

National Life Saving Day 2020

Newer Devices in Cardiac Arrest Management

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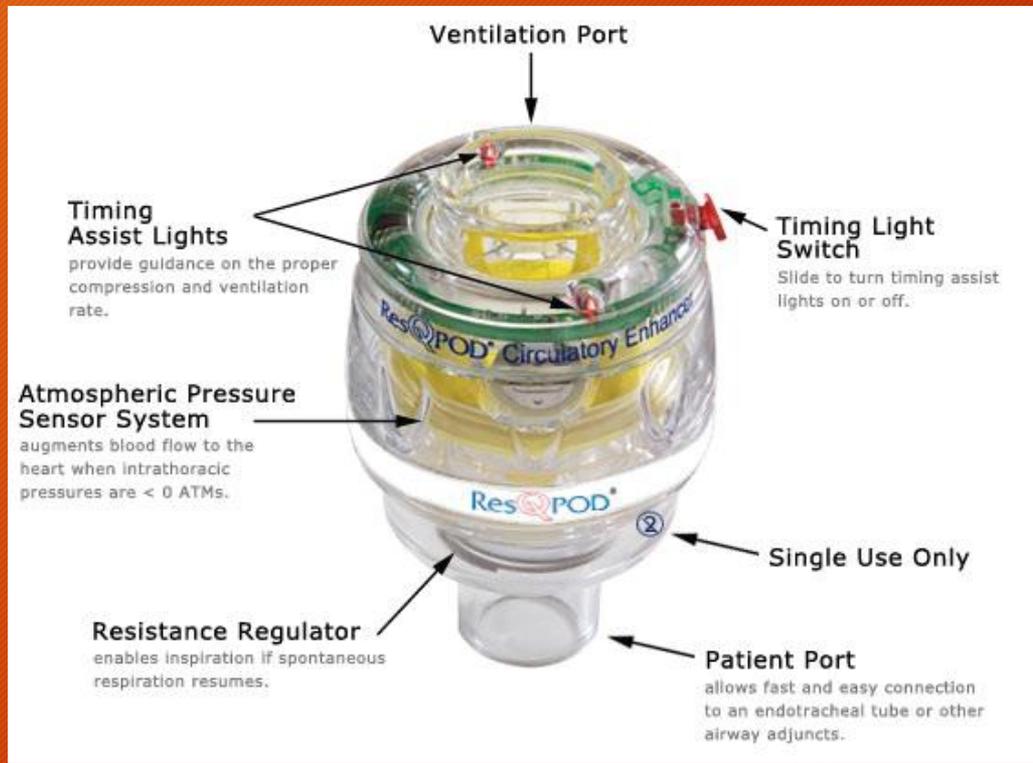
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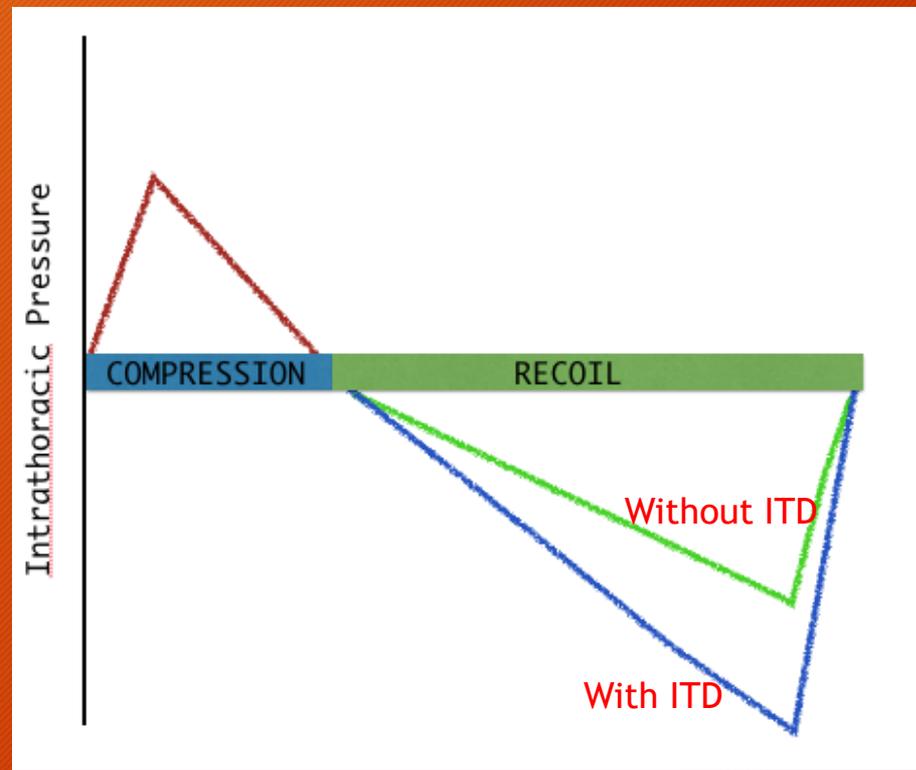
Scope

