

Repetitive work and musculoskeletal disorders

Extracts of a CIS bibliography

CIS 06-573 Carpal tunnel syndrome: Overuse of the hands. (French: Syndrome du canal carpien: des mains trop sollicitées) Durcy M., *Prévention BTP*, Feb. 2006, No.82, p.52-54. Illus. 2 ref. (In French)

Carpal tunnel syndrome is the most compensated occupational musculoskeletal disease (MSD) in France. It represents 23,000 cases each year, or approximately 37% of all notified MSDs. This article describes the symptoms and cause of the disease and summarizes the main findings of a recent epidemiological study on carpal tunnel syndrome in France. (105159)

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CIS 06-1359 Upper-extremity musculoskeletal disorders. (French: Les troubles musculo-squelettiques du membre supérieur) Aublet-Cuvelier A., Institut national de recherche et de sécurité, 30 rue Olivier-Noyer, 75680 Paris Cedex 14, France, Nov. 2005. 6p. Illus. 20 ref. Price: EUR 1.50. Downloadable version free of charge. (In French)

Internet: [http://www.inrs.fr/INRS-PUB/inrs01.nsf/inrs01_catalog_view_view/431BA76993D421A4C12570BA005291B1/\\$FILE/ed5031.pdf](http://www.inrs.fr/INRS-PUB/inrs01.nsf/inrs01_catalog_view_view/431BA76993D421A4C12570BA005291B1/$FILE/ed5031.pdf)

Musculoskeletal diseases (MSDs) constitute the leading cause of compensated occupational disease in France and their cost continues to increase. This guide covers specifically MSDs of the upper extremities (MSD-UE) which include the neck, elbow, wrist and hand. Also termed "periarticular diseases", MSD-UEs are multifactorial diseases that include an occupational component. Contents: definition, statistics, causes; risk factors; prevention measures to be implemented; legislation and regulations; internal and collaborative research programmes carried out by INRS. (105914)

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CIS 06-979 Ergonomics, musculoskeletal disorders and computer work. Wahlström J., *Occupational Medicine*, May 2005, Vol.55, No.3, p.168-176. Illus. 105 ref. (In English)

This literature review summarizes knowledge regarding ergonomics and musculoskeletal disorders associated with computer work. A model of musculoskeletal disorders and computer work is proposed, which emphasizes the associations between work organization, psychosocial factors and mental stress on the one hand and physical demands and physical load on the other. It is hypothesized that perceived muscular tension is an early sign of musculoskeletal disorder, which arises as a result of organizational and psychosocial factors as well as from physical load and individual factors. Interventions aimed at reducing musculoskeletal disorders due to computer work should be directed at physical, ergonomic, organizational and psychosocial factors. Interventions should be carried out with management support and the active involvement of workers. (105378)

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CIS 06-760 Syllabus of a series of seven training courses on repetitive strain injury. (French: Contenu d'une série de sept cours de formation sur les lésions dues à des efforts répétitifs) Eurosafe Project, Internet document, ca 2005. 24p. (In French)

Internet: <http://www.eurosafeproject.org/french/syllabus.pdf>

Syllabus of a series of seven training courses on repetitive strain injury: general introduction on occupational safety and health; ergonomics and design of a workstation; study of speed of work and work quotas; hazards and their effects; notification of occupational accidents and diseases; legal aspects; practical

application of occupational safety and health, environmental protection and ergonomics in the textile industry. (105282)

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CIS 06-475 A survey of repetitiveness assessment methodologies for hand-intensive tasks. You H., Kwon O., *International Journal of Industrial Ergonomics*, Apr. 2005, Vol.35, No.4, p.353-360. 41 ref. (In English)

This literature review surveyed measures, measurement methods, and analysis techniques used for assessing the repetitiveness of hand-intensive tasks. Repetitiveness measures were classified in terms of dimensional type (cycle time and frequency) and analysis scope (work cycle, body region and force exertion). It was found that frequency measures were used more than cycle time measures and hand/wrist movement frequency was used most often. Measurement methods were grouped into objective and subjective methods, and analysis techniques were classified into statistical and spectral techniques. The survey findings may be used for the selection of an appropriate methodology for repetitiveness assessment in the workplace. (104837)

