



## **22575VIC Course in Basic Oxygen Administration for First Aid**

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Publisher

In the spirit of reconciliation Premium Health acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea and community. We pay our respects to their elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

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## Training and assessment information

### Welcome

Welcome to your course and Premium Health. The aim of this workbook is to provide the essential knowledge and skills you require to recognise and respond to situations that require the application of oxygen therapy and/or oxygen resuscitation until the arrival of medical support.

### Helping you to succeed in your course

We believe learning should be an enjoyable and challenging process and we understand that each learner is different. A variety of methods such as class participation, group discussion, scenarios, workbook exercises and opportunities for practice will help you to achieve competency.

We select our Premium Health trainers and assessors carefully. All are either registered nurses or paramedics with appropriate qualifications, technical expertise and experience in both education and emergency first aid care to enable them to provide you with training. Where there are any difficulties with reading, writing, understanding English or a physical disability, training approaches can be varied to support learning and assessment.

### Conduct of assessments

You will be given clear directions about all assessments – time, place, conditions, layout, and equipment location and encouraged to ask questions to ensure you understand.

If you have a difficulty with language, literacy, numeracy or a disability that is likely to affect your participation or progress, please discuss your training and assessment needs privately with your trainer/assessor so appropriate modifications may be made to support you to successful completion.

Assessment is never a pass or fail process, rather at the end of a set period, you are judged to be Competent or Not Yet Competent. Where your performance in demonstrating the required skills and knowledge is not yet to competency, you will be asked to review relevant material, to practise and be reassessed at a later time. This may require you to call Premium Health to make reassessment arrangements.

### Statement of Attainment and Currency

A Statement of Attainment will be issued upon successful completion of your course. The Australian Resuscitation Council recommends, and industry requirements often specify, a CPR and oxygen assessment be done every 12 months to ensure current competency.

### Evaluation of the course

An evaluation form is provided at the back of this workbook. Your feedback is vitally important to us as we use this as part of our continuous improvement cycle. We especially value any personal comments you would like to make. Please complete the evaluation sheet at the end of your course.

### Premium Health's Customer Service

We offer you an on-going service in relation to first aid information and invite you to call our office on 1300 72 12 92 or email us on [info@premiumhealth.com.au](mailto:info@premiumhealth.com.au).

For more information about Premium Health products, services and policies, access our website [www.premiumhealth.com.au](http://www.premiumhealth.com.au).

## Oxygen

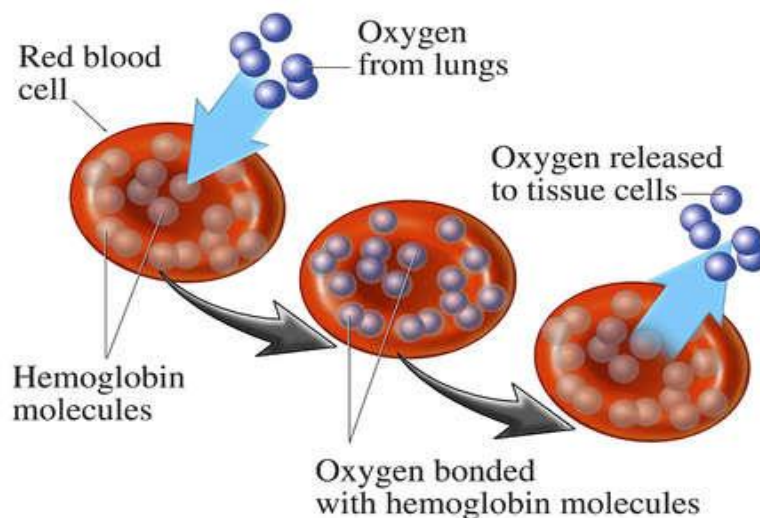
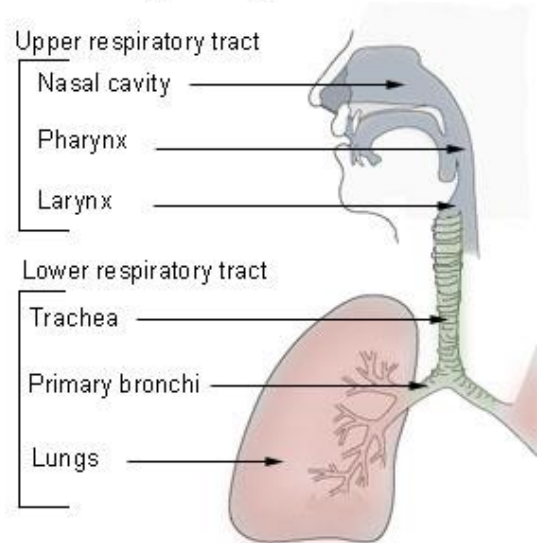
Oxygen is a vital ingredient needed for energy production by all body cells. Energy powers the cells to do their particular work and the contribution of all cells enables the body to function.

