stryker

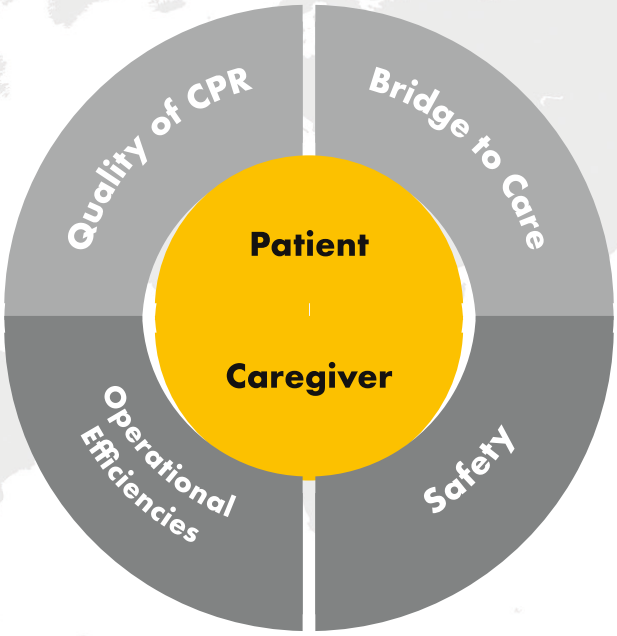
LUCAS® 3, v3.1

Chest Compression System

Your partner in life support

Consistency. It's a powerful thing.

The LUCAS Chest Compression System helps emergency care teams around the world do what they do best — save lives. With high-quality chest compressions and fewer interruptions than manual CPR, LUCAS is your partner that will administer Guidelines-consistent, high-quality compressions until the job is done.[26]



CPR quality

- Delivers Guidelines-consistent, high-quality chest compressions at recommended rate and depth while allowing for full chest recoil[6,24,25]
- Fewer interruptions, compared to manual CPR, leading to higher chest compression fraction[1,2] and increased blood flow to the brain[3,4]
- Higher $EtCO_2$ values, compared to manual CPR, which can be indicative of higher chance of ROSC[5]

Bridge to care

- Overcomes caregiver fatigue by providing Guidelines-consistent chest compressions for multiple hours if required*[26]
- Allows for hands-free, high-quality chest compressions during transport[1,6]
- Extends reach of care and allows for treatment of underlying cause during CPR (e.g. ECMO/PCI)[22]

Operational efficiencies

- Calms the event and reduces stress by eliminating the need to manage a compression rotation schedule[24]
- Frees up care givers to focus on other tasks[24]
- Utilizes data integration capabilities to enhance post event analysis and quality improvement efforts[29]

Safety

- Rescuers can avoid awkward and potentially dangerous situations when performing CPR during patient transport[26]
- Potential to reduce CPR-related injuries to the CPR provider[26]
- Reduces X-ray exposure of CPR provider during PCI[27]

* When using multiple batteries or an external power source. Battery typically lasts for 45 minutes of operation

Proven. Safe. Effective.

For over 15 years the LUCAS Chest Compression System has been helping lifesaving teams around the world deliver high performance, Guidelines-consistent chest compressions to cardiac arrest patient in the field, on the move and in the hospital.

The LUCAS device has been proven safe and effective in a large randomized controlled trial, the highest level of clinical evidence.[10]

LUCAS by the numbers

50,000+

With over 50,000 devices in the global market, a patient is treated approximately every 2 minutes[7,8]

16,830

In a successful 2 hour 45 minute resuscitation, LUCAS administered 16,830 Guidelines-consistent compressions[9]

>99%

Operational reliability in clinical use[10]

