



DGUV Conference on MSD

Summary workshop 1:

Work-related MSDs and their incidence in various occupations / MSD risk factors

Prof. Thomas Kraus (DGAUM) , Dr. Elke Ochsmann (DGAUM), and
Dr. Rolf Ellegast (DGUV)

Workshop 1

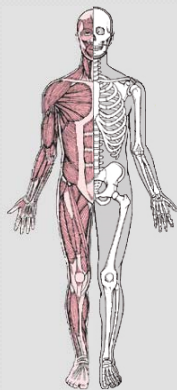
Program

Deutsche Gesetzliche
Unfallversicherung



10:00 a.m. –
12:30 a.m.

Experiences
from
international
MSD experts



MSD prevention – NIOSH, USA

Dr. R. Greg Cutlip, NIOSH, Washington DC, USA

Summary of work-related MSDs in the province of Quebec (Canada), priorities of research in MSDs at the IRSST and an example applied to manual material handlings

Prof. Andre Plamondon, IRSST, Montreal (Quebec), Canada

MSD prevalence and psychosocial risk exposure

Dr. Leonard O'Sullivan, University of Limerick, Ireland

Production system rationalisations as risk factor for MSD

Prof. Rolf H. Westgaard, University Trondheim, Norway

Lifting technique and low back loading

Dr. Idsart Kingma, University Amsterdam, The Netherlands

Collaborative research on prevention of MSDs

Prof. Richard Wells, University of Waterloo, Canada

Results of the survey on MSD prevention

Discussion and conclusion

12:30 a.m. –
1:15 p.m.

Lunch

Survey on MSD prevention priorities

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- **Dr. R. Greg Cutlip, NIOSH, Washington DC, USA:**
 - Fundamental research is needed to understand pathomechanisms
 - Age-related differences concerning adaptation to workloads
 - Results can be used to identify targeted prevention measures

- **Prof. Andre Plamondon, IRSST, Montreal (Quebec), Canada:**
 - Overview of high risk occupations for MSD in Quebec/Canada
 - Consideration of gender aspects is important
 - Exact exposure assessment in field is necessary to derive effective preventive measures



- **Dr. Leonard O’Sullivan, University of Limerick, Ireland:**
 - Overview of psychosocial risk factors associated with MSDs
 - Different risks concerning age and gender
 - Focus on low back pain and stress
- **Prof. Rolf H. Westgaard, University Trondheim:**
 - literature review on production system rationalisations as risk factor for MSD
 - Most types of rationalizations have negative effects (exception high performance work system)
 - Prevention should be integrated with management systems

Survey on MSD prevention priorities

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- **Dr. Idsart Kingma, University Amsterdam, The Netherlands:**
 - Lifting technique and low back loading
 - Prevention measures should be based on exact biomechanical and physiological assessments
 - Knowledge on the specific effect needed for each risk factor
- **Prof. Richard Wells, University of Waterloo, Canada:**
 - Prevention strategy in the Ontario transportation sector
 - Consider the potential positive effects of MSD prevention on other health and business outcomes such as safety, productivity and fatigue
 - Plan multi-component, multi-level countermeasures

Survey on MSD prevention priorities

Design



Localisation/ Examples for Disorders/Diseases	Ranking	Disorders/ Diseases	Work Tasks/Occupations Entries	Risk Factors Entries
  <p style="text-align: center;">forearm/ hand</p> <p>tenosynovitis, tendinitis, synovitis, carpal tunnel syndrome, basal thumb arthritis</p>		tenosynovitis, synovitis, wrist MSDs	office work assembly line workers metalworking occupations interior decorators	combined stresses of effort and repetition combined stresses of effort and repetition grip strength and repetition cold exposure
		carpal tunnel syndrome (CTS)	upholsterers meat/fish processing metalworking occupations	combined stresses of effort and repetition combined stresses of vibration and posture
		rhizarthrosis (basal thumb arthritis)	metalworking occupations female assembly workers	

Survey on MSD prevention priorities

Ranking evaluation method

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- Allocation of points in reverse ranking order

ranking		points
1	→	5
2	→	4
3	→	3
4	→	2
5	→	1

- Summation of all points per MSD
- Ranking of the highest scores (Top Five MSDs)

Survey on MSD prevention priorities

Ranking results (response rate: 67%)

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Ranking	Points	Disorders/Diseases
1	115	lumbar spine syndrome
2	87	knee arthrosis
3	81	tenosynovitis, synovitis, wrist MSDs
4	73	shoulder pain
5	65	carpal tunnel syndrome (CTS)
6	60	intervertebral disc-based low back complaints
7	59	cervical spine syndrome
8	37	elbow MSDs
9	24	shoulder MSDs
10	11	intervertebral disc-based neck complaints

Workshop 1

Summary

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General recommendations for a MSD campaign

- Recommendations for prevention measures
 - preventive recommendations should be drawn from research results
 - effects must be measurable
 - ideal target group:
high prevalence, high exposure to risk factors, indicators →
significant effects
 - dividing into subtopics, involving particular stakeholders
(participatory interventions)



General recommendations for a MSD campaign

- MSD topics from the ranking
 - MSDs of the lumbar spine
 - + huge body of research results
 - difficult selection of suitable target groups
 - + associated with other body region MSDs (e.g. neck, shoulder)
 - MSDs of the upper limb
 - + relevant considering the ranking of several upper limb diseases
 - + specific target groups when regarding overhead work as risk factor for shoulder complaints
 - variety of respective diseases
 - MSDs of the knee joint
 - lack of knowledge, need for fundamental research
 - + specific target groups when regarding knee osteoarthritis as occupational disease
 - diagnosis difficulty