



# A GUIDE TO DEFIBRILLATORS

HOW YOU CAN SAVE A LIFE

A Sudden Cardiac Arrest (SCA) can happen to anyone, anywhere, at anytime. Read **our** guide to ensure you're prepared.



# A GUIDE TO DEFIBRILLATORS HOW YOU CAN SAVE A LIFE

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Turning bystanders into first responders

Across Australia each year, approximately 30,000 individuals experience an out of hospital cardiac arrest. 7,500 occur in New South Wales alone.

Survival from out of hospital cardiac arrest is less than 9%

For every minute that passes, the individual's chance of surviving decreases by 10%

> Without any response of CPR, brain damage can start to occur within 4 minutes

With no CPR or defibrillation, there is little chance of surviving cardiac arrest past 8-10 minutes

> Average response times of Ambulance in Metro Sydney is approximately 10 minutes

The number of people it takes to make a difference

### **SUDDEN CARDIAC ARREST:** WHAT YOU NEED TO KNOW

#### WHAT IS IT?

Sudden Cardiac Arrest (SCA) is when the heart rhythm becomes chaotic. It usually results from a disturbance in your heart that stops its pumping action, stopping the blood flow to your brain and the rest of your body.

It's a medical emergency that if not treated immediately, will result in death within a few minutes.

# For example, here's what a "normal" heartbeat looks like:

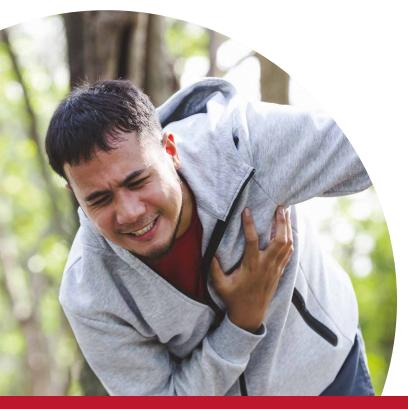


Normal Sinus Rythm

And here's what happens to the heart when it enters an Sudden Cardiac Arrest:



V.F. (Ventricular Fibrillation)



#### HOW CAN YOU TELL IF SOMEONE IS HAVING A SCA?

The symptoms of an SCA are immediate and include:

- Sudden collapse
- No breathing
- Loss of consciousness

And, it can occur without warning.

#### WHO CAN SUFFER FROM SCA?

Anyone, anywhere at anytime can be affected by SCA. However, there are risks that can increase the likelihood of them occurring.

#### CONTACT US NOW

Find out which defibrillator is best for you

#### THIS INCLUDES:

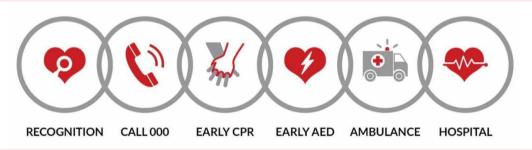
- Having a family history of coronary artery disease or another form of heart disease / heart problems
- Smoking
- High blood pressure and cholesterol
- Obesity and diabetes
- Having a predominantly sedentary lifestyle
- Drinking too much alcohol
- Age SCA likelihood increases with age
- Being male men are two to three times more likely to suffer from SCA than women
- Having had a heart attack before
- Using illegal drugs
- Nutritional imbalance such as low potassium or magnesium levels
- Accidents and trauma
- Drownings
- Severe cases of Asthma and Anaphylaxis

#### HOW SERIOUS ARE THEY?

- Worldwide, seven million people are impacted annually
- More than 25000 per year in Australia suffer from SCA out of hospital, every year (Heart Foundation)
- Every minute that passes without defibrillation reduces survival rate by 10%
- The average response time for emergency services is around eight to 10 minutes.
- Only 12% of people currently survive SCA
- Only 12% of SCA cases have a defibrillator available
  - \* Source: Aus Roc

Automated External Defibrillators (AEDs) can increase the survival rates for an SCA up to 75%

### CHAIN OF SURVIVAL



There are varied defibrillator manufacturers, but we recommend devices that provide the best possible outcome when responding to a cardiac arrest. In addition, we believe that the devices selected should contribute to the best possible quality of life post Sudden Cardiac Arrest (SCA).