+60%

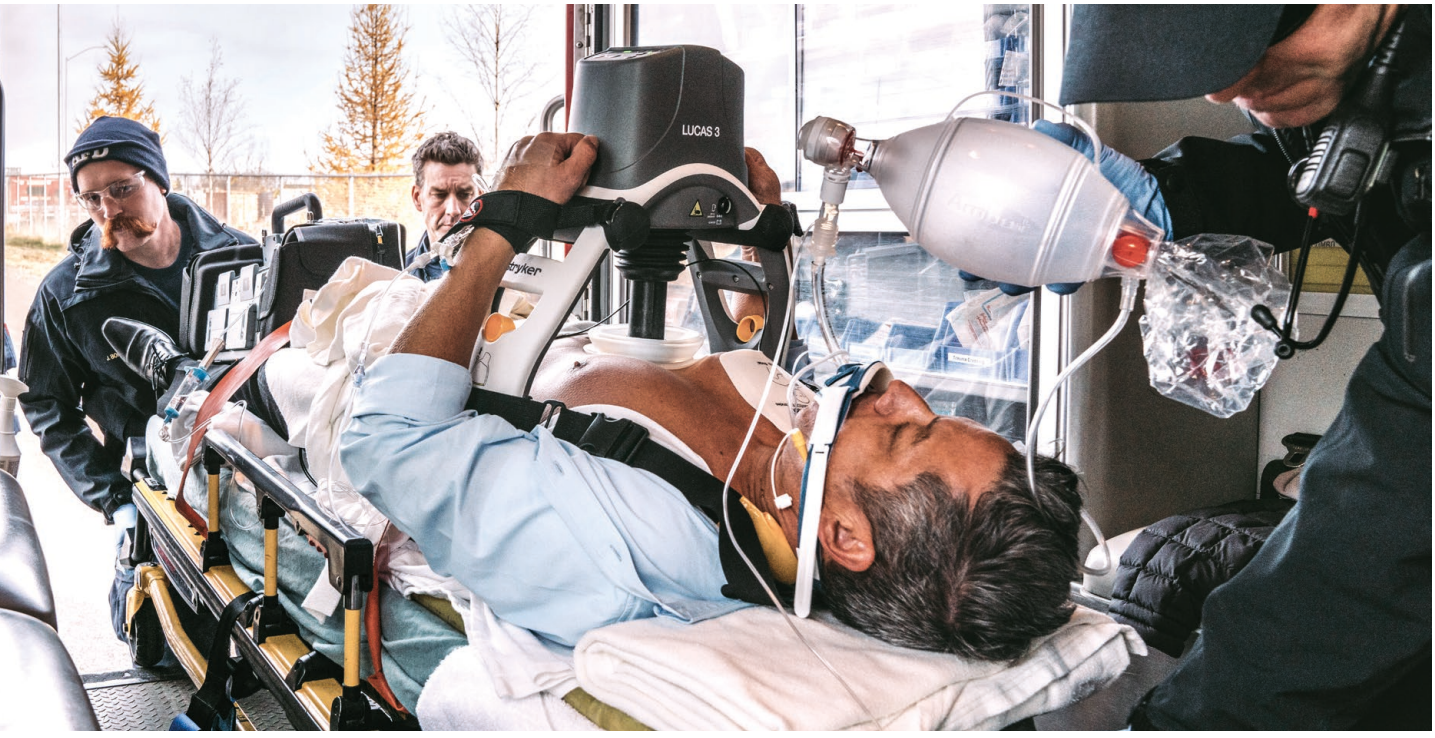
Increased blood flow to the brain vs. manual CPR[3]

>99%

of survivors had good neurological outcomes in large randomized LINC trial[10]

95%

of patients fit in the LUCAS device[10,11]