The air we breathe is a mixture of gases containing approximately 21% of oxygen and negligible carbon dioxide. The respiratory system comprises the organs responsible for breathing, which is the act of moving air into and out of the lungs. When air is breathed into the lungs air sacs called alveoli, gases are exchanged between the alveolar air and blood in surrounding capillaries. Oxygen moves into the blood stream and carbon dioxide moves into the air and is breathed out. Expired air contains around 17% oxygen and 4% carbon dioxide. Oxygen must be continuously supplied and carbon dioxide be continuously removed from the body for the body to function properly.

When you breathe, the air:

- enters the body through the nose or the mouth
- travels down the throat through the larynx (voice box) and trachea (wind pipe)
- goes into the lungs through the tubes called main-stem bronchi
  - one main-stem bronchus leads to the right lung and one to the left lung
  - the main-stem bronchi divide into smaller bronchi and then into even smaller tubes called bronchioles
  - bronchioles end in tiny air sacs called alveoli
- then passes through the thin walls of the alveoli into the bloodstream.

### Conducting Passages



### Oxygen transported in red blood cells

Most oxygen combines with a pigment called haemoglobin in the red cells and is transported this way in the blood to the heart and out in the arteries to all body organs. Haemoglobin then releases its oxygen into the tissue cells, and picks up carbon dioxide, an energy waste product, which is carried back to the lungs. The process of gas exchange in the lungs and at the cellular level is called respiration.

Breathing and respiration are essential life processes. Any disease, injury or accident which interferes with the movement of air into and out of the lungs, the regulation of the respiratory centre located in the brainstem controlling breathing or gas exchange and circulatory transport will result in oxygen deficiency

known as hypoxia, in the body cells. As poisonous waste products accumulate the cells function less and less effectively. This state has the potential to lead to death.

## Oxygen use in first aid emergencies

Serious and life-threatening medical emergencies often cause oxygen depletion leaving the casualty at risk from cardiac arrest or brain damage. Administering emergency oxygen increases oxygen concentration in the air in the lungs allowing more oxygen to be exchanged. Increased blood oxygen concentration helps prevent brain damage, stabilises the heart and other vital organs and therefore may be life saving.

In the context of first aid, oxygen should be viewed as a drug. First aiders may only administer oxygen when trained to do so, and then only to the level of competency specified in the course undertaken.

Importantly, first aiders need to be skilled in recognising a casualty's need for supplemental oxygen and in knowing its place in terms of treatment priorities. Basic life support (airway management, cardiopulmonary resuscitation and control of serious bleeding) comes first. These treatment aspects need to be under control before giving oxygen. The delivery of basic life support should not be withheld nor delivery compromised while waiting for oxygen equipment to arrive or be set up.

## Oxygen administration

In this unit, first aid oxygen administration is defined as oxygen given either via a simple face mask, nasal prongs, non-rebreather mask, pocket style resuscitation mask or bag resuscitation mask. The two first aid emergency purposes for use are:

1. **As therapy:** to increase oxygen concentration in a person who is injured or ill and who may have poor circulation or decreased blood oxygen levels, for example, in the emergency management of a heart condition, shock, poisoning, anaphylaxis, head injury, chest injuries, asthma, following a seizure.
2. **For resuscitation:** to inflate the lungs with oxygen-rich air in a person whose breathing is absent or ineffective.

