



Emergency First Responder

General Medical Emergencies



Objectives

By the end of this session you should be able to:

- Manage the care of a patient with an acute medical emergency



Medical Emergency

- An illness or condition that can affect the body is known as a Medical Emergency
- Medical Emergencies may be caused by infections, poisons, or the failure of one or more of the body's organs and systems



Types of Medical Emergencies

- Altered Mental Status
- Seizures
- Cerebro Vascular Accident (CVA)
- Diabetes
- Hypothermia
- Heat Exhaustion
- Heat Stroke
- Frostbite
- Burns
- Poisoning
- Acute allergic reaction



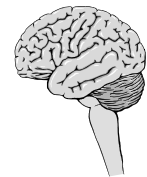
Altered Mental Status

- Sudden or gradual decrease in a patient's level of responsiveness
- Change may range from a decrease in level of understanding to unresponsiveness
- Use AVPU scale when assessing altered mental status



Causes of Altered Mental Status

- Trauma
- Lack of Nutrients
 - Poor Blood supply - Shock
 - Oxygen - Hypoxia
 - Glucose - Diabetes
- Abnormal electrical activity
- Infection & fever
- Poisoning
- Psychiatric conditions





General Care Management

- Scene size up / Nature of Illness
- General Impression of patient / LOC
- Airway
- Breathing
- Circulation
- Disability - AVPU
- OPQRST / SAMPLE History / Baseline Vitals
- Ongoing assessment
- DOCTOR / HOSPITAL

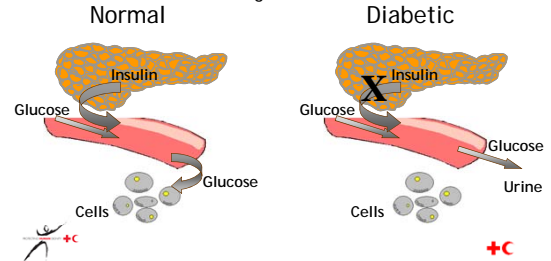


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Diabetes

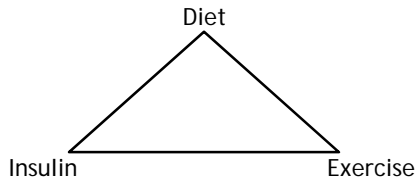
A condition in which a person has an abnormally high blood glucose level



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Diabetes



A person may develop:

- A High Blood Glucose - Hyperglycaemia
- A Low Blood Glucose - Hypoglycaemia



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Hypoglycaemia Recognition



- Rapid onset
- Person may feel "hypo"
- Pale & sweaty
- Pulse - rapid
- Weakness
- Confusion
- Aggressiveness
- Unconsciousness



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Hypoglycaemia Treatment

- Ask
 - Are you diabetic?
 - When did you eat last?
 - Did you take your medication/insulin?
- If Conscious
 - Give sugar / glucose gel
- If Unconscious
 - Check A - B - C
 - Recovery position
 - Hospital



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Hyperglycaemia

- Recognition
 - History of diabetes
 - Underlying illness
 - Warm, dry skin
 - Rapid, full pulse
 - Deep, rapid breathing
 - Fruity odour
 - Slow onset
- Management
 - Initial assessment
 - Medical advice



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Stroke



- Clot in an artery
 - 85%
- Rupture of an artery
 - 15%



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Stroke Recognition

- Previous history
 - "Mini strokes"
- Headache
- Paralysis or weakness
- Speech difficulties
- Impaired vision
- Incontinence
- Reduced level of responsiveness



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Stroke Recognition

- F.A.S.T.
 - Face symmetry
 - Arm Drift
 - Speech
 - Time



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Care for a Stroke Patient



- Maintain an open airway
- Ventilate if necessary
- Administer oxygen
- Keep comfortable
- Provide psychological support
- Do not give anything by mouth
- Medical advice
- Unconscious
 - Recovery position



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Seizures

- Irregular electrical activity in the brain causing a sudden change in behaviour or movement
- Causes
 - Epilepsy
 - Drugs, alcohol or poisons
 - Infection and fever
 - Trauma
 - Brain tumour
 - Stroke

