Pre-Course Reading.
Approximately 30
minutes required.

TriEx
A GALLAGHER BASSETT COMPANY

PRE-COURSE READING FOR TRIEX UNIT STANDARD BASED FIRST AID TRAINING.

Welcome to TriEx First Aid Training and your Pre-Course Reading.

TriEx First Aid is fun, interactive and easy to learn. Our goal is to create confident and capable first responders. We look forward to training with you!

This Pre-Course Reading is to help you make the most of your first aid experience with TriEx. The following topics are the basics of First Aid that will be covered in detail in your course. Some prior knowledge will help you get the most from the course, so we require you to please take the time to read over this document and complete the activity before coming to your course. You will be asked to indicate if you have completed this reading when you sign-in on the day of your course.

NZQA require us to provide you with a minimum learning time, and by completing this reading prior to your course, you will not be required to have 'working breaks' on the day of your course.

STOP – THINK – ACT.
The Importance of Adrenaline.
SAFETY FIRST.

Adrenaline is produced by adrenal glands in our body. It is a natural hormone that is secreted throughout the body when you undergo some type of traumatic experience. When released, it stimulates a wide array of bodily functions. From the heart rate to blood vessels, it effectively counters high-stress and physical situations. This enables us to process information, while utilizing actions at a rapid rate. These are referred to as adrenaline rushes, which increase physical performance in unexpected instances, such as during a first aid emergency.

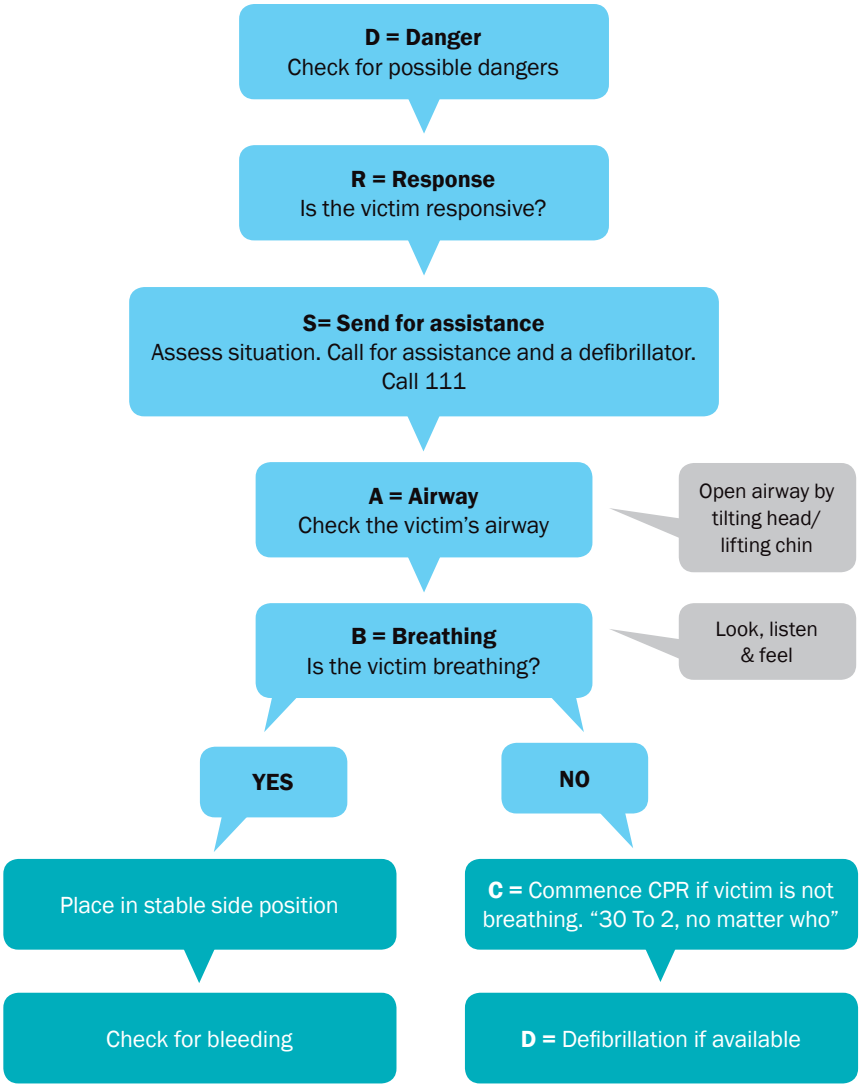
An adrenaline rush is an extremely intense feeling. For instance, if you are attacked by a dog or have a near miss incident, you will notice an energetic feeling that gives you the power and strength to either escape or to attack. Because of this, an adrenaline rush can be intense and can be used in order to help you out. There are a number of different symptoms that you will probably experience if you undergo an adrenaline rush. Here are just a few of the symptoms of adrenaline:

» Noticeable Increase in Your Strength
» No Feelings of Pain
» Heightened Senses
» Sudden Boost of Energy
» Increased Breathing

Typically, your body releases adrenaline only when you need it. It can also be released when you come across an emergency or a first aid situation. In this instance, it is important to control the adrenaline rush so that we don't dive head-first into a situation that may endanger ourselves. Therefore, if you are suffering from an extreme adrenaline rush, it is important that you try to calm yourself down. Monitor your breathing and look to take long, deep breaths to slow your heart rate and keep your blood pressure down. Take time to try to focus on what's happening as well. The trick is not to panic and to let the adrenaline rush wear off by relaxing. Once the adrenaline rush subsides, you can step in and help, now that you have taken time to assess the scene and ensured there are no dangers to you.