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CIS 06-314 Musculoskeletal disorders: Where we are, and where we could be. (French: Les troubles musculo-squelettiques: état de la question et perspectives d'action) Gauthy R., *HESA Newsletter*, June 2005, No.27, p.22-27. 5 ref. (In English, French)

Internet: <http://hesa.etui-rehs.org/uk/newsletter/files/Newsletter27p22-27.pdf> ;
<http://hesa.etui-rehs.org/fr/newsletter/files/Newsletter27p22-27.pdf>

Review article on musculoskeletal disorders (MSDs) in Europe. Topics addressed: object, scope and definitions; epidemiological aspects; failure of existing preventive measures; list of European preventive instruments; suggested improvements in legislation and other instruments to stem the growth of MSDs in Europe. (104792)

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CIS 03-1457 Ergonomic approach to the evaluation of repetitive movements in production processes. (Spanish: Metodología ergonómica para la evaluación de movimientos repetitivos en los procesos productivos) Iglesias Traserra J., *Prevención*, July-Sep. 2003, No.165, p.10-26. Illus. 6 ref. (In Spanish)

This article presents an approach to the carrying out of an ergonomic evaluation of assembly-line workplaces and analysing tasks requiring the use of equipment or tools that involve repetitive or cyclical movements of upper extremities. Within the workplaces and tasks to be evaluated, the first step consists of identifying the critical operations and body parts involved. Next, the data are collected by means of questionnaires based on systematic observations (effort index method or RULA method) or video recordings. The evaluation is carried out with the help of a computer application that integrates the data collected with ergonomic criteria. Finally, an evaluation report is prepared for each workplace or task analysed, mentioning the ergonomic improvements to be implemented. (102184)

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CIS 03-1178 Musculoskeletal diseases. (French: Les troubles musculo-squelettiques) Guérin S., *Cahier Pratique Tissot - Guide de la santé, sécurité au travail*, Editions Tissot, BP 109, 74941 Annecy-le-Vieux Cedex, France, Oct. 2003, No.15, p.1-32 (whole issue). (In French)

While in France the number of cases of occupational diseases increased nearly six-fold in 20 years, that of recognized musculoskeletal diseases (MSDs) increased 35-fold. MSDs represent 76% of all cases of recognized occupational diseases, with more than 18,000 MSDs recognized and compensated in 2001. Contents of this special issue on MSDs: definitions; causes of the disease; occupational diseases;

prevention methods. Appendices on the carpal tunnel syndrome and the use of computers are included. (102287)

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CIS 03-634 Carpal tunnel syndrome due to keyboarding and mouse tasks: A review. Fagarasanu M., Kumar S., *International Journal of Industrial Ergonomics*, Feb. 2003, Vol.31, No.2, p.119-136. 85 ref. (In English)

A literature review enabled the highlighting carpal tunnel syndrome (CTS) risk factors in data-entry tasks. A comparison of several keyboards with respect to design of key depression forces and their effect on carpal tunnel pressure was provided. The factors implicated in the occurrence of CTS due to computer work were reviewed. Many so-called ergonomic keyboards change the musculoskeletal region exposed to risk, instead of eliminating hazardous postures. The ergonomic assessment of new devices should precede their introduction and not follow it. Future research should be directed to better understanding of factors to be eliminated or modified, to assess the impact of workstation redesign and to uncover the interrelationships between different factors that contribute to the development of CTS. (101633)

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CIS 03-81 Aching arms (or RSI) in small businesses - Is ill health due to upper limb disorders a problem in your workplace? Health and Safety Executive, HSE Books, P.O. Box 1999, Sudbury, Suffolk CO10 2WA, United Kingdom, Feb. 2003. 12p. Illus 6 ref. (In English)

Internet: <http://www.hse.gov.uk/pubns/indq171.pdf>

This booklet is designed to help employers and managers in small enterprises to understand upper limb disorders (ULDs), often called "RSI" (repetitive strain injury). Contents: definition; symptoms; difference between ULD and RSI; managing ULDs; risk assessment in the workplace; measures for reducing the risks; dealing with ULDs. (101471)

