



Consideration of Control Banding Principles to Reduce Musculoskeletal Disorders

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2nd International

Control Banding Workshop:

Validation and Effectiveness of Control Banding

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Control Banding Concept

- INT'L CHEMICAL CONTROL TOOLKIT
 - ◆ Assessment and Control of Chemical Exposures
- BASED ON COSHH ESSENTIALS
- DEVELOPED FOR ILO WITH IOHA ASSISTANCE
- UTILIZES CONTROL BANDING PRINCIPLES
 - ◆ Use in Small and Medium Size Enterprises
 - ◆ Interest in Developed and Developing Countries
 - ◆ Assign Practical Controls by Hazard Groupings
 - ◆ Uses Chemical R Phrases on Label or MSDS
- INT'L TECHNICAL ADVISORY GROUP



Why Apply to Ergonomics?

- MSDs = 40% WORLD'S HEALTH COSTS (ILO, 1999)
 - ◆ Occupational and Work-Related Diseases
- 37% WORLD'S BACK PAIN - OH RISKS (WHO, 2002)

DISEASES	COST
Tumours	2%
Skin Diseases	3%
Mental Disorders	7%
CNS	8%
Respiratory Dis.	10%
Accidents	14%
Heart Disease	16%
Musculoskeletal	40%



Ergonomics Toolkit

- MSD RISK FACTORS~CHEMICAL HAZARD GROUPS
 - ◆ Awkward Postures, Hand Force, Repetitive Motions
 - ◆ Heavy, Frequent, or Awkward Lifting
- RELATIVELY EASIER FOR ERGONOMICS
 - ◆ MSD Risks for Procedures by Profession More Finite
 - ◆ Compare to Ever-Growing Hazardous Chemicals List
- ERGONOMISTS ANALYZE COMMON RISK FACTORS
 - ◆ Risks: **Red** = High; **Yellow** = Moderate; **Green** = Lower
- HIGHEST RISK PROFESSIONS GET MORE FOCUS
 - ◆ Higher Level of Assessment, Training, Intervention
- IMPLEMENTATION CREATES ERGO PROGRAMS
 - ◆ Address Physical Exposures Over Long Term
 - ◆ Proven Prevention of Work-Related MSDs



Ergonomics Toolkit

POSSIBLE IDC IMPLEMENTATION PROTOCOL

$$\text{CBE} = \text{PE} + \text{EA} + \text{CT}$$

- ◆ CBE = Control Banding in Ergonomics
- ◆ PE = Participatory Ergonomics
- ◆ EA = Exposure Assessment
- ◆ CT = Creation of Training



Ergonomics Toolkit

- PARTICIPATORY ERGONOMICS {PE}
 - ◆ Address Social, Psychosocial, & Cultural Needs
 - ◆ Proven Successful for Practical, Inexpensive Solutions
 - ◆ In Line With Participation Action Research (PAR)
- EXPOSURE ASSESSMENT {EA}
 - ◆ Important Link With Occupational Hygiene
 - ◆ Field Compatible Tools Essential
 - ◆ Range From Checklists to 3D Modeling
 - ◆ Funding, Level of Detail, Variation of Exposures
- CREATION OF TRAINING {CT}
 - ◆ Essential to Create Ergo Programs (WHO, 1968)
 - ◆ PE Techniques = Successful Interventions
 - ◆ Local, Regional, & International Network



International Applications

- ADAPTING EXISTING RESOURCES
 - ◆ Much Expertise in DCs for Developing Ergo Programs
- WASHINGTON STATE'S ERGONOMIC RULE
 - ◆ <http://www.lni.wa.gov/wisha/ergo/ergorule.htm>
 - ◆ Existing On-line Link for Basic Ergonomics Information
 - ◆ Available in English and Spanish
 - ◆ Assess “Caution Zone” Jobs for Education & Evaluation
 - ◆ Awkward Postures, Force, Repetition, Impact, Lifting
 - ◆ Similar to Chemical Toolkit, Results Lead to Controls
- ACGIH TLVs FOR PHYSICAL AGENTS
 - ◆ Hand Activity, Hand/Body Vibration, Lifting
 - ◆ Great for EA, Evaluate Exposure Reduction
 - ◆ Emphasizes Worker Involvement & Program



Discussion

- UNIFIED APPROACH ESSENTIAL
 - ◆ First Step in Reducing MSDs Internationally
- COLLABORATIVE, MULTIDISCIPLINARY EFFORT
 - ◆ WHO Collaborating Centres Support
 - ◆ Task Force 10; Preventative Technologies
 - ◆ Ergonomics Toolkit; IEA, IOHA, and ILO
 - ◆ Combine Implementation With ILO-OHS 2001
 - ◆ Expand by Profession Into an OESH Tool*BOX*
 - ☞ CHEMICAL, ERGONOMICS, PHYSICAL/BIO, SAFETY
- STANDARDIZED CRITERIA=ACCURATE MSD DATA
- RESEARCHERS; USE, APPLY, ADAPT TOOLS
 - ◆ Full Day Logging Devices, Internet Modeling
- ABILITY TO SHARE TRAINING INSTANTLY



Control Banding in Ergonomics

- FOCUS ON HIGH PHYSICAL EXPOSURE PROFESSIONS
 - * AGRICULTURE, FISHING, FORESTRY, MINING, TEXTILES, MANUFACTURING
- THE PIECES OF THE PUZZLE ARE THERE
 - * ALL THAT NEEDS TO BE DONE IS THE REFINING OF EXISTING PROGRAMS

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Control Banding in Ergonomics

THANK YOU!

For Your Time

& Consideration