D.R.S.A.B.C.D'S

The "Doctor's ABCD's" are a great way to remember the order in which to address a first aid situation.



ENSURE THE VICTIM IS KEPT WARM AND KEEP REASSURING THEM.

WHAT IS CPR?

Cardiopulmonary Resuscitation (CPR) is an emergency procedure in which cardiac massage and artificial respiration are used to keep oxygenated blood circulating to the brain and around the body to keep vital organs alive.

If your victim is an adult or child older than 8 years, and not breathing, commence CPR:

» Ensure the victim is flat on their back on a firm surface.

» Start compressions by placing the heel of one hand in the centre of the chest, with your other hand on top of the first. GIVE 30 COMPRESSIONS AT A RATE OF 100-120 TIMES PER MINUTE.

» Open the victim's airway by gently tilting their head back and lifting the chin. Take a normal breath and ensure a good seal around the victim's mouth with yours and GIVE 2 BREATHS with just enough force to make the chest rise.

» Repeat 30 COMPRESSIONS + 2 BREATHS until help arrives. Don't give up, even if you feel that it is hopeless.

» Check to see whether there may be a defibrillator available.

If your victim is an infant or child under the age of 8 years old, and not breathing, commence CPR:

» Ensure the infant/child is flat on their back on a firm surface.

» For infants/children the compression area is the same as with adults, but with less pressure. Infants (under 1 year) use 2 fingers only. Children (1–8 years) use the heel of one hand only. GIVE 30 COMPRESSIONS AT A RATE OF 100-120 TIMES PER MINUTE.

» For a child, open the airway by gently tilting their head back and lifting the chin. For an infant, have head in neutral position (i.e. a very small tilt). Take a normal breath and ensure a good seal around the mouth for a child (or nose and mouth for an infant) with yours and GIVE 2 BREATHS with just enough force to make the chest rise.

» Repeat 30 COMPRESSIONS + 2 BREATHS for 1 minute. If there is no response, go for help and continue CPR until help arrives. Don't give up, even if you feel that it is hopeless.

» Check to see whether there may be a defibrillator available.

THE HEARTSINE DEFIBRILLATOR

The brand of defibrillator that we will show you at your course is a HeartSine Defibrillator. Here is some information about defibrillation:

1. About Sudden Cardiac Arrest

Sudden Cardiac Arrest (SCA) often happens without warning, and when it happens, it is often devastating. It can happen to anyone, anywhere and at any time. SCA can strike regardless of age, race or gender. According to the Occupational Safety and Health Organization USA, 15% of workplace fatalities are due to Sudden Cardiac Arrest.

2. What Is Sudden Cardiac Arrest?

SCA is a malfunction of the heart's electrical system, which causes it suddenly and unexpectedly to begin to beat rapidly, then erratically, and finally to stop altogether. Two of the most common onsets are a rapid heartbeat called ventricular tachycardia (VT) and a chaotic heartbeat called ventricular fibrillation (VF). When this happens, the heart cannot pump blood effectively. As such, blood flow to the brain is compromised and the victim quickly loses consciousness. During SCA, CPR alone will not restart the heart. Cardiac defibrillation within minutes is the only effective means to restart the heart. Survival from cardiac arrest decreases 10% with each minute from the time of collapse to defibrillation.

Is SCA the Same as a Heart Attack?

No. A heart attack is when a blockage in an artery results in a lack of oxygen to the heart muscle, ultimately causing damage. Heart attack victims may experience chest pain and usually remain conscious. Heart attacks are serious and can lead to SCA. However, SCA may occur independently from a heart attack and without warning. SCA results in death if not treated immediately.

3. What Does a Cardiac Defibrillator Do?

A processor inside the AED analyses the victim's heart rhythm through adhesive electrodes placed on a patient's chest. The processor analyses the heart rhythm and advises if a shock is required. An electric current is delivered to the heart through the victim's chest wall through the adhesive electrode pads.

Cardiac defibrillators are specifically designed not to shock unless a lifesaving shock is required. The shock delivered by a cardiac defibrillator interrupts the chaotic rhythm and allows it to return to normal.

4. Why Do You Need an Automated External Defibrillator?

The HeartSine device can be used by anyone, anytime, or anywhere to administer a lifesaving shock to victims of Sudden Cardiac Arrest. With CPR alone, the chance of survival after Sudden Cardiac Arrest is less than 5%; when CPR is combined with the use of a cardiac defibrillator within the first few minutes, the chance of survival can increase dramatically to more than 75%. Having an AED on the premises gives the victim the best chance of survival until paramedics arrive and take over care.