- Impedance Threshold Device (ITD)
- Mechanical CPR

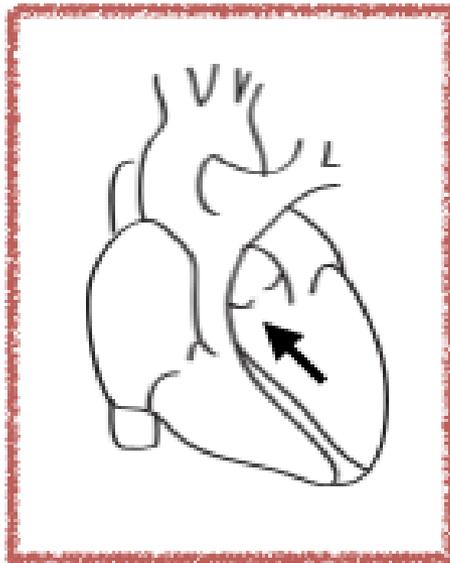
Impedance Threshold Device (ITD)



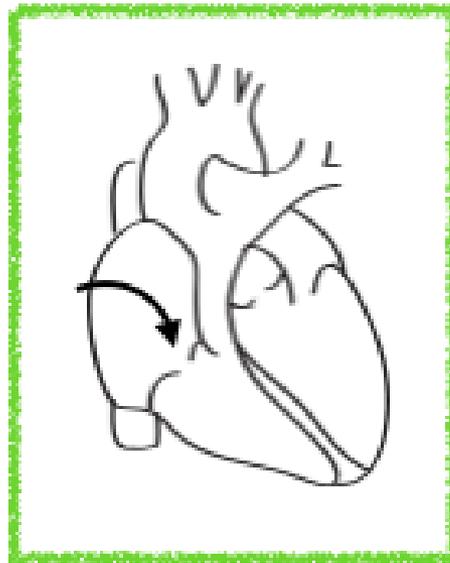
ITD Mechanism of Action



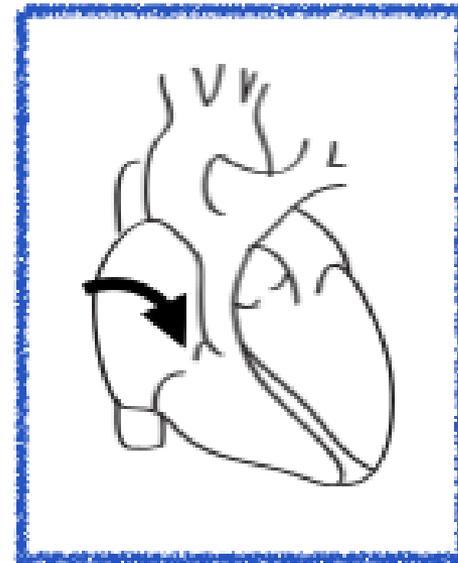
ITD Mechanism of Action



Compress



Recoil



Recoil+ ITD

ITD Use with Mask

- The 2-handed technique in initial use of the ITD with a face mask
- Maintain a continuously tight seal during compressions and ventilations



