accident insurers to
 - share our national knowledge on MSD prevention and occupational diseases
 - use common exposure databases and technical equipment
- Need in exchange of experiences in
 - coping with new occupational diseases, e.g. lower limb disorders
 - conducting a prevention campaign on MSD/LBP

THANK YOU for your attention !

Adding Value through
International Cooperation
Conference, Dresden
June 21 to 22, 2011



Contact details:

Dr. Rolf Ellegast
Institute for Occupational Health and Safety of
the German Social Accident Insurance – IFA
Alte Heerstraße 111, 53757 Sankt Augustin, Germany
www.dguv/ifa.de rolf.ellegast@dguv.de
Tel: 02241-231-2605 Fax: 02241-231-2234

Further information:

www.dguv.de/ifa

www.dguv.de/d/ifa/fac/ergonomie/index.html

