HLTAID001 Provide cardiopulmonary resuscitation

Learner Guide

Global Fitness Institute

RTO21793

enquiries@globalfitness.edu.au

www.globalfitness.edu.au

Welcome to Global Fitness Institute

Welcome, and thank-you for choosing Global Fitness Institute to undertake your First Aid Training. This workbook has been designed to assist you in developing your knowledge and skills that are required to provide Emergency Life Support to a casualty in the event of an emergency.

Global fitness Institute is a Nationally Registered Training Organization (R.T.O. # 21793), run by very experienced and successful professional Sports people and educators, which specializes in the delivery of Nationally accredited Courses for the Fitness and Health Industries.

Assessments

To achieve competency in this qualification, you are required to undertake a formal assessment that will look at your knowledge and skills. You assessment will include :

- Short written test to validate your knowledge
- Observation of first aid skills to validate your skills

All assessments will take place within the class times, and will follow the principles of assessment (fair, valid, reliable and flexible). At the end of your assessment/s you will be classified as Competent or Not Yet Competent.

Assessment during training may include oral responses to questions, written response to questions, roll plays, multiple choice test paper, and external written test paper. Students will be given an opportunity for at least one reassessment for any competencies not achieved on the first attempt.

Competent

All students who are found competent will receive a Certificate / Statement of Attainment.

Not Yet Competent

Achieving a Not Yet Competent result is not the end of your journey. Everyone learns at a different rate, and occasionally additional studies are required before achieving competency. All students who are found Not Yet Competent will be given one other opportunity to be assessed (at a time mutually agreed with your trainer). Your trainer will advise you of further study or practice required prior to your second assessment.

It is an industry requirement that CPR is **updated annually**.

RENEWAL OF QUALIFICATION

CPR courses should be updated every 12 months

First Aider Characteristics

As a First Aider, you will be dealing with emergency, life threatening situations. People around you may be screaming, moaning, or in a panic. A proficient First Aider will be:

Calm & Collected – As you approach an emergency – take a few deep breaths. This will help you slow down your racing heart, and encourage you to take a moment to collect your thoughts. Take a good look around. Look at the situation. Look at who is around and what dangers are present that may impact on your safety or that of others. Concentrate on what you are doing, and try not to get distracted or flustered.

Reassuring – The casualty may be in shock, confused, or concerned. Talk to your casualty as a person, and reassure that things are under control. You may also need to reassure others around you that you have the situation in hand, and the best thing they can do is follow your instructions.

Assertive – There is a big difference between assertion and aggression. You need to be bold in your statements, and confident in your instructions. People will be relying on you to direct them. If you are the only First Aider on site, take control and provide brief explanations as to why you are asking people to perform tasks. As bystanders see you taking control, most people will be happy to assist within their comfort range. You also need to be assertive to your casualty (once they have given consent for help), again explaining why you are asking them to assist you (i.e. – placing a burn casualty in a cool shower).

Good communicator – You need to be clear in your instructions, as to not create confusion.
A clear instruction meets 3 criteria:

- Observable – you must be able to see the person undertake your task
- Measurable – to what extent must the person do it
- Clear – easy to understand

"I need you to call 000 for help, ask for an ambulance, and tell the operator the casualty is unconscious and breathing"

- This is observable, because you can see the person call 000
- This is measurable – because the person has been told what to say
- This is clear – as it is not ambiguous.

The Wrongs Act (1958)

Section 31B of the Wrongs Act (1958) states:

1) A Good Samaritan is an individual who provides assistance, advice or care to another person in relation to an emergency or accident in circumstances in which-

(a) he or she expects no money or other financial reward for providing the assistance, advice or care; and
(b) as a result of the emergency or accident the person to whom, or in relation to whom, the assistance, advice or care is provided is at risk of death or injury, is injured, is apparently at risk of death or injury, or is apparently injured.

2) A Good Samaritan is not liable in any civil proceeding for anything done, or not done, by him or her in good faith-

(a) in providing assistance, advice or care at the scene of the emergency or accident; or
(b) in providing advice by telephone or by another means of communication to a person at the scene of the emergency or accident.

3) Sub-section (2) applies even if the emergency or accident was caused by an act or omission of the Good Samaritan.

4) Sub-section (2) does not apply to any act or omission of a Good Samaritan that occurs before the assistance, advice or care is provided by the Good Samaritan.

Duty of Care

Duty of care is a general legal duty owed by one person to another to act in a certain way. All First Aiders have a duty of care towards casualties to do exercise reasonable care and skill in providing first aid treatment. This is because you will have the knowledge and skills required to manage an emergency situation.

