Impact of Fast Food Outlet Density on Incidence of Acute Myocardial Infarction in the Hunter Region

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Background: Changing food-purchasing and consumption patterns have led to a rapid growth in fast-food availability worldwide. There is a well-established association between fast food consumption and metabolic diseases. Some studies also suggest that calorie-dense food promotes a proinflammatory response, which is itself linked with myocardial infarction (MI). Whether increased fast-food availability is a risk factor for MI remains unknown.

Methods: We conducted a retrospective cohort study using a database of all MI events between 1996–2013, extracted from the Hunter Cardiac and Stroke Outcomes unit. Fast food outlet density (FFD) was calculated for each local government area (LGA) of the Hunter region, allowing for a comparative analysis. Stratification by fast food outlet data and LGA resulted in a total of 3,070 cases. Weighted linear regression was used to investigate the role of fast food outlet density on incidence of myocardial infarction in regional and rural Australia.

Results: Fast food outlet density was positively correlated with rates of MI, remaining consistent in both single and multivariate predictor models adjusting for age, obesity, hyperlipidaemia, hypertension, smoking status, and diabetes (p < 0.001). An increase of one fast-food outlet per 100,000 people in an LGA corresponded with four additional cases of MI per year (4.12, 95% CI. 3.88–4.35).

Conclusions: Fast food outlet density was positively associated with incidence of myocardial infarction in both rural and metropolitan areas of NSW. This relationship remained consistent after multivariate adjustment for standard cardiovascular risk factors, highlighting the importance of an individual’s food environment as a potential contributor towards their health.

Impact of Lunar Phase on Outcomes following ST-Elevation Myocardial Infarction

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Background: There is a long-held belief in the association between the full moon and extremes of human behaviour and potential adverse health consequences. Small-scale studies are conflicting, however most suggest no clear association between lunar phase and occurrence of acute coronary syndromes.

Methods: This multi-centre retrospective observational study from the Melbourne Intervention Group registry included 7,570 ST-elevation myocardial infarction (STEMI) cases from 6 tertiary centres over a 12-year study period in Victoria, Australia.

Outcome measures: Primary outcomes studied included incidence of STEMI, major adverse cardiac events (MACE) at 30 days, and death at 30 days.

Results: Fast food outlet density was positively correlated with rates of MI, remaining consistent in both single and multivariate predictor models adjusting for age, obesity, hyperlipidaemia, hypertension, smoking status, and diabetes (p < 0.001). An increase of one fast-food outlet per 100,000 people in an LGA corresponded with four additional cases of MI per year (4.12, 95% CI. 3.88–4.35).

Conclusions: Fast food outlet density was positively associated with incidence of myocardial infarction in both rural and metropolitan areas of NSW. This relationship remained consistent after multivariate adjustment for standard cardiovascular risk factors, highlighting the importance of an individual’s food environment as a potential contributor towards their health.