



# FUNDAMENTAL FIRST AID COMPETENCIES



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NAZRIN AHMAD

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To all who have contributed in big and small ways, we extend our deepest gratitude. This book represents a collective effort, and we hope it will serve as a valuable resource for learners and practitioners dedicated to saving lives through first aid.

Finally, we would like to express our sincere appreciation to our families, colleagues, and friends, who provided unwavering encouragement, understanding, and moral support throughout the development of this book. Their belief in this project has been a source of motivation and strength.

We hope that this book will serve as a valuable resource, encouraging readers to share their knowledge and confidently apply first aid skills in times of need.

# Preface

NAZRIN AHMAD

Emergencies are unpredictable and may occur at any time or place, often without warning. Imagine a situation where a family member, perhaps a parent or spouse, suddenly collapses, and you are the only person available to help. In such a critical moment, would you be able to perform the necessary life-saving procedures effectively without proper knowledge and skills in first aid?

This book, *Fundamental Components in First Aid*, has been developed as a guideline that focuses on the essential skills required in first aid management. The content emphasises five major areas: rapid assessment skills, control of different types of bleeding, immobilisation techniques for fractures and dislocations, cardiopulmonary resuscitation (CPR), and the management of choking in both adults and infants. These fundamental components are applicable in most emergency, trauma, and medical situations.

Although numerous first aid training modules are available, this book presents a tailored approach that concentrates on essential knowledge and practical techniques. By focusing on the most critical skills, readers can save time in learning while strengthening their ability to perform basic life-saving procedures confidently and effectively.

The chapters are arranged according to priority, beginning with assessment skills before advancing to medical and trauma interventions. To further optimise the development of both knowledge and practical skills, it is highly recommended that readers complement this book with participation in certified first aid training courses. This will ensure a smooth transition from theoretical understanding to hands-on practice.

We hope that this book will serve as a valuable reference and learning resource, equipping readers with the confidence and ability to respond effectively during emergencies.

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NAZRIN AHMAD

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# Chapter 1: Introduction to First Aid

NAZRIN AHMAD

## *Learning Objectives*

Type your learning objectives here.

- To understand the purpose and basic principles of first aid in emergency situations.
- To recognize common workplace emergencies and provide appropriate basic first aid.

First aid is the initial procedure and treatment performed for a victim who experiences an acute injury or illness, including a fall, seizures, or cardiac arrest. The undesirable incident may occur at any time and anywhere, regardless of whether you are prepared or not. Thus, equipping yourself with the appropriate knowledge and skills is crucial to saving a life.

Imagine a situation in which your colleagues unexpectedly experience a harmful incident that poses a critical threat to their lives, and you are the only person available at that time. Would you allow them to suffer the pain without any life-saving intervention, or at least attempt a basic procedure that could make a difference? The decisions lie in your hands, as it ultimately depends on your level of knowledge and skills in providing first aid.

Anyone can be a first aider to assist victims in preventing,

minimising, and delaying the deterioration of conditions after an injury or illness occurs. The principles of providing first aid are simple, which include 'preserve life', 'prevent further harm', and 'promote recovery'. Although the principles are simple, they require the first aider to acquire the appropriate knowledge and skills to assist the victims. Without adequate knowledge and skills, it is nearly impossible to provide effective assistance to victims, and the risk of causing further harm to them remains high.

These First Aid Guidelines were specifically designed for individuals who have never attended any formal medical education. It will cover various and common workplace (office) incidents, including minor cuts or lacerations, burns and scalds, falls, fainting (syncope), choking, sprains and strains, asthma attacks, allergic reactions, eye injuries, electrocution or electric shock, head injuries, seizures, and cardiac emergencies. To optimise the learning outcome, the author has prepared basic information on human anatomy and physiology suitable for the layperson. The information is consistent with the recommendations from the European Resuscitation Council (ERC).

Thus, these guidelines are intended to equip employers and employees with essential knowledge and skills to respond effectively and potentially save lives in workplace emergencies, particularly in an office setting. The guidelines are presented in a clear and concise format, making them easy to understand for quick reference. In the preparation of these guidelines, the authors made extensive references and discussions with experts in the field, following the principles of a first aider to support the Malaysian government's health initiative and align with the Sustainable Development Goals (SDG) 3 and 4, which emphasise providing effective health support systems and quality medical education.





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<https://openbook.ums.edu.my/fundamentalfirstaidcompetencies/?p=34#h5p-26>

# Chapter 2: The Principle Component of First Aid

NAZRIN AHMAD

## *Learning Objectives*

Type your learning objectives here.

- Define what first aid is.
- Recognise the fundamental principles of first aid.
- Explain the important components in rapid assessment.
- Describe the essential components of first aid management.
- Identify the types of injuries or medical conditions that may occur.

## **2.1 Introduction of First Aid**

First aid (FA) refers to the immediate assistance provided to a person who is injured or experiencing medical illness. It includes the initial and basic procedures that are available before professional medical care is available. In some cases, the FA procedure is crucial to be implemented to save a life, while in other cases, it is commonly used to manage minor injuries and health issues. Although FA is frequently referred to as providing basic medical procedures, the actual services can vary. Sometimes you are required to perform a life-saving procedure that a layperson might think is an advanced

procedure, but it is not. It just requires an integration of good knowledge and skills in managing the cases.

Anyone can be a first aider (FAr) regardless of whether they have ever received formal training in managing emergency cases or not. There is no specific requirement to be FAr. What is more important is that you know the principles of FA and have the courage, knowledge and skills to perform the basic life-saving procedures. Having good knowledge and skills may not guarantee that you will perform those skills when needed. It requires courage supplemented with knowledge and skills to make you confident, and the procedure performed is effective in mitigating medical injuries or issues.

Being able to perform effective FAr is essential. It is delivered through rapid intervention to preserve life, prevent injury or illness from worsening, and promote recovery. Providing high-quality, evidence-based FA training for laypeople creates safer and healthier communities by reducing risks and improving response in everyday emergencies, disasters, and crisis situations.

## **2.2 Common Injuries and Illnesses**

As highlighted earlier, injuries or illnesses can occur anywhere and at any time, and their nature often depends on the activities being carried out in a particular place.