If you choose to provide first aid assistance (which is voluntary under common law when this role does not form part of your employment / position requirements), you have a duty to use your knowledge and skills in a responsible way.

The common law does not impose an automatic duty on First Aiders to go to the aid of every casualty they come across. However, First Aiders do have a duty to provide first aid assistance if they have voluntarily taken on that role. For example, a nominated first aid officer in a workplace owes a duty of care to assist another person in that workplace.

Once you start first aid treatment on any casualty, you enter into a duty of care obligation to continue with treatment until:

- The scene becomes unsafe for you or the casualty
- Another trained first aider arrives and takes over
- Qualified help arrives and takes over
- The casualty shows signs of recovery
- You become physically unable to continue

You need to be aware that Duty of Care requirements do differ across Australia, so you should check your legal obligations when moving or working interstate.

Codes of Practice

Codes of practice state ways to manage exposure to risks.

If a code of practice exists for a risk at your workplace, you must:

- Do what the code says; or
- Adopt another way that identifies and manages exposure to the risk; and
- Take reasonable precautions and exercise due care. Date, time and location of the incident

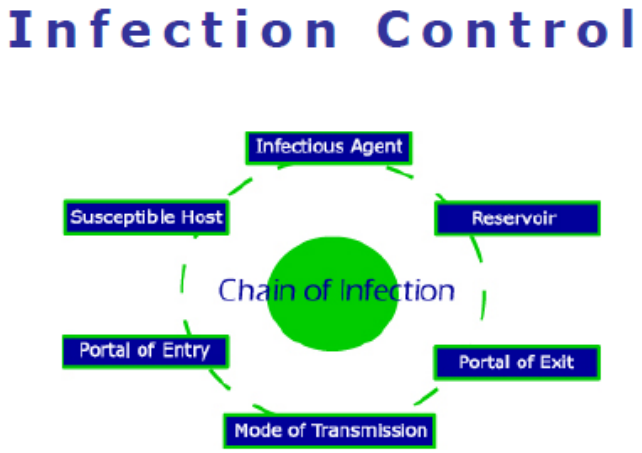
Consent

Prior to assisting any casualty, a First Aider must ask for and receive permission from the casualty before giving first aid. Where the casualty is unconscious or unable to give consent, the law assumes that the injured person has given consent. This is because the law assumes that the casualty would want his or her life saved.

When the casualty is a minor, you should ask their parent or guardian. When their parent or guardian is not available, again the Law assumes consent is given.

Infection Control

The risk of disease transmission during training and actual CPR performance is very low.
A recent systematic review found no reports of transmission of hepatitis B, hepatitis C, human deficiency virus (HIV) or cytomegalovirus during either training or actual CPR when high-risk activities, such as intravenous cannulation were not performed.



Whether or not infection happens will depend on a number of things. This is best explained by looking at the chain of infection.

The Six links to the Chain of Infection

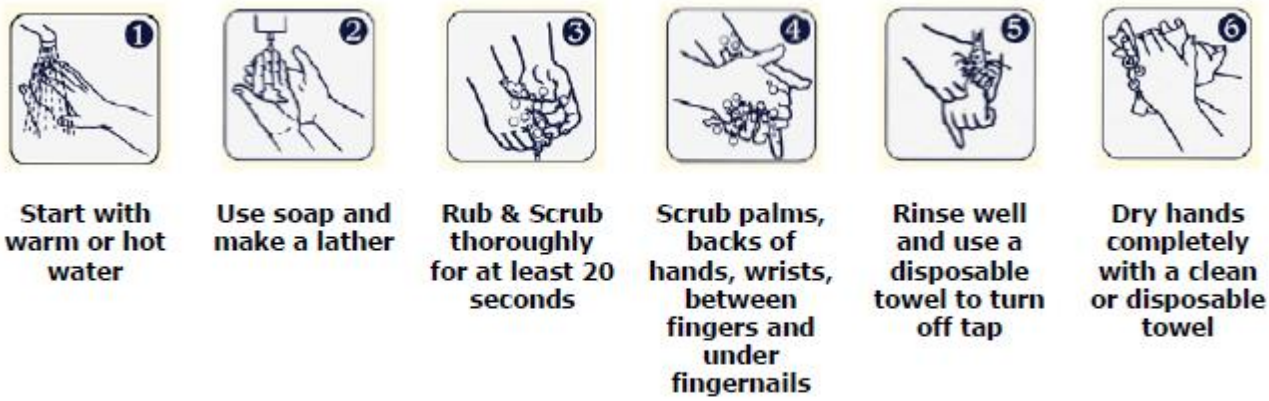
In order for infection to occur, the six links to the Chain of Infection must occur.

