PREVENTING MUSCULOSKELETAL DISORDERS AND TRAINING: FAQ’S

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F.A.Q.’s

WHAT
• IS TRAINING?

WHY
• IS NEEDED?

WHO
• MUST BE TRAINED?

HOW
• SHOULD BE THE PROPER TRAINING?

WHICH
• SHOULD BE THE COMPETENCIES?

HOW
• DO WE KNOW IF OUR TRAINING IS EFFECTIVE?

CONCLUSIONS
WHAT is TRAINING?

TEACHING / DEVELOPMENT

SKILLS

KNOWLEDGE

USEFUL COMPETENCIES

IMPROVING CAPABILITY, CAPACITY, PRODUCTIVITY, PERFORMANCE

TO LEARN, MAINTAIN, UPDATE AND UPGRADE SKILLS THROUGHOUT WORKING LIFE
WHY is needed?

- Promote behavioural and attitudinal changes
- Safer working practices
- Less physical exertion
- Reduce MSDs
- Improve the quality of care
WHY is needed?

Legal requirements

- Directive 89/391 EEC (Safety&Health)
- Directive 90/269 EEC (Manual handling of loads)

International standards

- ISO/TR 12296
  Ergonomics - Manual handling of people in the healthcare sector
WHO must be trained?

Management

Healthcare workers

New and untrained workers

Staff

Key worker/ergo-coach / peer leader

Periodically

Change of working conditions

When effectiveness of training highlights
WHO must be trained?

Caregiver students

ISO/TR 12296
Ergonomics — Manual handling of people in the healthcare sector

If not already provided, it is recommended that the indicated educational contents be included in the teaching programmes of caregiver schools.
WHO must be trained?

- **NURSING SCHOOLS**

  Dutch Study

  Method: Survey (n= 45 nursing schools, response 80%) and expert meeting

  On average 11.4 hour is spend on patient handling, ergonomics

  Almost 50% of the schools offer ergonomics as a special subject

  80% systematically intertwine patient handling in other subjects

  89% of the schools explicitly focus on ergonomics during internships

WHO must be trained?

- **NURSING SCHOOLS**

<table>
<thead>
<tr>
<th>German Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documents on which nursing vocational education is based in different German federal states</td>
</tr>
<tr>
<td>Inadequate form of specialist learning materials</td>
</tr>
<tr>
<td>Insufficient prerequisites for the proper teaching of Ergonomic Patient Handling among teachers</td>
</tr>
<tr>
<td>Lack of regulations governing cooperation between learning sites</td>
</tr>
<tr>
<td>Differences in the implementation of practical training at practical learning sites</td>
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</tbody>
</table>

HOW should NOT be the proper training?

- Isolated action
- Lifting techniques based solely on “proper” body mechanics

### Lumbosacral compressive force in Newtons

<table>
<thead>
<tr>
<th>Action</th>
<th>Conventional technique</th>
<th>Optimized technique (body mechanics)</th>
<th>Optimized technique + aids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moving a patient towards the bed’s head</td>
<td>690</td>
<td>540</td>
<td>280</td>
</tr>
<tr>
<td>Moving a patient in the bed sidewards</td>
<td>490</td>
<td>260</td>
<td>190</td>
</tr>
<tr>
<td>Placing a patient from sitting at bed’s edge in a chair</td>
<td>510</td>
<td>370</td>
<td>310</td>
</tr>
</tbody>
</table>

### Limits for compressive forces on lumbar discs

<table>
<thead>
<tr>
<th>Age</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>440 N</td>
</tr>
<tr>
<td>30</td>
<td>380 N</td>
</tr>
<tr>
<td>40</td>
<td>320 N</td>
</tr>
<tr>
<td>50</td>
<td>250 N</td>
</tr>
<tr>
<td>≥ 60</td>
<td>180 N</td>
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</tbody>
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Dortmund Lumbar Load Study (Jäger, 2007)
HOW should be the proper training?

Safe Patient Handling Strategy/POLICY

- Assessment
- Equipment selection
- Training
- Working environment
- Effectiveness
HOW should be the proper training?

TRAINING PLAN

ISO/TR 12296

- Tailored to the needs of staff and patients
- Based on risk assessment
- Required competencies
HOW should be the proper training?

**TRAINING PLAN**

ISO/TR 12296

- Appropriate records and supervision of training should be maintained
- Theoretical
- Hands-on practice
  - Appropriate equipment
- Assessment of education and training effectiveness is recommended
WHICH should be the competencies?

ISO/TR 12296

CORE COMPETENCIES

- Knowledge of legal responsibilities, local policy and procedures
- Understanding potential risk factors in patient handling activities
- Acquired basic knowledge of ergonomics, anatomy and biomechanics of the musculoskeletal system, causes of injury and musculoskeletal disorders
- Ability to carry out risk assessment of patient’s condition
- Ability to select and use appropriate equipment safely
- Knowledge and skills to apply principles of normal human movement to achieve safer patient handling and maximize patient independence
HOW do we know if our training is effective?

Managers/supervisors monitor compliance with patient handling policies and procedures

Patient handling risk assessments are in place and are implemented

Managers audit and monitor practice in the workplace and correct unsafe practices of staff

Managers monitor the outcomes and effectiveness of the training as an integral part of a risk management system

Managers check whether lifting equipment is being stored, serviced and used correctly

Performance is measured against agreed-upon standards; competencies or the work technique are assessed

Reporting and investigation of accidents/incidents which result from patient handling activities

Find out more: TROPHI: development of a tool to measure complex, multi-factorial patient handling interventions, Fray M, Hignett M. Ergonomics (2013)
CONCLUSIONS

TRAINING

SYSTEMIC APPROACH

- SCHOOL + WORKING PLACE
- THEORETICAL + PRACTICAL
- AIDS AND EQUIPMENT
- EFFECTIVENESS
MERCI BEAUCOUP!

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