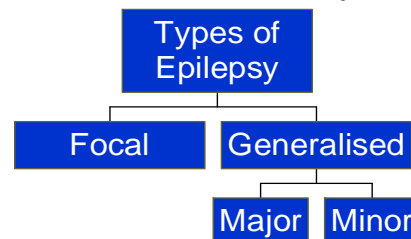


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Epilepsy

Due to abnormal electrical activity in the brain



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Minor Epilepsy



- Blank stare.
 - "Day dreaming"
- Slight twitching
 - Mouth & Eyes
- Automatic movements
 - Smacking & Chewing
- Lasts seconds



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Minor Epilepsy Management



- Protect the casualty
- Reassure
- Advise to see own doctor



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Major Epilepsy

- Aura
- Unconsciousness
- Rigid phase
 - Muscles tense
 - Stop breathing
 - May be incontinent



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Major Epilepsy

- Convulsive phase
 - Muscle jerking
 - Noisy breathing
 - Froth at mouth
- Muscles relax
- Remain unconscious
- Tired and confused on waking



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Major Epilepsy Management

- Protect the casualty
- Loosen tight clothing
- Get information
- When the seizure stops
 - Check A - B - C
 - Recovery position
- Administer oxygen
- Monitor closely



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Acute Allergic Reaction

- Abnormal sensitivity to a substance
 - Skin rashes
 - Sneezing
 - Watering of the eyes
 - Facial & tongue swelling
 - Cough and wheeze
 - Difficulty breathing
 - Pulse - rapid & weak
 - Unresponsiveness



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Allergic Reaction Management

- If severe
 - Dial 999 / 112
 - Check A.B.C.
 - Position the casualty
 - Administer Oxygen
- If mild
 - Seek medical advice



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Poisons

- Any substance which if taken into the body in sufficient quantities may damage health or even cause death



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Poisons Recognition

Route	Local	General
Inhale	Difficulty breathing, Wheezing	Hypoxia, Cyanosis Unconsciousness
Ingest	Vomiting, Diarrhoea, Burns around mouth	Raised temperature Weakness
Inject	Infected injection marks Bite marks	Confusion, Seizures Unconsciousness
Absorb	Skin redness and irritation Mucus Membranes	Confusion, Seizures Unconsciousness



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Poisons Recognition

- Depends on
 - Substance
 - Amount
 - Route
- Empty containers
- Unexplained seizures
- Unconsciousness



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Poisoning Management

- Scene size up
- Initial assessment
 - Secure airway
 - Resuscitate if necessary
 - Consider oxygen
- Be prepared for vomiting
- If Unconscious
 - Recovery position



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Poisoning Management

- Gather information
 - Exactly what was taken?
 - When?
 - How much?
 - Over what period of time?
 - Save containers and specimens
- Transport / Medical advice



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Alcohol Poisoning

- Risks
 - Blocked airway
 - Hypothermia
 - Undiagnosed medical problem



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Alcohol Poisoning Recognition

- | | |
|--|--|
| Early Stages <ul style="list-style-type: none"> • Smell of alcohol • Reduced level of responsiveness • Flushed face • Pulse - full • Breathing - noisy | Later Stages <ul style="list-style-type: none"> • Unconsciousness • Pulse - weak • Breathing - shallow • Pupils - dilated |
|--|--|



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Drug Abuse

- Self administration of a drug in a manner that is not in accordance with approved medical or social patterns
- Wide range of possible effects



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Drug Abuse

Painkillers	Aspirin, Paracetamol.	Abdominal pain, Vomiting.
Tranquillisers	Benzodiazepines, Barbiturates.	Drowsiness, Irregular pulse
Stimulants	Amphetamines, Ecstasy, Cocaine.	Excitable, Tremors, Hallucinations
Narcotic	Morphine, Heroine.	Confusion, Small pupils, Slow breathing
Solvents	Glue, Lighter fuel	Hallucinations

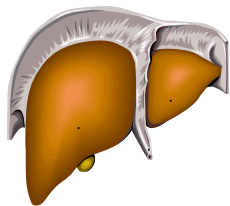


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Paracetamol

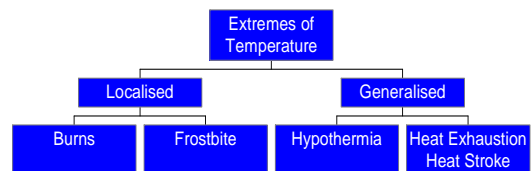
- Little immediate effect
- Delayed liver damaged
- Requires immediate hospital treatment



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Extremes of Temperature



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Temperature Regulation

- The body generates heat by
 - Converting food to energy
 - Muscle activity
- The body absorbs heat
 - From outside sources
- The body conserves heat
 - Constricting blood vessels
 - Reducing sweating
 - Erecting body hair



