



AUSTRALIAN RESUSCITATION COUNCIL

GUIDELINE 9.2.8

THE FIRST AID MANAGEMENT OF HYPERVENTILATION SYNDROME

INTRODUCTION

Hyperventilation syndrome is the term used to describe the symptoms and signs resulting from over-breathing.

In this condition, the rate and depth of breathing exceed that required to maintain normal levels of carbon dioxide in the blood. Consequently the carbon dioxide level in the arterial blood falls, resulting in a range of symptoms and signs as below. Anxiety is usually present.

Not every person who is breathing deeply or rapidly has hyperventilation syndrome. Other more serious conditions which could cause this include:

- asthma attack
- heart failure
- pulmonary embolus
- heart attack
- spontaneous pneumothorax
- some poisoning incidents
- uncontrolled diabetes.

If any of the above conditions are suspected, call for an ambulance (Dial Triple Zero – 000)

RECOGNITION

Symptoms may include:

- lightheadedness
- shortness of breath
- being unable to get enough breath in
- chest discomfort
- a feeling of panic and impending death
- blurred vision
- tingling of fingers, toes and lips
- palpitations
- a feeling of detachment and not being in full control of the body (depersonalisation).

Signs may include:

- rapid breathing
- occasional deep, sighing breaths
- rapid pulse
- altered level of consciousness e.g. fainting
- hand and finger spasm (carpo-pedal spasm) in advanced attacks. The fingers and wrists become claw-like with the thumb held stiffly across the palm.

MANAGEMENT

- **Reassure the victim and encourage the person to slow down their breathing.**
- Follow the ARC Basic Life Support Flow Chart Guideline 8.
- If the symptoms of hyperventilation are unresolved, call for an ambulance (Dial Triple Zero – 000).

DO NOT USE ANY BAG FOR RE-BREATHING

RATIONALE

This practice may be dangerous and should only be used under medical direction.

LEVEL OF EVIDENCE

Expert Consensus Opinion

CLASS OF RECOMMENDATION

Class A

FURTHER READING

ARC Guideline 8 Cardiopulmonary Resuscitation

ARC Guideline 9.2.1 Chest Pain

ARC Guideline 9.2.5 First Aid for Asthma

ARC Guideline 9.5.1 Emergency Management of a Victim Who has been Poisoned

ARC Guideline 9.5.2 Emergency Management of Victims of Inhalational Incidents