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MUSCLE PAIN AND SLEEP – A POPULATION STUDY

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Pain is considered a common cause of disturbed sleep. Also, poor sleep may cause pain. We studied relations between sleep and muscle pain in a population of 40-45 year olds in Hordaland, Norway. The study included all individuals in the county born 1953-57 (29.400). Participation rate was 63%. 8860 persons answered a questionnaire with information on sleep habits and problems. Participants also reported painful muscles or joints for at least 3 continuous months the last year.
A total of 42% had experienced pain, mostly in neck (25%), shoulders (28%), upper back (14%) and lower back (22%). Work ability was reduced in 25% of these, 12 % had been on sick leave.
Women not reporting muscle pain slept 7.23 h on workdays, women with pain slept 7.14 h ($p=0.001$), and 7.05 h if reporting sick leave ($p=0.036$ compared to pain without sick leave. Men without pain slept 6.91 h, with pain 6.81 h ($p=0.006$) and 6.72 h if reporting sick leave ($p=0.107$). During free time women slept 8.35 h vs. 8.22 h ($p=0.002$), men 8.05 h vs. 8.02 h ($p=0.56$).
Insomnia (once per week or more) was reported in 8% of women not reporting pain and in 18% reporting pain ($p<0.0005$), in men 7% vs. 16% ($p<0.0005$).
Participant with pain reported more sleepiness, higher sleep need and lower subjective health than subjects without pain. Logistic regression analysis suggested a slight but significant increased risk for pain with low education and income. Linear regression analysis showed that muscle pain only accounted for 0.1% ($p= 0.017$) of the sleep duration variance when controlled for gender, education, income, marriage/cohabitation, shift work and urban/rural living.
Conclusion: Muscle pain affects sleep variables, socioeconomic factors are important covariates. Patients complaining of muscle pain should be interviewed on sleep habits and encouraged to obtain enough sleep.