Musculoskeletal Disorders as a Major Health Issue

Mr Abdelkader Djeghdjegh* Dr Smadi Hacene

Institut Universitaire.d'Hygiène et de Sécurité, Université Batna 2 - Algérie

Abstract

Musculoskeletal disorders are a major health issue and as a source of costs. To link prevention and economic issues of the company, is to give all players more leverage to improve the health of employees and the health of the company.

Keywords: Musculoskeletal disorders. Health.Prevention. Safety. Standards

1. Introduction

The bad gestures and postures at work are characterized by the occurrence of disorders affecting the muscles , bones and joints is commonly called MSD (musculoskeletal disorders) due to :

wrong movements when handling loads

- maladaptive workstations

- the fulfillment of tasks.

They are a major source of disruption , which may cause a drop in performance for the company

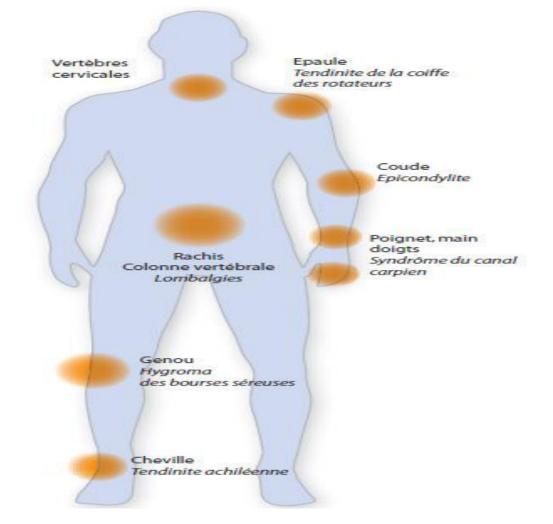
prevention solutions can be implemented. They can not only reduce the risk of MSDs but also lead to improved quality of work life of employees and product quality . MSDs : What are we talking about? MSDs affect the muscles , tendons , ligaments , nerves, but also the blood vessels, bursae or cartilage. shoulder tendinitis of the rotator cuff. ,

elbow epicondylitis, cubital tunnel syndrome

wrist and hand carpal tunnel syndrome or Guyon , tendinitis of the flexor and extensor of the hand and fingers \dots .

fingers : Raynaud's syndrome

Lower Limbs : hygroma knee , Achilles tendon, ankles, circulatory disorders



2.Objectives

To be able to define the different pathologies called musculoskeletal disorders,

Know the occupational risk factors at the workplace,

propose ways of prevention,

Magnitude of the issue

The handling problems represent the 2nd cause of AT (20%),

They are responsible for :

80% of herniated discs,

63% of lumbago,

54% of muscle and tendon tears .

Accidents

& non-fatal diseases but,

generating more work stoppages (frequency and severity)

the work stoppage lasts 22 to 43 days on average

This represents the longest stoppages in recent years

Magnitude of the issue

The TMS direct result of bad gestures and work postures represent the first MP recognized in France,

Their frequency increases by 18 % per year,

As head of Professional diseases in five European countries (Belgium, Finland, Spain, Sweden and Luxembourg).

In the US the number is multiplied by six in ten years.

costs incurred

On the medico-economic level, the figures - which abound in this report - are instructive. In Europe, more than 40 million workers suffer from musculoskeletal disorders due to their work.

The European Commission, these diseases account for half of all work stoppages of at least three days, and 60% of permanent work disability (IPP).

Most affected activities

The most affected sectors:

food industry, Metallurgy, BTP, Automobile industry,

commercial and office activities

3.Regulations and standards

Health and safety, there is currently no specific regulation on the prevention of risks related to musculoskeletal disorders (MSDs).

It is appropriate to refer, first, to the regulatory obligation of the employer to preserve physical and mental health of its employees (law 88-05 of 26 January 1988).

regulations

Executive Decree 91-05 of 19 January 1991 on the general requirements applicable to protection of hygiene and safety.

