Guideline 9.2.3 – Shock: First Aid Management of the Seriously Ill or Injured Person

Guideline

Who does this guideline apply to?

This guideline applies to adults, children and infants

Who is the audience for this guideline?

This guideline is for use by bystanders, first aiders and first aid providers.

Recommendations

The Australian and New Zealand Committee on Resuscitation (ANZCOR) make the following recommendations:

1. Control any bleeding promptly (Guideline 9.1.1).
2. **Send for an ambulance.**
3. **Reassure and constantly re-check the person's condition for any change.**

Level of Evidence

Low quality

Class of Recommendation

Weak

1.0 | Introduction

Shock is a loss of effective circulation resulting in impaired tissue oxygen and nutrient delivery[1] and causes life threatening organ failure. Any seriously ill or seriously injured person is at risk of developing shock.

2.0 | Causes

Some conditions which may cause shock include[2]:

2.1 | Loss of circulating blood volume (hypovolaemic shock), e.g.:

- severe bleeding (internal and / or external)
- major or multiple fractures or major trauma
- severe burns or scalds
- severe diarrhoea and vomiting
- severe sweating and dehydration.

2.2 | Cardiac causes (cardiogenic shock), e.g.:

- heart attack
- abnormal heart rhythm.

2.3 | Abnormal dilation of blood vessels (distributive shock), e.g.:

- severe infection (sepsis)
- severe allergic reactions (anaphylaxis)
- severe brain / spinal injuries
- fainting (generally short lived).

2.4 | Blockage of blood flow in or out of heart (obstructive shock), e.g.:

- punctured lung causing increased pressure in chest causing reducing return of blood to the heart (tension pneumothorax)
- severe injury to the heart with weak heart muscle (cardiomyopathy) or blood around the heart reducing blood return to the heart (cardiac tamponade)
- blood clot in the lung (pulmonary embolus)
- compression of the large abdominal veins by the uterus in pregnancy.

3.0 | Recognition

Early recognition of the seriously ill or seriously injured person should alert the first aider to the risk of developing shock.

The symptoms, signs and rate of onset of shock vary widely depending on the nature and severity of the underlying cause[3]. Shock is a condition that may be difficult to identify.

3.1 | Symptoms may include:

- dizziness
- thirst
- anxiety
- restlessness
- nausea
- breathlessness
- feeling cold, shivering or chills.
- extreme discomfort or pain

3.2 | Signs may include:

- collapse
- rapid breathing
- rapid pulse which may become weak or slow
- fever or abnormally low temperature
- cool, sweaty skin that may appear pale or discoloured
- skin rash
- confusion or agitation
- decreased or deteriorating level of consciousness
- vomiting
- decreased urine output

4.0 | Management

1. **Ensure safety of all at the scene**
2. **Lie the person down.** If unconscious place the person on their side (Guideline 3).
3. Control any bleeding promptly (Guideline 9.1.1).
4. **Send for an ambulance.**
5. **Administer treatments relevant to the cause of the shock.**
6. Administer oxygen if available and trained to do so (Guideline 9.2.10).
7. **Maintain body temperature (prevent hypothermia).**
8. **Reassure and constantly re-check the person’s condition for any change.**
9. If the person is unresponsive and not breathing normally, follow the Basic Life Support Flowchart (ANZCOR Guideline 8).

4.1 | Positioning of people with shock

If possible, lie the person down rather than sitting them upright[4] (CoSTR 2015, weak recommendation, low-quality evidence).

For individuals with shock who are in the supine (lying) position and with no evidence of trauma, the use of passive leg raise (PLR) may provide a transient (less than 7 minutes) improvement.

The clinical significance of this transient improvement is uncertain; however, no study reported adverse effects due to PLR[4]. Because improvement with PLR is brief and its clinical significance uncertain, ANZCOR recommends the supine (lying) position without leg raising for those in shock[4] (CoSTR 2015, values and preferences statement).

References

1. Skinner, B. & Joans, M. (2007). Causes and Management of Shock. Anesthesia and Intensive Care Medicine. **8**(12): 520-524.
2. Graham, C.A. & Parke, T.R. (2005). Critical care in the emergency department: shock and circulatory support. Emergency Medicine Journal. **22**:17-21.
3. Moore, F.A., McKinley, B.A. & Moore, E.E. (2004). The next generation in shock resuscitation. The Lancet **363:**1988-96.
4. Zideman, D. A., Singletary, E. M., De Buck, E., et al. (2015). Part 9: First aid: 2015 International Consensus on First Aid Science with Treatment Recommendations. *Resuscitation, 95*, e225. http://www.cprguidelines.eu/assets/downloads/costr/S0300-9572(15)00368-8_main.pdf Accessed 19/11/2015.

About this Guideline:

Search date/s	2015-2019 Evidence update
Question/PICO:	There was no PICO for the Evidence update
Method:	Both GRADE on SR (for CoSTR 2015) and recent literature review
Primary reviewers:	Jason Bendall; Natalie Hood
Other consultation	None
Worksheet	No worksheet
Approved:	November 2019
Guidelines superseded:	9.2.3 (January 2016)