

Guideline for use of LUCAS 3 device

Indications - Patients in Cardiac arrest

Contraindications

- **Small patient**

The LUCAS device will alert with 3 fast signals when lowering the Suction Cup and fail to enter the PAUSE mode or ACTIVE mode

- **Large patient**

No specific weight restriction

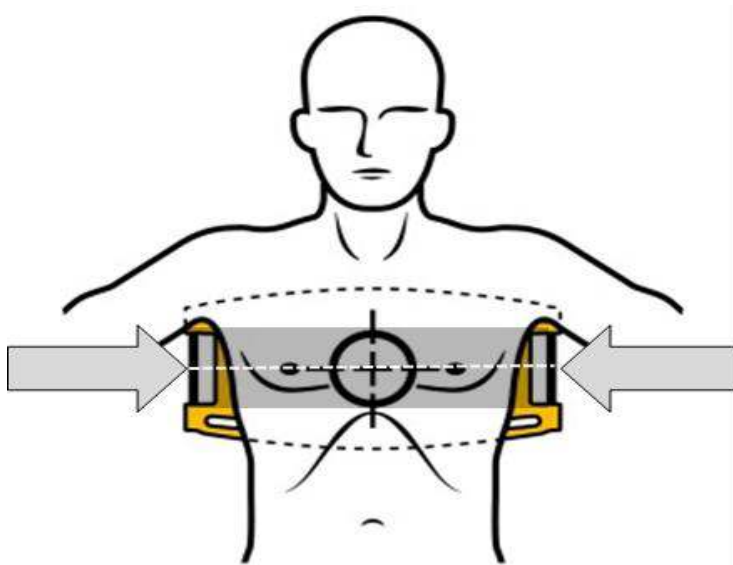
Failure to lock the upper part of the LUCAS device to the back plate without compressing the patient's chest.

Roles

- Allocate lead operator for the LUCAS 3, they will be responsible for facilitating fitting of the LUCAS, initial and ongoing position check of the suction cup, marking the suction cup position and operation of the LUCAS during resuscitation

Start-up

- Push ON/OFF on the user control panel for 1 second to power up the LUCAS and start the self test.
- The green LED adjacent to the ADJUST key illuminates when the device is ready for use.



**Ensure backplate positioned high into the patient's armpit*

Positioning of the back plate

- The LUCAS operator should coordinate application so that chest compression interruption is minimised

- Hold manual chest compressions briefly and roll or lift the patient to put the back plate in place
- Place the back plate centrally behind the heart, positioned high into the patient's armpits, this will facilitate position of the suction cup
- The black bars of the back plate should align over the heart area and central chest compression point where the manual CPR provider has their hands
- Place patient's arms straight in a crucifix position or alternatively position the arms vertically towards the head to mobilise adipose tissue and optimise plate position
- During ongoing manual chest compressions, attach the support leg that is nearest to you to the back plate
- Stop manual CPR while attaching the other support leg to the Back Plate so that the two support legs lock against the Back Plate. Listen for a click. Pull up once to make sure that the parts are correctly attached

Suction cup positioning and compressions

- Use your hands to check the position of the suction cup on the sternum bone
- When the suction cup is in the correct position, the lower edge of the suction cup is immediately above the end of the sternum
- Adjust if necessary
- Push **PAUSE** to lock the start position
- Push **ACTIVE (30:2 or continuous)** to start compressions

Unsecured airway - Intermittent chest compressions

- In an unsecured airway press **ACTIVE (30:2)** and the LUCAS will perform 30 compressions
- The LUCAS will pause for 3 seconds to allow the rescuer to perform two respirations
- An intermittent LED and audio signal sequence will alert the operator before each ventilation pause
- Chest compressions will automatically restart

Secured airway

- In a secured airway there is no requirement to synchronise ventilation and chest compressions
- Press **ACTIVE (continuous)** to provide continuous compressions
- The green LED light will blink 8 times a minute to alert the rescuer to ventilation

Defibrillation

- Apply/assess self adhesive defibrillation pads - ensure pads and/ or wires are not under the suction cup
- Pause the LUCAS 3 to allow for rhythm check, once rhythm confirmed resume chest compressions as soon as possible
- There is **no** requirement to stop the LUCAS 3 to administer a shock

Cleaning

- Clean surface and straps with soft cloth and mild detergent
- Suction cup is single patient use - Replace following use and ensure new cup fully attached
- Ensure device dry before replacing in box
- Weekly check (see overleaf)

Weekly check or after use

- Ensure that the device is clean
- A suction cup is installed and is clean
- Check patient straps are attached and clean
- Check that the two support leg straps of the Stabilization Strap are attached around the support legs, and that the neck strap is placed in the carrying case
- Pull the release rings upwards to make sure that the claw locks are open.
- Make sure that both batteries are fully charged. When the LUCAS device is in the **OFF** mode, push **MUTE**. The battery indicator illuminates and shows the battery charge status
- Push **ON/OFF** to make the device do a self test. Make sure the **ADJUST LED** illuminates with no alarm or warning LED.
- Push **ON/OFF** to power off the device again.
- Make sure that the external power supply cord is not damaged.

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