

BREATHING DEFINITIONS

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Breathing Emergencies

Effective breathing is vital for life. When breathing is affected through injury or illness, a persons life is in immediate danger.

Causes of breathing emergencies

Injuries that can cause a breathing emergency: broken ribs, near drowning, knife or gunshot wound, burns to the face, head injury, compression of the chest preventing chest expansion.

Illnesses that can cause a breathing emergency: asthma, stroke, allergic reaction, pneumonia, congestive heart failure, emphysema.

Poisoning that can cause a breathing emergency: inhaled poison (carbon monoxide), swallowed poison (sleeping pills), injected poison (drugs, bee sting etc.).

Hypoxia - lack of oxygen in the blood, damages vital tissues and may cause death if not looked after.

Lack of oxygen - can happen where there is a low level of oxygen in the air i.e. high altitude environments.

Blocked airway - can happen when a person chokes on a certain object i.e. food. The tongue can also block the airway. The airway can also be swollen to due infection or an allergic reaction.

Abnormal heart and lung function - illness such as chronic obstructive pulmonary disease, pneumonia or congestive heart failure, an injury to the head, spine, chest, etc. a drug overdose or poisoning.

To breathe effectively these are the minimum requirements:

- A functioning control centre in the brain and an intact spinal cord so the brain can control breathing
- A good supply of air
- An open airway
- An intact chest wall
- One functioning lung

Other signs of normal breathing include:

- Quiet and effortless breathing
- Chest movement that is equal on both sides
- The person is alert and relaxed
- Normal skin colour
- Able to speak without taking a breath every few words

Normal effective breathing rates per minute are:

Age group	Range of Normal Rates	Too Slow	Too Fast
Adult (over 8 yrs.)	10 to 20	Below 10	Above 30
Child (1-8 yrs.)	20 to 40	Below 15	Above 40
Infant (under 1yr.)	30 to 60	Below 25	Above 60

Pneumothorax is the result of an injury where the air gets into the chest cavity. This can cause one or both of the lungs to collapse, which is a life-threatening breathing emergency. If air gets into the chest cavity through an open wound, the wound is called a penetrating chest wound. Bloodstained bubbles may appear around the wound when the person exhales.