



## **Reduction of injuries due to external causes. Can the pediatrician help?**

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**T**his issue of the *Jornal de Pediatria* presents an article that analyzes certain factors related to physical injuries to children and adolescents that resulted in hospital admission, written by Gaspar et al.<sup>1</sup>

This is a prospective research study of a one-year period including children under 19 years old who were hospitalized as a result of unintentional injuries (accidents), and which raised a number of different considerations of interest to pediatricians.

The incidence of intentional and unintentional physical injuries (external causes: accidents and violence) is visibly greater in urban areas, concentrating 75% of all deaths from these causes.<sup>2</sup>

The impact of these deaths can be analyzed by means of the relative indicator, years of potential life lost (YPLL), which increased by 30% (from 1981 to 1991) with respect of external causes. It is calculated that deaths and incapacitations due to these causes will increase by 20% over the coming years.<sup>2,3</sup>

These causes occupy on average 10 to 30% of hospital beds. In the study in question, injuries accounted for 9.9% of hospitalizations.

The economic impact of accidents and violence in Brazil can be measured directly by means of hospital spending on internments and general hospital stays. In 1997, these accounted for approximately 8% of the total cost of hospital admissions for all causes. Although these values are underestimates as they only refer to admissions via SUS (the Brazilian National Health System), and do not could private or affiliated hospitals, the cost/day of

hospitalizations due to injuries and poisoning is 60% greater than the average for other types of admission.<sup>2</sup>

Despite the great size of the problem for Brazilian society, there is still a large imbalance between its importance and the number of studies related to it. According to Blank, this is an issue which, despite the bad prognosis, we continue to undervalue.<sup>4</sup>

Despite the constant increase in the number of physical injuries, inconsistent data, the lack of records and ignorance of certain aggravating factors make it difficult for pediatricians to understand the factors that determine external causes.

Gaspar et al., assessing children admitted to hospital for such causes, trace the profile of who is subject to risk and to what specific type, at the location that was studied.

Published work shows that the primary risk factors for physical injuries depend on age, sex, socio-economic and cultural level and on urbanization.<sup>5-7</sup> As an overall rule, younger children suffer more burns, drownings, falls and poisonings while older ones are suffer more from being hit by vehicles and falling from bicycles and adolescents are more subject to drowning, traffic injuries and firearms injuries.<sup>3,8</sup>

It is known that for every child killed by external causes 20 to 50 are hospitalized; a third progress with temporary sequelae or permanent incapacity, generating up to 1,000 clinical consultations. The economic and emotional costs of this scenario are incalculable.<sup>5</sup>

In the study by Gaspar et al., there were a large proportion of cycling accidents; in general males predominated (2.3:1), which figure is comparable with earlier research. However this analysis should be very careful since it is known that certain physical injuries (for example, those that affect child cyclists) do not appear to have a correlation with developmental differences, such as coordination or muscular strength, while others, such as being hit by vehicles, are related to behavioral differences.<sup>3</sup>

Age influences the causes of injuries; for example, a large proportion of falls occur among lower age groups, at

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**Suggested citation:** Waksman RD. Reduction of injuries due to external causes. Can the pediatrician help? *J Pediatr* (Rio J). 2004;80:435-6.

home, while transport accidents overtake falls from 10 years onwards. In the home, the kitchen is in third place in order of frequency, being a traditional site for injuries to occur in.

By learning the regional frequency and severity of physical and having an idea of the costs and sequelae for the victims and for society, pediatricians become excellent instruments of intervention, emphasizing preventative aspects at the place in which they work.

Every effort towards the physical integrity of children and adolescents should be channeled into ensuring that strategic injury prevention activities are based on scientific evidence and the practical application of epidemiology, since it is only through a knowledge of the risk factors that significant progress can be achieved in the control of external causes.

In treating the problem as a public health issue, society as a whole and pediatricians in particular must participate in building citizenship, adopting strategies that will prevent injuries and promote health.

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