The Chain of Survival is an Internationally recognised process. If each link in the Chain is completed to a high standard and quickly, the patient has the greatest chance of survival.

We support AEDs and education programs which contribute to a strong Chain of Survival.



# WHY IS CPR SO IMPORTANT?

CPR stands for cardiopulmonary resuscitation. It is a lifesaving procedure that is given to someone who is unresponsive and not breathing normally.

It helps to pump blood around the person's body when their heart can't.

In addition, it helps prevent brain damage and limits cardiac and vital organ damage, whilst significantly increasing the chance of survival. It also buys time when professional help is on its way.



CPR must always be performed and with the support of an AED, if one is available.

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We supply devices that deliver realtime verbal and visual feedback & CPR coaching to the rescuer to help improve CPR.

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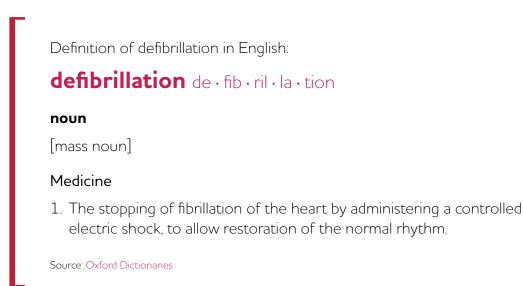
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### WHAT IS A DEFIBRILLATOR?

According to the Heart Foundation a defibrillator is:

"...a device that gives a high energy electric shock to the heart through the chest wall to someone who is in cardiac arrest."

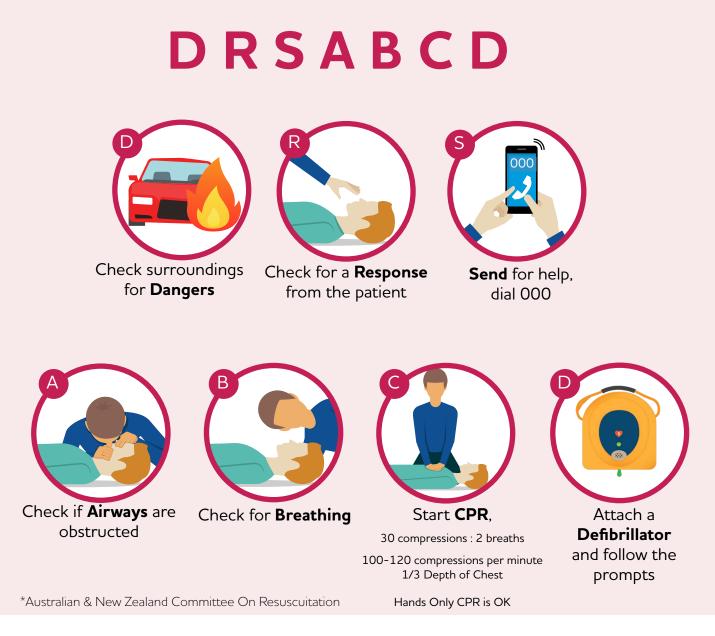


AEDs have been developed for public access use and can be used without any formal training. Furthermore, you cannot misuse or do any harm by using a defibrillator.

The most frequent heart rhythm witnessed during an SCA is ventricular fibrillation (VF), and it is fatal. The only treatment to help save a life is CPR and defibrillation.



However, when early and effective bystander CPR is provided, survival rates can double or triple. This highlights the importance of quick defibrillation coupled with effective CPR as key links in the chain of survival. When responding to any medical event, including SCA, we recommend following these seven steps, as per the ANZCOR\* guidelines. This is basic life support and taught in all first aid courses in Australia.