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Temperature Regulation

- In normal conditions the body loses heat
 - Cool surrounding air (radiates)
 - Contact with cool surfaces
- In hot condition the body loses heat by
 - Dilating blood vessels
 - Sweating
 - Increases in the rate and depth of breathing



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Frostbite

- Freezing of the tissues, usually the extremities, due to low temperatures
- May cause permanent damage
- Immobile people are particularly at risk
- May be accompanied by hypothermia



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Recognition of Frostbite

- Initially pins and needles
- Pallor followed by numbness
- Hardening and stiffening of the skin
- Skin becomes mottled and then blue
- On recovery the skin may be
 - Red, hot, painful and blistered
- Blackness indicates gangrene



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Treatment of Frostbite

- Perform scene size up and initial assessment
- Move to a warm environment
- Remove any constricting items
- Gently warm the area
 - Do not rub
 - Do not apply direct heat
- Place the affect area in warm water
- Dry carefully and apply a light dressing
- Seek medical advice



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Hypothermia

- Lowering of the body core temperature below 35°C (95°F)
- Situations where hypothermia may occur:
 - Cold environment
 - Exposure to cold weather
 - Immersion in cold water
 - Inadequate clothing or diet



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Hypothermia Recognition

- Shivering initially
- Pale, dry, cold skin
- Slow, shallow breathing
- Slow, weak pulse
- Confusion and irritability
- Falling level of responsiveness
- Unconsciousness
- Cardiac arrest



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Hypothermia Management

- Perform scene size up & initial assessment
- Handle casualty gently
- Remove from cold environment
- Get shelter
- Hot drinks / high energy foods
- Insulate with extra clothing and blankets
- If possible - hot bath
- Get medical advice



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Hypothermia in Infants

- May occur in a cold room
- Skin is cold but looks pink
- May be quiet and refuse feeds
- Re-warm gradually with blankets
- Seek medical advice



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Heat Exhaustion

- There is excessive loss of salt and water through sweating and the circulatory system begins to fail
- Causes
 - Prolonged period in a hot environment
 - Underlying illness
 - Use of Ecstasy



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Recognition of Heat Exhaustion

- Gradual onset
- Temperature - normal
- Headache, dizziness and confusion
- Nausea
- Sweating, skin cool and moist
- Muscle cramps
- Rapid, weak pulse



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Management of Heat Exhaustion

- Perform scene size up
- Complete initial assessment
 - Give oxygen
- Lie down in a cool area
- Raise the legs
- Give fluids
- Seek medical advice



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Heat Stroke

- The body rapidly becomes overheated
- Causes
 - Prolonged exposure to high temperatures
 - Illness causing a high temperature



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Recognition of Heat Stroke

- Hot, flushed, dry skin
- Temperature over 40°C (104°F)
- Full bounding pulse
- Headache and dizziness
- Restless, confusion
- Rapidly falling level of responsiveness



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Management of Heat Stroke

- Complete scene size up
- Perform initial assessment
 - Give oxygen
- Move to a cool area
- Wrap in a wet sheet
- Use ice packs in armpits and groins (wrapped)
- Monitor closely
- Wrap in a dry sheet when temperature reaches 38°C (100°F)
- Seek medical advice



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Decompression Illness

- Caused by air bubbles being released in the body as a result of the changes in pressure while diving
- Depending on location symptoms may be similar to that of a stroke or collapsed lung
- Complete primary survey
- Treat in supine position
- Administer oxygen therapy
- Transport dive computer and equipment with them with transport completed below 300 metres
- Consider diving buddy as possible patient also

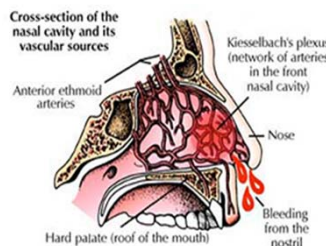


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Nose Bleed - Epistaxis

- Sit patient down
- Lean forward
- Pinch below bridge
- Do not blow nose
- Do not pick nose
- Spit out any blood in mouth
- Blood swallowed may result in vomiting



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Summary

- Definition of Medical Emergency
- Types of Medical Emergency
 - Altered mental status
 - Diabetes
 - Stroke
 - Seizures
 - Allergic reaction
 - Poisoning
 - Extremes of temperature
 - Decompression illness
 - Epistaxis



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