1. Infectious Agent: any disease causing micro-organism (pathogen)
2. Reservoir: The organism in which the infectious microbes reside (blood, saliva)
3. Portal of Exit: The route of escape of the pathogen from the reservoir (blood, saliva, breaks in skin)
4. Mode of Transmission: How the pathogen gets from the reservoir to its new host (air, direct contact, and insects)
5. Portal of Entry: The route in which the pathogen enters the new host (breaks in skin (cuts, wounds), inhalation, ingestion, sexual contact)
6. Susceptible Host: The organism that accepts the pathogen (you or the casualty)

How to break the Chain of Infection

Correct Hand Washing: Appropriate hand washing by the First Aider remains the most important factor in preventing the spread of micro-organisms. Good hand-washing techniques include:

Start with Use soap and Rub & Scrub palms, Rinse well Dry hands warm or hot make a lather thoroughly backs of and use a completely water for at least 20 hands, wrists, disposable with a clean seconds between towel to turn or disposable fingers and off tap towel under fingernails



GLOBAL FITNESS
INSTITUTE

Barriers

Use barrier equipment whenever possible (gloves, masks, face shields, eye protection, aprons and tongs). Barriers will dramatically decrease the chance of infection spreading, both to the casualty and to you!

Needle Stick Injuries

The most identified risk with needle stick injuries is being pricked or scratched, and contracting a blood borne virus (HIV – Aids and Hepatitis B). Whilst the actual risk of contracting such viruses from discarded syringes is quite low, you should be very careful and cautious when discarding syringes.

Ways to reduce the risk of needle stick injuries:

- It is generally recommended that workers who may come in contact with blood or body fluids should receive Hepatitis B
vaccinations
- Follow all safety procedures in the workplace
- Latex or nitrile gloves will not protect you against needle stick injuries
- Never bend or snap used needles
- Never re-cap a needle
- Always place used needles into a clearly labelled and puncture-proof sharps approved container

If you do become contaminated by a sharp you should follow the following steps

- Penetration of skin - wash the blood / body fluid away with water
- Contamination of the eye – rinse with water or saline with the eye open
- Blood in mouth – spit out blood, and repeatedly wash with water
- Seek professional medical assistance from your doctor or hospital

CARDIOPULMONARY RESUSCITATION (CPR)

Cardiopulmonary resuscitation is the technique of chest compressions combined with rescue breathing. The purpose of cardiopulmonary resuscitation is to temporarily maintain a circulation sufficient to preserve brain function until specialised treatment is available. Rescuers must start CPR if the victim is unresponsive and not breathing normally. Even if the victim takes occasional gasps, rescuers should start CPR.

CPR should commence with chest compression and Interruptions to chest compressions must be minimised.
If performed correctly and promptly, it has the power to restore blood flow to someone suffering cardiac arrest, keeping them alive until an ambulance arrives.

Bystander CPR rarely leads to harm in victims who are eventually found not to have suffered cardiac arrest: bystander CPR should be actively encouraged.
A casualty who IS NOT breathing and NOT conscious.

The Australian Resuscitation Council recommends using the following acronym when caring for the unconscious

D R S A B C D

DANGER

Quickly check for any danger to you, the casualty and bystanders. Dangers could include fire, electrocution, explosion, fast flowing water, chemicals, fumes, gases, smoke, unstable or slippery surfaces, oncoming traffic, etc– anything that would threaten safety.

If there is danger, remove it or move the casualty to safety. If serious injuries are suspected, only move your casualty if there in immediate danger. In moving the casualty, be aware of your manual handling techniques. If the danger is too great, keep clear and call emergency personnel. If not, survey the scene to identify what has happened, how many casualties there are. Enlist bystanders help.

RESPONSE

Check conscious state, speak in a calm positive manner, identify yourself and ask if you can help. Always approach a casualty with caution, feet first.

If there is no response and it is safe to do so, implement TALK and TOUCH.

- TALK - Tell me your name; squeeze my hand, both hands. Open your eyes, are you O.K?
- TOUCH - gently squeeze the casualty's shoulders and speak more loudly.

CALL FOR HELP, EMERGENCY NUMBER 000 / 112 (mobile phone)

AIRWAY

Open casualty's mouth and check for signs that the airway may be blocked. Give jaw support by lifting the casualties jaw forwards with a "pistol grip. If the casualty has fluid blocking the airway, turn them into the Recovery position so the fluid can drain out.