#### FOR BABIES & CHILDREN:

- Same compression rate as adults less head tilt for breaths.
- You can purchase child pads, recommended for 1-8 year olds (defibrillation is not recommended for children under 12 months)

It is best to have the AED in standard Adult mode. If you do need to put AED pads on a very small child, if the chest is too small to place the pads in the usual position, placing one pad on the chest and on the back is acceptable.

The peak body of resuscitation, Australian Resuscitation Council state in the Basic Life Support Guidelines that adult pads may be used on a child if you do not have child pads.

The Child pads can be ordered separately for defibrillators or come standard with the unit, depending on the model you choose.

### **USING A DEFIBRILLATOR**

 Adult Patient or Child Patient
 this determines which electrodes are inserted into the device. (child pads are for 1-8 years olds)

If Child electrodes are not available the guidelines set out by the Australian Resuscitation Council is that Adult electrodes should be used.

- Call for Medical Assistance.
- Remove clothing from patient's chest to expose bare skin.
- Open and apply electrodes to patient's bare chest as indicated.



• Press electrodes firmly to patient's bare skin.

• If shock is advised the defibrillator instruct the user to press the shock button

• A fully automatic defibrillator delivers a shock without further intervention following a warning.

- You will then be prompted to carry out CPR.
- When two minutes of chest compressions have been completed the defibrillator will prompt you to stop chest compressions;

• The defibrillator will again access the patient's heart rhythm;

• Sometimes no shock is needed in a lifesaving situation, the defibrillator will advise you on this; and will advise you to continue CPR.

• Continue until the person starts to show signs of consciousness and breathing, or when the Ambulance arrives.

Note: An AED will not shock someone unless they are in SCA. You cannot misuse a defibrillator.



#### WHY SHOULD A CHILDCARE CENTRE CONSIDER A DEFIBRILLATOR?

While not a legal requirement in Australia, it is recommended that the installation and use of AEDs should at least be considered by all workplaces. In order to plan first aid requirements for your facility, you must assess your facility (child risk minimisation plans, risk assessments, location to emergency services, first aid response) which will provide a tailored approach to first aid.

Under Federal and State legislation, as well as early learning frameworks, staff must have current first aid qualifications. Part of that training is focussed on CPR and defibrillation. Centres can only enhance the first aid response and also support staff by providing defibrillators as a necessary piece of equipment within the centre.

In 2017 the Facilities Management Journal reported that a survey revealed that **52% of businesses** have never considered buying, or have bought, a defibrillator.

#### CONTACT US NOW

Find out which defibrillator is best for you In its most recent guidelines<sup>+</sup> the Resuscitation Council said it "strongly suggests a policy of early attempted defibrillation" and it pointed out that with every minute of delay of defibrillation, the chances of survival diminish by 10%, and after 10 minutes, the chances of survival are almost zero.

\* Occupational Safety and Health Administration, U.S. Department of Labor. | \* Released in 2015

#### **EVALUATE YOUR RISKS**

A childcare facility is of course a workplace, and as with any workplace it is an area where people spend a large proportion of their daily lives. As sudden Cardiac Arrest is the largest cause of death in the western world, this means that we need to be prepared at every workplace should Sudden Cardiac Arrest strike.

Although we normally think of the duty of care at a childcare centre being towards children, the facts are that the greatest risk actually lies in the possibility of one of the staff, parents, grandparents or visiting contractors having a Cardiac Arrest. Sudden Cardiac Arrest is in fact very uncommon with children where there is no pre-existing congenital heart defect.

#### WHEN EVALUATING YOUR RISKS, PLEASE CONSIDER:

- Pre existing health issues of children and staff
- Your location and time to access emergency services (Ambulance)
- Location of your centre within the general community
- Community members

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- The closest defibrillator in the vicinity of the centre
- Suitable location of the defibrillator on site Unit must be visible, easily accessible and secure
- Communication strategies
- Updating your policies and procedures (including fire evacuations) to include the defibrillator



We recommend that defibrillators are as accessible as possible. This should be a max 90-second brisk walk from any employee.

