

Abstract from:
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International Conference

"Fair Globalization – Safe Workplace –
Policies, Strategies and Practices for Sustainable Development"
24.-26. October 2005, Düsseldorf, Germany
Messe und Kongresszentrum

Session 2: 25 Oct. 2005; 15:45-16:00

***Musculoskeletal Prevention with Overhead Linesmen – Presentation of
an Interdisciplinary Project***

SPEAKER:

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FUNCTION:

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ABSTRACT:

"Musculoskeletal disorders are the most common causes of severe long-term pain and physical disability across the globe. They have enormous impact on the individual, society and health care social systems. There are effective ways **to prevent these conditions, but we must act on them now.**" (Kofi Annan)

This is equally true for the workplace.

Even in the 21st century certain activities have remained in industry – *and indeed new ones have emerged* – which require an extreme amount of physical strain and which frequently lead to injuries and to damage arising from repetitive strain. This affects not only the individual, but also the organizations bearing primary and secondary costs. *Liberalization of the energy market has also led to greater physical strain in a variety of workplaces, partly due to staff cuts, which have been quite extreme in some cases. This has made it necessary to research whether staff who will be spending more time in certain work processes than they are the moment can really be exposed to such an increase in physical strain throughout their working lives or whether they might not suffer physical damage.*

As a major energy group, RWE has now taken the *first steps* by launching a musculoskeletal prevention programme for its overhead line staff. This programme is based on interdisciplinary expertise gained from engineering, biomechanical sports science and medicine.

The **aim** was to

- define work-related strain factors,
- define the physical strain tolerance of the individual, implement intervention activities, based on the results.

Methods and results :

82 line staff were examined under a three-year study, from 2003 to 2006. After the results from an on-site workplace analysis the relevant forms of strain were given realistic simulations under lab conditions and the musculoskeletal strain was recorded, using a specially developed biomechanical diagnostic tool that would allow the **quantification of individual performance under workplace-specific conditions**. As well as providing "clinical" research results, this ensured a high level of reproducibility, particularly for any follow-up examinations. The results were used as the basis for an intervention programme comprising not only a basic module for everyone but also a specific work-out module for each individual.

After only a year we noted a high level of impact of our interdisciplinary prevention programme, which appears to be equally applicable to other occupational groups:

- Considerable acceptance among the workforce
- Improved subjective well-being
- Improvement of performance parameters, e.g. energy, mobility, lifting techniques
- Cost reduction