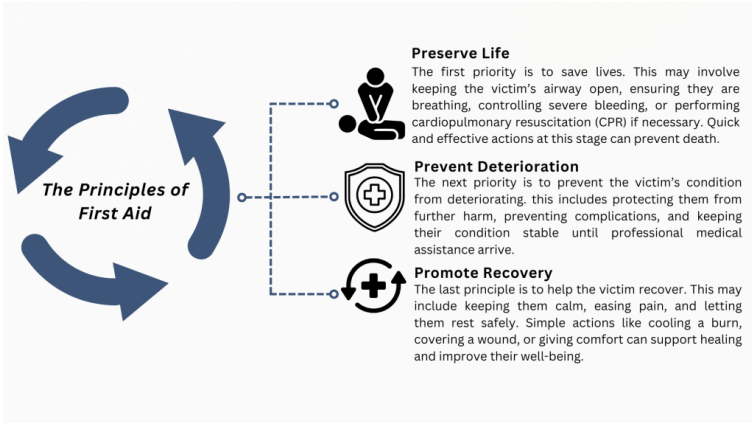
The common injuries and medical emergencies that potentially could occur in the office are as follows:

1. Cuts and lacerations
2. Burns
3. Slips, trips, and falls
4. Sprains and strains
5. Eye injuries
6. Fainting (syncope)
7. Allergic reaction
8. Asthma attacks
9. Head injuries
10. Seizures

- 11. Choking
- 12. Cardiac arrest

### 2.3 The Principles of First Aid

The principles of First Aid serve as the foundation for providing immediate and effective care during medical emergencies. These principles can be summarised into three key goals:



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### 2.4 Vital Component in First Aid Management

In an emergency, it is essential to remain calm and act systematically. Prioritising care means deciding what to do first so that the most serious and life-threatening problems are handled before less urgent ones. This helps you give adequate care and prevents mistakes when under pressure. The FAR should always follow the vital components of emergency management, which include:



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### **2.4.1 Scene Assessment**

Begin these initial steps by taking a deep breath and observing the entire scene. Gather and make a rapid analysis of types of emergencies, number of victims, and identify whether it is a trauma injury or involves a medical case, such as a seizure, etc. At the same time, identify any potential hazards that could harm the victim and the FAR, such as fire, exposed electricity, or hazardous chemicals.

### **2.4.2 Ensure Safety**

Always prioritise your own safety before attending to the casualty or others nearby. If the area is not safe, do not attempt to enter and wait for professional help to arrive. Whenever possible, use protective items such as gloves, face shields, or hand sanitiser to minimise the risk of infection.

### **2.4.3 Call for Help**

In a serious emergency, immediately contact the emergency services by dialling 999 or the local emergency number. Give clear and accurate details about the incident, including the exact location, the number of victims, and any potential dangers at the scene. If other people are present, you may ask them to make the call while you begin providing First Aid.

#### **2.4.4 Provide First Aid Care According to Need**

Always treat the most serious problems first, such as unconsciousness, heavy bleeding, or difficulty breathing. Once these life-threatening conditions are under control, you can then attend to less serious injuries, including minor cuts, sprains, or burns.

#### **2.4.5 Aftercare and Reassurance**

Stay with the victim until professional help arrives, ensuring they are kept calm, warm, and comfortable. Reassure them that help is on the way. If there are witnesses or bystanders, offer them support as well, since emergencies can be distressing for everyone involved.



*An interactive H5P element has been excluded from this version of the text. You can view it online here:*

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# Chapter 3: Assessment of the Victim

NAZRIN AHMAD AND ABDUL ALIF BIN ABDUL HAMID

## *Learning Objectives*

Type your learning objectives here.

- Define what a rapid assessment is.
- Demonstrate rapid assessment techniques.
- Explain the important components in rapid assessment.
- Describe the abnormal finding based on the DRSABC assessment.
- Explain the important information needed during rapid assessment.

### **3.1 Introduction to Rapid Assessment Techniques of the Victim**

Rapid Assessment Techniques (RAT) refers to a systematic technique and steps that anyone, even someone without medical training, can take to evaluate an injured or ill person in an emergency. This is often the first part of FA, also known as 'primary survey' or 'initial assessment'. The goal is to prioritise care by addressing life-threatening conditions first, followed by less urgent issues. As a FA, you will encounter two types of victims: a) someone who is injured or ill. It's not about diagnosing a specific illness or injury, but rather about checking the basics to keep the person

alive until professional help arrives. Think of it like triage in a crisis: You're not fixing everything, you're just spotting the significant dangers right away.

### 3.2 Important Components in Rapid Assessment Techniques

First Aid Rapid Assessment Techniques (RAT) consist of two key components: the systematic and standardised sequence outlined by the European Resuscitation Council (ERC) known as DRSABC (Danger, Response, Shout for help, Airway, Breathing, Circulation), and the quick assessment of a victim's level of consciousness using the AVPU mnemonic (Alert, Verbal, Pain, Unresponsive). To make it practical and easy for the layperson to follow, the RAT begins with identifying the potential risk from the environment and the victim, followed by determining the level of consciousness, calling for assistance, and managing the airway, breathing, and circulation to address both types of conditions.

### 3.3 What is DRSABC and AVPU?

The DRSABC is a standard approach that provides a structured and straightforward method for managing both injuries and illnesses during an emergency, particularly before medical professionals arrive. It begins with **Danger (D)**, where the first aider checks the surroundings to ensure safety from hazards such as traffic, fire, or electricity, preventing further harm to themselves or the victims. Body fluid can also be considered a hazard for the rescuer. Once the area is safe, the next step is **Response (R)**, where the victim's level of consciousness is assessed using the AVPU approach. This helps determine the severity of the situation and whether immediate action is necessary. The step of **Shout for Help (S)** is crucial because calling emergency services or alerting others ensures that professional medical assistance is on the way while first aid is being given. The next stage, **Airway (A)**, focuses on ensuring that the victim's airway is open and clear, since many medical emergencies, such as choking, fainting, or collapse, can block normal breathing. After this, **Breathing (B)** is assessed to check

whether the casualty is breathing normally or needs urgent support. If breathing is absent or abnormal, cardiopulmonary resuscitation (CPR) should begin immediately. Finally, **Circulation (C)** involves maintaining blood flow through CPR and using an Automated External Defibrillator (AED) if available or monitoring circulation in victims who are breathing but may show signs of shock or illness.

### 3.3.1 DRSABC: Danger

- a. Assess the scene and look for actual or potential hazards such as fire or smoke, electricity, chemical spills or gases, sharp objects, unsafe crowd, etc.
- b. Apply protective equipment such as a surgical mask, disposable gloves, and a face shield to protect yourself from infectious diseases or as a precautionary measure.
- c. If safe, eliminate the hazard by switching off the electrical supply or moving hazardous objects away from the victims.
- d. Move the victims using appropriate techniques if required. Reassess the hazards continuously.

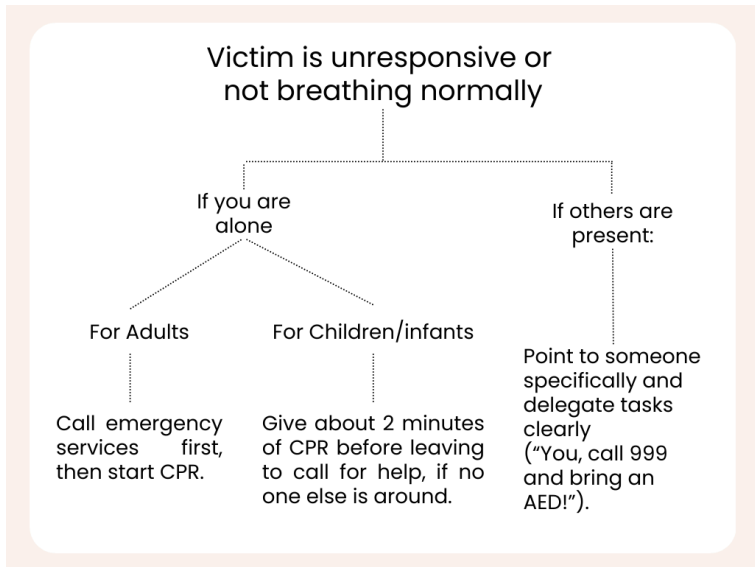
### 3.3.2 DRSABC: Respond

Check the 'respond' by using the AVPU mnemonic:

- A** - Alert : The victim is awake, can talk or move, and responds appropriately.
- V** - Verbal : The victim only responds when spoken to (e.g., opens eyes, moans, or answers slowly).
- P** - Pain : No response to voice, but reacts to a painful stimulus (e.g., pinching the earlobe, pressing the nail bed).
- U** - Unresponsive: No reaction at all, the victim is unconscious.