He stated in Articles 25 and 26 provisions to take when handling and circulation,

TITRE II

Mesures générales de sécurité sur les lieux de travail

Section 1

Manutention et circulation

Art. 25. — Les dispositions des articles 5 et 7 de la loi n° 88-07 du 26 janvier 1988 susvisés, relatives aux obligations de l'organisme employeur en matière de sécurité sur les lieux de travail, sont précisées aux articles 26 à 44 du présent décret et ce, sans préjudice des mesures de protection individuelles telles que prévues à l'article 6 de la loi précitée.

Art. 26. — Lorsque le déplacement de matériaux ou d'objets encombrants et pesants doit être effectué sans appareil mécanique, la charge supportée par chaque travailleur sur de courtes distances ne peut excéder 50 kg.

Cette charge maximale est fixée à 25 kg pour le personnel féminin et les travailleurs mineurs.

Des moyens de levage, de manutention et de transport doivent être mis à la disposition des travailleurs pour assurer le levage, la manutention et le transport de charges supérieures à celles prévues aux alinéas 1 et 2 ci-dessus.

La Norme AFNOR NFX 35-109

Les limites recommandées pour le port occasionnel de charges sont :

Hommes			Femmes		
15 à 18 ans	18 à 45 ans	45 à 65 ans	15 à 18 ans	18 à 45 ans	45 à 65 ans
15 kg	30 kg	25 kg	12 kg	15 kg	12 kg

Dans le cas de port répétitif de charges, les limites recommandées sont plus basses.

4.Risk factors

MSDs are multifactorial diseases with professional component :

Risk factor

- 1 / biomechanical factors
- 2 / Facteurrs psychosocial (stress Source)
- 3 / organizational factors :
 - The activity of employees at the workplace is strongly determined by the organization of work .

4 / Individual factors :

These factors are related to the intrinsic characteristics of individuals such as age, gender or health status.

5.Problematic

In Algeria , none of the 85 TMP supports MSDs or herniated discs ,

All the damage caused by bad postures and gestures are supported in the context of workplace accidents.

Note ; Poverty studies or statistical data in this area.

problematic

Thus socio-professional and financial impact of MSDs are supported by companies (reduced productivity, quality of work, absenteeism \dots) On the one hand, and the health care system (rheumatology, functional rehabilitation \dots) of somewhere else.

investigations

Knowing the risk,

Analyze work situations (ergonomic actions that aim at changing work situations to reduce the constraints on employees)

identify risk factors,

About Risk The goal is to find data on the health of employees and the company: interviews with employees,

Absenteeism,

age distribution,

the overall operation of the production process.

Analyze work situations

Ergonomic study: the repetition of gestures,

- prolonged maintenance of posture,
- ♣ overexertion,
- extreme range of motion.
- ♣ Identifying risk factors measures to assess: sizing station

the physical environment (lighting, noise, thermal environment).

Controlling risk the reduction of occupational stress (biomechanical, psychosocial and organizational)

information - corporate training and their employees

maintaining functional capacity

reduced work loads

The design of work equipment (chains , posts, tools , ...)

The design of manufacturing,

The design of the organization.

Training Information

An employee informed of the risks he is a " sentinel " effective in preventing MSD hazards ,

Teacher training Occupational gestures and postures is beneficial to prevent the risk of MSDs.

maintaining functional capacity regular physical activity,

warm-up exercises before taking positions on strong physical demand,

Finally

To those who say

Security is expensive

I suggest

Try the accident

6.Conclusion

Preventive measures are the best ways to help prevent MSDs. These disorders aren't common during young adulthood, but your risk increases with age. This is why it is crucial to change your lifestyle habits now to help avoid potential pain later. Regular strengthening exercises and stretching can help keep bones, joints, and muscles strong. Also take care in the ways in which you complete everyday activities. Maintain a tall posture to

prevent back pain and be careful when picking up heavy objects......

