



## **GUIDELINE 9.1.7**

### **EMERGENCY MANAGEMENT OF A CRUSHED VICTIM**

#### **INTRODUCTION**

Crush injuries may result from a variety of situations, including vehicle entrapment, falling debris, industrial accident or by prolonged pressure to a part of the body due to their own body weight in an immobile victim.(1-5) *Crush syndrome* refers to the multiple problems that may subsequently develop, most commonly as a result of crush injuries to the limbs, particularly the legs.(1) Crush syndrome results from disruption of the body's chemistry and can result in kidney, heart and other problems. The likelihood of developing acute crush syndrome is directly related to the compression time, therefore victims should be released as quickly as possible, irrespective of how long they have been trapped.<sup>1,2</sup>

#### **MANAGEMENT**

- Ensure the scene is safe, and that there is no risk of injury to the rescuer or bystanders.
- Call an ambulance,
- If it is safe and physically possible, all crushing forces should be removed from the victim as soon as possible.<sup>1</sup>
- A victim with a crush injury may not complain of pain, and there may be no external signs of injury. All victims who have been subjected to crush injury, including their own body weight, should be taken to hospital for immediate investigation<sup>2-4</sup>
- Keep the victim warm, treat any bleeding.<sup>5,6</sup> (ARC Guideline 9.1.1)
- Continue to monitor the victim's condition. If the victim becomes unresponsive and is not breathing normally, follow Australian Resuscitation Council and New Zealand Resuscitation Council Basic Life Support Flowchart (Guideline 8) if possible.
- **DO NOT** leave the victim except if necessary to call an ambulance
- **DO NOT** use a tourniquet for the first aid management of a crush injury.

#### **NOTE**

Crushing force applied to the head, neck, chest or abdomen can cause death from breathing failure or heart failure so must be removed promptly.

Although the victim may appear to be alert and not distressed, there is a risk of deterioration so ongoing reassessment of the victim's condition is essential.

## **REFERENCES**

1. Greaves I, Porter K and Smith JE, Consensus statement on the early management of crush injury and prevention of crush syndrome. J R Army Med Corps. 2003;149(4):255-9
2. Aoki N, Demsar J, Zupan B, Mozina M. Predictive modelling for estimating risk of crush syndrome: a data mining approach. J Trauma. 2007;62(4):940-5
3. Brown AA and Nicholls RJ, Crush syndrome: A report of 2 cases and a review of the literature. Brit J Surg. 1977;64(6):397-402
4. Burns K, Cone DC, Portereiko JV. Complex extrication and crush injury. Prehosp Emerg Care. 2010;14(2):240-4
5. Jagodzinski NA, Weerasinghe C and Porter K, Crush injuries and crush syndrome - A review. Part 1: The systemic injury. Trauma. 2010;12(2):69-88
6. Hatamizadeh P, Najafi I, Vanholder R, Rashid-Farokhi F, et al., Epidemiologic Aspects of the Bam Earthquake in Iran: The Nephrologic Perspective. Am J Kid Dis. 2006;47(3):428-38

## **LEVEL OF EVIDENCE**

Level III-3

Level IV

## **CLASS OF RECOMMENDATION**

Class B - Acceptable

## **FURTHER READING**

ARC Guideline 8 Cardiopulmonary Resuscitation

ARC Guideline 9.1.1 Principles for the control of bleeding for first aiders