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CIS 03-461 The nature of work-related neck and upper limb musculoskeletal disorders. Buckle P.W., Devereux J.J., *Applied Ergonomics*, May 2002, Vol.33, No.3, p.207-217. Illus. 80 ref. (In English)

This article presents the results of a literature review of work-related musculoskeletal disorders of the neck and upper extremities in the European Union. Mechanisms of musculoskeletal disorders affecting tendons, ligaments, nerves, muscle, circulation and pain perception are reviewed and conceptual models for the pathogenesis of musculoskeletal disorders affecting the neck and upper limbs are presented. The epidemiological evidence pointing towards occupational causes of these disorders is discussed. A relationship between the performance of work and the occurrence of neck and upper extremity disorders is evident. Prevention strategies should focus on work organization factors as well as on the active involvement of the individual worker. The current knowledge is sufficient to enable informed decisions to be made on future research needs and prevention strategies at the societal, organizational and individual level. (101402)

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CIS 02-1155 Upper limb disorders in the workplace. Health and Safety Executive, HSE Books, P.O. Box 1999, Sudbury, Suffolk CO10 2WA, United Kingdom, 2nd ed., Feb. 2002. vi, 122p. Illus. 82 ref. Price: GBP 9.50., ISBN 0-7176-1978-8 (In English)

Upper limb disorders (ULDs) are conditions which affect the muscles, tendons, ligaments, nerves or other tissues and joints of the neck, shoulders, arms, wrists, hands and fingers. This manual provides guidance on minimizing the risks of workplace-related ULDs, in particular by implementing a cooperative programme

involving managers and workers in seven-step process: understanding the issues and commitment to action; creating the right organizational environment; assessing the risks of ULDs at the workplace; educating and informing the workforce; managing occurrences of ULDs; carrying out regular checks to programme effectiveness. Appendices include case studies, worksheets for risk assessment, medical aspects of ULDs and legal aspects. (100097)

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CIS 02-948 Risk of shoulder tendinitis in relation to shoulder loads in monotonous repetitive work. Frost P., Bonde J.P.E., Mikkelsen S., Andersen J.H., Fallentin N., Kaergaard A., Thomsen J.F., *American Journal of Industrial Medicine*, Jan. 2002, Vol.41, No.1, p.11-18. Illus. 29 ref. (In English)

To evaluate the hypothesis that shoulder loads in repetitive work might contribute to the occurrence of shoulder tendinitis, a cross-sectional study was carried out involving 1961 workers in repetitive work and 782 controls. Shoulder loads were quantified at task level and measures of exposures were assigned based on task distribution. Shoulder tendinitis was defined on the basis of symptoms and clinical criteria. The prevalence of shoulder tendinitis was higher among exposed workers (adjusted OR 3.1). Neither the frequency of movements nor the lack of micro-pauses in shoulder flexion were related to disease prevalence. Increasing force requirements increased risk slightly (OR 1.6). The results indicate that workers with repetitive tasks have increased risk of shoulder tendinitis, which partially can be attributed to force requirements. (78762)

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CIS 02-1673 Collective prevention strategy against the risk of musculoskeletal disorder (MSD). (*French*: Stratégie de prévention collective des risques musculosquelettiques (TMS)) Malchaire J., Piette A., Cock N., *Médecine du travail & Ergonomie / Arbeidsgezondheidszorg & Ergonomie*, 4th Quarter 2001, Vol. XXXVIII, p.147-156. 24 ref. (In French)

To develop a coherent approach for both small and large enterprises for the prevention and control of musculoskeletal disorders (MSD), existing methods were reviewed concerning their complexity, their implicit or explicit prerequisites and their cost. A feasibility study was also conducted on a sample of potential users to determine their expectations. The proposed approach consists of four phases: "screening", to recognize the problems, identify straightforward solutions and decide whether a more systematic observation is required; "observation", based on a detailed list of items to be discussed by the workers and their management; "analysis", where investigation techniques are used by occupational health specialists to identify more technical control measures; finally "expertise", involving sophisticated experimental observations and prevention measures. The approach enables the optimization of the process of solving the MSD problems in both large and small enterprises, by relying progressively and when needed on the complementary competencies of the workers, their management, occupational health specialists and experts. See also CIS 02-1888, where the same approach is used for the prevention of hazards due to workplace thermal environments. (100941)

