

Beaty

The power to save lives



martek[™]
LIFECARE
Making Life Better



**There when you
need it most**

Real-time CPR feedback device



Why Beaty?

Beaty helps you perform chest compressions effectively by providing audio feedback when reaching a depth of 5cm



88% of cases happen at home

X3

Effective bystander CPR can **triple** the chances of survival



70% may feel helpless to act during a cardiac emergency



Within approximately **4 minutes** of cardiac arrest the damage to the brain is irreversible.

This can be prevented by immediate initiation of chest compression reaching a **depth of 5cm**



Gauging the exact depth of chest compression is **very difficult** for professionals and almost impossible for bystanders and lay rescuers



Features and Benefits



Silicone Adapter

Adds protection to your device and increases user's comfort when prolonged CPR is required



Affordable

Costs what you pay for a few cups of coffee



Audio Feedback

Enables the user to perform effective chest compression



Small Dimensions and Lightweight

Designed to fit anywhere within reach



Curved Silicone Pad Ergonomic Design

Fits the palm of the hand for optimal use



Simple and User Friendly

Just apply and start compressing



Developed by a team
of leading **doctors and
medical engineers**

Clinical Studies

Chest compression depth and survival in out-of-hospital cardiac arrest

Vadeboncoeur, Tyler, et al. "Chest compression depth and survival in out-of-hospital cardiac arrest." *Resuscitation* 85.2 (2014): 182-188.

Quality of cardiopulmonary resuscitation during out-of-hospital cardiac arrest

Wik, Lars, et al. "Quality of cardiopulmonary resuscitation during out-of-hospital cardiac arrest." *Jama* 293.3 (2005): 299-304.

Highlights of the 2015 American Heart Association guidelines update for CPR and ECC

American Heart Association. "Highlights of the 2015 American Heart Association guidelines update for CPR and ECC." Dallas, USA: American Heart Association (2015).

The aim of this study was to assess the relationship between chest compression depth and OHCA survival.

Among 593 OHCA, 136 patients (22.9%) achieved return of spontaneous circulation, 63 patients (10.6%) survived and 50 had favorable functional outcome (8.4%). Mean compression depth was significantly deeper in survivors (53.6 mm, 95% CI: 50.5-56.7) than non-survivors (48.8 mm, 95% CI: 47.6-50.0).

This study demonstrated that deeper chest compressions were associated with improved survival and functional outcome following OHCA. The results suggest that adhering to the current AHA Guideline-recommended depth of at least 51 mm could improve outcomes for victims of OHCA.

The aim of this study was to measure the quality of out-of-hospital CPR performed by ambulance personnel, as measured by adherence to international CPR guidelines.

176 adult patients with out-of-hospital cardiac arrest treated by paramedics and nurse anesthetists, between March 2002 and October 2003 were examined. The defibrillators that were used in these cases recorded chest compressions via a sternal pad fitted with an accelerometer and ventilations by changes in thoracic impedance between the defibrillator pads, in addition to standard event and electrocardiographic recordings.

In this study of CPR during out-of-hospital cardiac arrest, chest compressions were not delivered half of the time, and most compressions were too shallow. Mean compression depth was 34 mm (95% CI, 33-35 mm).

"Untrained lay rescuers should provide compression-only (HandsOnly) CPR, with or without dispatcher guidance, for adult victims of cardiac arrest."

"During manual CPR, rescuers should perform chest compressions to a depth of at least 2 inches (5 cm) for an average adult ... "

"Most monitoring via CPR feedback devices suggests that compressions are more often too shallow than they are too deep."

"Compression depth may be difficult to judge without use of feedback devices ... "

Technical Specifications

Indications for Use

BEATY is to be used during CPR in cases of cardiac arrest, allowing the rescuer to perform effective chest compressions as suggested in the current guidelines. BEATY gives an audible feedback when adequate force is applied on a patient's chest during CPR. The given feedback increases sense of capability among rescuers and chances of survival among victims, due to effective CPR. The device can be used by any person familiar with CPR.

BEATY is not to be used in the following cases:

Children- BEATY is to be used only on victims 8 years of age and above

If there is no indication for chest compressions or chest compressions are unlikely to help the patient

Device Specifications

Power Requirements:	Rated input voltage: 3v lithium coin batter
Dimensions:	Height: 50mm, 1.96" Width: 50mm, 1.96" Depth: 24mm, 0.94"
Package Size:	95mm x 120mm x 30mm, 3.74" x 4.72" x 1.18"
Weight:	Total device weight: 34g
Operating Environment:	Ambient Temperatures: Between 32° and 102.2°F (0° and 39°C) and in normal conditions Relative Humidity: 10% to 90% RH Atmospheric Pressure: Up to 2000m above sea level (700hpa)
Ingress Protection:	IP22: Resistant to solid objects greater than 12.5mm such as finger and vertically falling drops over an actuator tilted 15°
Applied Parts:	Type BF: Electrically connected to Patient but not directly to heart
FDA:	Class 2 (PMJ)
CE:	Class 1 MHRA Reference Number: CA016844
Colour:	Please note that we supply Beaty in red. To discuss other colour options, please speak to us.

Technical Specifications

Compliance with International Standards

CE-labelled device; complies with all appropriate performance standards as specified in Annex II of the European Medical Device Directive MOD 93/42/EEC. BEATY is classified as class I medical device per the MOD.

It is classified as Class I by the International Standard IEC 60601-1 and as Class II Medical device by the Department of Health and Human Services of The Food and Drug Administration. (21CFR8750.5210)

The device is designed to comply with current revisions of the following international standards:

- **IEC 606011:2005 (Third Edition)+ CORR. 1:2006 + CORR 2:2007 + A1:2012 or IEC 60601 - 1: 2012 reprint):** General requirements for Basic Safety and Essential Performance.
- **IEC 606011 - 2 (4th edition); sections 7 & 8**
 - Sec. 7.1 & CISPR 11: radiated emission
 - IEC 61000-4-2: Immunity from electrostatic discharge (ESD)
 - IEC 61000-4-3: Immunity from electromagnetic fields
- **IEC 60601 - 1 - 6: Medical Electrical Equipment - Part I - 6:** General Requirements for Basic Safety and Essential Performance-Collateral Standard: Usability.
- **IEC 62366 -1 Medical devices** - application of usability engineering to medical devices
- **RoHS:** Restriction of Hazardous Substances DIRECTIVE 2011/65/EU.
- **WEEE:** Waste Electrical and Electronic Equipment Directive.



References

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2. Hasselqvist-Ax, I., Herlitz, J., & Svensson, L. (2015). Early CPR in Out-of-Hospital Cardiac Arrest. *The New England journal of medicine*, 373(16), 1573-1574.
3. Mary Fran Hazinski, RN, MSN. (2015). Highlights of the 2015 American Heart Association Guidelines for CPR and ECC [Brochure]. Author.
4. Zapletal, B., Greif, R., Stumpf, D., Nierscher, F. J., Frantal, S., Haugk, M., ... & Fischer, H. (2014). Comparing three CPR feedback devices and standard BLS in a single rescuer scenario: a randomised simulation study. *Resuscitation*, 85(4), 560-566.
5. Vadeboncoeur, Tyler, et al. "Chest compression depth and survival in out-of-hospital cardiac arrest." *Resuscitation* 85.2 (2014): 182-188.
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7. American Heart Association. "Highlights of the 2015 American Heart Association guidelines update for CPR and ECC." Dallas, USA: American Heart Association (2015).

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