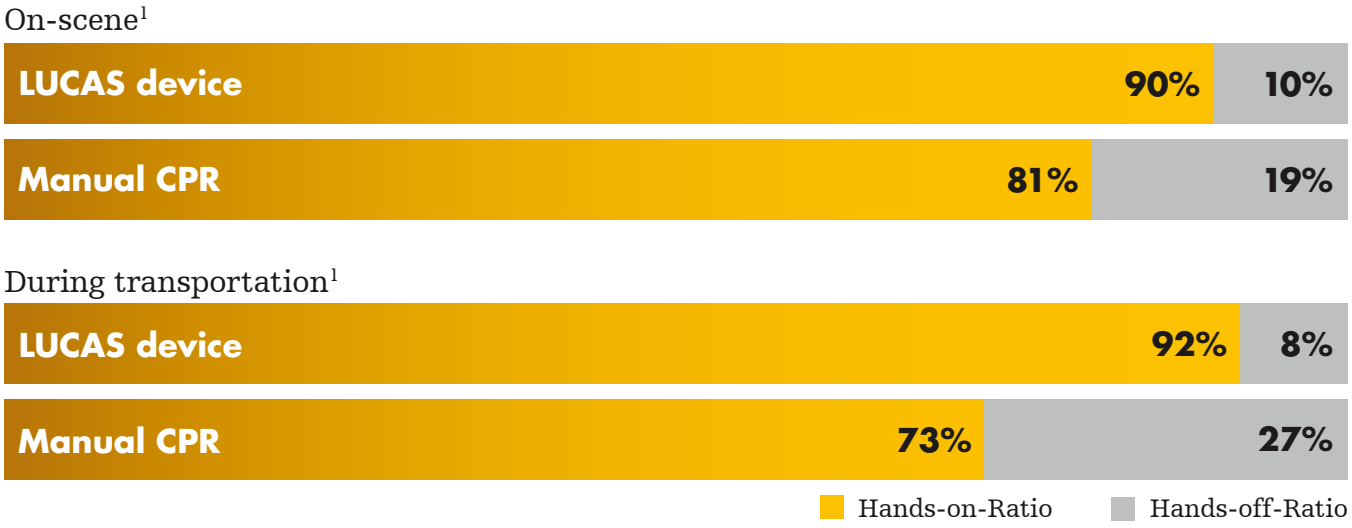
"We know CPR is difficult to do well. People slow down. They don't always do it appropriately — even professional rescuers. A machine doesn't get tired; it is consistent, and consistency is key."

—Charles Lick, MD Medical Director, Allina Medical Transport & Emergency Department Director, Buffalo Hospital[23]

Your power to improve CPR quality

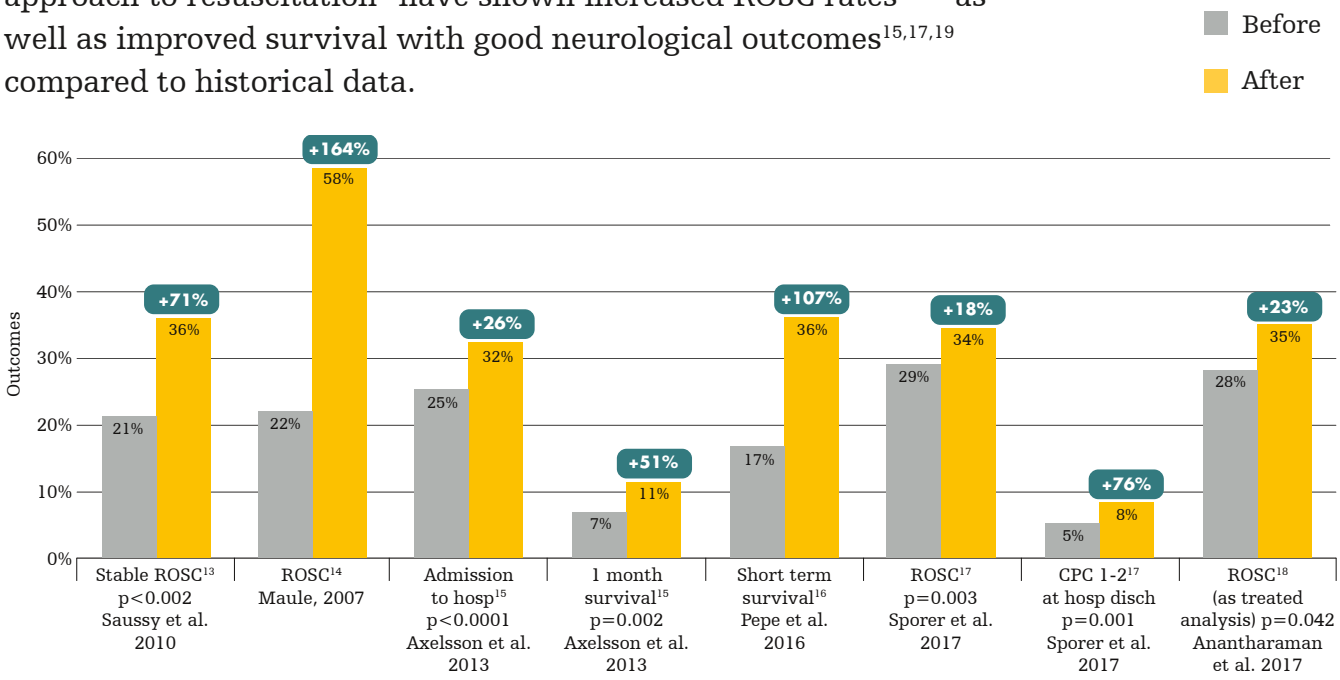
Less interruptions to CPR on the scene and during transport