If you have access to the Internet, please click on this link to watch a demonstration on how to use a Defibrillator: **bit.ly/demodefib**

www.aedlocations.co.nz

The website and associated app for **www.aedlocations.co.nz** could be the difference between life and death, so we highly recommend you familiarise yourself with it. Individuals and businesses that have AED's on their site are able to register their location on this website. Once registered, anyone can look for publically accessible defibrillators near to their home, work, bus stop, or even use the app to find an AED when you are out and about in the city. If you know of an AED that is not registered on the website, email the details to **info@aedlocations.co.nz** to have it added — it might just save a life.

BLEEDING & SHOCK

The amount of blood in the human body is generally equivalent to 7-8 percent of body weight or 70-80 ml of blood per kg of body weight.

Losing around 20% of the blood in the body is a dangerous medical event that can be life-threatening. Losing around 40% of the blood is usually fatal.

Lacerations (cuts) on fingers, toes, or hand are common, and many will heal on their own. However, some lacerations on hands or feet may involve deeper structure under the skin, like tendon and nerves. In the case of deep lacerations, bleeding can be rapid and extensive.

Bleeding should be managed as severe, life-threatening bleeding in the following situations:

» blood spurts or gushes steadily from a wound.
» amputated or partially amputated limb above wrist or ankle.
» shark attack, propeller cuts or similar major trauma to any part of the body.
» bleeding not controlled by local pressure.
» bleeding with signs of shock, i.e. pale and sweaty and/or decreased level of consciousness.

Management of all bleeding begins with application of pressure on or around the wound.

» Applying firm, direct pressure. Pressure can be applied using hands or a pad over the bleeding point.
» If bleeding continues, apply a second pad and a tighter bandage over the wound.
» If bleeding still continues, check that the pad and bandage are correctly applied, directly over the bleeding.
» Advise the casualty to lie down and remain still.
» Restrict movement by immobilising a bleeding limb.

SEE BLOOD — THINK RED

Rest & **R**eassure

Expose & **E**valuate

Direct Pressure & **D**ressing

WHAT IS SHOCK?

Shock is a very serious and life-threatening condition and must be identified and managed immediately. Shock occurs when the body is not getting enough blood flow and can damage multiple organs.

Losing an excessive amount of blood is known as haemorrhagic shock.

SOME OF THE SIGNS AND SYMPTOMS MAY BE:

» Cold, pale and clammy skin
» Feeling dizzy, faint and unwell
» Anxiety, shallow breathing
» Confusion
» Rapid but weak pulse
» Urgent need to go to the toilet
» Feeling sick/nauseous/vomiting

HOW TO MANAGE SHOCK

» Call 111 for Assistance
» Check DRSABCD
» Do not elevate the legs
» Give first aid for any wounds or injuries and control any bleeding without using elevation techniques
» Keep the victim warm and comfortable
» Keep reassuring them as much as possible

MUSCULOSKELETAL INJURIES

The musculoskeletal system is the combination of the muscular and skeletal systems working together and includes the bones, muscles, tendons and ligaments of the body. The musculoskeletal system provides our bodies with shape, protection of our internal organs and the ability to move.

Bones - There are usually 206 bones in the adult human body.

Muscles - There are two kinds of muscle that are part of the musculoskeletal system — skeletal and smooth.

Joints - The joints are where the ends of two or more bones come together.

Cartilage - The ends of the bone that form a joint are covered with cartilage.

Ligaments - Ligaments are tough, fibrous cords or bands of tissue that connect bone to bone.

Tendons - Tendons are tough, fibrous bands of tissue that connect muscle to bone.

A musculoskeletal injury is an injury to any of the above tissues. The common musculoskeletal injuries include:

» Fractures

» Dislocations

» Strains and Sprains

Musculoskeletal injuries represent 50% of all injury-related claims in Australia and around 1.2 million ACC claims annually in New Zealand.

For an obvious fracture, leave in an 'as found' positon and call 111.

The First Aid management for **Strains** and **Sprains** include:

Use RICE	**Do no HARM**
Rest	**H**eat
Ice	**A**lcohol
Compression	**R**unning
Elevation	**M**assage

Do not force movements of your injured limb, and stop if it gets too painful.

If, despite the RICE treatment, the injury does not improve in a few days, see your health professional to assess it.

YOUR SUPPORT OPTIONS

Call one of these support options for information or advice if you are concerned about your patient and it is not an emergency.

Healthline **0800 611 116**

Poison Centre ..... **0800 POISON** (0800 764 766)

Diabetes NZ ..... **0800 DIABETES** (0800 342 238)

Immunisation Advisory Centre ..... **0800 IMMUNE** (0800 466 863)

Health Info ..... **HEALTHINFO.ORG.NZ**

In emergencies phone 111

AED locations..... **www.aedlocations.co.nz**

Thank you

Thank you for completing your pre-course reading. We hope you have found it interesting, and we look forward to teaching you even more about first aid soon.

NOTES

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