



Clinical Practice Procedures: Trauma/Orthopaedic splinting – Prometheus pelvic

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Date	February, 2021
Purpose	To ensure a consistent procedural approach to orthopaedic splinting – Prometheus pelvic.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
Population	Applies to all ages unless stated otherwise.
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Orthopaedic splinting – Prometheus pelvic

February, 2021

The early and appropriate application of a pelvic circumferential compression device (PCCD) can be lifesaving. Benefits include decreased mortality, haemorrhage control, reduced transfusion requirement, fracture stabilisation, length of stay in hospital and analgesia.^[1]

Prometheus pelvic splint



The Prometheus Pelvic Splint is a latex free, single patient use immobilisation device designed to fit all patients from the infant to the bariatric adult. It is indicated for the emergency management of suspected pelvic fractures(s).^[2]

Indications



Mechanism of injury suggestive of pelvic fracture(s) with any of the following criteria:^[3]

- Haemodynamic compromise (HR > 100 OR SBP < 90 mmHg)
- GCS < 13
- Distracting injury
- Abnormal clinical assessment of the pelvis with high likelihood of fracture.

Contraindications



Suspected isolated:

- Neck of femur fracture; or
- Hip dislocation

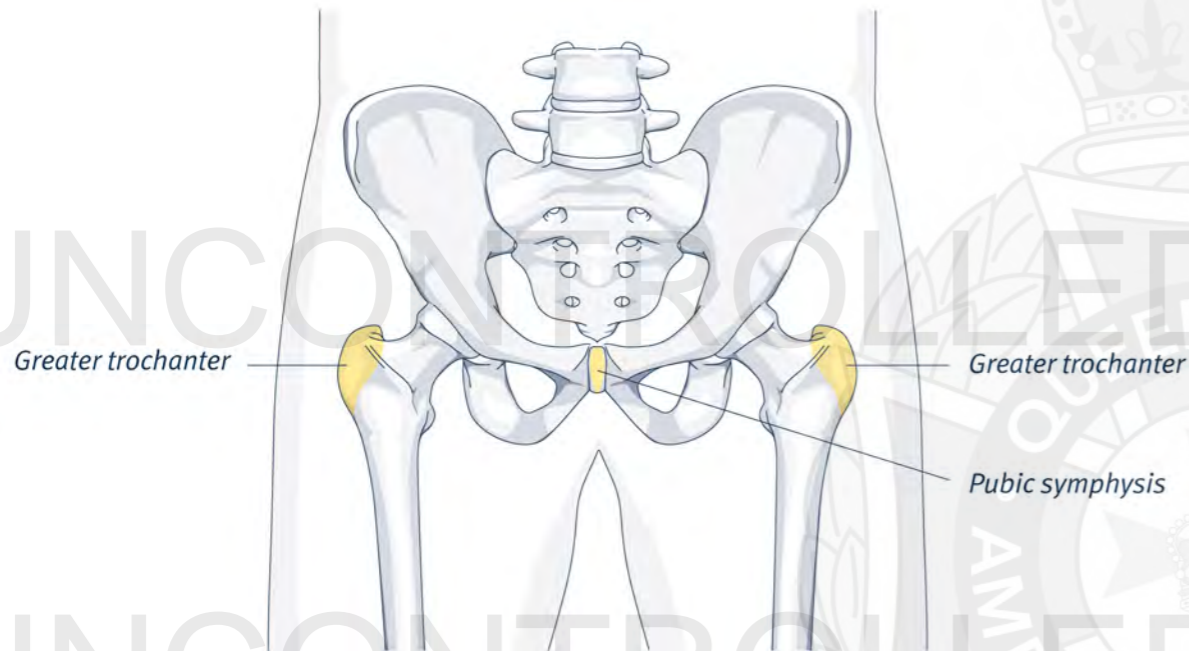
Complications



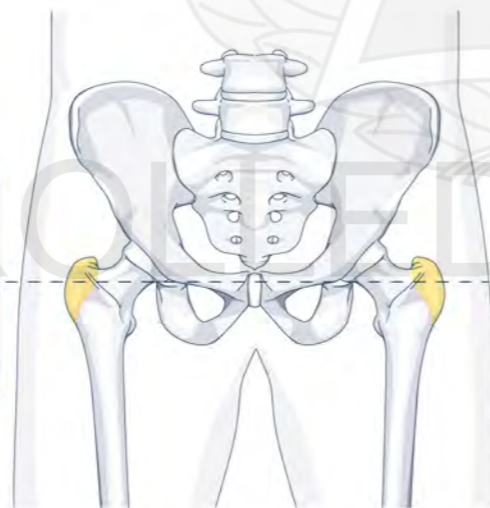
- Pressure areas
- Tissue necrosis

Procedure – Orthopaedic splinting – Prometheus pelvic

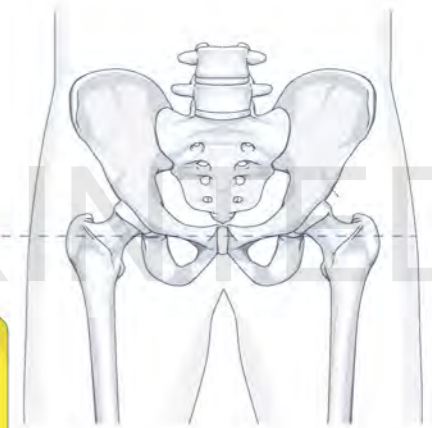
1. Position the patient supine.
2. Ensure all clothing is removed. The device should be applied to the skin.
3. Identify the patient's greater trochanters by gentle palpation.
If unable to palpate the greater trochanters use the pubic symphysis as an approximate transverse landmark.



