

models. A sensitivity analysis was carried out stratifying by sport PA levels.

Result In a median 17 years of follow-up, n=102 first CVD events occurred. As compared to the intermediate OPA tertile, workers with low and high OPA showed higher HRs of 1.67 (95% CI: 0.96 to 2.92) and 2.01 (1.17–3.46), respectively. Stratifying by sport PA, the above reported HRs for low and high OPA workers increased to 2.32 (1.15; 4.69) and to 2.54 (1.09; 5.95) when sport PA was below and above the median, respectively. High vs non-high JS workers evidenced an HR of 1.27 (0.76–2.11). When adjusting for age, BMI, alcohol intake, smoking and sport PA, a joint effect was detected between OPA and JS, with the highest HR for workers in the low OPA and high JS category [2.70 (1.17; 6.26)] as compared to workers in the intermediate OPA and non-high JS.

Discussion We observed a joint additive effect between sedentary work and high JS on the incidence of cardiovascular events.

1661c CARDIOVASCULAR DISEASE SCREENING AT THE WORKPLACE: DISCRIMINATION ABILITY OF LIFESTYLE RISK FACTORS AND JOB-RELATED CONDITIONS

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Introduction Lifestyle and job-related conditions (LS and JRC) are recognised cardiovascular disease (CVD) risk factors, but their prognostic utility remains to be established. We investigated the discrimination ability at 10 years of LS and JRC in a Northern Italian working male population.

Methods n=2532 men, 35–64 years, CVD-free and employed at the time of recruitment (1989–1996) in either the MON-ICA-Brianza and PAMELA (population-based) or the SEMM (factory-based) cohorts, were available for the analyses. The following LS and JRC were ascertained using standardised procedures: smoking (current vs non-current); alcohol intake (drinks/day; 1–3 drinks as reference); habitual occupational and sport physical activity (PA); the Baecke questionnaire); job strain (high vs non-high; Job Content Questionnaire) and BMI, from measured height and weight. Workers were followed-up (median 14 years) until first major coronary event or ischaemic stroke, fatal or non-fatal. Discrimination ability was estimated as the Area Under the ROC-Curve (AUC) for a Cox model with LS and JRC satisfying the Akaike Information Criterion for the selection of candidate predictors, and contrasted to the AUC from a model including blood lipids, blood pressure, smoking and diabetes.

Result n=162 events occurred during follow-up (10 year risk: 4.3%). BMI was not associated with the endpoint. The risk factors meeting the AI Criterion were: smoking (Hazard Ratio=2.49, 95% CI: 1.81 to 3.42); alcohol intake (abstainers: HR=1.52, 1.03–2.23; 6+drinks/day: HR=1.81, 1.11–2.95); job strain (HR=1.39, 0.98–1.97); combined sport and occupational PA (p=0.02), as the HRs for sport PA changed between workers at low (HR=0.42) and intense (HR=1.55) occupational PA (interaction test p=0.001). The LS and JRC model had the same discrimination (AUC=0.75; 95% CI: 0.70 to 0.78) than the model with clinical and biological risk factors

(AUC=0.75); this finding was consistent across the occupational classes.

Discussion Our results support the potential of primary prevention interventions at the workplace based on promoting healthier lifestyles and on improving job-related risk factors, to reduce CVD risk among workers.

1661d PSYCHOSOCIAL STRESS AT WORK INCLUDING JOB INSECURITY – IMPORTANT RISK FACTORS OF CHD: AN UPDATED SYSTEMATIC REVIEW

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Introduction In recent years evidence on elevated risks of coronary heart disease (CHD) due to exposure to adverse, chronically stressful psychosocial working conditions has accumulated. Exhausting demands and efforts in combination with low control and low reward at work seem to be of particular significance, augmenting physiological dysregulation of the cardiovascular system. Two theoretical models, demand-control and effort-reward imbalance, assessing these conditions, have been studied most frequently in recent past. This contribution aims at providing a synthesis of the current state of art concerning cohort studies on associations of these models with CHD.

Methods We conducted a systematic review on published and unpublished prospective epidemiologic studies estimating the relative risk of CHD as a function of either model. As results are often given for effects of single model components in addition to their summary measures this information is additionally analysed. This holds particularly true for job insecurity as this component has often been studied as a single risk factor. Reviews were conducted according to established quality criteria (PRISMA).

Result Taken together, both models were associated with a significantly elevated relative risk of CHD. Consistency of findings was higher if single components were analysed, specifically in case of low job control and high job insecurity. Moreover, the strength of associations varied according to adjustment for confounding factors, and there was limited evidence of a moderating role of socioeconomic position.

Discussion This review found support for a role of chronic psychosocial stress at work in terms of two theoretical models, demand-control and effort-reward imbalance, as risk factors of CHD. While the risk elevation was modest, the prevalence of exposure to stressful conditions at work was high, thus emphasising the relevance of findings for occupational health. Future studies should combine these models and enlarge the scope of analysis. Moreover, intervention studies are needed to strengthen the evidence base.

1661e CARDIOVASCULAR AUTONOMIC ASSESSMENT FROM THE CLINICAL LABORATORY TO THE OCCUPATIONAL ENVIRONMENT. A NEW CHALLENGE TO PREVENT CARDIOVASCULAR DISEASES IN WORK PLACE

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