### 3.3.3 DRSABC: Shout for help

As soon as you confirm that the victim is unresponsive or not breathing normally:



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### 3.3.4 DRSABC: Airway

If the victim does not respond to your call, proceed to assess and open the airway if required. Open the victim’s mouth to identify if there is a foreign body or anatomical abnormality that blocks the airway, such as the fall back of the tongue. To open the airway, you may use several techniques as follows:

**Default technique (all ages >1 year): Head-tilt/Chin-lift:**

- a. One hand on the forehead → gently tilt the head back.
- b. Two fingers under the bony chin → lift the chin upward (avoid pressing the soft tissues under the jaw).

**If spinal/neck injury is suspected:**

- a. Try a jaw thrust (place fingers behind the angles of the jaw

- and lift forward) while keeping the head in neutral.
- b. If the airway remains blocked, prioritise life. Carefully add a small head-tilt/chin-lift as needed to open the airway.

**Infants (<1 year) & small children:**

- a. Aim for a neutral “sniffing” position (a rolled towel under the shoulders may help infants).
- b. Avoid overextending the neck.



Head-tilt chin lift



Jaw thrust



Sniffing position

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### 3.3.5 DRSABC: Breathing

#### 3.3.5.a Perform rapid breathing assessment (5–10 seconds)

- a. Look for chest/abdomen movement, as well as any obvious obstructions in the mouth.
- b. Listen for breathing sounds: normal, snoring (tongue), gurgling (fluid), high-pitched stridor (tight/blocked upper airway).
- c. Feel for air movement from the mouth/nose.
- d. Red flags: unable to speak/cry, noisy breathing, drooling, cyanosis (blue lips), paradoxical chest/abdomen motion.



## Look, listen, and feel techniques

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### 3.3.5.b Abnormal finding in 'breathing' assessment:

- a. Absence of breathing (no chest rise).
- b. Abnormal breathing pattern:
  - **Agonal Breaths:** irregular, gasping, or snorting sounds; often seen in cardiac arrest.
  - **Shallow or weak breathing:** minimal chest movement, inadequate air exchange.
  - **Laboured breathing:** using neck or chest muscles excessively, visibly struggling to breathe.
- c. Noisy breathing:

- **Gurgling:** may indicate fluid or vomit obstructing the airway.
- **Wheezing:** a whistling sound, often due to asthma or airway narrowing.
- **Stridor:** a harsh, high-pitched sound indicating upper airway obstruction.
- **Snoring respirations:** tongue partially blocking the airway in an unconscious person.

d. Abnormal rate:

- **Too slow (bradypnea)** may indicate drug overdose, brain injury.
- **Too fast (tachypnea)** may suggest shock, asthma attack, severe bleeding, or anxiety.

e. Cyanosis

### **Key Action for Non-Medical Professionals**

- If breathing is absent or abnormal → treat as not breathing normally.
- Start CPR immediately and call emergency services.
- Place the casualty in the recovery position only if they are breathing normally and safely.

### **3.3.6 DRSABC: Circulation**

The circulation assessment can be divided into two main components: medical cases and trauma cases. A medical case involves conditions resulting from physiological abnormalities. In contrast, a trauma case refers to injuries caused by external forces, which may lead to internal bleeding, external bleeding, or fractures.

a. **Medical circulation assessment:**

- Palpate the neck (carotid) pulse within 10 seconds. If no palpable pulse, commence high-quality cardiopulmonary

resuscitation (CPR).

**b. Trauma circulation assessment:**

- Observe for any visible external and internal bleeding and determine its location.

**3.4 The examples of the application of DRSABC in medical and trauma cases**

**3.4.1 Case 1: Severe haemorrhage (Injury)**

You are in an office workshop when you hear a loud crash. A colleague has accidentally cut their arm deeply on a piece of broken glass after tripping over a toolbox. Blood is flowing heavily from the wound, and a few bystanders are panicking. What would be your action:

- **Danger (D):** Before rushing in, you quickly check the area. There is broken glass scattered on the floor, and machinery nearby. You ensure the power is turned off and ask others to keep away from the sharp glass to prevent further injuries.
- **Response (R) + AVPU:** You kneel beside your colleague and speak to them: “Can you hear me? Are you okay?” They respond weakly, showing they are still Alert but in pain. You continue to check using the AVPU scale. They respond to your voice but appear dizzy.
- **Shout for Help (S):** You immediately ask a coworker to dial 999 (or 112) and provide clear instructions to report a severe bleeding incident, including the location and the number of casualties.
- **Airway (A):** As the casualty becomes pale and less responsive, ensure their head is in a safe position and their mouth is clear, maintaining an open airway.
- **Breathing (B):** You observe their chest movement and confirm they are still breathing normally, although shallow due to shock.

- Circulation (C): You take a clean cloth from the first aid kit and apply firm, direct pressure to the bleeding wound to slow the blood loss. You reassure your colleague, keeping them calm, warm, and conscious until emergency services arrive.

### **3.4.2 Case 2: Asthma attack in the office**

During a busy morning in the office, one of your colleagues suddenly starts coughing and wheezing after someone sprays an air freshener nearby. They clutch their chest and struggle to catch their breath.

- Danger (D): You quickly remove the trigger by opening a window and asking others not to spray anything else in the room. You ensure the environment is safe from further irritants, such as smoke or dust.
- Response (R) + AVPU: You approach the colleague and ask, “Can you talk to me? Do you have your inhaler?” They nod and try to speak, but can only manage short words between breaths. This means they are Alert but struggling. If they could only respond to Verbal prompts or Pain, or became Unresponsive, it would signal a life-threatening attack.
- Shout for Help (S): Since the attack appears severe, ask another coworker to call 999 (or 112) and report an asthma emergency, providing the office location and details of the casualty’s condition.
- Airway (A): Encourage the casualty to sit upright and slightly lean forward, which helps keep their airway open and makes it easier for them to breathe.
- Breathing (B): You monitor their breathing, which is fast and noisy, and help them take their reliever inhaler. You stay calm and reassure them while watching for any changes.
- Circulation (C): You stay close in case their condition worsens. If they were to collapse and stop responding, you would immediately begin CPR and use an Automated External Defibrillator (AED) if available.