\*Research study by CMAJ 2015

### HOW DO YOU LOOK AFTER A DEFIBRILLATOR?

Many people are unaware that whilst they are technologically advanced and simple to maintain, defibrillators still need to be monitored to ensure they are fully functional and can work effectively when needed.

Our defibrillators come with built-in technology that will give users warning signs of any issues, and we recommend organisations to check their devices weekly.

So what do you need to be aware of when maintaining your defibrillator?

#### CONTACT US NOW

The Michael Hughes Foundation will support you to care and update your defibrillator

#### DEFIBRILLATOR MAINTENANCE REQUIREMENTS

#### **Expiration dates**

The batteries and pads in your defibrillator are the key functions that send the shock to the person suffering from an SCA. The pads connect the device to the patient and the battery provides the power to deliver the defibrillation shock.

Pads are single-use, and both the pads and batteries will have expiration dates, so it's essential that you keep an eye on when they'll need replacing.

We supply a fully-connected defibrillator that features software that will monitor the status of your device, and will highlight if the pads or batteries need changing, if the batteries are fully charged, and if it is in good working order.

This benefits businesses that have multiple sites, and multiple defibrillators – as they are able to get an overview of the status of all the devices quickly and efficiently.

#### WHERE SHOULD THEY BE LOCATED?

In short, defibrillators should be available in just about every location imaginable, as you never know when someone is about to be struck by a SCA. Remember, it can happen to anyone, anywhere, at anytime.

Defibrillators should be treated in the same way as fire extinguishers, so they should not be locked away in a cupboard, and should be easily accessible to everyone - when you have one on your business premises.



So, by investing in a defibrillator or multiple defibrillators (depending on the size and spread of your centre), you'll have complete confidence that your employees, the children, their parents, visiting contractors will have easy access to a life-saving device in time of emergency.

### KEY CONSIDERATIONS WHEN PURCHASING A DEFIBRILLATOR

So, you now understand the importance of CPR & defibrillation, and the need for an AED in your business, but you need to convince your board of directors.

We can work with you to put your business case together, sharing details about the benefits of having a defibrillator on site and how they can mean the difference between life and death, and we can even help you present your case to your wider team to gain buy-in.

But now comes the tricky part - which defibrillator should you choose?

There are many alternatives available on the market, so it's essential that you choose wisely, and the device you select meets all your specific needs and requirements. As it's important to remember that they are not all the same, and device performance and clinical efficacy vary considerably. We'd recommend considering the following:

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#### **DEFIBRILLATOR CHECKLIST**

- Does it offer CPR feedback? This is a feature that talks to the defibrillator user and tells them how to perform CPR and offers user feedback. (see page 20)
- 2. Where will it be located and how will it be stored?
- How will it be monitored and maintained? Does the device offer remote monitoring?
- What's your employee demographics

   and can the defibrillator "shock" everyone that is likely to be at your premises?
- 5. How easy is it to operate?
- 6. Does it come in different languages, do you need a second language?

7.	Does it come with substantial manufacturer's warranty?	
8.	What is the IP rating of the device? This measures the machine's tolerance to dust and moisture. Ensure you look for products that have an IP rating of 55 or above and that they are tested to Military Standard 810F.	
9.	What is the device's battery and electrode pad life? This is how long the battery and pads will be in "date" for, whether they are used or not.	
10.	How will you pay for the defibrillator?	
11.	Do you need training?	

#### **CONNECTED DEFIBRILLATOR BENEFITS**

- Connected via Wi-Fi or a cellular network.
- All information accessed via an online dashboard.
- Remotely monitor readiness information.
- Locate on a map and detect location changes.
- Receive alerts of any situation affecting readiness such as battery status.
- Be alerted when an AED has been used.
- Send SCA event data via Wi-Fi to emergency responders.
- Automatically send event data and reports to hospital and medical caregivers.
- Get notifications if batteries or electrodes are expiring.
- Eliminates manual checks and risks of human error.
- Helps you save time and money on device management.