An assessment of the casualty using the First aid priority action plan (DRSABCD) will enable you to recognise the presence of signs and symptoms of breathing difficulties (respiratory distress) or the existence of ineffective breathing or the absence of breathing. It is important that you ensure that you take the time to make an adequate assessment before moving on to the next step.

## Signs and symptoms of respiratory distress and hypoxia

### Breathing

- Rapid shallow breathing
- Laboured, gasping, or gurgling/noisy breaths
- Use of accessory breathing muscles, e.g. nasal flaring and neck muscles above the collar bone seen retracting on inspiration
- Slow ineffective breathing or absent breathing.

**Note:** In the first few minutes of a casualty's cardiac arrest, **agonal breathing** may be present; this is where sounds of gurgling, gasping, sighing or coughing as well as movements of the chest and stomach may occur. These chest movements are shallow, slow (3-4 per minute), irregular inspirations followed by irregular pauses. These chest movements can be mistaken for "breaths" but they are not breaths. The person **is not breathing normally**.

If you are in any doubt about whether the casualty's breathing is normal, then treat them as if they are not breathing and commence CPR and when appropriate, administer first aid oxygen.

### Circulation

- Rapid, weak pulse rate

- Skin, pale, cold, and sweaty
- Cyanosis – a bluish discoloration of the skin, in particular the lips, tongue, and mucous membranes may occur with severe hypoxia.

### **Mental State**

- Restlessness, anxiety, agitation, violence
- Tiredness, exhaustion, confusion, loss of consciousness.

## **First aid priority action plan**

### **Steps in recognition and management of respiratory distress/hypoxia**

#### **1 Respond to the first aid situation**

Assess the first aid situation in a manner that recognises that time is critical:

- D:** Identify physical hazards and immediate risks to health and safety of self, casualty, others
    - Minimise, remove or isolate identified hazards/immediate risks using established first aid principles and procedures.
  - R:** Assess conscious state
    - Recognise consciousness/unconsciousness
  - S:** Send/call for help (000)
    - If conscious, reassure casualty and confirm consent to give first aid
  - A:** Assess airway (clear/blocked), manage correctly according to what you find
  - B:** Assess breathing - interpret observations (signs) and information from casualty (symptoms) and others
    - Recognises respiratory distress/breathing difficulty and need for supplemental oxygen
    - Assists and decides an appropriate response to ensure prompt control of situation
    - Assists/places casualty in an appropriate position
  - C:** Assess for signs of circulation - check colour and recognise skin colour change if present
  - D:** Assesses for deadly bleeding, recognises there is no bleeding.
- 2 Administer oxygen** – where the indications for supplemental oxygen are present
- Select equipment (or sends team member to get) appropriate oxygen equipment , cylinder and an oxygen delivery device appropriate for the casualty's needs
  - Administer oxygen using the appropriate device at correct oxygen flow rate
  - Prepare to give CPR.
- 3 Communicate details of incident**
- Reports situation accurately - history, event, conscious state, breathing difficulty, colour
  - Hands over casualty to ambulance officer - communicates details of incident, casualty's condition and treatments given
  - Document incident, including oxygen administration details, in workplace incident/casualty report.

### **Indications for first aid oxygen**

Some of the indications for oxygen administration as a first aid intervention include the following conditions:.

- Unconsciousness
- Shock
- Heat stroke
- Severe injury of any type
- Respiratory distress
- Poisoning

- Gas or smoke inhalation
- Respiratory failure
- Cardiac arrest (non-breathing, non-circulating casualty)

In severe illness or injury oxygen may be insufficient and additional concentrations of oxygen will be required to supply depleted cells within the body.

Oxygen may be administered to a breathing casualty by:

- Face mask (hudson and non-rebreather mask)
- Intra nasal cannula or nasal prongs
- Soft bag resuscitator with oxygen

Oxygen (or air) may be administered to a non-breathing casualty by:

- Bag mask resuscitator
- Pocket mask only with oxygen nipple

## **Oxygen equipment**

### **Oxygen cylinders**

In an effort to standardise oxygen cylinders across all Australian states and NZ, oxygen cylinders are now all white in colour and have a pin index valve on every size cylinder. Because oxygen cylinders are filled and stored under high pressure (approximately 150 000 – 163 000 kPa or 150 and 163bar) and because oxygen aids combustion, it is important to adhere to safety precautions.