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CIS 02-478 NIOSH Musculoskeletal documents on CD-ROM - Preventing work-related disorders. Publications Dissemination, National Institute for Occupational Safety and Health (NIOSH), 4676 Columbia Parkway, Cincinnati, OH 45226-1998, USA, Apr. 2001. CD-ROM for Windows 95, 98, NT or 2000, with a Pentium 60MHz or higher (needs Acrobat Reader 3.0 or higher). (In English)

Collection of documents in PDF format on CD-ROM covering the following topics: ergonomic keyboards; revised NIOSH lifting equation; effectiveness of back belts; elements of ergonomics programmes; ergonomic interventions for the soft drink beverage delivery industry; effective workplace ergonomic practices and

programmes; musculoskeletal disorders and workplace factors; national occupational research agenda for musculoskeletal disorders; participatory ergonomic interventions in meatpacking plants; NIOSH testimony submitted to the Occupational Safety and Health Administration (OSHA) in support of the proposed OSHA ergonomics programmes. The documents include methods, case studies, "toolkits", study reports and proposed research programmes. (77954)

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CIS 04-480 Repetitive strain injuries in EU Member States - Summary of an Agency report. (*French*: Lésions résultant de l'exécution de gestes répétitifs (RSI) dans les Etats membres de l'UE - Résumé d'un rapport de l'Agence; *Spanish*: Lesiones por movimientos repetitivos en los Estados miembros de la UE - Resumen de un informe de la Agencia) European Agency for Safety and Health at Work, <http://osha.eu.int>, 2000. 2p. Illus. 2 ref. (In English, French, Spanish)

Internet: http://agency.osha.eu.int/publications/factsheets/6/en/facts6_en.pdf ;
http://agency.osha.eu.int/publications/factsheets/6/es/facts6_es.pdf ;
http://agency.osha.eu.int/publications/factsheets/6/fr/facts6_fr.pdf

Repetitive strain injury (RSI) covers a range of work-related musculoskeletal disorders. These disorders can affect both upper and lower limbs including the shoulders and neck, the wrist, elbows and knees, and can be caused by work involving awkward postures and movements or of a highly repetitive or fast-paced nature. This fact sheet highlights the findings of a report of the European Agency for Safety and Health at Work entitled Repetitive strain injuries in the Member States of the European Union, and is based on the results of a questionnaire survey conducted in 1999. The objective of the survey was to determine how various European countries define and measure the RSI problem and the types of policies and actions they have in place to tackle it. This fact sheet is also available in Danish, Greek, Finnish, German, Italian, Dutch, Portuguese, Polish and Swedish (see <http://agency.osha.eu.int/publications/factsheets/>). (103404)

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CIS 02-442 Method for the prevention of musculoskeletal diseases of the upper extremities and simple tools. (*French*: Méthode de prévention des troubles musculosquelettiques du membre supérieur et outils simples) Aptel M., Gerling A., Cail F., Morel O., Lahaye S., *Documents pour le médecin du travail*, 3rd Quarter 2000, No.83, p.187-223. Illus. 29 ref. (In French)

This issue includes a collection of four articles devoted to the prevention of musculoskeletal diseases of the upper extremities (MSDs). The first article covers general aspects and principles, and explains why prevention requires a two-step approach, one of screening and one of corrective actions based on ergonomic analyses of the workplace; the second article presents the check-list developed by the Occupational Safety and Health Administration (OSHA); the third article presents the MSD questionnaire developed by the Institut national de recherche et de sécurité (INRS) for collecting subjective data; finally, the fourth article presents a tool for identifying and evaluating body movements called OREGÉ, developed by INRS in 1999, which enables the separate evaluation of the various biomechanical risk factors. (78301)

