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## The association between mother's alcohol consumption during pregnancy and their child's educational attainment and risk of hospital admission by age 14

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### Background

Heavy alcohol consumption by mothers during pregnancy is associated with developmental problems in their children. However, the impact of light to moderate consumption on the long-term health and educational attainment up to adolescence has not been established.

### Main aim

To investigate the association between mother's alcohol use during pregnancy and health and educational attainment of their children up to age 14 years.

### Methods

Millennium Cohort Study (MCS) children in Wales (1,838), with parental consent, were record-linked to emergency hospital admission data between birth and 14 years (1,795) and National Curriculum Key Stage-Three (KS3) (1,645) records within the Secure Anonymised Information Linkage (SAIL) Databank. Mother's self-reported alcohol use during pregnancy was classified into a) abstain; b) light (1 - 2 units per week/occasion, 1 unit = 8g ethanol); c) moderate (3 - 6 units per week/3-5 units per occasion) and d) heavy (> 6, dropped due to a paucity of data). Cox regression estimated the risk of emergency hospital admission and multivariate linear regression models estimated the difference in KS3 scores by exposure group.

### Results

71% of mothers abstained, 24% were light drinkers and 5% moderate. Light drinking was associated with children's lower risk of emergency hospital admission (HR = 0.85, 95% CI 0.75

- 0.97) and better KS3 scores ( $\beta = 0.14$ , 95% CI 0.05 - 0.23) by age 14 years, when compared to abstaining mothers. Children of mothers who drank moderately had a comparable risk of emergency hospital admission (HR = 1.07, 95% CI 0.79 - 1.46) and a better KS3 score ( $\beta = 0.30$ , 95% CI 0.11 - 0.49), compared to abstaining mothers.

### Conclusion

Consumption during pregnancy of 1-2 units of alcohol per week/occasion was neither associated with an increased risk of emergency hospital admission nor poor academic attainment in children up to 14 years of age.

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