

Back Blows and Chest Thrusts for Choking Victims? Dr. Heimlich Answers

A letter to the editor (*Public Health Reports*, March-April 1986) from Joseph Greensher, MD, of the American Academy of Pediatrics and William H. Montgomery, MD, Chairman, 1985 National Conference on Standards and Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiac Care, advises that chest thrusts will continue to be recommended for treating choking children under 1 year of age.

"The success of a maneuver to dislodge a foreign body from the airway," as Surgeon General C. Everett Koop stated in his response, "depends on a reservoir of air being forcibly expelled through the airway." Backslaps, with an infant draped over the rescuer's forearm that rests on the thigh, is, therefore, an acceptable alternative to the standard Heimlich Maneuver in an infant, since the forearm is performing intermittent subdiaphragmatic pressure, which is also a Heimlich Maneuver.

There is, however, no known published documented or anecdotal case report of the life of an infant being saved by chest thrusts. Furthermore, a Johns Hopkins University Medical Institutions study proved that intrathoracic pressure generated by chest thrusts (or compressions) is dissipated because it forces the diaphragm downward (*JAMA* 1981;246:351). Airflow from the trachea is, therefore, minimal and inadequate to expel a foreign body from the airway.

Of greater significance, reports from the Mayo Clinic and other outstanding institutions describe injuries following chest thrusts for CPR which include damaged liver, heart, spleen, lungs, and chest wall (*Pediatrics* 1982;70:120 and 1983;71:982).

Doctors Greensher and Montgomery also state that the Heimlich Maneuver "was recommended as the sole treatment for choking to fulfill a need for simplicity and uniformity in teaching, not a substitute for potential hazards from previously taught methods." Simplicity and uniformity are good reasons for having eliminated their earlier recommendations for treating choking. Extensive scientific evidence exists, however, that "previously taught methods," backblows and chest thrusts, are "hazardous, even lethal," as stated by the Surgeon General (*Public Health Reports*, November-December 1985). Numerous published references that attest to the fact that those methods are ineffective and have resulted in injuries and deaths can be found in the above-mentioned papers as well as in the following: Montgomery, WH: Standards and guidelines for cardiopulmonary resuscitation (CPR) and emergency cardiac care (ECC). *JAMA*, June 6, 1986;225:2905-2989. See references 45, 47, 48, 49, 50, 53 on page 2932.

Should those who initiated or perpetuated back blows and chest thrusts not inform physicians, first aid instructors, and the general public of the ineffectiveness and dangers of those methods, their organizations will lose credibility and millions of Americans who were taught such techniques will continue to endanger the lives of choking victims.

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Treatment for Choking Infants: Some Controversy Lingers

Regretfully, controversy regarding the treatment of a choking infant appears to have been only partially resolved. Dr. Heimlich was a member of the Panel on Management of Foreign Body Airway Obstruction at the 1985 National Conference. He presented his views and data at the open session and also participated in the discussions which later led to the panel and conference recommendations of abdominal thrusts (Heimlich Maneuvers) for all children above 1 year of age and continuation of back blows and, if these fail, chest thrusts for choking infants under 1 year of age.

The recent recommendations have narrowed past differences. Of great importance was the acceptance that no maneuvers are necessary if the victim can cough, breathe, or speak because the natural cough reflex very adequately resolves most choking episodes spontaneously.

Dr. Heimlich's acceptance of back blows for infants further closes the gap, although we would postulate that back blows contribute to chest rather than subdiaphragmatic compression as a potential additive effect.

The controversy regarding the effectiveness and benefit to risk ratios of chest thrusts has been extensively dealt with in the literature.

The chest in infants and young children is resilient, and injury data indicate a more than adequate ability to handle external force. Chest compression in this age group has been a well accepted part of cardiac resuscitation. However, chest thrusts for choking episodes should not be equated with the prolonged chest compression often used for CPR. There have been no complications reported in children from chest thrusts used to relieve a choking episode. There is concern by pediatricians that abdominal thrusts done too zealously may be harmful to the liver, a concern that I am sure is shared by Dr. Heimlich. Proper techniques must be learned to avoid damage in *any* maneuver.

Little credibility is added to the question of the lack of effectiveness of chest thrusts by Dr. Heimlich's