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CIS 01-586 Work-related neck and upper limb musculoskeletal disorders. Buckle P., Devereux J., European Agency for Safety and Health at Work, Office for Official Publications of the European Communities, Luxembourg, Grand Duchy of Luxembourg, 1999. 114p. Illus. 209 ref. Price: EUR 7.00 (excluding VAT)., ISBN 92-828-8174-1 (In English)

A report on risk factors for work-related neck and upper limb musculoskeletal disorders (WRULDs) was prepared taking into account knowledge from an extensive set of sources. The sectors of activity most exposed to these risks include agriculture, forestry and fishing, manufacturing and mining industries, building,

distribution (wholesale and retail) and repair, as well as hotels and restaurants. In terms of occupations, manual labourers, machine operators, secretaries and manual handlers are most at risk. Scientific studies provide solid evidence in favour of the biological causes of WRULDs; in particular, they show a close causal relationship between WRULDs and the performance of certain tasks. Risk factors requiring assessment and strategies for prevention are discussed. (76330)

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CIS 00-874 Special report: Musculoskeletal disorders in Europe. (French: Dossier spécial: les troubles musculo-squelettiques en Europe) Tozzi G.A., Occhipinti E., Colombini D., Malchaire J.B., Cock N.A., Daniellou F., Bjurvald M., Ringelberg J.A., *Newsletter of the European Trade Union Technical Bureau for Health and Safety - Bulletin d'information du Bureau technique syndical européen pour la santé et la sécurité*, June 1999, No.11-12, p.11-40. Illus. Bibl.ref. (In English, French)

This collection of articles assesses the results of actions undertaken by the trade unions of European countries in view of preventing musculoskeletal disorders (MSDs). It also presents a consensus document on the exposure evaluation of upper extremities to repetitive movements, different participatory approaches to MSD risk assessment as well as the organizational failures revealed by the development of MSDs. Regulatory issues are also covered, in particular recent Swedish legislation on the prevention of MSDs as well as a series of technical standards on biomechanics for the design of machinery, currently in the public enquiry stage. (74862)

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CIS 00-871 Cross-sectional study of the relationship between repetitive work and the prevalence of upper limb musculoskeletal disorders. Latko W.A., Armstrong T.J., Franzblau A., Ulin S.S., Werner R.A., Albers J.W., *American Journal of Industrial Medicine*, Aug. 1999, Vol.36, No.2, p.248-259. Illus. 32 ref. (In English)

This study examined the relationship of repetitive work and other physical stressors to prevalence of upper limb discomfort, tendinitis and carpal tunnel syndrome. Job exposure levels for repetition and other physical stressors were quantified using an observational rating technique. Job selection was based on repetition (three categories: high, medium, and low) to ensure a wide range of exposures. Physical evaluations on all participating workers were performed by medical professionals and included a self-administered questionnaire, physical exam and limited electrodiagnostic testing. Repetitiveness of work was found to be significantly associated with prevalence of reported discomfort in the wrist, hand, or fingers, tendinitis in the distal upper extremity, and symptoms consistent with carpal tunnel syndrome. An association was also found between repetitiveness of work and carpal tunnel syndrome, indicated by the combination of positive electrodiagnostic results and symptoms consistent with carpal tunnel syndrome. (74934)

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CIS 00-279 Role of physical load factors in carpal tunnel syndrome. Viikari-Juntura E., Silverstein B., *Scandinavian Journal of Work, Environment and Health*, June 1999, Vol.25, No.3, p.163-185. Illus. 87 ref. (In English)

Epidemiologic and experimental studies were reviewed to assess the role of postural factors, high handgrip and pinch forces, repetitive hand and wrist movements, external pressure, and vibration in the occurrence of carpal-tunnel syndrome (CTS). Forceful repetitive work, vibration, and extreme wrist postures have been associated with CTS in several epidemiologic studies. Experimental studies have shown that certain forearm, wrist, and finger postures, even moderate hand loads and external pressure on the palm, can increase carpal tunnel pressure at least temporarily to levels at which nerve viability is threatened. There is sufficient information to suggest that reducing the duration, frequency or intensity

of exposure to forceful repetitive work, extreme wrist postures and vibration is likely to result in a reduction of the incidence or severity of CTS in working populations. (74361)

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CIS 99-1032 Guidelines for designing jobs featuring repetitive tasks.