Remove any substances that are in the mouth, using casualty's fingers or your own. Open the airway by tilting the casualty's head backwards.

If there are no signs that the airway might be blocked, leave the casualty on their back and continue to check Breathing and Signs of Life.

BREATHING

LOOK - LISTEN - FEEL FOR BREATHING.

Can you see / feel movement of the chest? Can you hear / feel air from casualties' mouth?

If the casualty is Breathing, place them on their side in the Recovery Position.

If the unconscious victim is unresponsive and not breathing normally after the airway has been opened and cleared, the rescuer must immediately commence chest compressions and then rescue breathing. Give 30 compressions and then two breaths allowing about one second for each inspiration

Breathing can performed in a number of ways :

Mouth to Mask is the recommended form of rescue breathing, and is a simple variation on the jaw thrust method of holding the airway open. Backward head tilt is essential, except when a neck injury is suspected.

Mouth to Mouth is the recommended form of rescue breathing, and is a simple variation on the jaw thrust method of holding the airway open. Backward head tilt is essential, except when a neck injury is suspected.

Mouth to Nose is normally used if it is preferred by the rescuer; for use on infants where the rescuer's mouth covers the infants' nose and mouth; the casualty's' jaws are tightly clenched; or where severe facial injuries make it the preferable method. The techniques used with mouth–to–nose breathing are similar to mouth–to-mouth except that air is blown into the nose, and the mouth must be sealed during inflation. (Sealing the mouth is achieved through pushing the casualty's' lips together with your thumb).

Blocked Airway -If the casualty's chest does not rise during rescue breathing, check that:

- The head is tilted back and the jaw is lifted correctly
- There is no foreign material in the airway
- The seal is firm
- Enough air is being blown in.

Vomiting and Regurgitation -About one in four casualties will regurgitate whilst having CPR performed on them, especially when drowning is the cause of unconsciousness. This is because the valve that stops regurgitation (located above your stomach), is relaxed, and cannot stay shut, which allows undigested food and liquid out through mouth.

If your casualty does vomit or regurgitate during CPR, turn them onto their side, and keep their airway clear as previously described. If they are still not breathing once the obstruction is cleared from the airway, place them on their back again and re-commence CPR. If they have breathing effectively on their own, place the casualty in the recovery position, and continue checking A B C.

GLOBAL FITNESS
INSTITUTE

COMPRESSIONS

This step is only to be applied to a non-breathing casualty. CPR comprises of breathing and performing heart compressions
on behalf of the casualty

Current consensus is that a universal compression-ventilation ratio of 30:2 (30 compressions followed by two ventilations) is recommended for all ages regardless of the numbers of rescuers present. Compressions must be paused to allow for ventilations.

Compressions are performed as follows :

• Kneel beside the casualty
• Locate lower third of casualty's sternum (you can do this by finding the xyphoid and moving slightly towards the head)
• Position yourself vertically above the casualty's chest
• Place your interlocked hands (or 2 fingers for infants) on the casualty's chest
• Keeping your arms straight, press down vertically to about a third of the casualty's chest depth, then release pressure
• Give 30 compressions (about 100 per minute – a little less than 2 a second)
• Give 2 rescue breaths
• Repeat compression / breaths at 30:2 ratio until help arrives

Adult (over 8 years old)

- Full Head Tilt
- 2 hands lower 1/2 of Sternum
- 1/3 depth of chest
- 30 compressions for every 2 Breaths
- Approx 5 Cycles of 30:2 every 2mins (100 per minute)
- Keep going until Medical aid arrives or Signs of Life

Child (between 1 and 8 years old)

- Half Head Tilt
- 1 hand lower 1/2 of Sternum
- 1/3 depth of chest
- 30 compressions for every 2 Breaths
- Approx 5 Cycles of 30:2 every 2mins (100 per minute)
- Keep going until Medical aid arrives or Signs of Life

Infant (under 1 year old)

- NO Head Tilt
- 2 Puffs over nose/mouth
- 2 fingers lower 1/2 of Sternum
- 1/3 depth of chest
- 30 compressions for every 2 Breaths

Approx 5 Cycles of 30:2 every 2mins (100 per minute)
Keep going until Medical aid arrives or Signs of Life

GLOBAL FITNESS
INSTITUTE

DEFIBRILATION

Automated External Defibrillators (AEDs)

Automated External Defibrillators (AEDs) are computerised devices (about the size of a laptop) that provide an electrical charge to "jump-start" the heart. These portable devices have built in computers that analyse the casualty's heart rhythm to determine if defibrillation is needed. Voice prompts are then given to the user to follow, to streamline the defibrillation process

Access to Early Defibrillation is the single most important step in this cycle. Every minute where early defibrillation is delayed reduces the person's chances of survival by 10%.