#### STORAGE

Your defibrillator should be visible. and easily accessible to everyone that may enter your premises, and in a location that is not obstructed.

There are a wide variety of storage options available, and we offer a number of alternatives to meet your exact requirements.

This includes:

- Wall brackets
- Internal wall cabinets
- Alarmed cabinets
- External wall cabinets
- Monitored cabinets
- Backpacks



We have partnered with Aero Healthcare, a national AED supplier for over a decade in Australia, who are industryleaders in both customer service and product support. Our manufacturers introduced the world's first mobile defibrillators in the 1960s to make defibrillation accessible to everyone.



### WHAT MAKES OUR DEFIBRILLATORS DIFFERENT?

- They offer the quickest time to shock at just eight seconds. Every second counts as the chance of survival reduces by 10% per minute
- They have the highest IP rating of IP56

   which means it is protected against dust and water and therefore suitable for use in almost any environment.
- They use patented shock delivery technology - this delivers a more effective shock at lower energy levels reducing risk of heart damage and improving patient recovery time.
- They can shock someone with a chest impedance of 10-300 ohms - which is greater than other defibrillators available
   therefore can shock in more cases resulting in more lives saved.

- They have a simple **one-button operation,** and voice and visual prompts for users, making them exceptionally easy to use by untrained and minimally trained rescuers.
- They can connect to **remote monitoring systems** making management of large fleets simple and cost effective.
- They have **patented CPR feedback** technology which provides the user voice guidance ensuring their chest compressions reach adequate Depth and Rate.

#### CONTACT US NOW

Find out which defibrillator is best for you

#### **ABOUT OUR DEFIBRILLATOR PACKAGES**

As a registered distributor for HeartSine and Lifepak defibrillators, below are our three key packages.



#### Heartsine 500P Package

- Heartsine 500P defibrillator unit Semi Auto with CPR feedback
- Adult Electrode & Battery PAD-Pak
- Premium Prep Kit (scissors, razor, etc)
- Steel Wall Cabinet
- AED wall sign
- Instruction Manual
- Delivery (Australia wide)
- Michael Hughes Foundation 1 hour online First Responder Information Session with staff/members of each childcare centre

Child pads can be purchased separately.

**ACA Price** 

\$2,440

**ACA Price** 

\$2.060

**ACA** Price

\$2.640

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#### Heartsine 350P (semi) or Heartsine 360P (auto)

- Heartsine 350P (semi auto) or Heartsine 360P (auto) defibrillator unit
- Adult Electrode & Battery PAD-Pak
- Premium Prep Kit (scissors, razor, etc)
- Steel Wall Cabinet
- AED wall sign
- Instruction Manual
- Delivery (Australia wide)
- Michael Hughes Foundation 1 hour online First Responder Information Session with staff/members of each childcare centre

Child pads can be purchased separately.



#### Lifepak CR2 – Semi or Automatic Options

- Lifepak CR2 Non-WiFi connected AED
- Semi or Fully automatic options
- Universal electrode pads for both adult and paediatric (child) use
- Premium Prep Kit (scissors, razor, etc)
- Steel Wall Cabinet
- AED wall sign
- Instruction Manual
- Delivery (Australia wide)
- Michael Hughes Foundation 1 hour online First Responder Information Session with staff/members of each childcare centre

# ABOUT OUR DEFIBRILLATORS

# DID YOU KNOW

the HeartSine 500P is the **ONLY** AED which provides CPR feedback based on assessment of the patient





#### The PAD 500P

A semi-automatic defibrillator that is operated by using two buttons. It features clear and simple voice prompts for users, and visual prompts to assist the rescuer in noisy or multi-lingual environments. The 500P features **unique patient specific CPR feedback** which instructs the user to push harder, faster, slower or reassures you that you're doing it right.