Bergamasco R., Girola C., Colombini D., *Ergonomics*, Sep. 1998, Vol.41, No.9, p.1364-1383. Illus. 5 ref. (In English)

Preventive measures aimed at minimizing the occurrence of work-related musculoskeletal disorders of the upper limbs associated with repetitive tasks are reviewed. The focus is on structural measures involving optimization of the layout of the work area and furnishings, and the ergonomic properties of work tools and equipment. A practical trial conducted in a major engineering firm is described to illustrate the implementation of these measures. Fundamental principles guiding the adoption of specific educational and training programmes for workers and their supervisors are presented and discussed. Topics: check lists; design of equipment; ergonomic evaluation; job study; musculoskeletal diseases; repetitive work; upper extremity disorders; work design; work organization; work posture; workplace design. (72977)

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CIS 99-1031 Criteria for the health surveillance of workers exposed to repetitive movements. Ricci M.G., De Marco F., Occhipinti E., *Ergonomics*, Sep. 1998, Vol.41, No.9, p.1357-1363. 2 ref. (In English)

A strategy for a health surveillance programme for work-related musculoskeletal disorders of the upper limbs is outlined. Aims of the programme are defined and relevant criteria for its implementation are identified. A screening schedule is presented based on subsequent investigations. Principal methods used for processing the results of the health surveillance programme are discussed with respect to collective terms (statistical comparison, planning of periodical investigations) and individual terms (job fitness judgments, reporting of suspected occupational diseases). Topics: degree of disability; exposure evaluation; limitation of exposure; medical supervision; musculoskeletal diseases; repetitive strain injury; risk factors; upper extremity disorders. (72976)

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CIS 99-1028 OCRA: A concise index for the assessment of exposure to repetitive movements of the upper limbs. Occhipinti E., *Ergonomics*, Sep. 1998, Vol.41, No.9, p.1290-1311. Illus. 9 ref. (In English)

A method for calculating a concise index of exposure to repetitive movements of the upper limbs is proposed. The proposal is based on the procedure recommended by NIOSH (US National Institute for Occupational Safety and Health) for calculating the Lifting Index in manual load handling activities. The concise exposure index (OCRA index) in this case is based on the relationship between the daily number of actions actually performed by the upper limbs in repetitive tasks and the corresponding number of recommended actions. Although still experimental, the exposure index can be used to obtain an integrated and concise assessment of the various risk factors analysed and to classify occupational scenarios featuring significant and diversified exposure to such risk factors. Topics: exposure evaluation; mathematical models; repetitive strain injury; repetitive work; risk factors; upper extremity disorders; work posture. (72973)

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CIS 99-1027 An observational method for classifying exposure to repetitive movements of the upper limbs. Colombini D., *Ergonomics*, Sep. 1998, Vol.41, No.9, p.1261-1289. Illus. 28 ref. (In English)

A model is presented for describing and evaluating the principal risk factors characterizing occupational exposure: frequency and repetitiveness of movements;

use of force; type of posture and movements; distribution of recovery periods; and presence of other influential (additional) factors. For each risk factor, a method of practical detection is proposed along with criteria for classifying and interpreting the results based on a critical review of the literature. The concepts presented are illustrated with examples. The various factors considered are classified using numbers or indexes, so that they can be integrated into a concise exposure index. Topics: body mechanics; classification; description of technique; ergonomic evaluation; exposure evaluation; literature survey; motion study; repetitive strain injury; repetitive work; risk factors; upper extremity disorders; work posture; workbreaks. (72972)

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CIS 99-1016 Predictive models of carpal tunnel syndrome causation among VDT operators. Matias A.C., Salvendy G., Kuczek T., *Ergonomics*, Feb. 1998, Vol.41, No.2, p.213-226. 10 ref. (In English)

