



AUSTRALIAN RESUSCITATION COUNCIL

GUIDELINE 9.1.5

HARNESSES SUSPENSION TRAUMA – FIRST AID MANAGEMENT

INTRODUCTION

Suspension trauma, or orthostatic shock, has been reported to affect victims who are suspended within a body harness for a prolonged period of time (5 to 30 minutes).^{1,2} It presents with the development of a range of symptoms which may result in unconsciousness or death, and is thought to occur as a result of low blood pressure secondary to blood pooling in the legs, pelvis and abdomen of victims who are suspended and motionless.

RECOGNITION

The signs and symptoms of suspension trauma are the same to those of shock. Suspension trauma should be considered where the victim has been suspended by a harness for a prolonged period, and are exhibiting any of the following:³

- faintness
- breathlessness
- sweating
- paleness
- nausea
- dizziness
- low blood pressure
- unconsciousness

MANAGEMENT

- Call for an ambulance (Dial Triple Zero - 000)
- If unconscious, manage as per ARC Basic Life Support flow chart (Guideline 8)
- Rest the conscious victim in a position of comfort, ideally lying down, and provide reassurance
- Loosen or remove harness
- Administer oxygen if available
- Look for and manage associated injuries in all victims, but particularly victims who may have fallen or been electrocuted.
- Monitor the signs of life at frequent intervals

Some agencies recommend that rescuers maintain victims in a sitting position and avoid lying them flat for 30 minutes. There is no evidence to support this practice as a treatment of suspension trauma and it may be harmful. Care of the airway takes precedence over any injury.

LEVEL OF EVIDENCE

Consensus Expert Opinion

CLASS OF RECOMMENDATION

Class A - Recommended

REFERENCE

1. Turner N.L., Wassell J.T., Whisler R., Zwiener J. Suspension tolerance in a full-body safety harness, and a prototype harness accessory. [Evaluation Studies. Journal Article] Journal of Occupational & Environmental Hygiene. **5**(4):227-31, 2008.
2. Lee C., Porter K.M. Suspension trauma. [Journal Article. Review. Emergency Medicine Journal. **24**(4):237-8, 2007.
3. Adish A., Robinson L., Codling A., Harris-Roberts J., Lee C., Porter K. Evidence based review of the current guidance on first aid measures for suspension trauma. Health and Safety Executive. Research Report RR708. May 2009.
<http://www.hse.gov.uk/research/rrpdf/rr708.pdf>

FURTHER READING

ARC Guideline 3 Unconsciousness
ARC Guideline 4 Airway
ARC Guideline 8 Cardiopulmonary Resuscitation
ARC Guideline 9.1.6 Management of Suspected Spinal Injury
ARC Guideline 9.2.3 Shock