### 3.5 Possible finding from the ‘Rapid Assessment Techniques’

RAT Assessment	Normal	Abnormal
Danger	No environmental threats	<p>Environmental hazard: Fire, smoke, or risk of explosion, oil spill</p> <p>Traffic and moving hazards: ongoing road traffic</p> <p>Electrical hazards: exposed live wire, victim in contact with power sources</p> <p>Biological hazards: vomit, blood, body fluids</p> <p>Aggressive people or animals</p>
Respond	The victim opens their eyes spontaneously when approached or in response to being called by the FAr.	<p>Not Alert</p> <p>Responds only to Voice</p> <p>Responds only to Pain</p> <p>Unresponsive</p>
Shout for help	NA	NA
Airway	The victim could speak normally without showing signs of struggling to breathe.	<p>Noisy breathing such as snoring, gurgling, stridor, wheezing</p> <p>Inability to speak or cry</p> <p>Silent chest with no air movement</p> <p>Universal choking sign (grasping throat)</p> <p>Cyanosis (bluish lips or face)</p>
Breathing	Symmetrical chest rises upon inhalation without struggle	<p>Absent breathing</p> <p>Gasping and shallow breathing pattern</p> <p>Noisy breathing such as snoring, gurgling, stridor, wheezing</p> <p>Slow or very rapid respiratory rate (bradypnoea or tachypnoea)</p> <p>Weak chest expansion</p> <p>Use of accessory muscles (neck/shoulder muscles)</p> <p>Nasal flaring</p> <p>Retractions (chest sinking in during inspiration)</p> <p>Cyanosis (bluish lips or face)</p> <p>Unequal or asymmetrical chest movement (pneumothorax, flail chest)</p>
Circulation	Palpable pulse, pink skin colour	<p>No palpable pulse</p> <p>Weak pulse</p> <p>Bleeding: uncontrolled haemorrhage</p> <p>Skin abnormalities: pale, cool, clammy skin, bluish, mottled skin (severe circulatory compromise)</p> <p>Capillary refill delay (&gt;2 seconds)</p>

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## Key Takeaways

Type your key takeaways here.

- *The FAr may perform the 'airway', 'breathing', and 'circulation' assessment simultaneously, however, the management always begins with the 'airway' followed by 'breathing' and 'circulation'.*
- *Ongoing assessment is essential, as the victim's condition is dynamic and may sometimes require modification of techniques to preserve life.*



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# Chapter 4: Control Bleeding

NAZRIN AHMAD AND BAIDI BIN BADDIRI

## *Learning Objectives*

Type your learning objectives here.

- Define what bleeding is.
- Differentiate between types of bleeding.
- Perform techniques to control bleeding.

## **4.1 Introduction to Bleeding**

Haemorrhage, or bleeding, occurs when blood vessels within the body tissues are damaged, leading to blood loss that can often be identified through visible bleeding or bruising. This condition can be life-threatening, depending on the location and severity of the injury. For instance, a fracture of the humerus may result in an estimated blood loss of 500–750 ml. Therefore, bleeding control is considered a top priority in FA. Bleeding can be categorised as either internal or external, and it is further divided into three types: venous, capillary, and arterial. While each type requires specific management techniques, the fundamental principles of bleeding control remain the same.

### **4.2 Types of Bleeding**

#### **4.2.1 Arterial Bleeding**

Arterial bleeding represents the most critical and life-threatening form of haemorrhage. It typically occurs following a penetrating wound, blunt force injury, or damage to major organs and blood

vessels. Unlike other types of bleeding, arterial blood has distinct characteristics. It appears bright red due to its high oxygen content and is expelled in rhythmic spurts that match the heartbeat. Controlling this form of bleeding is challenging, as the strong pressure generated by the heart prevents the blood from clotting or stopping quickly.

The techniques for controlling the arterial type of bleeding are as follows:

- a. Perform the DRSABC assessment.
- b. Clean the wound using sterile solution or clean water with a sterile gauze pad or a clean cloth.
- c. Apply firm pressure directly on the bleeding site using a gloved hand and a piece of sterile gauze. If there is no sterile gauze available, you may use a clean cloth instead.
- d. If the first layer of gauze/cloth is soaked with blood, do not remove it, instead, add another layer and continue to press the wound. Removing the first layer may disturb the blood clotting process.
- e. If the bleeding slows or stops, the wound should then be secured with a sterile dressing and bandage to maintain continuous pressure.
- f. For bleeding from an artery in the arm or leg, raising the injured limb above heart level may help reduce blood flow.
- g. If bleeding persists despite these measures, the final option is to place a tourniquet above the site of injury to control the blood loss.

#### **4.2.2 Venous Bleeding**

Venous bleeding is typically less severe than arterial bleeding, however, it can still become life-threatening depending on the location of the injury and the size of the wound. This requires immediate medical attention. Since the blood originates from a vein, it appears darker in colour due to its lower oxygen content. Unlike arterial bleeding, venous bleeding is not driven by high pressure,

so the blood escapes in a steady, continuous flow rather than in forceful spurts.

The techniques for controlling a venous bleed are similar to those for managing an arterial bleed.

### **4.2.3 Capillary Bleeding**

Capillary bleeding typically occurs when the skin is damaged and is the most common type of bleeding. Unlike arterial bleeding, which spurts, or venous bleeding, which flows steadily, capillary bleeding seeps slowly from the injured area. This form of bleeding is the least dangerous and the simplest to manage, as it originates from surface-level blood vessels rather than deeper structures within the body.

The techniques for controlling the capillary bleed are as follows:

- a. Clean the wound with soap and water or using a cell-safe cleansing agent.
- b. If necessary, irrigate the area under pressure to remove dirt or foreign material, which helps reduce the risk of infection.
- c. To complete the process, place a sterile dressing over the wound and apply firm pressure with a gloved hand, as this is usually enough to stop the bleeding.

The characteristics of arterial, venous, and capillary bleeding are as follows:

	<b>Arterial</b>	<b>Venous</b>	<b>Capillary</b>
<b>Source</b>	<b>Arteries</b> (carry oxygen-rich blood from the heart)	<b>Veins</b> (carry deoxygenated blood back to the heart)	<b>Capillaries</b> (tiny surface blood vessels)
<b>Appearance of blood</b>	Bright red (oxygenated)	Dark red (low oxygen)	Bright to dark red (mixed)
<b>Flow characteristics</b>	Spurts in rhythm with heartbeat, forceful	Steady, continuous flow (not spurting)	Oozes slowly from the wound surface
<b>Severity</b>	Most severe, life-threatening	Less severe than arterial, but can still be dangerous	Least severe, usually minor
<b>Ease of control</b>	Very difficult to control, often requires advanced intervention (e.g., pressure, tourniquet)	Moderate difficulty, controlled with firm pressure and dressings	Easiest to control, often stops with simple cleaning and dressing

### Key Takeaways

- Always protect yourself by using gloves or barriers if available to reduce the risk of infection before assisting the victim.
- Direct pressure over the wound is the most effective initial method to control bleeding, especially for severe or arterial bleeding.
- If an object is lodged in the wound, leave it in place and apply pressure around it to prevent further injury and bleeding.

- Continuously assess the victim for signs of shock (such as pale skin, dizziness, or rapid pulse) and arrange prompt transfer to medical care.



An interactive H5P element has been excluded from this version of the text. You can view it online here:

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# Chapter 5: Managing Fracture and Dislocation

NAZRIN AHMAD AND ROSNAH MAJIN

## *Learning Objectives*

Type your learning objectives here.

- Define what immobilisation is.
- Recognise types of fracture and dislocation.
- Perform techniques to manage fractures and dislocations.

