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Epidemiology of Perthes' disease

The incidence of Perthes' disease varies considerably from place to place. Low rates of around 5 or 6 per 100 000 have been reported from British Columbia, Massachusetts, and rural Wessex whereas rates of between 11 and 15.6 per 100 000 have been found in Liverpool and industrial Merseyside. It has been suggested that the disease is related to the urban environment and social deprivation. A report from Northern Ireland (WDC Kealey and colleagues. *Journal of Bone and Joint Surgery* [Br] 2000;**82-B**:167–71) has stressed the second of these over the first.

Northern Ireland has a high incidence of Perthes' disease (11.6 per 100 000). Over a period of 7 years the diagnosis was made in 313 children and data on area of residence was available for 311. For successive quintiles of population density (lowest to highest) the annual incidence was 11.2, 12.3, 11.6, 10.4, and 12.2 per 100 000. Similar figures for deprivation (Townsend Deprivation Index quintiles, least to most deprived) were 8.3, 10.8, 11.4, 13.2, and 13.1 per 100 000. In rural areas the incidence was 7.1 per 100 000 in the least deprived and 16.1 per 100 000 in the most deprived. In cities it was 11.1 (least deprived) and 12.7 (most deprived).

In Northern Ireland deprivation rather than population density affects the incidence of Perthes' disease. The specific causal factors associated with deprivation remain to be demonstrated.

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