

Epidemiology meets work-related musculoskeletal disorders

Keynote presentations of the joint scientific meeting PREMUS-ISEOH'98

III International scientific conference on prevention of work-related musculoskeletal disorders

XIII International symposium on epidemiology in occupational health

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Two scientific committees within the International Commission on Occupational Health (ICOH), the Scientific Committee on Musculoskeletal Disorders and the Scientific Committee on Epidemiology in Occupational Health, organized a joint meeting on 21-25 September 1998 in Helsinki. This meeting consisted of two overlapping events, the 3rd International Scientific Conference on Work-related Musculoskeletal Disorders (PREMUS'98) and the 13th International Symposium on Epidemiology in Occupational Health (ISEOH'98). The purpose was, in addition to the regular agenda of the two meetings, to discuss methodological issues encountered in the epidemiology of work-related musculoskeletal disorders and also to enhance networking and collaboration between research scientists in the two fields.

This supplement consists of the keynote presentations from the PREMUS-ISEOH'98 meeting. A wide range of interesting topics was discussed, starting from the possibilities for regulatory action to prevent musculoskeletal disorders, a controversial issue. It is argued that regulatory action is needed and that researchers should get more involved in regulatory activities. Psychophysics is an old branch of psychology concerned with the relationship between physical stimuli and sensation. Psychophysical data still need validation, but it is suggested that psychophysical measures should be utilized more often in studies of musculoskeletal disorders. For the effect of physical and mental stressors a three-factor conceptual model is proposed, individual sensitivity being the third one. Exposure assessment strategy for work-related risk factors for musculoskeletal disease depends on many factors, such as measuring devices, feasibility, and variation at the workplace. The selection of exposure variables should allow specific etiologic inferences, for which also an appropriate characterization of episodic musculoskeletal problems is needed. It is also important to understand the underlying pathomechanisms of the disease under study by epidemiologic methods. Advantages and disadvantages of different epidemiologic study designs are discussed. Many health outcomes, musculoskeletal disorders among them, occur as episodic events which pose challenges to epidemiologic methods. Several modeling approaches are described that can be effectively applied to such events. In epidemiologic studies on occupational health, some data may be available only at the group level and therefore require a multilevel approach in the data analysis. This approach is only starting to appear in the health sciences. In all industrial countries there is an inverse social gradient in morbidity and mortality. It is demonstrated that attention to psychosocial factors inside and outside the workplace have the potential to reduce this gradient. When a better understanding of the impact of work-related disorders is needed, complementary qualitative and quantitative approaches are often warranted. The limits and advantages of both approaches need to be understood. Finally, methods for health and hazard surveillance, as well as possibilities for developing surveillance in the future, are discussed.

We wish to thank all the authors for their thoughtful contributions. We also hope that this supplement creates interest and stimulates questions among research scientists in the fields of occupational epidemiology and musculoskeletal disorders.

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