## **5.1 Introduction to Immobilisation**

Immobilisation is a method used to restrict the movement of bones or joints to manage fractures and dislocations. It refers to the process of stabilising an injured limb to protect surrounding tissues and organs during the immediate post-fracture phase. The primary objectives are to prevent further injury, alleviate pain, and, in some cases, assist in controlling bleeding. Various techniques can be applied depending on the site of the fracture or dislocation. The effectiveness of immobilisation often depends on the type of equipment used or adaptations made to the technique. These methods may range from basic to advanced, depending on the first aider's level of skill. In certain situations, immobilisation may also be combined with bleeding control measures to preserve life.

## **5.2 Types of Bone Fracture and Dislocation**

A fracture is a break or crack in a bone that occurs when an external force exceeds its strength, leading to either a partial or complete break. It may result from trauma such as falls or accidents, repetitive stress, or underlying conditions like osteoporosis, with causes including direct impact, twisting forces, compression, or pathological weakening. Fractures are classified as open, where the broken bone protrudes through the skin and may cause severe bleeding, or closed, where the deformity is evident without bone exposure. A dislocation, on the other hand, happens when the ends of bones in a joint are forced out of their normal position, disrupting joint alignment and often injuring surrounding ligaments, tendons, and soft tissues. It is typically caused by sudden impact, falls, sports injuries, or forceful twisting, with common sites including the shoulder, elbow, fingers, hip, knee, and jaw. Both fractures and dislocations share similar signs, including severe pain, swelling, deformity, restricted movement, and occasionally numbness due to nerve compression. Therefore, FA management for both conditions primarily involves immobilisation.



Closed fracture



Open fracture



Shoulder dislocation

*“Bone fracture and dislocation” by Nazrin Ahmad is licensed under CC BY-NC 4.0*

### 5.3 Different types of immobilisation and their indications

#### a) Arms sling application

Arm sling application refers to the procedures of applying a triangular bandage or specialised sling to support the forearm and

hold the arm in a comfortable and secure position across the chest. This procedure is performed to immobilise fractures, dislocations, or soft tissue injuries of the upper limb. The aim is to restrict movement of the arm, shoulder, or wrist, reduce pain, minimise the risk of further injury, and promote comfort and healing until definitive medical treatment is provided.

The indications for arm sling application:

- Fractures of the arm, forearm, collarbone (clavicle), or shoulder.
- Dislocations of the shoulder or elbow.
- Soft tissue injuries of the arm.



## Arm sling

*“Arm sling” by Nazrin Ahmad is licensed under CC BY-NC 4.0*

### b) Splinting

Splinting refers to the application of a rigid or semi-rigid support, called a splint, to stabilise an injured bone or joint. This procedure is performed to immobilise the affected area, minimise pain, prevent further damage to blood vessels, nerves, or muscles, and make transportation of the casualty safer. Splints can be improvised using

materials such as wood, cardboard, rolled-up magazines, or commercial plastic, metal, or inflatable materials. They should immobilise the joints above and below the fracture site whenever possible.



Upper limb splint



Lower limb splint



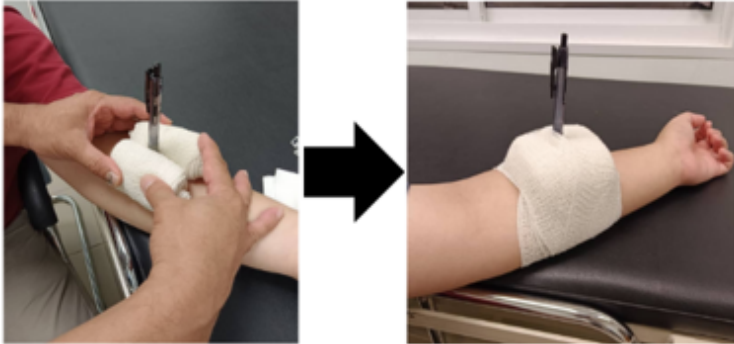
Buddy splint

“Types of splints” by Nazrin Ahmad is licensed under CC BY-NC 4.0

#### 5.4 Immobilisation of a penetrating wound

A penetrating wound occurs when a sharp object, such as a knife, glass, or metal, pierces and remains lodged in the body. In such cases, the object must never be removed by non-medical personnel, as it may be controlling bleeding by pressing against blood vessels or tissues.

Immobilisation involves securing the object in place to prevent movement, which could worsen internal damage or bleeding. This is usually done by carefully padding around the object with bulky dressings, cloth, or bandages, and then firmly bandaging them to keep the object stable without applying direct pressure on it. The goal is to keep the object from shifting during transport, reduce pain, and protect surrounding tissues until professional medical care is available.



## Immobilize a penetrating wound

*“Penetrating wound” by Nazrin Ahmad is licensed under CC BY-NC 4.0*

### 5.5 Steps-by-steps to Manage Fractures and Dislocations

As discussed earlier, managing fractures and dislocations shares similar principles and techniques. These are the procedures for managing fractures and dislocations:

- a. Ensure scene safety & do a primary check (DRSABC).
- b. Call for emergency help if severe (heavy bleeding, obvious deformity, exposed bone, loss of pulse, suspected spine injury, severe pain, or inability to move the victim).
- c. Keep the victim still and reassure them.
- d. Encourage them to stay as still and calm as possible to avoid further damage and pain. Support the injured limb in the position found and do not try to move it unless necessary for safety.
- e. Expose and inspect the injury (without moving the limb). Look for deformity, open wounds, bleeding, bone protruding, swelling, and skin colour. Check circulation, movement, and sensation distal to the injury (can they wiggle fingers/toes, is the skin warm and pink?).

- f. Control bleeding for open fractures, but don't press the bone back in.
- g. Immobilise the injury (splint or sling). Use a padded splint placed along the limb and secure it so it immobilises the joint above and below the suspected break.
- h. Pad all contact points and avoid tying bandages so tight that circulation is cut off. After splinting, re-check distal circulation, sensation, and movement.
- i. For penetrating objects, do NOT remove the object, stabilise it. Pad around the object and secure bulky dressings to keep it steady, avoiding direct pressure on the object itself. Emergency care must remove and treat the wound.
- j. For dislocations: immobilise and seek urgent care, do not attempt reduction. Realignment (reducing) a dislocation should only be done by trained clinicians.
- k. Apply cold compresses for pain and swelling (if there is no open wound). Apply a cold pack or wrapped ice for 10–20 minutes (wrap it to avoid direct skin contact). Reapply as needed with breaks, avoid applying cold to open wounds.
- l. Watch for and treat shock. Keep the casualty warm, comfortable, and lying down if appropriate, monitor breathing and consciousness, and treat for shock (cover, reassure, rapid transfer to care).
- m. Arrange prompt professional care and continue to monitor. Transport by ambulance if available. Re-check circulation and sensation after any bandaging/splinting and loosen ties if circulation is impaired (pale/blue/cold or pins-and-needles).

### *Key Takeaways*

- Keep the affected limb still and support it in the position found to prevent further injury and reduce pain.
- Never try to straighten a fractured limb or push a dislocated joint back into place, as this may cause additional damage.
- Use a cold compress or ice wrapped in cloth to help minimize swelling and pain, avoiding direct contact with skin.
- Check for numbness, color changes, or decreased movement beyond the injury, and arrange urgent medical attention.



