

Study highlights under 5s at risk from broken bones

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Public health researchers have discovered new clues about which children under five years old are the most at risk from broken bones in childhood accidents.

A study by experts from The University of Nottingham has highlighted specific risk factors for [fractures](#), a common and largely preventable type of injury.

Injuries in [children](#) and young people aged 1-14 lead to around 2 million emergency department visits and 120,000 hospital admissions in the UK every year. This new research is designed to inform and improve current prevention initiatives in the community.

Preventable injuries

The team at Nottingham carried out a large epidemiological survey to try to find evidence about which families with under-5s would benefit from injury prevention initiatives. Their work supports current NICE guidelines which recommend that children at high risk of injuries should be identified for home safety assessments.

The researchers examined data from a UK primary care research database, The Health Improvement Network (THIN), looking at around 26,000 anonymised patient records at participating GP practices from 1988 – 2004.

The results showed that fractures of 'long' bones, mainly arms and legs, were more common in under 5s who fell into several categories:

- over one year old
- had older siblings in the family
- had younger mothers
- had mothers with a history of alcohol misuse

Proactive intervention

Dr Ruth Baker, from the University's Division of Epidemiology and Public Health, said:

"I think this research shows that we can identify children most at risk of fractures by using information collected by GPs, and use this to target interventions to those families most in need as NICE recommends. It's important that a range of measures are adopted to prevent fractures, including education for families, environmental modification and legislation. Among pre-school children, over two thirds of injuries occur within the home environment so health professionals can where appropriate refer at risk families to home safety assessment and equipment schemes, in accordance with NICE guidelines on [injury prevention](#)."

The research paper, 'Risk factors for long-bone fractures in children up to 5 years of age: a nested case–control study' by Dr Ruth Baker, Dr Elizabeth Orton, Dr Laila J Tata and Professor Denise Kendrick is published online in the *BMJ's Archives of Disease in Childhood*.

More information: [adc.bmj.com/content/early/2014...
jkey=0zBp6es2K5QN66p](http://adc.bmj.com/content/early/2014...jkey=0zBp6es2K5QN66p)

Provided by University of Nottingham

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