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Injury Prevention Information Centre

Risk factors for serious fall-related injuries at home among working-age adults

Background

Unintentional falls account for a significant public health problem for people of all ages. Falls are the leading cause of injury hospitalisation and one of the three leading causes of injury death in New Zealand.[1] The commonest location of such injuries is the home.[2-4] Serious falls among working-age people may have significant consequences for work productivity and family life.[5]

This fact sheet summarises the findings from a population-based case-control study designed to identify modifiable risk factors for unintentional falls at home resulting in death or admission to hospital among working-age adults (25 to 60 years).

The Auckland Falls Study

Cases in this study were individuals aged 25 to 60 years involved in a fall-related injury at home in the Auckland region resulting in death or admission to hospital over the 12-month study period commencing in July 2005. Controls (the comparison group) were randomly selected from the General and Māori electoral rolls for the Auckland region from the same age group as the cases.[6] Data was collected via questionnaire on a range of known and postulated risk factors for falls, and on potential confounders (factors which can distort the relationship between exposure e.g. alcohol use and outcome e.g. fall). The study recruited 335 cases (97.4% response) and 352 controls (64.2% response).

Main findings

- Consuming alcohol in the previous six hours was associated with an approximately 12-times increased risk of a fall-related injury.[7]
- The risk increased as the level of intake increased with even relatively low levels of alcohol associated with significant risk (Figure 1). For example, people who had consumed two standard alcoholic drinks in a six hour period were up to four times more likely to fall than those who had none, and people who had three or more standard drinks in that same period were up to 12 times more likely to fall than those who had none.

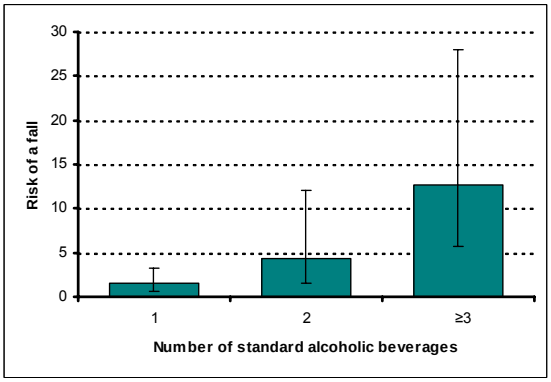

Figure 1: Risk of a fall-related injury due to alcohol use in previous 6-hours. The error bars indicate the 95% confidence intervals of the estimates, a statistical interpretation of the level of precision around the estimates.

- People who used two or more prescription medications were approximately three times more likely to have a fall-related injury compared to those who were on one or no medication. It is important to note that this finding may reflect risks associated with particular health conditions rather than the medications themselves.

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- Compared with people who had levels of activity consistent with the recommended national guidelines, those who did not, had double the risk of a fall-related injury.

New Zealand physical activity recommendations:[8]

≥30 minutes of **moderate** exercise or

≥15 minutes of **vigorous** exercise on at least five days per week.

Recommendations

1. Reducing the intake of alcohol and increasing regular physical exercise are likely to protect against serious injury-producing falls at home among people of working-age.
2. Fall prevention strategies should actively engage working-age adults, complementing existing programmes focusing on people of older ages.
3. Future research should particularly examine the effects of fatigue, specific health conditions and medications, and environmental and equipment-related factors that may increase the risk of falls and the cost and disability related to these injuries.

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