Government and insurance regulations relating to the storage of oxygen must be observed. Oxygen cylinders may be stored upright (only if held in a bracket) or on their side in a cool, dry ventilated area which is fire-resistant and below 45°C. If stored in the open, cylinders should be protected from weather extremes and ground dampness. Ensure that cylinders are secured using appropriate belt or strap. Only use a cylinder with an Australian Standards approved regulating device. Do not use in a confined space.

When handling oxygen cylinders it is advisable that the following precautions are followed:

- Larger cylinders are heavy, manual handling risk assessment and training should be undertaken
- Cylinders should be moved with the appropriate size and type of trolley
- Never roll cylinders along the ground as this may cause the valve to open accidentally. It may also damage the cylinder, label and paintwork.

Oxygen cylinders are available in a range of sizes.

### **Safety precautions**

- When a cylinder is almost empty, the valve should be closed, leaving some positive pressure in the cylinder. Mark the cylinder as empty.
- Do not store full and empty cylinders together.
- Do not use a cylinder without a proper regulating device
- Always use correct pressure gauges with oxygen
- Do not drop, drag, roll or slide cylinders. If a cylinder is fractured, the pressure released could convert the cylinder to a high powered missile.
- Do not use oxygen around an open flame as it will explode. Smoking should not be allowed near oxygen equipment
- Do not allow petroleum-based grease or oil to come in contact with supply devices, or the stem of the cylinder
- Always ensure that the BODOK seal, 'O' ring and valve seal inserts are clean, dry and in good condition
- Use only medical oxygen for administration to casualties. Industrial oxygen may contain impurities.
- Be aware of the dangers of oxygen, if in doubt – ask.

### **Delivery system**

Oxygen is delivered from the cylinder by a regulator which reduces the high cylinder pressure to a safe working pressure compatible with the delivery equipment. A pressure gauge is usually attached directly to, or on line with the regulator, and usually acts as a contents gauge.

Most medical oxygen regulators are fitted with yokes with pin fittings which match holes on the valve stem of the corresponding oxygen cylinder. This 'Pin Index' safety system prevents application of an incorrect regulator to an oxygen cylinder or a cylinder that does not contain oxygen.

A therapy head or flow-metre is connected to the output of the regulator. This controls the flow of Oxygen to the casualty, maintaining a constant flow rate. Several types of flow-metres are available.



**Regulator**



**Pin index**



**Flow-metre**

### Other Equipment

- Translucent PVC oxygen tubing with an internal diameter of 4.8mm is used for carrying oxygen via flow meters to the delivery system.
- The Linket tubing connector, a universal, transparent, nylon connector, is suitable for connecting a nasal cannula to oxygen tubing, or for adding additional lengths of tubing when required.



**Oxygen tubing**



**Oxygen tubing connector**



**Oxygen key**



**Key wheel**

### Selecting and preparing (cracking) an oxygen cylinder

- Select a cylinder of appropriate size
- Check that the label states 'MEDICAL OXYGEN' and that the cylinder is free of any defects



- ☞ Check the valve stem to ensure no obvious damage
- ☞ If necessary, wipe the valve stem clean before removing the plastic protective seal
- ☞ Check the heat tag is intact.

You will then need to “crack” the cylinder. To do this:

- ☞ Have the valve outlet pointed away from you and others then SLOWLY turn on for 1 second
- ☞ Doing this allows for any dirt to be blown out before the regulator is attached

**Note:** Turning cylinder on too hard can be dangerous, there is a possibility of losing control of the cylinder.

- ☞ Once cylinder is ‘cracked’, the regulator can be attached.

### Attaching the regulator

- ☞ You may need to replace a cylinder when it is empty
- ☞ This will require you to attach a regulator
- ☞ Once the cylinder is checked and cracked, select an appropriate oxygen regulator
- ☞ Ensure the “O” ring (bodok seal) is intact
- ☞ Align the regulator pins with the outlet holes on the cylinder pin index and securing
- ☞ Using the key wheel turn the oxygen cylinder valve “on” and check the gauge to see how much oxygen is left in the cylinder
- ☞ Check that masks and tubing are clean, intact and ready to use.

