Clinical Shorts A brief review of the literature

Bugs for bugs

Acute diarrhea is common, particularly among children. Treatment usually consists of replacing lost fluids and maintaining hydration, often with oral rehydration solutions. These solutions, however, do not reduce the severity or duration of diarrhea. Probiotics (microorganisms that have positive effects on health when colonizing the intestines) are being increasingly used to treat acute diarrhea, yet there are few randomized trials investigating the effectiveness of this treatment.

Researchers in Italy recently conducted a randomized trial comparing 5 different commercially available probiotic products along with oral rehydration solution in the treatment of acute diarrhea in 571 children between 3 months and 3 years of age. All the children in the study, who were otherwise healthy and had had diarrhea less than 48 hours, were given oral rehydration solution for 3 to 6 hours and were then fed with full-strength lactose-containing formula or cow's milk, depending on age. The test group received probiotics prescribed for 5 days and administered orally. The control group did not.

The 5 probiotic products were as follows:

- *Lactobacillus rhamnosus* strain GG;
- *Saccharomyces boulardii;*
- *Bacillus clausii;*
- *Enterococcus faecium* SF68; and
- a mix of *Lactobacillus delbrueckii* var *bulgaricus, Streptococcus thermophilus, Lactobacillus acidophilus,* and *Bifidobacterium bifidum.*

Bottom line

- Probiotics can be effective in the treatment of acute diarrhea in children, but not all probiotics are equally effective.
- Recommendations for the use of probiotics should be based on effectiveness data.

The study found that the median duration of diarrhea was significantly shorter ($P<.001$) among children who received the *L rhamnosus* strain (78.5 hours) or the mix of 4 bacterial strains (70.0 hours) compared with those who had oral rehydration solution alone (115.0 hours). One day after the first probiotic treatment, the daily number of stools was significantly lower ($P<.001$) in the *L rhamnosus* group and the mixed-strains group (4 per day) compared with those in the other groups (5 per day). Stool consistency, duration of vomiting, fever, and rate of admission to hospital were similar in all groups.

Source: Canani RB, Cirillo P, Terrin G, Cesarano L, Spagnuolo MI, De Vincenzo A, et al. Probiotics for treatment of acute diarrhoea in children: randomised clinical trial of five different preparations. *BMJ* 2007;335:340. DOI: 10.1136/bmj.39282.581736.55.

Word search

Medication errors occur frequently in outpatient health care. Poorly designed prescription drug labels are thought to contribute to the problem. Although patients should be counseled by their physicians and pharmacists on adverse effects and proper administration of medication, there is evidence that appropriate counseling is often not done. Auxiliary pamphlets can contain useful information, but might be discarded or ignored. As a consequence, patients might rely on the container label for information.

A group of researchers decided to assess the usefulness of medication container labels. Identically written prescriptions for 4 commonly used medications (atorvastatin calcium, alendronate sodium, trimethoprim-sulfamethoxazole, and ibuprofen) were filled in 6 pharmacies (large chain, grocery store, and independent) in 4 large American cities. The researchers evaluated the format and content of the main container labels and any auxiliary stickers.

Bottom line

- The authors call for the development of an "evidence-based" prescription drug label that is easy to read and understand.
- Given the variability in the quality of medication container labeling, physicians should be very explicit in writing medication instructions on prescriptions, should counsel patients carefully, and should review medications at appointments.

Eighty-five labels were evaluated; 11 ibuprofen containers were excluded, as they were over-the-counter formulations without pharmacy-printed labels. The most prominent item on 84% of the labels was the name of the pharmacy, printed in a mean font size of 13.6 points. Colour, highlighting, and boldface were generally reserved for items primarily useful to pharmacists (eg, prescription number, refill status, and quantity).

Font sizes were considerably smaller for information that might be more important to patients: medication instructions (9.3 points), medication name (8.9 points), and warning or instruction stickers (6.5 points). These sizes might be difficult for the elderly to read, even with refractive glasses. Warning stickers (eg, for common interactions, specialized instructions, or adverse effects) were inconsistently used; when used, 82% of the warning stickers were affixed sideways.

Source: Shrank WH, Agnew-Blais J, Choudhry NK, Wolf MS, Kesselheim AS, Avorn J, et al. The variability and quality of medication container labels. *Arch Intern Med* 2007;167:1760-5.