

Vapor rub relieves cold symptoms for children, helps them sleep better

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Applying a vapor rub is effective for treating children with night-time cough and congestion and improves sleep for children with cold symptoms, according to Penn State College of Medicine researchers.

"Upper respiratory infections are the most common acute illnesses in the world," said Ian Paul, M.D., M.Sc., associate professor of pediatrics and public health sciences. "Symptoms caused by these infections are disruptive for [children](#), and often disturb sleep for both ill children and their parents, with an impact on subsequent daytime activities. Safe and effective, evidence-based treatments are desperately needed by parents and healthcare providers for children."

Recent studies by Paul and colleagues at the Penn State College of Medicine looked at the efficacy of oral over-the-counter treatments such as [dextromethorphan](#) and diphenhydramine for upper respiratory infection symptoms. They found the preparations no more effective than a placebo. Vapor rubs, containing menthol, camphor and eucalyptus oils, have been used for over a century without published evidence to support their use.

"The American Academy of Pediatrics does not support the use of over-the-counter oral cough and [cold medications](#) for children due to a lack of evidence of efficacy and the potential for side effects," Paul said. "The question of whether clinicians can recommend a vapor rub topical treatment to treat cold symptoms required evaluation."

Paul and his research team recruited 138 children ages 2 to 11 for the study. Parents assessed their child's symptoms the night before enrollment in the study. Each child was then randomly assigned to one of three treatment groups: [Vicks VapoRub](#), petroleum jelly placebo, and no treatment. Parents of children receiving the vapor rub or petroleum jelly massaged the treatment into their child's neck and chest 30 minutes before bedtime.

The randomized study was partially double-blinded. Medical staff did not know what treatment each participating family received when distributing their sealed specimen cup-containing envelope. Parents of children who received the vapor rub or petroleum jelly were blinded to their treatment group. To accomplish this, given the characteristic scent of vapor rubs, parents received their own specimen cup of vapor rub that they were instructed to apply between their own upper lip and nose before opening their child's treatment in order to ensure they could not detect the smell of their child's treatment. Parents of children in the no treatment group received an empty specimen cup.

Parents then completed a second survey the following morning assessing their child's cough, sleep, congestion and runny nose.

In comparisons across the three treatment groups, parents reported that the vapor rub provided significantly greater relief as measured by cough frequency, cough severity, congestion and the child's ability to sleep. Parents also rated their own sleep as most improved in the vapor rub group when compared across the three study groups. Paired comparisons between the vapor rub group and the no treatment group demonstrated the superiority of the vapor rub for all study outcomes except runny nose. Paired comparison of the vapor rub group to the petroleum jelly group showed vapor rub improved child's sleep, parent's sleep and the combined symptom score. The petroleum jelly placebo was not significantly better than no-treatment for any study outcome.

The most common side effect cited with the use of the vapor rub was a burning sensation of the skin, reported by 28 percent of participants receiving that treatment. No side effects were reported with use of petroleum jelly.

The results of this study suggest that an old, commonly used remedy is effective at providing symptomatic relief from night-time cold symptoms with the added benefit of improving sleep for children with colds and their parents," Paul said. "Vapor rubs have been used for generations, but this study demonstrates that this therapy is indeed effective." The research results appear in the December issue of *"Pediatrics."*

Provided by Pennsylvania State University

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