30-40% of patients who have achieved return of spontaneous circulation (ROSC) on the scene will re-arrest prior to hospital arrival and may require CPR during transportation.[20,21]



LUCAS can contribute to improved outcomes

Systems of care implementing LUCAS together with a comprehensive approach to resuscitation* have shown increased ROSC rates[13-17] as well as improved survival with good neurological outcomes[15,17,19] compared to historical data.



*May include additional therapies or changes of protocols

LUCAS 3, v3.1 at a glance

7 seconds

The two-step application (back plate, then upper part) makes the LUCAS device quick and easy to deploy, as short as a median 7 second interruption time when transitioning from manual CPR.[12]

Battery allows for 45 min continuous run time. Plug in the external power supply for prolonged operation/charging

Check Battery charge status through the Carrying Case top window

Compact, lightweight carrying case included with every device

The carbon fiber LUCAS PCI back plate (optional) is intended specifically for use in the cath lab, with its radiotranslucent material minimizing image shadows

Wi-Fi® connectivity for device Post-Event reports and asset notifications over e-mail

Comprehensive post-event analysis of LUCAS and LIFEPAK® data in CODE-STAT™ 11 data review software

Patient straps secure patient arms during transport

Release rings to remove the upper part from the back plate

Disposable suction cup with optional pressure pad release during ventilations

Compression rate can be set at 102, 111 or 120 to meet unique protocols

Stabilization strap helps keep device in correct position on patient

Standard low profile back plate, easy to place

High-quality CPR

If the patient is lying on a soft surface, the LUCAS device delivers Guidelines-consistent depth, overcoming the “mattress effect”.

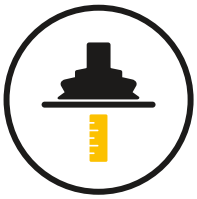
LUCAS 3, 3.1 setup options*

The LUCAS 3, v3.1 was designed with enhanced data capabilities to allow for better post-event reporting and asset management. With Wi-Fi and Bluetooth connectivity, your LUCAS device can be configured to meet your protocols within your LIFENET account. Integration with CODE-STAT 11 now allows for precise and timely post-event reviews that can help with training and quality improvements.

Increase compression rate **without** sacrificing depth.[3,17,28] Compression rate can be fixed or variable during operation at 102, 111, or 120 compressions per minute while still maintaining desired depth between 1.8 to 2.1 inches/45 to 53mm (depth fixed during operation).

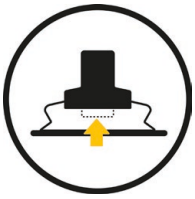
Adjust ventilation alerts, pause length and count

Auto-lowering of piston (AutoFit or QuickFit)



Adjustable depth: 1.8 and 2.1 ± 0.1 inches / 45 to 53 ± 2mm (fixed during operation)

Audible CPR timer: 1-15 minutes (in 1 min. increments)



Optional pressure pad release (0.4 inches/10 mm) allows for chest rise during ventilation

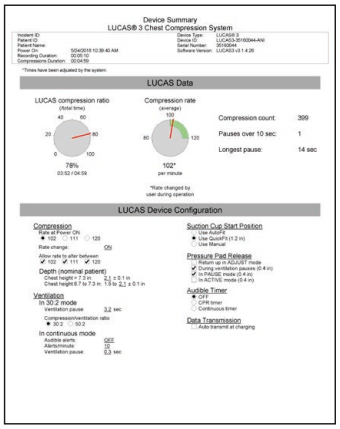
* Setup options should be changed only under the direction of a physician knowledgeable in cardiopulmonary resuscitation who is familiar with the literature in this area

Connected care

Post-Event reporting

Key metrics and dashboards:

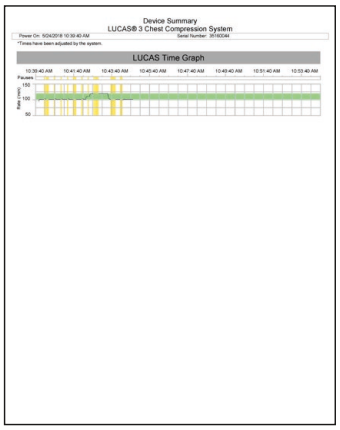
- Compression time, ratio, and rate
- Count, number of pauses > 10 sec.
- Duration of longest compression pauses
- Visual timeline of the event



Post-Event reporting

CODE-STAT 11 allows for LUCAS Post-Event Reports to be merged with reports from LIFEPAK 15 and LIFEPAK 20/20e devices.