A defibrillator is a power tool in saving a persons life. However, used incorrectly, this tool can be deadly to the casualty, the First Aider and other bystanders. Ideally only First Aiders who have undertaken specific Defibrillation Training should undertake this step.

AEDs must only be used for victims who are unresponsive and not breathing normally.
Attach AED as soon as available and follow its prompts.
CPR must be continued until the AED is turned on and pads attached. The rescuer should then follow the AED prompts.

The time to defibrillation is a key factor that influences survival. For every minute defibrillation is delayed, there is approximately 10% reduction in survival if the victim is in cardiac arrest

All paramedics have defibrillators in their emergency vehicles, and will commence the defibrillation process upon arrival.

Recovery Position

Once you have established the patient is breathing, and followed DRSABCD, you need to place the casualty in the recovery position. Remember that an unconscious casualty left lying flat may quickly die from a blocked airway.

Recovery Position for a Child (1-8) or Adult (8+)

- Check that the casualty is breathing normally
- Raise one of the casualty's knees
- Using the raised knee as a leaver with one hand, place your other hand near the casualties shoulder and turn casualty onto their side.
- Lift chin forward in open airway position and adjust hand under the cheek as necessary.
- Check casualty cannot roll forwards or backwards.
- Monitor breathing and pulse continuously.
- If injuries allow, turn the casualty to the other side after 30 minutes.
- REMEMBER - WHEN MOVING THE PERSON ONTO THEIR SIDE MAKE SURE THEIR NECK AND BACK DO NOT MOVE.

Recovery Position for an infant (Under 1 year old)

- For a baby less than a year old, a modified Recovery Position must be adopted. Cradle the infant in your arms, with his
head tilted downwards to prevent him from choking on his tongue or inhaling vomit.
Monitor and record vital signs - level of response, pulse and breathing until medical help arrives.
- Try not to walk or move around with the infant, as you may trip or drop the infant – increasing the injury

Early Advanced Care

Early advanced care means the sooner a paramedic can attend, the greater the chance is that the causality can be stabilised. As such, it is important that you call 000 as soon as possible. The sooner you contact emergency services, the sooner a paramedic will be on the soon, which dramatically increases the casualties chance of survival.

Post Incident Debriefing

Once you have provided CPR to a casualty, and handed over responsibility to the paramedics, it is suggested that you undergo a debrief. Talk through your actions with your manager, other first aiders, psychologists, family or friends. Take time to calm down and reflect on your actions - don't go straight back to work.

The following reactions are normal, and help people come to terms with a critical incident

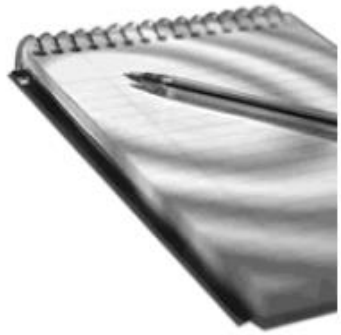
Physical reactions - Disturbed sleep, Nausea, Nightmares, Restlessness, Headaches, Excessive alertness and being easily startled.

Cognitive reactions - Poor concentration, Poor attention and memory, Visual images of the event, Intrusive thoughts, Disorientation or Confusion.

Emotional reactions – Fear, Numbness and detachment, Avoidance, Depression, Guilt, Oversensitivity. Anxiety and panic, Withdrawal and tearfulness.

Record Keeping

After providing first aid to a casualty, you should always make detailed notes or fill out a casualty report on any event attended, no matter how minor. This will help you to recall the incident if you are ever asked about it at a later stage. When notes of an incident are completed soon after the event, your records could be used by a court of law. This means it is imperative that your notes are legible, accurate, factual, complete, and only state what you observe – not your opinions.



Information that should be included in your report includes:

- Date, time and location of the incident
- The casualties personal details (name, address, date of birth, etc)
- History of the illness/injury
- Observations (signs, symptoms and vital signs)
- Your assessment of the injury/illness
- Date
- Your Signature
- Your name and title

You should also

- Always complete the report in ink (never use pencil)
- Correct all mistakes by crossing them out and placing an initial next to them (never use correction fluid)
- Keep a copy of the report for your own records

If you are employed as a First Aider in your workplace, you may have reporting obligations under your State or Territory occupational health and safety (OH&S) legislation. You can check this with your workplace OH&S representative.