Physical activity in working age population

Working-age population (16-64 years) is almost two-thirds of the UK population and their health status is of growing concern (1). This population has high prevalence of chronic diseases (cardio-vascular diseases, cancer, obesity and diabetes mellitus), majority of which are due to physical inactivity (2).
Although PA is a modifiable risk factor for chronic diseases, 80% working-age population does not meet the PA recommendations (2). Determinants of PA levels are age, education, income-levels, marital status, obesity, smoking (2), and job-strain (3).
Work-related stress, exhaustion disorder, anxiety and depression are more prevalent in the working, compared to the general population (4). Sickness absence cost in 2006 was £20.2 billion (5), with loss of 175 million days/year at workplace (6). Moreover, health-related presenteeism has wider consequences, relative to absenteeism (7).

Various work-place exercise interventions have demonstrated beneficial effects on the overall health of employees. Light-resistance training sessions of just 5-minutes/working day improve the subjective physical well being among office workers by 5% (P= 0.015), when continued for 15 weeks (8). This was a crossover RCT, undertaken in a natural working environment (n= 90). The shortcoming of the study was that the people involved were not blinded, which was in fact a difficult task.
Another intervention with the same dose, frequency and duration of light resistance training in office workers led to reductions in the prevalence of headache (p= 0.041-0.047), neck (p= 0.003), shoulder (p= 0.007) and lower back (p= 0.000) symptoms by 19-49% (9). Symptomatic participants reported decline in the intensity of symptoms. A follow-up after 12 months showed decrease in musculoskeletal symptoms and increase in subjective physical-well-being, mood and self-confidence. Limitations of this study are the self-reported measures and that the outcomes cannot be generalized as the study group consisted of only office/sedentary workers.
A lunch-time walking intervention in sedentary employees (over 16 weeks) led to increased work performance and decreased fatigue, which was sustained even 4 months after the intervention (10). Although the study was not controlled (n=75), the outcomes signify beneficial effect of walking on work performance.
Moreover, exercise intervention at workplace also prevents depression in workers at high-risk of depression (11). It was a RCT conducted over 10 weeks with supervised training sessions, twice a week (30-40 minutes of cardiovascular and stretching exercises, followed by power-training and cool down). The exercise group showed decreases in systolic blood pressure (-6.4 mmHg), diastolic blood pressure (-3.2 mmHg), resting heart rate (-8.9 bpm), fat (-3.6%) and waist circumference (-4.6 cm); all improvements being significantly higher than the control group. 86% participants in the exercise group reported diminished depressive symptoms (compared to 31% in the control group).

Given the detrimental effects of inactivity, increasing the PA levels of working population is of utmost importance. Employers should be encouraged to add short PA sessions during work-time to promote health and well-being of employees and also reduce presenteeism and absenteeism (6). Further research should aim to

study the long-term effects of exercise on psychosocial functioning, especially in participants having low base-line scores for well-being (9).

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