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SPANISH ASSOCIATION OF PAEDIATRICS

Recommendations for the prevention of poisoning*



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KEYWORDS

Childhood; Poisonings; Prevention; Paediatrics Abstract Poisoning is the fifth leading cause of death from unintentional injury in the WHO European region, while Spain is in the group with a lower rate. Most involuntary poisonings occur in young children in the home, due to unintentional ingestion of therapeutic drugs or household products stored in non-original containers and/or within reach of children.

In this article, the Committee on Safety and Non-Intentional Injury Prevention in Childhood of the Spanish Association of Paediatrics provides a series of legal and educational recommendations aimed at preventing such cases.

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PALABRAS CLAVE

Infancia; Intoxicaciones; Prevención; Pediatría

Recomendaciones sobre la prevención de intoxicaciones

Resumen Las intoxicaciones constituyen la quinta causa de muerte por una lesión no intencionada en la región europea de la OMS, si bien España se encuentra en el grupo con una menor tasa. La mayoría de las intoxicaciones no voluntarias se dan en niños pequeños, en su casa, por la ingesta de medicamentos o productos del hogar. De estos últimos un porcentaje importante se almacena en recipientes no originales o al alcance de los niños.

En el presente artículo, el Comité de Seguridad y Prevención de Lesiones No Intencionadas en la Infancia de la Asociación Española de Pediatría proporciona una serie de recomendaciones tanto educativas como legales para prevenir este tipo de lesiones.

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Introduction

Death caused by unintentional poisoning is rare, and the rate has gone down drastically in the last 50 years.¹ This is mainly due to the use of medication containers and household products with child-resistant locks and the existence of safer medications. Other reasons that explain this decrease are the greater safety of consumption products, prevention regulations, public education, legal provisions, the establishment of toxicology centres, improvement in medical assistance and the availability of new antidotes.^{2,3}

Poisonings have more severe effects in children than in adults since they are smaller, have quicker metabolic rates and are less capable of fighting toxic chemical products.⁴

Epidemiology

Poisonings constitute the fifth cause of death due to unintentional injury in the WHO European region. Every year, 3000 children under the age of 14 die of acute intoxication. Most cases are caused by exposure to toxic substances in children under the age of 5, those under the age of 2 being especially vulnerable. Death by poisoning in children and adolescents shows an uneven distribution in Europe, with a risk up to 40 times higher in some countries. The highest rates were observed in Lithuania, Ireland and Estonia in boys, and Romania, Latvia and Lithuania in girls. Spain is among the group of countries with a lower mortality rate. Spain is

More than 90% of these poisonings occur at home, and many commonly used household products may cause them, including medications, cleaning products, beauty products, alcohol, plants and pesticides.⁵

In spite of the decrease in mortality, visits to the paediatric emergency departments in Spain have not decreased and despite the low mortality rate, morbidity and the use of health care resources including outpatient treatment, transport, tests, emergency department costs and hospital admissions, are still important factors to be considered.

Unintentional poisonings seen at the paediatric emergency departments occur mainly due to the ingestion of medications and household products, especially in the kitchen or living room. The medications most frequently

involved are psychiatric drugs (particularly benzodiazepines) and paracetamol. Up to 25% of unintentional poisonings caused by household products are due to the ingestion of substances stored in non-original containers, and up to 25% of families admitted that they stored these products within the reach of children. One-third of the families contact another service before visiting the hospital, where nearly half of the children seen receive some kind of treatment and are admitted for at least a couple of hours. The performance of tests, administration of treatment and hospital admission are the most frequent actions taken in the case of medication poisonings.⁷

The appearance of new products such as detergent capsules and their presentation in attractive colours have generated huge concern in the paediatric world due to the risks their ingestion generates, and this has led to calls for preventive measures affecting packaging, appearance, labelling and awareness-raising.⁸

Aside from accidental consumption of toxic substances, unintentional poisonings can also be caused by errors in the administration of medications. This accounts for 6% of poisonings recorded in the Spanish paediatric emergency departments. These poisonings are due to errors in the dose calculation of medications (particularly antipyretics and antihistamines) administered to children under the age of 12 months. 9

Strategies that have proved effective in the prevention of unintentional poisoning

• The safe storage of toxic substances eliminates the risk of poisoning to a greater extent than parent supervision, and constitutes an efficient method of preventing poisoning injuries. 10-12 Studies on the way in which children access toxic substances indicate that the most vulnerable moment is when the substances are being used, and that safe packaging cannot compensate on its own for unsafe storage and use. This highlights the importance of improving the safety of medication storage and the method of administration in the household. These changes must be backed by regulations and awareness-raising measures implemented both by manufacturers and local

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