### Checking for leaks

- ☞ Turn all oxygen outlets ‘OFF’
- ☞ Turn oxygen cylinder valve ‘ON’ and listen for audible leaks
- ☞ Turn oxygen cylinder valve ‘OFF’
- ☞ If contents gauge indicator moves back towards ‘EMPTY’ check all connections as there is a leak
- ☞ To isolate the leak, sparingly brush a mixture of water and detergent over each connection, and observe from which connection the bubbles appear
- ☞ Rectify by undoing the connection and re-assemble
- ☞ If it still leaks, Do NOT use and have it checked/serviced by a technician.

### Changing an oxygen cylinder

- ☞ Remove plastic seal from neck of oxygen cylinder
- ☞ ‘Crack’ the new full oxygen cylinder
- ☞ Close cylinder valve on empty oxygen bottle, release oxygen left in regulator
- ☞ Rotate the cylinder yoke key in an anti-clockwise direction until the yoke key is clear of the pin index
- ☞ Slide regulator off Yoke and slide upwards and off oxygen cylinder
- ☞ Ensure BODOK seal (also called Yoke seal or ‘O’ ring) is in working order
- ☞ Slide regulator onto ‘new’ full bottle, align pins and Yoke and slide into position
- ☞ Secure regulator into position by rotating Yoke key clockwise until finger tight
- ☞ Turn on new oxygen cylinder valve. Check contents gauge and for any audible leaks.

### Maintaining equipment

Equipment which is stored in readiness must be checked regularly and the cylinder turned on and off again to check the cylinder contents. After use wipe the regulator carefully with a damp cloth. Take care that no water enters the unit. Check the BODOK seal ‘O’ ring in the regulator is always correctly positioned and in good condition.

Whenever oxygen equipment has been used prepare it again for immediate use. Oxygen equipment marked for single use, such as oxygen masks, should be discarded appropriately after use. Disposable components should be replaced and non-disposable components need to be cleaned and sterilised.

### Flow rates

The oxygen flow must be capable of being controlled and measured. This may be by:

- A fixed flow self-sealing outlet at varying litres per minute (lpm)

- An adjustable flow meter, which allows from 0 to 15 lpm or 0-25 lpm to be delivered. Flow is indicated either by a floating device in a clear tube, or on a dial. This is the preferred method.

## Administering oxygen

### Face mask

The most commonly used disposable face mask for giving therapeutic oxygen to a breathing casualty is known as the universal face mask. It is available in adult and child sizes. This mask is also referred to as a soft mask or Hudson mask. Oxygen delivered to the mask can be mixed with air drawn in through the side holes with low oxygen flow rates and deep respirations from the casualty. The percentage of oxygen inhaled depends on the rate and depth of respiration and oxygen flow rate, but can be as high as 60% oxygen. Exhaled air is vented through the holes on each side of the mask. As a general guide a flow rate between 8-15 litres per minute (lpm) should ensure adequate oxygen delivery to the casualty. A flow rate under 6 lpm with quick respirations, may not be enough to 'flush' out the carbon dioxide in the face mask fully and therefore may have an effect on respiratory effort.

Face masks should be of a clear plastic, disposable and should fit the face firmly. It is advisable to use a new disposable mask at each separate application. Some casualties have a fear of a mask being placed over their face and need careful reassurance of the benefits of oxygen.



### WARNING

**Disconnection of the oxygen supply may result in the casualty re-breathing exhaled air.**

- ⇒ Ensure the casualty is breathing regularly
- ⇒ Reassure the casualty. Explain the need for oxygen therapy.
- ⇒ Turn oxygen source on
- ⇒ Ensure tubing is fitted securely to the outlet nipple on the regulator
- ⇒ Fit appropriate size mask
- ⇒ Adjust oxygen flow to appropriate rate
- ⇒ Position face mask comfortably on casualty
- ⇒ To prevent oxygen from blowing directly into the casualty's eyes, ensure that the face mask fits snugly, by squeezing the soft metal strip on mask over the nose to form a seal
- ⇒ On completion of therapy, remove mask and close flow-meter valve
- ⇒ Ensure oxygen is turned off.

