SPLINTERS & FRAGMENTS

In an effort to reduce deaths and injuries associated with travelling to and from school by elementary schoolchildren, Connecticut researchers designed a pavement stencil to indicate a safe area to wait for the school bus. The bus shaped stencil was placed 10 feet away from the roadway and students were instructed to wait within its confines. A control group was instructed to wait within the bounds of another environmental feature. The intervention group demonstrated safer behaviour during the waiting time and this remained consistent during the five week observation period (*Pediatrics* 1996; 97: 520–3).

Bicycle helmets have been hailed as an important answer to head injuries among cyclists, but not everyone shares this view. In an opinion piece (Child: Care, Health and Development 1996; 22: 105–11), M McCarthy from a London health authority contends that 'Helmets are similar to filters in cigarettes — they give the illusion of safety to both consumer and producer of the product, but the illusion is fatal'. McCarthy believes that children should have the freedom to cycle around the neighbourhoods where they live and that the real problem is the behaviour of adult motorists. Helmets reinforce the adult centred idea that since children are to blame for the injuries they sustain, they should therefore protect themselves with helmets.

Bicycle helmets may be new but helmets in many forms have been with us for over 4000 years to provide head protection in war, industry, sport, and road transport. Whether the outer shell was metal or fibreglass, the inner lining of wool, leather or polystyrene, they all served the same purpose. Donald Simpson from Adelaide's Road Accident Research Unit provides a lively commentary on the several forms of helmet from the Sumerians to the ancient Greeks and Romans, through to the military helmets of two world wars, firefighters' helmets and modern cycling helmets, along with technical details of their construction and information about the designers (*Australian and New Zealand Journal of Surgery* 1996; 66: 314–324).

What psychosocial factors impinge upon the risk of pedestrian injury among children aged 5 to 12 years? This Chicago study of 128 matched pairs of injured and uninjured children reveal that one child factor (advanced physical development in 5 to 8 year olds) and three family characteristics (stress, overcrowding, and low family cohesion and support) were relevant. The family is therefore central to psychosocial risk. It is likely that physically advanced children are given more freedom than their smaller peers and this might also be the case in families under stress, overcrowded households and families with few social supports (Pediatrics 1966; 97: 33–42).

Are psychosocial conditions relevant to injury rates in the absence of environmental hazards? This Swedish study looked at a cohort of 300 children born in the 1980s and living in a planned suburb in which legislated standards had been applied to the building and equipping of homes and the planning of schoolyards, playgrounds and roads, and found that psychosocial factors were not a risk factor if the physical environment is made safe (*Acta Paediatrica* 1996; 85: 285–91).

A Montreal study comparing safety knowledge and practices of 116 French Canadian and 71 immigrant families from

Haiti, Southeast Asia, Latin America, and the Middle East found that French Canadians were more likely to use devices such as smoke alarms, stair barriers, car restraints, and bicycle helmets than the immigrant families who relied more upon close supervision. The immigrant families were less familiar with protective devices whereas the French Canadians placed less reliance on supervision. It is possible that the immigrant families either cannot afford the products or that the information is not available in their own first language, factors which the authors did not explore (Ambulatory Child Health 1996; 1: 235–43).

A quarter of the deaths (148/574) from house fires in New Jersey from 1985 to 1991 involved children under 11 years of age (*Burns* 1996; 22: 85–8). Fires were caused by smoking materials, arson, kitchen fires, and heating systems. More than half the fires started between 11 pm and 7 am; fires are not more common at those times, but are more likely to be fatal. Smoke detectors are helpful, but less so to the aged, the young, and those with impairments. The authors suggest that residential fire sprinklers, used in conjunction with smoke detectors, might be more effective among these groups.

Shopping carts of the current design (narrow wheel base and high centre of gravity) are not suitable for the safe transport of young children and this practice should be prohibited according to emergency physicians at Columbus Children's Hospital. They came to this conclusion after treating 62 children aged from 4 months to 10 years in 15 months who either fell from the carts or the carts tipped over. Belts were ineffective, especially when the cart tipped. Head injuries, including five skull fractures, were the most common after children fell onto concrete, linoleum, and asphalt (Pediatrics 1996; 97: 161–5).

The recurring theme of several articles concerning violence in adolescents (*Journal of Adolescent Health* 1995; 17: 345–88) is that aggressive behaviour is associated with increased levels of violence. One study examining students' perceptions of violence in schools found that low academic achievement was associated with violent behaviour and that schools working with the community to reduce violence is essential; another article describes a cohort study in which children who were identified as aggressive were more likely to be injured or to experience near-misses involving both intentional and unintentional injuries in motor vehicles, with firearms, and during sports activity than their peers, suggesting that prevention programs should start in elementary school.

Two further articles (Archives of Pediatric and Adolescent Medicine 1996; 150: 390–5 and 415–20) reiterate the theme of violence. One prospective study from a metropolitan area in the midwestern United States found that about half the childhood victims of abuse and neglect had been arrested for non-traffic offences by the age of 32. Another study from Ohio identifies that children injured intentionally use more hospital resources and incur higher costs than do children injured unintentionally due to their greater needs and the increased severity of injury.

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