



# A spoonful of honey helps a coughing child sleep

## Finally, we have a safe and effective alternative to OTC cough and cold remedies for young children with upper respiratory infections.

### PRACTICE CHANGER

When a parent brings in a child (ages 1-5 years) with cough, runny nose, and other symptoms of a viral upper respiratory infection (URI), recommend that honey be given at bedtime.<sup>1</sup>

### STRENGTH OF RECOMMENDATION

**A:** Based on a well-designed, randomized controlled trial (RCT)

Cohen HA, Rozen J, Kristal H, et al. Effect of honey on nocturnal cough and sleep quality: a double-blind, randomized, placebo-controlled study. *Pediatrics*. 2012;130:465-471.

### ILLUSTRATIVE CASE

A mother brings in her 18-month-old son because he's had a runny nose and low-grade fever for the past 4 days—and a cough that kept them both up last night. You diagnose a viral URI, and she requests a strong cough medicine so he (and she) can get a good night's sleep. What can you recommend that is both safe and effective for a child of this age?

For primary care physicians, office visits for coughing kids with URIs are commonplace. In addition to the cost of such visits, Americans spend some \$3.5 billion a year on over-the-counter (OTC) cough and cold remedies, and often give them to young children.

### It's not enough to tell parents what *not* to do

As physicians (and parents), we understand the desire to give a coughing child something

to ease the symptoms. We also know that OTC cough and cold medications can lead to serious complications, and even death. Between 1983 and 2007, 118 pediatric deaths were attributed to the misuse of such preparations.<sup>2</sup> And, in a 3-year span (2005-2008), the American Association of Poison Control Centers received 64,658 calls for exposures to cough and cold remedies in children younger than 2 years of age, 28 of which resulted in a major adverse reaction or death.<sup>3</sup>

The US Food and Drug Administration recommends against the use of OTC cough and cold medications in children younger than 2 years,<sup>4</sup> and the American Academy of Pediatrics has issued strict warnings about the use of OTC cough and cold preparations in children younger than 6 years.<sup>5</sup> But warning parents of the dangers of giving them to young children without offering an alternative doesn't satisfy anyone's needs, and many parents continue to use these medications.

### What about honey?

A study published in 2007 evaluated buckwheat honey and found it to be superior to no treatment and equal to honey-flavored dextromethorphan in reducing cough severity and improving sleep for children and their parents.<sup>6</sup> Honey is known to have both antioxidant and antimicrobial properties—a possible scientific explanation for its effect. Before recommending honey for kids with URIs, however, more evidence of its efficacy was needed.

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## INSTANT POLL

**Do you recommend that parents give honey to young children with viral URIs?**

- Yes, frequently
- Yes, provided the child is at least 1 year old
- Only if the parent requests a "natural" remedy
- No, I haven't seen enough evidence to support it
- Other (Please specify) \_\_\_\_\_

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CONTINUED

➤ **Giving children honey may reduce the use of potentially harmful and often ineffective OTC cough and cold remedies.**

### STUDY SUMMARY

#### Honey reduces cough frequency and severity

Cohen et al sought to determine whether honey, administered before bedtime, would decrease coughing in children between the ages of one and 5 years—and improve sleep for both the children and their caregivers.<sup>1</sup> They enrolled 300 children with a nocturnal cough of <7 days' duration and a diagnosis of URI in a one-night study.

Children were excluded if they had any signs or symptoms of asthma, pneumonia, sinusitis, allergic rhinitis, or laryngotracheobronchitis, or if they had been given any cough remedy, including honey, the night before. Parents completed a 5-question survey, using a 7-point Likert scale to assess the child's cough and both the child's and parents' sleep the previous night. Only children whose parents rated their child's cough severity  $\geq 3$  in 2 of the 3 questions related to cough were included in the trial.

The study had a double-blind randomized design, with 4 treatment arms. Three groups received 10 g (about 1.5 tsp) of one of 3 types of honey: eucalyptus, citrus, or labiatae (derived from plants including sage, mint, and thyme); the fourth group received a placebo of silan date extract, which is similar to honey in color, texture, and taste.

Children in all 4 groups received the preparation 30 minutes before bedtime. Neither the parents nor the physicians or study coordinators knew which preparation the children received. The following day, research assistants telephoned the parent who had completed the initial survey and asked the same 5 questions. The primary outcome measure was the change in cough frequency from the night before to the night after treatment. Secondary measures included cough severity and the effect on sleep for both the child and the parent.

Of the 300 children initially enrolled, 270 (90%) completed the trial, with an even distribution among the groups. While there were improvements across all outcomes for both the treatment and placebo groups, the changes were statistically significant only in the treatment groups. There were no significant differences in efficacy noted among the

3 types of honey. Adverse effects of stomachache, nausea, or vomiting were noted by 4 parents in the treatment groups and one in the placebo group, a difference that was not statistically significant.

### WHAT'S NEW?

#### We have more evidence of honey's efficacy

For children older than one year with a viral URI, we can now recommend 1.5 tsp honey to be given prior to bedtime as a cough remedy. This may reduce the use of potentially harmful and often ineffective OTC cough and cold remedies.

### CAVEATS

#### Honey is unsafe for the youngest children

An obvious limitation of this study was its brevity. Although one night of improved cough and sleep is important, a study that showed honey's sustained benefit as a cough suppressant would be more convincing. What's more, there are safety concerns that are age-related.

Honey is considered unsafe for children younger than one year because of the risk of botulism. And honey has the potential to increase dental caries if it is given nightly for a prolonged period of time.

We do not know whether all varieties of honey will have the same benefit, and the source of store-bought honey is not always identified. The authors of this study received funding from the Honey Board of Israel.

### CHALLENGES TO IMPLEMENTATION

#### Parents may be reluctant to abandon OTCs

Changing the behavior of parents and other caregivers who are accustomed to treating children with OTC cough and cold remedies is likely to be an uphill battle. Because honey is readily available, however—often as close as the pantry—and perceived to be safe and nutritious, a recommendation from a trusted physician could go a long way toward its implementation. **JFP**

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## References

1. Cohen HA, Rozen J, Kristal H, et al. Effect of honey on nocturnal cough and sleep quality: a double-blind, randomized, placebo-controlled study. *Pediatrics*. 2012;130:465-471.
2. Dart RC, Paul IM, Bond GR, et al. Pediatric fatalities associated with over the counter (nonprescription) cough and cold medications. *Ann Emerg Med*. 2009;53:411-417.
3. Srinivasan A, Budnitz D, Shehab N, et al. Infant deaths associated with cough and cold medications—two states, 2005. *JAMA*. 2007;297:800-801.
4. US Food and Drug Administration. Public Health Advisory: FDA recommends that over-the-counter (OTC) cough and cold products not be used for infants and children under 2 years of age. Available at: <http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/DrugSafetyInformationforHealthcareProfessionals/PublicHealthAdvisories/ucm051137.htm>. Accessed February 14, 2013.
5. American Academy of Pediatrics. Withdrawal of cold medicines: addressing parent concerns. Available at: <http://www.aap.org/en-us/professional-resources/practice-support/Pages/Withdrawal-of-Cold-Medicines-Addressing-Parent-Concerns.aspx>. Accessed February 14, 2013.
6. Paul IM, Beiler J, McMonagle A, et al. Effect of honey, dextromethorphan, and no treatment on nocturnal cough and sleep quality for coughing children and their parents. *Arch Pediatr Adolesc Med*. 2007;161:1140-1146.

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