### Non-rebreather mask

A non-rebreather mask, or NRB, is a device fitted with a one way valve and reservoir bag. An NRB requires that the casualty can breathe unassisted, but unlike a nasal cannula NRB allows for the delivery of higher concentrations of oxygen (reported as up to 95% with flow rates of 10-15lpm). The reservoir bag fills with oxygen and, when the wearer inhales, a one-way valve ensures that oxygen is predominately breathed from the reservoir. When the wearer exhales, the one-way valve system prevents exhaled gas from entering the reservoir. For proper use, the reservoir bag must be primed with oxygen and should always contain enough oxygen so that it does not deflate fully when the wearer inhales. Always ensure the wearer is constantly monitored.

- ⇒ Ensure the casualty is breathing regularly
- ⇒ Reassure the casualty. Explain the need for oxygen therapy.
- ⇒ Turn oxygen source on



- Ensure oxygen tubing is attached securely to the mask and to the oxygen outlet
- Fit appropriate size mask
- Adjust oxygen to appropriate flow rate, approx. 15 lpm to begin with
- Ensure the reservoir is distended with oxygen before the mask is placed on the casualty's face
- Position face mask comfortably on casualty
- To prevent oxygen from blowing directly into the casualty's eyes, ensure that the face mask fits snugly, by squeezing the soft metal strip on mask over the nose to form a seal
- Adjust the flow rate to ensure that the reservoir never deflates completely or constantly remains fully inflated
- Carefully monitor the casualty and never leave them unattended.

*Non-rebreather*

*mask*

### **Intra-nasal cannula**

Oxygen is delivered into a casualty's nostrils through two plastic prongs. Effectiveness is reduced if the casualty has any sort of nasal obstruction, e.g. cold, injury. The nasal cannula is the simplest, most comfortable means of delivery. The casualty can talk, drink, cough and have airway care without interrupting oxygen administration. Nasal cannulas will deliver oxygen concentration of 30-40% with an oxygen flow rate of 3 lpm. Do not use higher flow rates as they will not increase the delivered oxygen concentration but will cause irritation of the nasal mucosa. It is mainly used for chronic airway disease casualties who are feeling slightly short of breath. Anyone who has acute shortness of breath needs higher concentrations of oxygen delivered via a face mask.



- Reassure the casualty and explain the need for oxygen therapy
- Place the casualty in sitting position if appropriate for the condition
- Select an appropriate size cannula
- Remove the cannula from its package and place two prongs underneath casualty's nostrils
- Place tubing over ears and secure under the chin
- Connect the oxygen tubing to the flow-meter outlet nipple and turn oxygen supply on
- Insert the tip of cannula into casualty's nostrils. Place the elastic strap under the casualty's ears and secure by tightening it.
- Adjust the flow-meter control to required rate
- Check flow rate and comfort of casualty.

*Intra-nasal cannula*



## Resuscitation devices

### Pocket mask

The pocket mask is a popular device for delivering oxygen as it has several important advantages:

- It is readily available, can be carried in the pocket so that the rescuer does not have to race back to the first aid cabinet for other equipment.
- There is no need to switch to another device once oxygen becomes available. Simply attach the oxygen line to the inlet valve on the mask and continue ventilating. **NOTE:** Not all pocket masks have oxygen nipple.
- Using the pocket facemask, the rescuer can feel the resistance of the patient's lungs in their own lungs and can adjust volume of ventilations accordingly.

### Mechanical resuscitators

- Soft bag-valve-mask
- Face mask with oxygen nipple

The hazards associated with mechanical resuscitators include:

- Possible difficulty in maintaining a seal with a mask as well as maintaining an airway
- The stomach is easily distended with oxygen if the airway is not totally open due to high flow rate.

### Portable resuscitators

Portable resuscitators are an advantage in the workplace because:

- The casualty can be given a high concentration of oxygen
- Some portable resuscitators include a number of pieces of emergency apparatus in a compact box, e.g. suction demand valve and therapeutic oxygen mask.

### Bag-mask resuscitator

A number of brands of operator-powered infant, child and adult resuscitators with infant, child and adult facemasks are available. The principles of design are similar. The volume delivered into the patient's lungs depends on the:

- Volume of the bag or bulb (hence the different sizes for infants, children and adults)
- Size of the operator's hand and vigour of the squeeze
- Patency of the airway
- Effectiveness of the seal of the mask on the face.