ITD with ETT or LMA



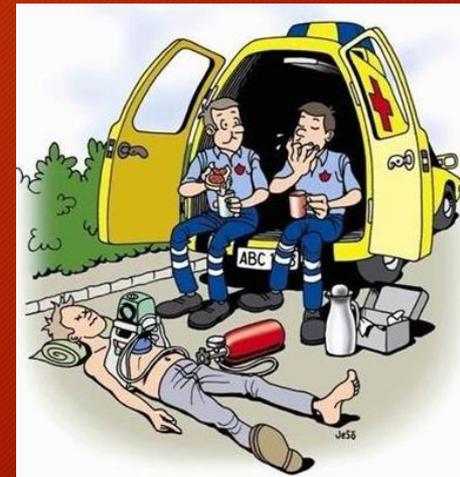
Resqpod Impedance Threshold Device

Resqcpr System Overview



Advantages Of Mechanical CPR

- Chest compressions often done incorrectly
- Incorrect chest compression compromises survival
- **Automated mechanical devices (Me-CPR) can potentially:**
 - improve quality of chest compressions
 - apply compression more consistently than manually
 - provide high quality compressions in a moving ambulance - difficult to achieve with manual CPR
 - allow less EMS staff to do CPR.



Disadvantages of Mechanical CPR

- Heavy
- Bulky
- Expensive
- Takes time to apply if not well trained

Many kinds of Mechanical CPR devices



AutoPulse device

- Size (L×W×H): 82.6 cm x 44.7 cm x 7.6 cm
- Weight (less Battery): 9.3 kg
- Weight of Battery: 1.3 kg



LUCAS 3 Device

Dimension

- HxWxD: 56 x 52 x 24 cm
- In carrying case (HxWxD):
58 x 33 x 26 cm

Weight

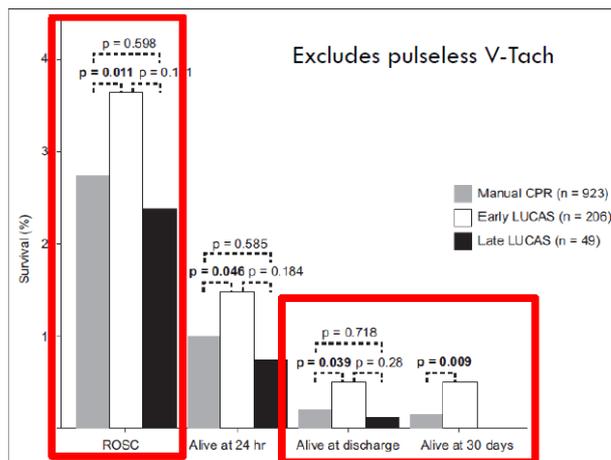
- Device with Battery: 8.0 kg
- Battery: 0.6 kg



Does Mechanical CPR Work?

Does Mechanical CPR applied early make a difference?

- Seems to!
- RCT LUCAS 2 vs. manual CC
- LUCAS applied onsite vs. ambulance



MECCA Trial – Mechanical Cardiopulmonary Resuscitation vs. Standard Manual CPR in OHCA by Emergency Ambulance Crew

Easy Pulse



Easy Pulse



Easy-Pulse: Technical specs

- Lightweight, Simple
- Small and light electrically-driven CPR device, weighs 3.5 kg
- Multidirectional chest compressions
- High-quality chest compressions of consistent rate and depth, ?impossible to achieve with manual compressions
- Possibility of 30:2 compression-ventilation cycle or continuous CPR
- Thanks to slider and buckle system, it can be easily attached to the upper body
- Easy to position - easy to operate
- Replaceable battery with charge level indicator
- Autonomous operation for 45 minutes (with one battery)

Thank you

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