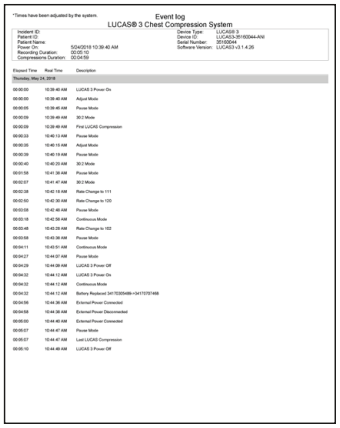
Merged reports give a comprehensive view of cardiac arrest cases and can be used in quality improvement and training efforts.



Asset management

LIFENET offers easily accessible asset dashboard for fleet status at latest device check-in.

Gives notifications of expiring and expired LUCAS batteries.



Selected specifications

For further details on specifications, please see the LUCAS 3, v3.1 Data Sheet (GDR 3336665) or LUCAS 3, v3.1 Instructions for Use.

Therapy

- Rate: 102 ± 2 compressions per minute
- Depth: 2.1 ± 0.1 inches / 53 ± 2 mm*
- Compression duty cycle: 50 ± 5%
- ACTIVE 30:2 mode: 30:2 compression to ventilation ratio
- ACTIVE Continuous mode
- Ventilation alerts and pauses

Above specifications are factory default settings and for nominal patients. The LUCAS 3, v3.1 setup options allows you to tailor rate, depth and ventilation alerts and pauses within certain values, as well as setting up an optional audible timer, sending device data reports and connecting to Wi-Fi networks.

*For smaller patients with sternum height less than 7.3 inches / 185 mm: 1.5 to 2.1 ± 0.1 inches / 40 to 53 ± 2 mm

Device

Dimension

- Assembled (HxWxD): 22.0 x 20.5 x 9.4 inches / 56 x 52 x 24 cm
- In carrying case (HxWxD): 22.8 x 13.0 x 10.2 inches / 58 x 33 x 26 cm

Weight

- Device with Battery (no straps): 17.7 lbs / 8.0 kg
- Battery: 1.3 lbs / 0.6 kg

Environment

- Operating temperature: +32°F to +104°F / +0°C to +40°C -4°F / -20°C for 1 hour after storage at room temperature
- Storage temperature: -4°F to +158°F / -20°C to +70°C
- Device IP classification (IEC 60529): IP43

Eligible patients

- No patient weight limitation
- Chest height: 6.7 to 11.9 inches / 17.0 to 30.3 cm
- Maximum chest width: 17.7 inches / 44.9 cm

Power specifications

Power source: Proprietary battery alone or with external power supply or car power cable

Battery

- Type: Rechargeable Lithium-ion Polymer (LiPo)
- Capacity: 3300 mAh (typical), 86 Wh
- Voltage (nominal): 25.9 V
- Run time (nominal patient): 45 minutes (typical). Extended run time connecting to external power supply
- Service life: Recommendation to replace battery every 3 to 4 years or after 200 uses

Power supply

- Input: 100-240VAC, 50/60Hz, 2.3A, Class II
- Output: 24VDC, 4.2A
- Car power cable: 12-28VDC/0-10A
- Charging (at room temperature, +72°F / +22°C) Using external power supply:
  - Less than two hours
- Using external battery charger:
  - Less than four hours

Your partner in life support

—in the **field**

—on the **move**

—in the **hospital**

Reference:

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The LUCAS 3 device is for use as an adjunct to manual CPR when effective manual CPR is not possible (e.g., transport, extended CPR, fatigue, insufficient personnel).

For further information, please contact Stryker at 800 442 1142 (U.S.), 800 668 8323 (Canada) or visit our website at stryker.com

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