DESCRIPTION

Back pain is a leading cause of suffering, high medical costs, and loss of productivity in the workplace. Through a multidisciplinary approach, this book addresses the widespread problem of musculoskeletal injuries in general and lower back injury in particular. It presents the principles of ergonomics and bioengineering and their application to the prevention and rehabilitation of lower back injuries. Special attention is given to ergonomic methodologies such as human performance analysis and functional capacity assessment. Ways to structure workplaces and job tasks so as to minimize stresses to the back and improve productivity are presented. Case studies and population profiles are drawn from ergonomic research performed at the Comprehensive Pain and Rehabilitation Center at the University of Miami. The authors discuss the origins of low back pain, events that lead to injury, and the consequences to employers. Back pain is correlated with specific occupational factors. Nearly 150 illustrations further these discussions. Among the important preventive and therapeutic measures explored are:

* Body mechanics education and muscle reeducation

* Workplace design and biomechanics

* Functional electrical stimulation, electromyography, and biofeedback

* Management of low back pain during rehabilitation and post-rehabilitation stages

Extensive epidemiological data show the devastating effects of low back pain on the economy, industry, and healthcare delivery. Also examined are the role of medical personnel in the evaluation and treatment of back pain and the contributions that can be
made by an ergonomist who is part of a multidisciplinary healthcare delivery team. Ergonomics in Back Pain is intended for use by ergonomists, physicians, physical therapists, occupational therapists, vocational counselors, chiropractors, osteopaths, and rehabilitation medicine specialists, as well as by engineers, workplace designers, and people working on the implementation of the Americans with Disabilities Act.

About the Authors

Tarek M. Khalil, Ph.D., P.E., is Chairman of the Department of Industrial Engineering and Professor of Industrial Engineering Biomedical Engineering, Neurological Surgery, and Epidemiology and Public Health, as well as Chief of the Ergonomics Division of the Comprehensive Pain and Rehabilitation Center, at the University of Miami, Florida. Elsayed M. Abdel-Moty, Ph.D., is Research Assistant Professor in the Department of Industrial Engineering and Clinical Supervisor of the Ergonomics Division of the Comprehensive Pain and Rehabilitation Center, at the University of Miami, Florida. Renee S. Rosomoff, R.N., M.B.A., C.R.N., is Adjunct Associate Professor of Neurological Surgery and Programs Director of the Comprehensive Pain and Rehabilitation Center, at the University of Miami, Florida. Hubert L. Rosomoff, M.D., D.Med.Sc., is Chairman of the Department of Neurological Surgery in the School of Medicine and Medical Director of the Comprehensive Pain and Rehabilitation Center at the University of Miami, Florida.

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