#### The PAD 350P/360P

A defibrillator that provides audio prompts to users and metronome for CPR timing, and features visual representations of how to use the device. Available in semi or fully automatic versions.



#### The Gateway

The Gateway enables ANY Samaritan AED to be connected to a local WiFi network. Simply attach the Gateway, or purchase one with an AED, and your device can be monitored online ensuring your AED is rescue ready at all times!



#### LATEST TECHNOLOGY, THE ALL NEW LIFESAVER

With the LIFEPAK CR2 Essential Defibrillator, even minimally trained users can quickly begin lifesaving care in just 2 steps making it the fastest time to shock. While other AEDs may be difficult to use, the LIFEPAK CR2 Essential Defibrillator uses simple graphics, audible instructions and automated features to help users remain focused. CPR coaching gives users the confidence to perform CPR correctly. The LIFEPAK CR2 Essential Defibrillator uses a metronome to set an effective pace; users are audibly guided through the resuscitation process.

#### **EASY-TO-FOLLOW GUIDES**

**No-button operation.** The Lifepak CR2 will turn on immediately after opening the lid. After analysing heart rhythm, the CR2 Essential will automatically deliver a shock (if needed), eliminating the need for the rescuer to push a shock button

**User-friendly.** The Lifepak CR2 Essential features easy-to-understand visual and voice prompts that guide a user through the process including CPR coaching. Quik-Step interchangeable electrodes allow swift and easy operation by the user, as there is no foil backing to remove from the pads.

#### FOR THE MOST VULNERABLE

**Paediatric mode.** The Lifepak CR2 Essential can be used on children under the age of 8yrs by simply pressing the paediatric mode switch. This is saves critical time compared to competitive AEDs which require a separate set of electrodes

#### **TOUGH & PROTECTED**

#### **IP** Rating

The Lifepak CR2 Essential has an IP rating of 55 meaning it is well protected from external elements such as dust and water

#### Carry Case

Hard-shell carry case comes standard with every CR2, further protecting the AED from any external damage.

WIFI WIFI Option Available



### WILL YOU HELP TO SAVE A LIFE?

See what some customers have said about our our defibrillators:

I used your defibrillator to save a contractor, one month after making the decision to install one. It was fantastic, especially the CPR technology.

Supervisor, Logistics Company

I used your HeartSine<sup>®</sup> samaritan<sup>®</sup> PAD500P defibrillator on a gym member who had cardiac arrest. We saved the members life !

Fitness Centre Owner

Every year more than seven million people suffer from a Sudden Cardiac Arrest (SCA) globally with no warning. And only five to 10% of those affected actually survive.

But by using a defibrillator you can increase the chance of someone surviving from <u>6% to 7</u>4%

## FIRST AID TRAINING

Range of accredited first aid courses for workplace certification & personal interest requirements. Private courses hosted on site & completed in one day.

Each course requires a minimum of 10 participants. No pre online learning required (ex. HLTAID0012). Courses are delivered by fully qualified, passionate & medically trained facilitators.

- HLTAID009 Provide Cardiopulmonary Resuscitation
- 2.5 hours \$60 p/p

**CONTACT US** 

to find out about our childcare center

FIRST AID KITS

Vayager ) First Aid Kit First Aid Kit

- HLTAID011 Provide First Aid 7.5 hours \$120 p/p
- HLTAID012 Provide First Aid in an Education and Care Setting 8 hours \$150 p/p

#### Visit our website for more details and to view our public courses.

Responder)



## FIRST AID KITS

INSTANT REFILLS

EASY SERVICING

COMPREHENSIVE RANGE

WORKPLACE COMPLIANT

INJURY SPECIFIC OPTIONS

INNOVATIVE & QUALITY PRODUCTS

WALL MOUNTABLE & LOCKABLE SECURE OPTIONS

PRODUCTS ENTERED IN THE ARTG. ARTG NO 142658

#### FACT SHEET

# COMMON REACTIONS TO TRAUMA

#### When you experience a traumatic or

frightening event it is normal to have strong physical and emotional reactions that remain after the traumatic event is over. These reactions may last for a few days, weeks or even longer.

