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included group cohesion, within-team communication and team job performance.

Methods Two regional worksites from one large company took part in either the team sport intervention (n=28) or the control group (n=20). The intervention consisted of weekly 1 hour team sport sessions for 12 weeks. Measures of aerobic fitness, physical activity, group cohesion, interaction and performance were measured pre- and post-intervention. Data were analysed using a series of mixed ANOVAs.

Results After 12 weeks, significant improvements were observed in the intervention group in VO2 max (+4.5 ± 5.8 ml/min kg, p<0.002), interpersonal communication within teams (+3%, p<0.042) and mean weekly physical activity duration (+154.74', p<0.002) in the intervention group.

Discussion Participation in team sport might be not only be an effective way to improve aerobic fitness and physical activity behaviour of employees, but may also improve interpersonal communication between colleagues, which may in turn impact organisational well-being. Further workplace team sports studies are required that assess other important indicators of health and social wellbeing.

1615b DO HIGH LEVELS OF OCCUPATIONAL SITTING TIME PREDICT SICKNESS ABSENCE, SICKNESS PRESENTEEISM AND LOW WORK ENGAGEMENT OVER TIME?

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10.1136/oemed-2018-ICOHabstracts.735

Introduction Sedentary behaviour, has emerged as a risk factor for premature death and several chronic diseases. About onethird to half of our daily sitting time occurs at work. There is limited research on the link between occupational sitting and important work-related outcomes such as work engagement, presenteeism and sickness absence. An earlier cross-sectional study by Munir, *et al.* (2015) found that women had higher occupational sitting times than men and that men with high work engagement of vigour and dedication were less likely to have prolonged sitting time. In this study, we examine the effects of occupational sitting time on sickness absence, sickness presenteeism and work engagement, and over an 18 month period.

Methods A cohort of 1005 office workers from the Northern Ireland Civil Service (Stormont) completed a questionnaire in 2012 (T1) and in 2014 (T2). Occupational sitting time were divided into tertiles of low (<360 mins), medium (361–420 mins) and high levels of sitting time (421–600 mins). Logistic regressions and generalised linear regressions were used to analysed data.

Results Participants were predominantly female (n=613, 61%). There were no significant findings for occupational sitting times predicting sickness absence. Overall, males who reported moderate levels of sitting times at T1 were more likely to report engaging in sickness presenteeism at T2. This was not the case for those males reporting high levels of sitting time. Increase sitting time at T1 also contributed to lower levels of work engagement of dedication at T2 for males. There were no significant findings for females between occupational sitting times and work-related outcomes.

Discussion Our finding findings for levels of sitting time, sickness presenteeism and work engagement warrants further research.

1631 UPDATE ON ASSESSING RISK FOR UPPER LIMB MUSCULOSKELETAL DISORDERS

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10.1136/oemed-2018-ICOHabstracts.736

The aim of this Special Session is to discuss recent changes to risk assessment tools for upper extremity MSDs.

This session will present recent findings from large prospective epidemiologic studies on carpal tunnel syndrome and other upper extremity disorders. Then other presenters will discuss how those findings have modified common risk assessment models such as the Strain Index, the ACGIH Hand Activity Level, and other methods.

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1631a UPDATE ON PHYSICAL FACTORS FROM THE ITALIAN OCTOPUS STUDY

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10.1136/oemed-2018-ICOHabstracts.737

Introduction The American Conference of Governmental Industrial Hygienists (ACGIH) proposed a method to assess the hand, wrist and forearm biomechanical overload based on exertions frequency (hand-activity level) and force use (normalised peak force). We applied the ACGIH threshold limit value (TLV) method to a large occupational cohort to assess its ability to predict carpal tunnel syndrome (CTS) onset.

Methods A cohort of industrial and service workers was followed-up between 2000 and 2011. We investigated the incidence of CTS symptoms and CTS confirmed by nerve conduction studies (NCS). We then classified exposure with respect to action limit (AL) and TLV. Cox regression models including age, gender, body mass index, and presence of predisposing pathologies were conducted to estimate hazard ratios (HR) of CTS and population attributable fractions.

Results We analysed data from 3131 workers [females, n=2032 (65%); mean age at baseline 39.3, standard deviation (SD) 9.4 years]. We observed 431 incident cases of CTS symptoms in 8000 person-years and 126 cases of CTS confirmed by NCS in 8883 person-years. The ACGIH TLV method predicted both CTS symptoms [HR between AL and TLV 2.18, 95% confidence interval (95% CI) 1.86 to 2.56; above TLV 2.07, 95% CI: 1.52 to 2.81] and CTS confirmed by NCS (HR between AL and TLV 1.93, 95% CI: 1.38 to