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Irregular eating behavior and incidence of cardiovascular disease: results from a Swedish 60-year-old cohort of men and women

F. Laguzzi¹, S. Salleber¹, B. Gigante¹, U. De Faire¹, M.L. Hellenius², K. Leander¹

¹Karolinska Institute, Institute of Environmental Medicine, Stockholm, Sweden; ²Karolinska University Hospital, Department of Medicine, Stockholm, Sweden

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Background: Irregular meals may increase the risk of cardiovascular disease (CVD) but knowledge is limited. We aimed to investigate this association in men and in women, respectively, in a Swedish cohort followed-up for 11 years for incident CVD.

Methods: 4,232 participants (54% women) aged 60, randomly selected from Stockholm County in 1997–1998 were followed regarding incident CVD (coronary heart disease or ischemic stroke) up to 2009. Using national registers, 375 incident CVD cases (135 in women) were identified in subjects free from prior CVD events. Self-reported habit of seldom or sometimes having regular meals was compared to reports of often or always having regular meals. Cox proportional models were employed to estimate hazard ratios (HR) with 95% confidence interval (CI).

Results: The habit of having irregular meals was associated with increased risk of CVD in men (HR: 1.70 95% CI: 1.19; 2.43) but not in women (HR: 0.64 95% CI: 0.33; 1.22) in a model adjusted for civil status. Adjustments for smoking, physical activity, obesity and occasional intake of fruits and vegetables did not affect these relationships.

Conclusions: Our results show a clear association between irregular meal patterns and increased risk of CVD in men but not in women. Further studies are needed to confirm these gender specific results and elucidate the underlying biological mechanisms.