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# Chapter 6: Automated External Defibrillator (AED)

NAZRIN AHMAD AND SHARINAH ABD KASSIM

## *Learning Objectives*

Type your learning objectives here.

- Explain what is an Automated External Defibrillator (AED).
- Demonstrate the correct operation of an Automated External Defibrillator (AED).

### **6.1 Automated External Defibrillator (AED)**

An Automated External Defibrillator (AED) is a portable medical device used in the treatment of sudden cardiac arrest (SCA). It administers an electric shock aimed at restoring a normal heart rhythm in most SCA cases. AEDs are designed for quick and straightforward operation, making them accessible even to individuals with little or no medical background. Every unit comes with clear, step-by-step voice or visual prompts to guide the user through the process.

The key components of an AED include:

- AED pads: These adhesive patches are placed on the patient's chest to monitor heart activity. If the AED identifies a shockable rhythm, an electrical impulse is transmitted through the pads,

allowing the heart's rhythm to be corrected.

- **Battery:** The battery supplies power to the device, enabling it to perform rhythm analysis, charge, and deliver shocks when necessary. It also supports self-checks to ensure the AED remains functional and ready at all times.
- **Capacitor:** The capacitor stores the electrical energy required to deliver a strong, single shock. Unlike standard capacitors, it must hold a high level of charge to be effective during a cardiac arrest.
- **Processor:** Acting as the brain of the device, the processor interprets the heart's rhythm and determines whether a shock should be administered.

AEDs are capable of detecting two life-threatening arrhythmias, known as ventricular fibrillation (VF) and pulseless ventricular tachycardia (VT). When either is present, the device delivers a controlled shock to help restore a normal rhythm. Unlike manual defibrillators used in hospitals, AEDs are fully automated. This means users do not need to interpret heart rhythms themselves, making the device highly suitable for use by non-medical personnel in emergencies.

The reason non-medical personnel are hesitant to use the AED is due to a lack of knowledge and fear of being shocked by the device. The voice-assisted system will provide clear instructions to the rescuer, thus helping them to provide a safe shock delivery procedure.

## **6.2 AED pad's location**

a) For adults:

- **Right chest (upper right side):** Place one pad just below the collarbone, to the right of the breastbone.
- **Left chest (lower left side):** Place the other pad on the left side of the chest, a few inches below the armpit, along the ribcage.

b) For children under 8 years or <25 kg (use paediatrics pad if available)

- Use a paediatric pad if available. If not, may use the adult pad. Do not cut the adult pad smaller, as it may inhibit the effectiveness of the shock delivered.
- Paediatric pads: Located in a similar position to the adult pads.
- Adult pads: one on the chest (centre) and the other on the back (between shoulder blades).



- One pad on the right side of the chest, just below the collarbone.
- The other pad is on the left side of the chest, slightly below the armpit.

*“Placement of AED pad” by Nazrin Ahmad is licensed under CC BY-NC 4.0*

### **6.3 Steps to Use an AED**

a) Prepare the chest

- Make sure the chest is dry and free from body hair. This allows the pads to adhere properly and function effectively.

b) Power on the device

- Activate the AED and pay attention to the audio or visual instructions provided.

c) Attach the pads

- Refer to the diagrams or instructions provided on the AED. If the victim has a pacemaker, avoid placing the pad directly over it, as this can interfere with the device's function and reduce the effectiveness of the shock. Attach the pad below the pacemaker.

d) Rhythm analysis

- Once the pads are secured, the AED will automatically analyse the heart rhythm.

e) Shock delivery (if indicated):

- Automatic AEDs charge and deliver the shock on their own after warning rescuers to stand clear.
- Semi-automatic AEDs require the user to press the designated shock button when instructed. (Take care not to mistake this for the power button during the emergency.)
- Warn those nearby that a shock will be administered and instruct them to avoid any contact with the victim.

f) Provide CPR and re-check

- After a shock or if no shock is advised, continue to perform CPR for about two minutes before the AED reassesses the rhythm. Always follow the device's step-by-step directions.

g) Continue care

- Keep using the AED and performing CPR until trained emergency personnel arrive and take over.

**Important reminder:**

Do not touch the victim while delivering a shock.

*Key Takeaways*

- Do not use the AED in standing water or on a wet chest, as moisture can reduce effectiveness and pose safety risks.
- Make sure no one is in contact with the patient when the AED is analyzing or delivering a shock to avoid accidental injury.
- Remove clothing, wipe sweat, and remove medication patches or excessive chest hair to ensure good pad contact.
- Use the AED as soon as available and strictly follow its instructions, as it is designed to guide first aiders safely and effectively.



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# Chapter 7: Cardiopulmonary Resuscitation (CPR)

NAZRIN AHMAD

## *Learning Objectives*

Type your learning objectives here.

- Describe what cardiopulmonary resuscitation is (CPR).
- Demonstrate the correct use of an AED.
- Explain when to stop CPR.
- Perform high-quality CPR for adults, children, and pregnant women.

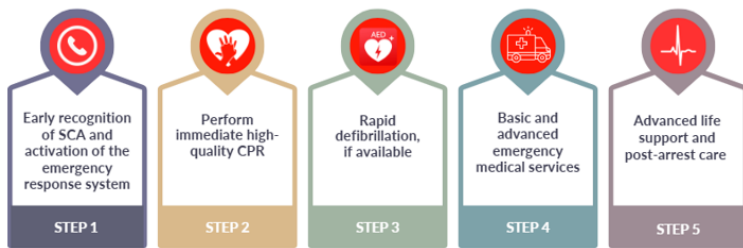
## **7.1 Introduction to Cardiopulmonary Resuscitation (CPR)**

CPR is the essential life-saving intervention for individuals experiencing sudden cardiac arrest (SCA) who have no pulse and are either not breathing or only gasping. It is a manual technique that temporarily takes over the function of the heart and lungs, ensuring vital organs receive sufficient oxygen to sustain life. Without a proper oxygen supply, irreversible damage, particularly to the brain, can occur within five minutes. CPR involves chest compressions, rescue breathing, and the use of an automated external defibrillator (AED). For non-medical personnel, hands-only CPR, focusing on correct chest compression technique and maintaining high-quality compressions, is strongly recommended. Challenges often arise

when rescuers hesitate due to a lack of knowledge or skills, or from concerns about infectious disease transmission, which relates to the 'Danger' step in the DRSABC approach.

### 7.2 Chain of Survival

The chain of survival refers to a sequence of critical actions that, when performed effectively, can improve both survival rates and neurological outcomes following cardiac arrest. It is composed of six interdependent links: early recognition of cardiac arrest with immediate activation of emergency medical services, prompt initiation of CPR, rapid defibrillation, timely advanced cardiac life support, and comprehensive physical and emotional recovery. The initial three links are actions that can be undertaken by laypersons at the scene. In contrast, the latter three require intervention from trained healthcare professionals. Although 70–90% of cardiac arrest patients still die before reaching the hospital, survival remains possible when bystanders respond swiftly and appropriately.



