



World Water Safety

## INTERNATIONAL LIFE SAVING FEDERATION

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### MEDICAL POSITION STATEMENT - MPS 01

## THE USE OF ABDOMINAL THRUSTS IN DROWNING

### BACKGROUND

Abdominal thrusts (Heimlich Manoeuvre) have been advocated for the removal of fluid from the lungs and relief of airway obstruction in the drowning victim.[4] Later published reports discredited the original case reports and proposed that the manoeuvre may cause harm.[ 3 5, 6]

During the drowning process, victims usually swallow large quantities of water and a 10-year study of beach lifeguard rescues in Australia demonstrated that 86% of drowned victims requiring compressions or ventilations vomited<sup>1</sup>. Another study found that nearly 60% of pediatric drowning victims arriving to the emergency department had the presence of vomiting [8].

Drowned victims may aspirate some fluid into their lungs but this is rapidly absorbed into the blood stream; there is no evidence that it should or can be removed. [2, 3] This aspirated fluid also mixes with pulmonary surfactant and produces a white or pink froth (foam or non-cardiogenic pulmonary oedema) that is often visible in the upper airways and should not be confused with vomit.

The morbidity and mortality of drowning is caused by a lack of oxygen to the brain. Initial resuscitation should interrupt the drowning process by providing oxygen to the brain as quickly as possible. Efforts to remove fluid from the lungs or stomach by external pressure can increase risk of aspiration and delay the start of appropriate resuscitative measures.

### STATEMENT

1. The priority in drowning is maintaining an open airway and adequate ventilation.
2. Abdominal thrusts (the Heimlich Manoeuvre) delay opening of the airway and delay the initiation of ventilations and chest compressions as indicated. It also poses a great risk of precipitating gastro-oesophageal regurgitation and subsequent inhalation of stomach contents into the lungs and should not be performed. If there are clear signs of a solid foreign body (not water) in the upper airway, as demonstrated by the inability to obtain adequate ventilation with proper positioning of the airway, continue with chest compressions, but check the mouth before attempting ventilation in case the obstruction is now visible and can be easily removed.
3. Avoid delays or interruptions to chest compressions and ventilations (CPR). Do not attempt to empty a distended stomach by applying external pressure. Do not attempt to expel or drain frothy liquid (foam or non-cardiogenic pulmonary oedema) that may accumulate in the upper airway during resuscitation.

## POTENTIAL CONFLICT OF INTEREST STATEMENT

None of the participants in the consensus process leading to this position statement has a conflict of interest with the stakeholder industry, technology, persons or organisations that are identified and/or impacted by the position statement.

## LEVEL OF EVIDENCE

This document is based on expert consensus

## REFERENCES

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## APPROVAL

Medical Position Statement approved by the ILS Board of Directors on 14/05/1996 and 03/09/2016.