7.BIBLIOGRAPHY

- Alfredsson, K., Karasek, R., & Theorell, T. (1983). Myocardial infarction and psycho-social work environment: An analysis of the male Swedish working force. Social Science and Medicine, 16, 463-467.
- Armstrong, T.J., Buckle, P., Fine, L.J., Hagberg, M., Jonsson, B., Kilbom, A., Kuorinka, I., Silverstein, B.A., Sjogaard, G., & Viikari-Juntura, E. (1993). A conceptual model for work-related neck and upper-limb musculoskeletal disorders. Scandinavian Journal of Work, Environment and Health. 19(2), 73-84.
- Association of Workers' Compensation Boards of Canada. (1997). Work injuries and diseases Canada 1994-1996. Mississauga: AWCBC.
- Battie, M.C., Bigos, S.J., Fisher, L.D., Hansson, T.H., Jones, M.E., & Wortley, M.D. (1989a). Isometric lifting strength as a predictor of industrial back pain reports. Spine, 14(8), 851-856.
- Battie, M.C., Bigos, S.J., Fisher, L.D., Hansson, T.H., Nachemson, A.L., Spengler, D.M., Wortley, M.D., & Zeh, J. (1989b). A prospective study of the role of cardiovascular risk factors and fitness in industrial back pain complaints. Spine, 14(2), 141-147.
- Bigos, S.J., Battie, M.C., Spengler, D.M., Fisher, L.D., Fordyce, W.E., Hansson, T.H., Nachemson, A.L., & Wortley, M.D. (1991). A prospective study of work perceptions and psychosocial factors affecting the report of back injury. Spine, 16(1), 1-6.
- Bigos, S.J., Battie, M.C., Spengler, D.M., Fisher, L.D., Fordyce, W.E., Hansson, T., Nachemson, A.L., & Zeh, J. (1992). A longitudinal, prospective study of industrial back injury reporting. Clinical Orthopaedics & Related Research, 279, 21-34.
- Bombardier, C., Kerr, M.S., Shannon, H.S., & Frank, J.W. (1994). A guide to interpreting epidemiologic studies on the etiology of back pain. Spine, 19(18S), 2047S-2056S.
- Bongers, P.M., de Winter, C.R., Kompier, M.A.J., & Hildebrandt, V.H. (1993a). Psychosocial factors at work and musculoskeletal disease. Scandinavian Journal of Work, Environment and Health. 19(5), 297-312. Work, Environment and Health. 18(1), 1-9.
- Burdorf, A., Rossignol, M., Fathallah, F.A., Snook, S.H., & Herrick, R.F. (1997). Challenges in assessing risk factors in epidemiologic studies on back disorders. American Journal of Industrial Medicine, 32, 142-152.
- Egilman, D., Punnett, L., Hjelm, E.W., & Welch, L. (1996). Evidence for work-related musculoskeletal disorders. JOEM, 38, 1079-1080.
- Gibson, E.S. (1988). The value of preplacement screening radiography of the low back. Occupational Medicine, 3 (1), 91-108.
- Kelsey, J.L., & Golden, A.L. (1988). Occupational and workplace factors associated with low back pain. Occupational Medicine: State of the Art Reviews, 3(10), 7-16.
- National Institute for Occupational Safety and Health. (1997). Musculoskeletal disorders and workplace factors. A critical review of epidemiologic evidence for work-related musculoskeletal disorders of the neck, upper extremity, and low back. Baltimore: U.S. Department of Health and Human Services.
- Riihimäki, H. (1991). Low-back pain, its origin and risk indicators. Scandinavian Journal of Work, Environment and Health. 17, 81-90.
- Theorell, T., & Karasek, R.A. (1996). Current issues relating to psychosocial job strain and cardiovascular disease research. Journal of Occupational Health Psychology, 1, 9-26.
- Veazie, M.A., Landen, D.D., Bender, T.R., & Amandus, H.E. (1994). Epidemiologic research on the etiology of injuries at work. Annual Review of Public Health, 15, 203-221. Waters, T.R., Putz-Anderson, V., Garg, A.,