*“Chain of survival” by Nazrin Ahmad is licensed under CC BY-NC 4.0*

### 7.3 High-quality CPR

The effectiveness of CPR not only depends on the skill of chest compression, but it is also highly influenced by the quality of CPR being performed. The key components of high-quality CPR that each rescuer must perform are as follows:

- The chest compression rate is 100-120 per minute (follow the

metronome beat)

- Allow complete chest recoil
- Minimise interruption. If permitted, it should not exceed 10 seconds.
- Avoid excessive ventilation (rapid delivery of rescue breath)
- The compression depth is at least 50mm (2 inches) for adults and 1/3 of the anteroposterior diameter of the chest for infants and children.
- Perform five cycles of CPR before re-checking the carotid pulse. For adults, each cycle consists of 30 chest compressions followed by 2 rescue breaths. For infants, the ratio is 30:2 when performed by a single rescuer, and 15:2 when performed by two rescuers.
- Do chest compressions at the centre of the chest for both adults and infants.

#### 7.4 Adult CPR (normal condition)

- Check for Danger:** Ensure the area is safe and look for any potential hazards, such as environmental risks or exposure to body fluids. If available, wear protective equipment like a surgical mask, disposable gloves, or a face shield.
- Assess for Responsiveness:** Gently tap the victim's shoulder and ask loudly, "Hello, sir, are you okay?"
- Call for Help:** If there is no response, shout for assistance. Point to a specific person and instruct them to call 999 (or the local emergency number) and bring an AED.
- Airway:** Inspect the mouth for any obstructions, foreign objects, or abnormalities that may block the airway. You may use the head-tilt-chin lift or jaw thrust to open the airway if required.
- Breathing:** Check for normal breathing by observing chest movement.
- Circulation:** Palpate the carotid artery (neck pulse) for no more

than 10 seconds. If there is no detectable pulse, start high-quality CPR immediately.

- g. **CPR Cycles:** Perform five cycles of CPR (30 chest compressions followed by 2 rescue breaths per cycle) before reassessing the carotid pulse within 10 seconds. If no pulse and the patient is spontaneous, continue to perform high-quality CPR.
- h. **If an AED is present,** attach the pads and follow the instructions. If not, continue standard CPR.
- i. **Recovery Position:** If a pulse is present after five cycles, place the victim in the recovery position, lying on their side with their face turned toward the rescuer.

**\*You may assess ‘airway’ and ‘breathing’ simultaneously by the look, listen, and feel technique.**



“Step-by-step procedure for performing CPR” by Nazrin Ahmad is licensed under CC BY-NC 4.0

## 7.5 Pregnant Women’s CPR

- a. **Check for Danger:** Ensure the area is safe and look for any potential hazards, such as environmental risks or exposure to body fluids. If available, wear protective equipment like a surgical mask, disposable gloves, or a face shield.
- b. **Assess for Responsiveness:** Gently tap the victim’s shoulder and ask loudly, “Hello, sir, are you okay?”
- c. **Call for Help:** If there is no response, shout for assistance. Point to a specific person and instruct them to call 999 (or the local emergency number) and bring an AED.

- d. **Airway:** Inspect the mouth for any obstructions, foreign objects, or abnormalities that may block the airway. You may use the head-tilt-chin lift or jaw thrust to open the airway if required.
- e. **Breathing:** Check for normal breathing by observing chest movement.
- f. **Circulation:** Palpate the carotid artery (neck pulse) for no more than 10 seconds. If there is no detectable pulse, start high-quality CPR immediately.
- g. **After 20 weeks:** tilt the mother 15–30° left or move the uterus left to prevent vessel compression and improve blood flow.
- h. **CPR Cycles:** Perform five cycles of CPR (30 chest compressions followed by 2 rescue breaths per cycle) before reassessing the carotid pulse within 10 seconds. If no pulse and the patient is spontaneous, continue to perform high-quality CPR.
- i. **If an AED is present,** attach the pads and follow the instructions. If not, continue standard CPR.
- j. **Recovery Position:** If a pulse is present after five cycles, place the victim in the recovery position, lying on their side with their face turned toward the rescuer.

**\*You may assess ‘airway’ and ‘breathing’ simultaneously by the look, listen, and feel technique.**



“Manual Left uterine displacement” by Nazrin Ahmad is licensed under CC BY-NC 4.0

## 7.6 Infant CPR

- a. **Check for Safety:** Make sure the environment is safe. Watch for hazards such as unsafe surroundings or exposure to bodily fluids. Use protective equipment if available (such as a mask, gloves, and a face shield).
- b. **Check for Responsiveness:** Gently tap the infant’s foot or flick the sole, and call out to see if there is any reaction.
- c. **Call for Help:** If there is no response, shout for assistance. Assign someone specifically to dial 999 (or local emergency number) and to bring an AED.
- d. **Airway:** Look into the mouth for any obstruction or foreign object. Open the airway gently using the head-tilt, chin-lift method (be careful not to overextend the neck).
- e. **Breathing:** Assess breathing using the ‘look, listen, and feel’ technique—watch the chest, listen for breath sounds, and feel for air movement.
- f. **Circulation:** Check the brachial pulse (inside of the upper arm) for no more than 10 seconds. If no pulse is detected, begin CPR

immediately.

g. **CPR Cycles:**

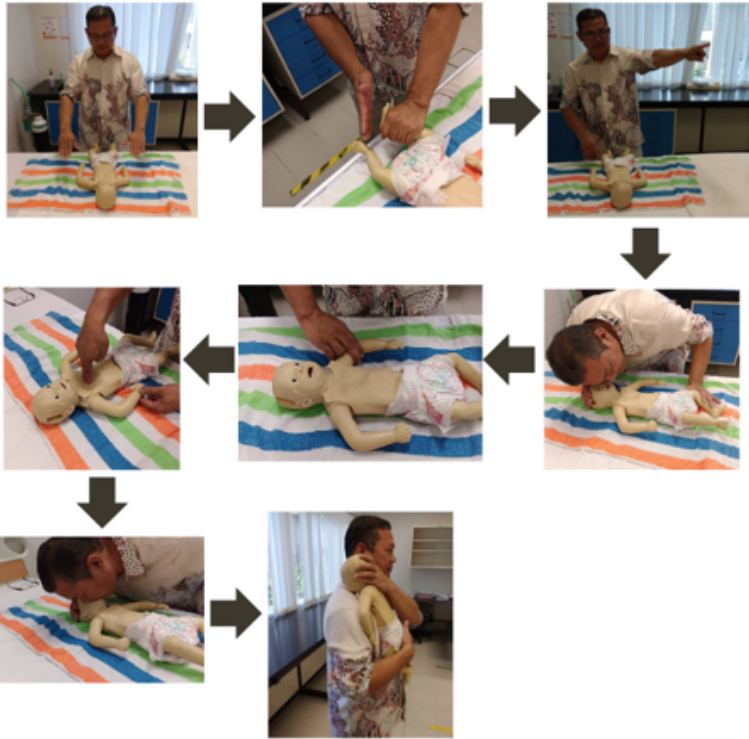
**Single rescuer:** Perform 30 chest compressions followed by 2 rescue breaths. Use two fingers for compressions, pressing about 4 cm (1.5 inches) deep.