With soft bags, the operator usually has the feel that an adequate volume has been delivered to the lungs but this should be assessed by the rise of the chest. With firmer bags, this feel is absent.



*Bag-mask resuscitator*

### Checking your oxygen kit

Check contents: (may include the following)

- 1 oxygen cylinder – contents not less than half full
- 1 resuscitation mask – adult
- 1 resuscitation mask – child
- 1 oxygen therapy face mask – adult
- 1 oxygen therapy face mask – child
- Guedel airways – standard sizes
- 1 oxygen nasal cannula
- Y suction catheters and 1 Yankeur sucker
- Spare BODOK seals
- 1 oxygen cylinder keywheel
- 1 suction jar
- 1 suction hose attachment



### Technique for clearing vomit or regurgitation

Should the casualty regurgitate or vomit into the pocket mask or therapy mask during the use of these items, it is very important that the rescuer immediately remove either the pocket mask or therapy mask from the casualty's face. The rescuer should then use the recommended technique from the Australian Resuscitation Council to clear the victim's airways and recheck for spontaneous breathing.

If the mask is to be used again immediately, the rescuer, or assistant wearing gloves should shake and clear the vomit or regurgitation from the mask followed by finger sweeps. If particles remain lodged within the mask, the mask should be discarded and not used.

During attempts to clean the mask, the rescuer should maintain the resuscitation effort without delay.

## Management of a non-breathing casualty: First aid priority action plan

### Management of a NON-BREATHING casualty: first aid priority action plan

# D

#### DANGER

- ➔ Check for dangers to yourself, bystanders and the casualty.
- ➔ Make the scene safe by removing the danger from the casualty or the casualty from the danger. Only continue when it is safe to do so.

# R

#### RESPONSE

Is the casualty conscious? A person who fails to respond or shows only a minor response, such as groaning without eye opening, manage as if unconscious. (ARC Guideline 3, November 2012). Assess for response to voice and touch:

- ➔ Give simple commands e.g. "Open your eyes, squeeze my hand". With an adult casualty, grasp the shoulders firmly to determine a response; for children and infants, assess their response by talking and firmly rubbing the breastbone (sternum). **Never shake an infant.**
- ➔ If the casualty is **conscious**, check **ABCD** and position appropriately.
- ➔ If the casualty is **unconscious**, position the casualty on their back.

# S

#### SEND

- ➔ Send/call for help (triple zero 000).

# A

#### AIRWAY (air passages)

- ➔ Open the mouth and check for foreign material or obstructions. In an infant make sure the nose is also clear.
- ➔ If airway is not clear from food, vomit, blood or fluids (e.g. immersion incident) turn casualty into the recovery position, open mouth and drain matter downwards, remove loose dentures and remove visible material with rescuer's fingers then position on back.
- ➔ Lift chin upwards (towards the ceiling) by placing fingers under chin or use a pistol grip; this lifts the tongue from the back wall of the throat and opens the airway.
- ➔ With upper hand on forehead, tilt an adult and child's head fully back to further open the airway. Place an infant's head in a neutral position (as tilting an infant's head backwards or forwards may cause airway obstruction).

# B

#### BREATHING (lungs)

Adults breathe approximately 12-15 breaths per minute; infants/children approximately 20 breaths.

- ➔ **Look** for the even movement of the rising and falling of the lower chest for 10 seconds.
- ➔ **Listen** for the sound of regular breathing.
- ➔ **Feel** air escaping from the mouth/nose with your cheek.

For a casualty who is **not breathing** or **not breathing normally** begin CPR.

