Abstract: **P661**

Associations of sedentary behaviour with myocardial infarction and stroke: findings from a 10-year prospective study of 0.5 million chinese adults

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Background/Introduction: Sedentary behaviour has become highly prevalent globally and is associated with a variety of adverse health outcomes. Several studies in high-income countries have identified positive associations of sedentary behaviour (such as TV watching) with cardiovascular disease (CVD) outcomes, but few studies have assessed the evidence from low- and middle-income countries such as China.

Purpose: To assess the association of sedentary leisure-time with incident myocardial infarction (ICD-10: I21-I23) and stroke (ICD-10: I60-I61; I63-I64) in Chinese adults.

Methods: The prospective China Kadoorie Biobank Study recruited >0.5 million adults aged 30–79 years from 10 (5 urban, 5 rural) diverse areas in China with an average follow-up of 10 years. Cox regression analyses were used to estimate adjusted hazard ratios (HRs) for the association of sedentary leisure-time (TV watching and reading) with myocardial infarction (n=5,144) and stroke (n=43,001) among 489,762 participants without prior CVD at baseline. All analyses were stratified by age at risk, sex, region, and adjusted for smoking, alcohol, income, education, self-rated health, fresh fruit intake, and total physical activity. The associations per 1 standard deviation (SD) higher sedentary leisure-time were corrected for "regression dilution bias" using a self-correlation (~0.30) for sedentary leisure-time ascertained from a re-survey (~ 3 years after baseline) of ~20,000 individuals to assess the association with "usual" sedentary leisure-time.

Results: Overall, the mean sedentary leisure-time was 3.0 h/day with similar levels for men and women (3.1 versus 2.9). Sedentary leisure-time was linearly and positively related with risk of myocardial infarction with a 15% (95% CI: 8–23) higher risk for the top versus bottom quintile. After correcting for regression dilution bias, each SD higher increase in usual sedentary leisure-time (~1.5 h/day) was associated with 14% (4–25) higher risk of myocardial infarction. Sedentary leisure-time was only weakly related to the risk of stroke with each SD higher increase in usual sedentary leisure-time associated with 5% (2–8) higher risk of stroke (Figure). The results for myocardial infarction and stroke differed little by area and gender, and persisted after excluding individuals with other prior chronic diseases, the first two years of follow-up and further adjustment for dietary factors, systolic blood pressure and body mass index.

Conclusions: In Chinese adults, higher sedentary leisure-time (TV watching and reading) was positively associated with a higher risk of myocardial infarction, and was positively but weakly associated with higher risk of stroke. The findings suggest that targeted strategies to reduce levels of sedentary leisure-time could lower the

risks of myocardial infarction and stroke.