How you react will depend on a number of factors including: the severity and circumstances of the traumatic event, your personality, other stressors in your life and the supports available to you. Listed below are common reactions that people experience following a traumatic event. You may relate to some or many of these examples:

#### PHYSICAL REACTIONS

Fatigue/exhaustion Disturbed sleep Nausea Nightmares Restlessness Headaches Excessive alertness and being easily startled



#### EMOTIONAL REACTIONS

Fear Numbness/detachment Avoidance Depression Guilt Over-sensitivity Anxiety/panic Withdrawal/tearfulness

#### MENTAL REACTIONS

Intrusive thoughts Confusion Reduced concentration and memory Flashbacks or replaying parts of the event Disorientation Inability to stop focussing on it A sense of losing time

#### BEHAVIOURAL REACTIONS

Avoiding reminders of the event Getting immersed in work for recovery Losing touch with normal routines Changed appetite, such as eating more or less Difficulty doing anything except familiar routines.

If you are finding these symptoms distressing or they persist after 3 weeks, we encourage you to seek help from the following people: Your doctor // Your local community health centre // Counsellor Psychologist // Lifeline 13 11 14

# mhf.life

# RECOVERING FROM TRAUMA

**Recognise** that you have been through a distressing or frightening experience and that you will have a reaction to it.

Accept that you will not feel your normal self for a period of time, but that it will also eventually pass.

**Remind** yourself daily that you are managing – try not to get angry or frustrated with yourself if you are not able to do things as well or efficiently as normal.

**Don't** over use alcohol or drugs to help you cope.

Avoid making major decisions or big life changes until you feel better.

**Gradually** confront what has happened – don't try to block it out.

**Try** to keep to your normal routine and stay busy.

**Don't** bottle up your feelings – **talk to someone** who can support and understand you.

> **Don't** go out of your way to avoid certain places or activities.

**Don't** let the trauma confine your life, take your time to get back to normal.

When you feel exhausted, make sure you **set aside time** to rest.

Make time for **regular exercise**, it helps release physical and psychological tension.

**Help** your family and friends to help you by telling them what you need, such as time out or someone to talk to.

**Relax.** Use relaxation techniques such as yoga, breathing or meditation, or do things you enjoy, such as listening to music or gardening.

**Express** your feelings as they arise – talk to someone about your feelings or write them down.

When the trauma brings up **memories or feelings**, try to confront them. Think about them, then put them aside. If it brings up other past memories, try to keep them separate from the current problem and deal with them separately.





# RTNER C for an accredited first aid course! learning, are hosted on site and delivered by our experienced MHF

**The Michael Hughes Foundation** (MHF) is an Australian charity focussed on increasing community action, in response to cardiac arrest, and being an active advocate for increasing survival rates of this health issue

**BUY** You can buy high quality first aid products and equipment including defibrillators and first aid kits. All products are supported with training, maintenance and re-stocking services

GIVE Become a regular donor of MHF. 100% of donations from our regular giving program are used to donate defibrillators and training services to communities across New South Wales LEARN Get 10 or more people together Courses are tailored with no pre-online Team/Paramedics. All training is delivered under the auspices of Healthcorp Pty Ltd RTO 91222

HOST Host a fundraising event to support MHF. We can partner with you for any number of fundraising activities including golf days, gala dinners, sports challenges, Guinness Records and in-house corporate events

**PARTNER** Organisations of all sizes can partner with MHF for the creation of Heartsafe Communities within their businesses and across their community. This partnership strengthens the Cardiac Chain of Survival and increases both the necessary equipment along with community confidence and strategies to act quickly with core skills of CPR and using a defibrillator

Be the one to give a beat enquire now mhf.life

HEALTHCORP

