

Misuse of Vicks VapoRub may harm infants and toddlers

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Vicks® VapoRub®, the popular salve used to relieve symptoms of cough and congestion, may be harmful for infants and toddlers. New research appearing in the January issue of *Chest*, the peer-reviewed journal of the American College of Chest Physicians (ACCP), shows that Vicks® VapoRub® (VVR) may stimulate mucus production and airway inflammation, which can have severe effects on breathing in an infant or toddler. Research findings are consistent with current VVR labeling which indicates the product should not be used on children under 2 years of age.

"The ingredients in Vicks can be irritants, causing the body to produce more mucus to protect the airway," said Bruce K. Rubin, MD, FCCP, the study's lead author from the Department of Pediatrics at Wake Forest University School of Medicine, Winston Salem, NC. "Infants and young children have airways that are much narrower than those of adults, so any increase in mucus or inflammation can narrow them more severely."

Dr. Rubin and his colleagues at Wake Forest became interested in the effects of VVR on small children after they cared for an 18-month-old girl who developed severe respiratory distress after VVR was put directly under her nose. The research team then launched an investigation to determine the effects of VVR on the respiratory system. Using ferrets, which have an airway anatomy and cellular composition similar to humans, the team conducted tests that measured the effects of VVR on mucus secretion and build up in the airways, and fluid build up

in the lungs. Healthy ferrets and ferrets who had induced tracheal inflammation (simulating a person with a chest infection) underwent testing after they were exposed to VVR through intubation.

Results showed that in vitro VVR exposure increased mucus secretion 59 percent over baseline, while in vivo VVR exposure increased mucus secretion 14 percent in normal airways and 8 percent in the inflamed airway, in addition to the increase in secretion due to the inflammation. Mucus clearance, as measured by ciliary beat frequency in the trachea, also decreased by 36 percent during in vitro testing.

VVR is not indicated for patients under age 2. However, Dr. Rubin realizes that some parents are still choosing to use VVR to relieve their sick young child's symptoms, usually rubbing the salve on the feet or chest.

"I recommend never putting Vicks in, or under, the nose of anybody—adult or child. I also would follow the directions and never use it at all in children under age 2," said Dr. Rubin. Even when directions are followed, VVR may make people with congestion feel more comfortable, but it does nothing to increase airflow or actually relieve congestion. "Some of the ingredients in Vicks, notably the menthol, trick the brain into thinking that it is easier to breathe by triggering a cold sensation, which is processed as indicating more airflow. Vicks may make you feel better but it can't help you breathe better." Dr. Rubin also feels that although the study only tested Vick's VapoRub, similar products, including generic brands, could cause the same adverse reaction in infants and toddlers.

In addition to VVR, decongestants are not recommended for young children; however, there are other treatments that are safe and effective.

"Cough and cold medicines and decongestants are dangerous and neither

effective nor safe for young children. Medications to dry up nasal passages also have problems," said Dr. Rubin. "The best treatments for congestion are a bit of saline (salt water) and gentle rubber bulb suction, warm drinks or chicken soup, and, often, just letting the passage of time heal the child." Dr. Rubin also notes that if a child is struggling to breathe, it is a medical emergency and would require the child to be seen by a doctor as quickly as possible.

"Parents should consult with a physician before administering any over-the-counter medicine to infants and young children," said James A. L. Mathers, Jr., MD, FCCP, President of the American College of Chest Physicians. "Furthermore, the American College of Chest Physicians and several other health-care organizations have concluded that over-the-counter cough and cold medicines can be harmful for infants and young children and are, therefore, not recommended."

Source: American College of Chest Physicians

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