Common musculoskeletal disorders in Finland

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The prevalence of musculoskeletal disorders has not changed in Finland. The age-standardized prevalence of musculoskeletal disorders was 21% in 1990 and 20% in 2017.[1] There were 1,630,100 prevalent cases of musculoskeletal disorders and 285,100 incident cases in Finland in 2019.[2] The rate of age-standardized disability adjusted life years (DALYs) due to musculoskeletal disorders did not also change between 1990 and 2019. The rate was 20 per 1000 population in 1990, 2010 and 2019.[2] The most common musculoskeletal disorders in Finland are as follows:

Neck pain

There were 311,600 prevalent neck pain cases and 43,500 incident cases in Finland in 2019.[2] The prevalence and incidence of neck pain did not change in Finland between 1990 and 2017.[3] In 2017, the prevalence of neck pain was 6% and the incidence rate was 10 cases per 1000 population.[3] The age-standardized DALY rate due to neck pain did not also change between 1990 and 2019. The rate was 4.3 per 1000 population in 1990, 4.6 per 1000 population in 2010 and 4.3 per 1000 population in 2019.[2] Between 33% and 65% of patients with acute neck pain recover within a year, and chronic or recurrent cases are common.[4,5] Neck pain is more common in office and computer workers.[4] Older age,[6] depressive symptoms,[7] high job demands,[6] working in awkward or sustained postures,[7] and neck muscular tension[7] increase the risk of neck pain. Neck muscle strengthening and workspace modification are effective in reducing neck pain.[8]

Shoulder disorders

The prevalence of shoulder pain in the past month is nearly 20% and that of rotator cuff tendinitis is 4%.[9,10] Shoulder pain is more prevalent in women than in men,[9] and rotator cuff tendinitis is more common in the dominant shoulder in women.[10] Older age, heavy lifting and forceful work, working with trunk forward flexed, overhead working, obesity, and mental stress increase the risk of shoulder pain.[11,12] To date, there is little evidence to suggest an effective workplace strategy for the primary or secondary prevention of shoulder pain.[12] Workplace strengthening exercises and modifications of workstation may reduce the severity of shoulder pain.[13]

Distal upper extremity musculoskeletal disorders

The prevalence of epicondylitis is approximately 1.5% in Finland.[10,14] The prevalence does not differ between men and women and is highest in people ages 45–54 years.[14] Epicondylitis is more common in the dominant elbow and the risk is highest in workers exposed to both high repetitive movements of the arms and high forceful activities.[14,15] Other occupational risk factors include forceful activities, awkward postures, and high force combined with awkward posture.[15] Workload modification could reduce the risk of epicondylitis or improve the severity of the condition.[15]

The prevalence of carpal tunnel syndrome is 4%, and that of carpal tunnel release surgery is over 1% in Finland.[10] Women are 2.5 to 3.5 times more likely to develop carpal tunnel syndrome than men.[10,16] Around 2% of Finnish men and 4% of Finnish women undergo surgery for carpal tunnel syndrome in their life.[17] A square-shaped wrist,[18] overweight and obesity,[19] physically demanding jobs,[16] using hand vibrating tools,[16] rheumatoid arthritis,[20] wrist osteoarthritis,[20] and diabetes[21] increase the risk of carpal tunnel syndrome and carpal tunnel release.

Low back pain

There were 625,100 prevalent low back pain cases and 185,600 incident cases in Finland in 2019.[2] A third of prevalent and incident cases are low back pain that radiates to the leg (lumbar radicular pain).[22] The age-standardized DALY rate due to low back pain was 9.8 per 1000 population in 1990, 9.2 per 1000 population in 2010 and 9.3 per 1000 population in 2019.[2] Low back pain is more common in women than in men,[23,24] and age-standardized years lived with disability (YLD) was 11 per 1000 population among men and 13 per 1000 population among women in 2017.[25] The incidence of lumbar radicular pain increases with age, while that of low back pain without leg pain decreases with age.[23,24] Obesity,[23,26,27] smoking,[23,26,28] strenuous physical work[23] and using vibrating tools[23] increase the risk of low back pain and lumbar radicular pain, while walking and cycling to work[26] reduce the risk. Of preventive strategies for low back pain, exercise reduces the risk of low back pain and associated disability,[29,30] particularly a combination of strengthening with either stretching or aerobic exercises performed 2–3 times per week can prevent LBP by 30%.[29]

Osteoarthritis

There were 719,700 prevalent osteoarthritis cases and 46,000 incident cases in Finland in 2019.[2] The majority of cases were knee osteoarthritis (462,800 prevalent cases and 31,00 incident cases).[2] The age-standardized DALY rate due to osteoarthritis did not change in Finland between 1990 and 2019. The rate was 2.35 per 1000 population in 1990, 2.43 per 1000 population in 2010 and 2.44 per 1000 population in 2019.[2] The rate of total knee arthroplasty increased in Finland between 1997 and 2012.[31] Total knee arthroplasty is more common in women than in men. Finns aged 65 years or older had the highest rate of total knee arthroplasty in the Nordic countries between 1997 and 2012.[31] Age,[32] prior injury,[32,33] excess body mass,[32,33] and exposure to physical workload factors[32,33] increase the risk of hip or knee osteoarthritis.

Disability due to musculoskeletal disorders

Of musculoskeletal disorders, back and shoulder disorders are the most common causes of sickness absence among employed Finns ages 25-64 years.[34] Osteoarthritis, disc disorders and rheumatoid arthritis cause long episodes of sickness absence.[34] The Finnish National Health Insurance paid EUR 764 million to 286,630 people for 14.1 million sickness absence days in 2017. [35] Thirty percent of sickness absence days were due to musculoskeletal disorders.[35] Musculoskeletal disorders are also common causes of disability retirement in Finland.[36] Approximately 20,300 Finns granted an earnings-related disability retirement in 2019. Mental and behavioral disorders surpassed musculoskeletal disorders as the number one cause of disability retirement in 2019.[37] Thirty-three percent of the new disability retirements were due to mental disorders and 31% were due to musculoskeletal disorders.[37] A 7-item self-reported checklist (sex-dependent age, level of education, pain limiting daily activities, multisite musculoskeletal pain, arthritis, and surgery for a musculoskeletal disorder) can be used to identify people at high risk of disability retirement due to musculoskeletal disorders.[38]

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