ResQPOD®
Enhanced Perfusion During CPR
What is the ResQPOD ITD?
The ResQPOD® ITD is a simple, non-invasive device that delivers intrathoracic pressure regulation (IPR) therapy during basic or advanced life support CPR, which can improve perfusion. The ResQPOD ITD lowers intrathoracic pressure during the recoil phase of CPR by selectively restricting unnecessary airflow into the chest. This vacuum increases preload, lowers intracranial pressure (ICP), and improves blood flow to the brain and vital organs.

How the ResQPOD ITD Works
The ResQPOD ITD offers a simple solution for more effective resuscitation.

Conventional CPR
Limited Blood Flow
Even though high-quality CPR has been shown to increase survival, it only provides 25%–40% of normal blood flow to the heart and brain. Limited blood flow is due, in part, to the open airway. During chest wall recoil, air is drawn in, wiping out the vacuum (negative pressure) that is needed to fill the heart. This limits cardiac output and the blood circulated with compressions.

CPR with ResQPOD
More Blood Circulated
Attached to a facemask or other airway adjunct, the ResQPOD ITD selectively prevents air from entering the lungs during the chest wall recoil phase (except when intended with ventilations). This enhances the vacuum, which pulls more blood back into the heart and lowers intracranial pressure (ICP). As a result, more blood is circulated to the brain and vital organs until the heart can be restarted. In studies, use of the ResQPOD ITD with high-quality CPR improved survival 25% or more compared with high-quality CPR without an ITD.

A Deeper Look at the PRIMED Trial Finding
A new post-hoc analysis of the ROC PRIMED study by Yannopoulos, et al. found that the ResQPOD significantly increased survival when used with high-quality CPR. The analysis found that less than 50% of the patients in the ROC study actually received high-quality CPR, defined as a rate of 80–120 compressions/minute, a compression depth of 4–6 cm, and a CPR fraction of > 50%. However, as the CPR quality improved so did the survival impact of the ResQPOD. And when high-quality CPR was performed, patients who received the ResQPOD ITD had a significantly higher (76%) chance of survival, compared with those who received high-quality CPR alone. This analysis demonstrates the importance of utilizing tools to help monitor CPR quality since it appears to have a dose-related impact on the ResQPOD ITD’s effectiveness. The better the CPR quality, the more impact the ITD has on survival.

Refer to the ResQPOD Clinical Summary for more information on this study.
Using the ResQPOD ITD on a Facemask

1. Begin chest compressions immediately.
2. Connect the ResQPOD ITD to facemask.
3. Open airway. Establish and maintain tight face seal with mask throughout.
4. Connect ventilation source to top of ResQPOD ITD, or mouthpiece if performing mouth-to-mask ventilation.
5. Perform CPR at recommended compression-to-ventilation ratio.
6. Place EtCO₂ detector between ResQPOD ITD and ventilation source (preferred).

Using the ResQPOD ITD on an Endotracheal (ET) Tube

1. Begin chest compressions immediately.
2. Connect the ResQPOD ITD to facemask.
3. Open airway. Establish and maintain tight face seal with mask throughout.
4. Connect ventilation source to top of ResQPOD ITD, or mouthpiece if performing mouth-to-mask ventilation.
5. Perform CPR at recommended compression-to-ventilation ratio.
6. Place EtCO₂ detector between ResQPOD ITD and ventilation source (preferred).

Performing High-Quality CPR with the ResQPOD ITD

1. Begin chest compressions immediately.
2. Avoid interruptions (CCF ≥ 80%)
3. Compress at the correct rate (100–120/min)
4. Push hard (at least 5 cm/2–2.4 inches)
5. Allow complete chest wall recoil
6. Don't hyperventilate
7. Use tools to help you get it right
   • Timing lights on the ResQPOD ITD to guide ventilations
   • CPR feedback, like ZOLL's Real CPR Help®, to guide compression rate, depth, and fraction
8. Remove secretions from ResQPOD ITD by blowing out with the ventilation source

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