

Conclusions Insufficient evidence exists supporting that laxative treatment is better than placebo in children with constipation. Compared with all other laxatives, PEG achieved more treatment success, but results on defecation frequency were conflicting. Based on the results of this review, we can give no recommendations to support one laxative over the other for childhood constipation.

Commentary This review about laxative treatments for pediatric constipation highlights the need for more high-quality, evidence-based studies on this common medical problem. Investigations regarding this condition have been increasing; however, many studies in this area pre-date current standards for design and statistical methods and are further compromised by differing definitions, insufficient power and other factors. Therefore, we agree that this common childhood problem deserves a greater effort to determine the best evidence for the components of treatment, including the effect of combinations or multimodal approaches.^{1,2} Nonetheless, we have concerns about how readers will interpret the findings of this study. The conclusions of this article could lead practitioners to assume there is no evidence that laxatives help children with constipation. Even though this conclusion might be reached using only studies of efficacy in controlled situations, this belies the availability of studies of effectiveness in typical, complex social circumstances. Although such “lower quality” studies are inherently confounded by a variety of situational and behavioral factors including child development, child adjustment, and parent-child dynamics, so is life. Methods other than randomized controlled trials may more practically determine treatment effectiveness in general application.³ Overall, we hope the readers will learn from this article that better studies in this area are needed; however, we hope that readers will not be deterred in the meantime from using the guidance available from guidelines and consensus statements that have used the best available evidence and have sought the experience from providers across clinical settings including primary care.⁴

Barbara T. Felt, MD

R. Van Harrison, PhD

University of Michigan Medical Center,
Ann Arbor, Michigan

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Cough and cold medications are risky for children

Dart RC, Paul IM, Bond GR, Winston DC, Manoguerra AS, Palmer RB, et al. Pediatric fatalities associated with over the counter (nonprescription) cough and cold medications. *Ann Emerg Med* 2009;53:411-7.

Question Among children who use over-the-counter (OTC) cough and cold medications, what is the risk of dying from these medications?

Design Case series developed from five different sources of information, including the medical literature, FDA databases, and manufacturers' reports.

Setting An independent panel of eight experts (pediatrics, pediatric critical care, pediatric toxicology, clinical toxicology, forensic toxicology, forensic pathology) used explicit definitions to assess the causal relationship between medication ingestion and death.

Participants Children under 12 years of age who died in which the report mentioned a cough and cold ingredient.

Outcomes Death among children associated with cough and cold medicine ingredient.

Main Results The experts found that of 189 cases, 118 were judged possibly, likely, or definitely related to a cough and cold ingredient. Of the latter, 103 involved a nonprescription drug and of these 88 involved an overdose. In 15, a dosage could not be determined. The authors identified that age younger than two years, use of the medication for sedation, use in a daycare setting, combining two or more medications with the same ingredient, failure to use a measuring device, product misidentification, and use of products intended for adults were associated with the fatalities. Finally, the review of the information showed that six of the children died after an attempt to sedate them, three were cases of abuse, and in 10 homicide was suspected.

Conclusions Pediatric death caused by nonprescription cough and cold medications are usually associated with an overdose in children less than 2 years old. The intent of caregivers appears to be therapeutic to relieve symptoms in some cases and non-therapeutic to induce sedation or to facilitate child maltreatment in other cases.

Commentary OTC cough and cold preparations have been known to result in very little clinical benefit and some adverse events. This paper by a group of inter-professionals, represent an extensive effort in combing the literature in order to identify fatalities associated with cough and cold medications. Beyond just sorting out case reports in the indexed literature, the authors review parents' and manufacturers' records. What was found in this study

and was previously reported is that some of these pediatric deaths were associated with preventable errors in administration of OTCs. Efforts to eliminate administration of two drugs containing the same components, providing measuring devices to ensure correct dosage administration and clear differentiation between adult and pediatric regimens are some of the possible solution that can prevent future therapeutic errors. What is maybe most important to learn from these findings is that fatalities were associated with a non-therapeutic intent of parents and day care workers, and included intent to sedate the children, abuse, and even homicide. These find-

ings must alert pediatricians and other medical care providers to enhance regulatory and educational efforts, in order to eliminate these deaths. Furthermore, the findings are likely only the tip of the iceberg, and the number of deaths reported is an underestimate of the true incidence, if one takes into account the millions of children receiving these preparations.

Ran D. Goldman, MD
University of British Columbia
Vancouver, BC
Canada