# C

#### CARDIOPULMONARY RESUSCITATION (CPR)

- ➔ Deliver 30 compressions and 2 rescue breaths (rescuer takes about 1 second to deliver 1 breath) x 5 times in two minutes and repeat until ambulance arrives
- ➔ Compressions only can be given if the first aider is unable or unwilling to perform rescue breathing at 100-120 compressions per minute

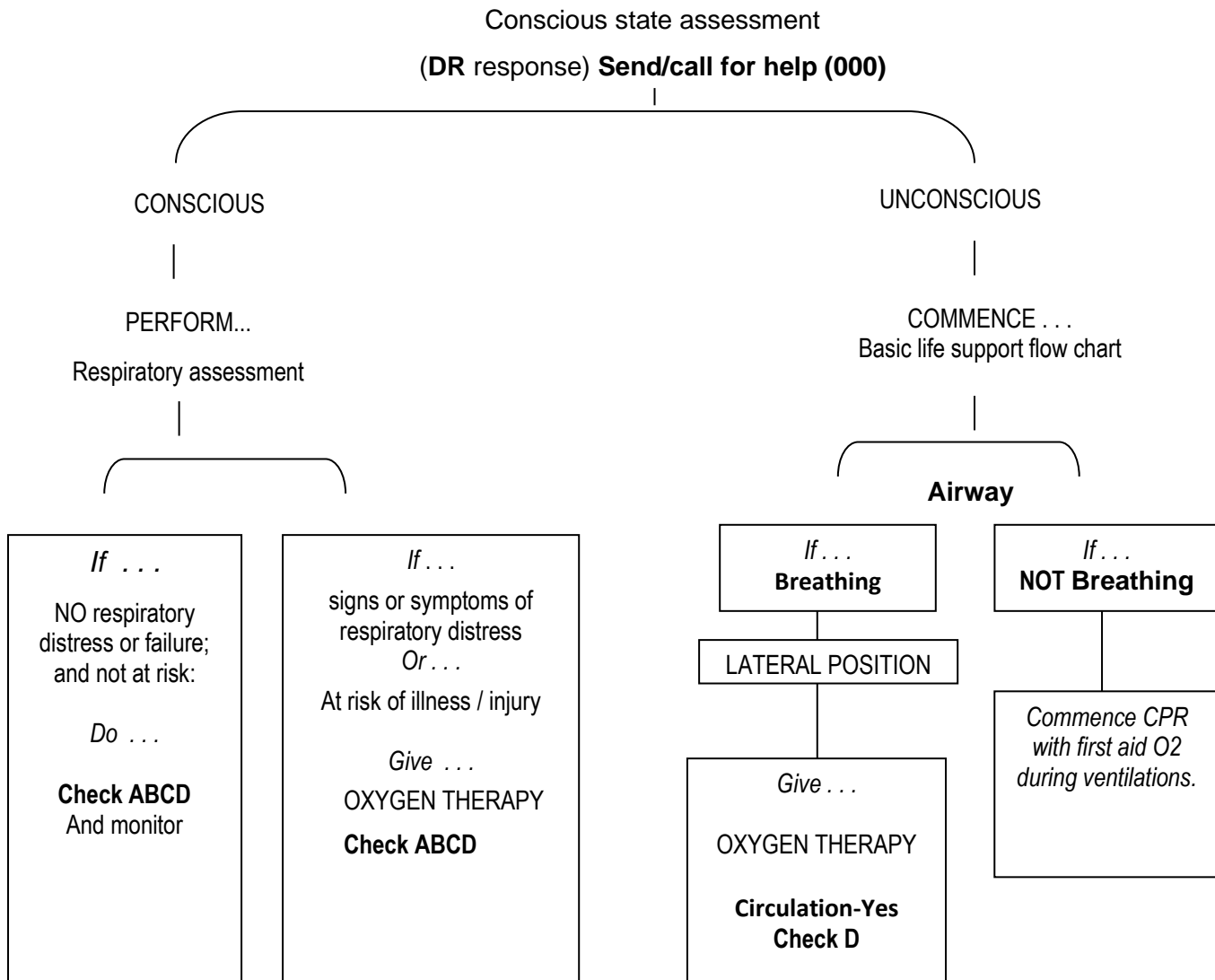
# D

#### DEFIBRILLATION

- ➔ Open/turn on the defibrillator and follow voice prompts.



## First aid administration of oxygen flow chart



### REMEMBER:

1. Resuscitation attempts MUST NOT BE DELAYED whilst awaiting the arrival of oxygen equipment
2. An ambulance or other medical attention MUST be called if oxygen administration is considered necessary
3. Do not discontinue oxygen therapy once commenced

**Notes:**