**Two rescuers:** Use the two-thumb encircling technique and perform 15 compressions followed by 2 rescue breaths.

Complete five cycles of CPR before reassessing the pulse. If still absent, continue high-quality CPR.

h. **AED Use:** If a pediatrician's AED with pediatric pads is available, attach them and follow the device's prompts. If not, continue CPR without delay.

i. **Recovery Position:** If a pulse is present after five cycles and the infant is breathing, place them in the recovery position (on their side, facing the rescuer).



*“Infants CPR without AED” by Nazrin Ahmad is licensed under CC BY-NC 4.0*

### **7.7 When to stop CPR?**

The rescuer may stop the CPR if one of the following is present:

- The victim regains return of spontaneous circulation (ROSC).
- The rescuer becomes too fatigued to continue.
- The emergency response team arrives and takes over the situation.
- Another trained person is available to relieve the initial rescuer.
- There are irreversible signs of death, such as decapitation (the head separated from the body).

- The victim's family requests discontinuation of CPR.



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# Chapter 8: Choking

NAZRIN AHMAD

## *Learning Objectives*

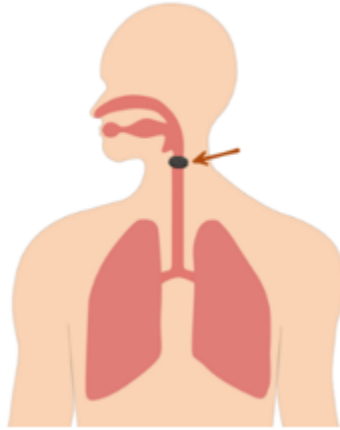
Type your learning objectives here.

- Understand what choking is.
- Types of choking.
- Relieve the choking maneuver.
- Adult choking.
- Pediatric choking.

### **8.1 Introduction to Choking**

Choking occurs when a foreign object, such as food or a small item, blocks the airway and prevents normal breathing. It is a medical emergency because the lack of oxygen can lead to brain damage or death within minutes if not managed quickly. Recognizing the signs, such as difficulty breathing, inability to speak or cough, or clutching the throat, is crucial.

Relieving a choking episode involves immediate first aid measures to clear the airway. These include encouraging the victim to cough, giving back blows, and applying abdominal thrusts (Heimlich manoeuvre) or chest thrusts if necessary. Prompt and correct action can restore airflow, prevent complications, and save the victim's life.



*“Airway obstruction ” by Nazrin Ahmad is licensed under CC BY-NC 4.0*

## **8.2 Types of Choking**

Choking can be classified into mild, moderate, and severe, depending on the degree of airway obstruction. In mild choking, the airway is only partially blocked, allowing the victim to breathe, speak, or cough. The person may appear anxious and clutch their throat. However, the cough is usually strong and effective in expelling the obstruction.

In moderate choking, the airway becomes more restricted, making it harder to breathe. The victim may only be able to speak in short or weak sentences, with noisy or wheezy breathing, and a weak or ineffective cough. Signs of distress and panic are more obvious at this stage, and first aid measures such as back blows and abdominal thrusts are necessary.

In severe choking, the airway is completely blocked, preventing any airflow from entering or exiting the lungs. The victim is unable to breathe, speak, or cough, and may show the universal choking sign by grasping the throat. Cyanosis, or bluish discoloration of the lips and skin, may develop rapidly. Without prompt intervention, the

victim can lose consciousness. Severe choking is a life-threatening emergency requiring immediate action, including back blows, abdominal or chest thrusts, and, if unresponsive, the initiation of CPR.

### **8.3 Relieve Choking Manoeuvre**

#### **8.3.1 Heimlich Manoeuvre (abdominal thrust)**

The Heimlich manoeuvre is a life-saving first aid technique used to relieve choking in adults and children over one year of age. It is performed when a foreign object completely obstructs the airway, preventing the victim from breathing, speaking, or coughing effectively (severe choking). The manoeuvre works by creating a sudden upward pressure on the diaphragm, which compresses the lungs and forces air out of the airway. This burst of air can expel the object lodged in the throat.

To perform the Heimlich manoeuvre, the rescuer should first stand behind the choking victim and wrap their arms around the victim's waist. One hand is clenched into a fist and placed just above the navel but below the rib cage, with the thumb side facing inward. The other hand grasps the fist, and the rescuer delivers quick, forceful upward thrusts into the abdomen. These thrusts are repeated until the object is expelled, and the victim can breathe normally, or until the victim becomes unresponsive.



*“Heimlich Maneuver” by Nazrin Ahmad is licensed under CC BY-NC 4.0*

### **8.3.2 Chest Thrust**

The chest thrust is a first aid technique used to relieve choking when abdominal thrusts (Heimlich manoeuvre) are not appropriate or effective. This method is particularly recommended for pregnant women and obese individuals, where abdominal thrusts may either be unsafe or impractical. The principle of the chest thrust is similar

to the Heimlich manoeuvre, it creates a rapid increase in pressure inside the chest cavity and lungs, forcing air upward through the airway to expel the obstructing object.

To perform a chest thrust on a conscious adult or child, the rescuer stands behind the victim and places their arms under the armpits, wrapping them around the chest. The rescuer makes a fist and positions it on the middle of the breastbone, slightly above the lower end of the sternum. The other hand grasps the fist, and sharp, backward thrusts are delivered against the sternum. These thrusts are repeated until the object is expelled or the victim becomes unresponsive.

Chest thrusts are effective and safer alternatives when abdominal thrusts may cause harm, such as risk of injury to the uterus in pregnancy or difficulty accessing the abdomen in obese individuals. However, care must be taken to avoid placing thrusts too low on the sternum or too forcefully, as this could result in injury to the ribs or internal organs. When applied correctly, chest thrusts are a crucial manoeuvre that can save lives in choking emergencies.



*“Chest thrust technique” by Nazrin Ahmad is licensed under CC BY-NC 4.0*

### **8.3.3 Back Blow and chest Thrusts**

For infants under one year old, the recommended technique to relieve choking is a combination of back blows and chest thrusts, as abdominal thrusts are unsafe at this age. If the infant is unable to cry, cough, or breathe, immediate intervention is required. The rescuer should position the infant face down on their forearm with the head lower than the chest, supporting the head and jaw while keeping the airway clear. Using the heel of the hand, five firm back blows are delivered between the infant’s shoulder blades, checking

after each blow to see if the obstruction has cleared. If the object does not come out, the infant is turned onto their back with the head still lower than the chest, and two fingers are placed on the lower half of the breastbone just below the nipple line. Five quick chest thrusts are then given, pressing sharply to create pressure that may dislodge the obstruction. The cycle of five back blows and five chest thrusts is repeated until the airway is cleared or the infant becomes unresponsive. If the infant becomes unresponsive, emergency help must be called immediately, and CPR should be started, beginning with chest compressions and checking the mouth for any visible obstruction before giving rescue breaths.



“Back blow and chest thrusts technique” by Nazrin Ahmad is licensed under CC BY-NC 4.0



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<https://openbook.ums.edu.my/fundamentalfirstaidcompetencies/?p=125#h5p-33>



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An interactive H5P element has been excluded from this version of the text. You can view it online here:

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