

Work Load and Musculoskeletal Disorders

Workload can be defined as the amount of work to be done by someone or something. If the workload is too intense, too repetitive or involves chronic pressure to certain areas, this can lead to musculoskeletal disorders and other forms of occupational disease. This is known as **overloading**.

Overloading of the musculoskeletal system can cause diseases such as tendinitis, arthritis, meniscal injury, bursitis, diseases of peripheral nerves (compression – ischemic neuropathy).

Musculoskeletal Disorders

- The term MSD covers any injury, damage or disorder of the joints or other tissues in the upper/lower limbs or the back.
- MSDs can affect the body's muscles, joints, tendons, ligaments and nerves.
- The most frequent occupational diseases in males and females after the age 40.
- A cumulative trauma most often occurs after a long work history of exposure, at least 15-30 years.
- Causative factor is repeated mechanical stress – long lasting, repeated and extreme strain of the musculoskeletal system.

Examples of MSD

Humeral Epicondylitis

- The lesions occur after repeated forceful wrist extension or flexion.
- Clinical findings: local pain, with muscular contraction pain radiates into the dorsal part of the forearm.
- Two main types: lateral and medial (tennis and golf elbow).

Tendinitis and Tendynovitis

- Aseptic inflammation of a tendon or of the tendon sheath.
- The onset of symptoms is usually associated with overuse of the tendon and often coincides with the beginning of new, repetitive motion work activities.
- Clinical findings and diagnosis: pain, local swelling, crepitus over the tendon sheath.

Bursitis

- Aseptic inflammation of a bursa e.g. prepatellar or olecranon bursitis is caused by local pressure.
- Clinical findings: localized fluctuant swelling and pain.

Treatment

Treatment for all of these conditions is quite similar and depending on when the problem is identified full recovery may be possible.

The type of treatment is ordered with regards to the extent of damage.

1. Elimination of the harmful activity.
2. Immobilization.
3. Nonsteroidal anti-inflammatory drugs.
4. Corticosteroids injection into the tendon.
5. Surgical treatment.

Prevention

To Prevent MSDs

- Avoid MSD risks.
- Evaluate the risks that cannot be avoided.
- Tackle the risks at source.
- Adapt the work to the individual.
- Develop a coherent overall prevention policy, addressing the whole load on the body.
- Give collective protective measures priority over individual protective measures.
- Give appropriate instruction to workers.

Keep Workers With MSDs at Work

- Provide rehabilitation.
- Reintegrate workers that suffer or have suffered from MSDs back into work.

Links

Related articles

- Exposure Assessment at Work
- Risk Analysis at Work

Bibliography

- BENCKO, Vladimír, et al. *Hygiene and epidemiology : selected chapters*. 2. edition. Prague. 2008. ISBN 80-246-0793-X.

External Links

- Musculoskeletal disorder at Wikipedia (http://en.wikipedia.org/wiki/Musculoskeletal_disorder)
- Introduction to work-related musculoskeletal disorders (<http://osha.europa.eu/en/publications/factsheets/71>)
- Pracovní zátěž a muskuloskeletální onemocnění at WikiSkripta (http://www.wikiskripta.eu/index.php/PracovnC3%AD_z%C3%A1t%C4%9B%C5%BE_a_muskuloskelet%C3%A1ln%C3%AD_onemocnC4%9BnC3%AD)