Data on job exposure, anthropometry and posture factors were collected for 100 female video-display terminal (VDT) users who performed a variety of office functions. The percentage of the workday spent working with a VDT was the most significant factor in the causation of musculoskeletal discomforts associated with carpal tunnel syndrome (CTS). Results also showed evidence of the importance of trunk and wrist posture in the development of CTS and indicated that individual differences in terms of anthropometric measurements play a significant role when combined with posture and duration. Results suggest that prevention of CTS is possible through ergonomic interventions in the design of workstations and jobs. Topics: anthropometry; carpal-tunnel syndrome; CRT display terminals; keyboard operations; length of exposure; mathematical models; office work; prediction; questionnaire survey; repetitive strain injury; risk factors; upper extremity disorders; women; work posture. (72949)

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CIS 97-1725 Repetitive strain injuries. Yassi A., *Lancet*, 29 Mar. 1997, Vol.349, No.9056, p.943-947. Illus. 29 ref. (In English)

Disorders commonly arising from repetitive strain injuries (RSI) are listed and ergonomic conditions that pose a threat for RSI are outlined: repetitive and forceful motions; static muscle load and mechanical stress; vibration and temperature extremes; awkward postures arising from improperly designed equipment, tools or workstations; and organizational factors (excessive work rates, inadequate work breaks, monotonous work). Procedures for the diagnosis and evaluation of RSI are described along with the clinical course of the disorder, possible ergonomic interventions, and medical treatment. (69747)

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CIS 97-1029 Cumulative trauma disorders - Prevention, evaluation and treatment. Erdil M., Dickerson O.B., eds., Van Nostrand Reinhold, 115 Fifth Av., New York, NY 10003, USA; International Thomson Publishing Services Ltd., Cheriton House, North Way, Andover, Hampshire SP10 5BE, United Kingdom, 1997. xv, 719p. Illus. Bibl.ref. Index. Price: USD 89.95 (in North America), GBP 67.50 (in Europe)., ISBN 0-442-01074-5 (In English)

Manual on the diagnosis, treatment and prevention of cumulative trauma disorders (CTDs). Contents include: introduction to the definition and history of CTDs, disease prevalence and costs, and causation controversies; CTDs of the upper extremities (determining the work-relatedness of carpal tunnel syndrome; management of CTDs with physical therapy; surgical evaluation and treatment of peripheral nerve entrapment syndromes; screening and medical surveillance; whole-body and segmental human vibration; video display workstations; ergonomic analysis and the ergonomic safety programme; disability assessment); low back pain (diagnosis and medical management; ergonomic considerations for manual handling); regulatory issues. (69142)

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CIS 97-1021 Ergonomics program development: Prevention in the workplace. Cohen R., *American Industrial Hygiene Association Journal*, Feb. 1997, Vol.58, No.2, p.145-149. 6 ref. (In English)

The development of an ergonomics programme to prevent work-related repetitive strain injuries in an electronics manufacturing company is described. Hazard assessment consisted of a review of injury/illness records by department and location, work site surveys, and a survey of workers for evidence of risk-related tasks. Tasks were prioritized according to degree of hazard, and alternative interventions were developed for each task. Intervention activities included evaluation by an ergonomics corrective action team and an ergonomics specialist team, training, exercises, and changes to equipment and processes. The programme resulted in a significant reduction in repetitive strain injury severity. (68960)

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CIS 97-794 RSI hazards handbook: A workers' guide to repetitive strain injuries and how to prevent them. London Hazard Centre, Interchange Studios, Dalby St., London NW5 3NQ, United Kingdom, 1997. iii, 99p. Illus. Bibl.ref. Index. Price: GBP 12.00 (GBP 4.50 to trade unions and other qualifying organizations)., ISBN 0-948974-14-1 (In English)

Repetitive Strain Injury (RSI) is a collective name for musculoskeletal diseases caused by excessive work loads or rates using poorly designed equipment. Workers in food processing, electronics, clothing, cars, packing, cleaning, furniture and many other industries are affected as well as keyboard operating staff. Disability, if not recognized in time, can become permanent. Adequate information and prevention programmes should be arranged by trade unions and other workers' organizations. (69021)

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