PHYSICAL WORK DEMANDS AND PHYSICAL FITNESS IN LOW SOCIAL CLASSES

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Objectives Social class and physical work demands are strongly correlated and by implication much more prevalent among manual workers, that is, lower social classes. To challenge physical work demands as a risk factor for ischaemic heart disease (IHD) mortality, we analysed the interplay of physical work demands, physical fitness and mortality exclusively among the lower social classes.

Methods 30-year follow-up in the Copenhagen Male Study of 5249 gainfully employed men aged 40–59 years. 274 men with cardiovascular disease were excluded from the follow-up. Physical fitness (maximal oxygen consumption, VO2Max) was estimated using the Åstrand cycling test, and participants divided into low (VO2Max 15–26 ml/kg/min) or high (VO2Max 39–78 ml/kg/min) physical fitness. Physical work demands were determined by two self-reported questions.

Results Overall, 583 men (11.9%) died due to IHD and 2648 (54.0%) from all cause mortality (ACM). Among the higher social classes (I–III), only 3.5% had high physical work demands versus 30% among classes IV and V. Among 2707 belonging to social classes IV and V, multiple-adjusted Cox proportional hazard ratios (HR) with 95% CI showed a substantial increased risk of IHD mortality from high physical work demands among men with low physical fitness (HR:2.90, 95% CI: 1.21 to 6.96), but not among men with high physical fitness (HR:0.60, 95% CI: 0.24 to 1.47), referencing men with low physical work demands. Similar, but weaker associations were found for ACM.
**Conclusions** These findings among low social class men support that high physical work demands increases the risk of IHD mortality among those with low physical fitness.