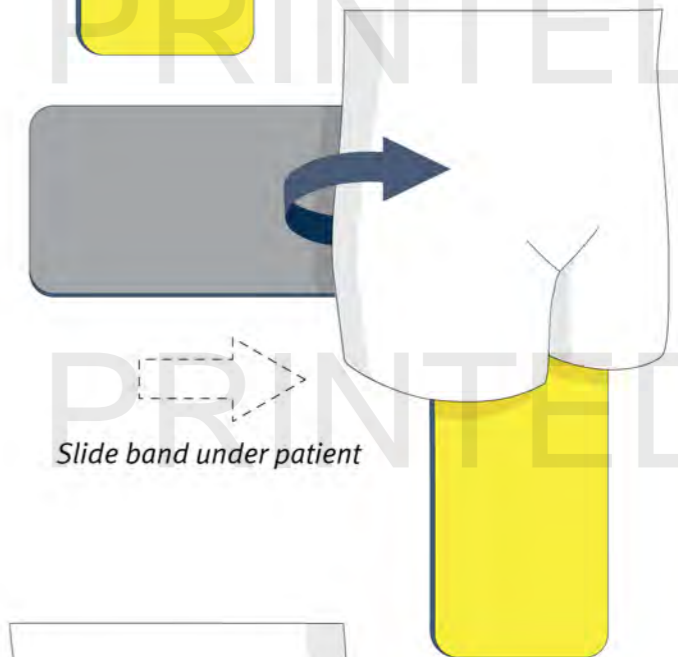
4. Fold the neoprene band in half with the 'fuzzy yellow' on the outside.
5. Place the folded band against the patient with the centre of the band in line with the greater trochanter.



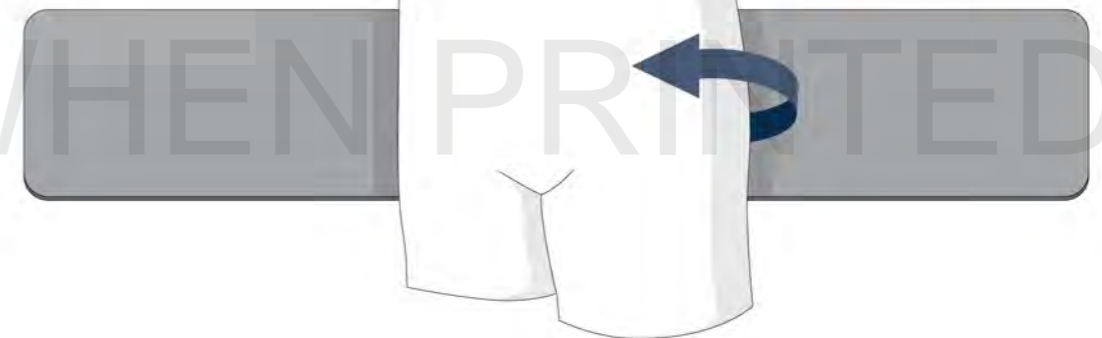
6. Fold the top half of the band down to lie beside the patient's leg.



7. Perform a minimal movement roll to pass the band underneath the patient to the midline.

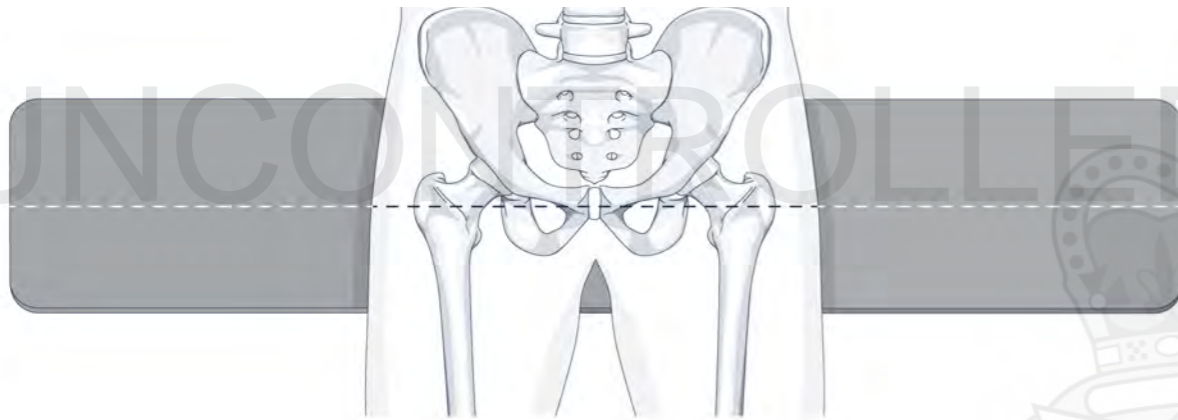


8. Gently roll the patient back to retrieve the folded band.

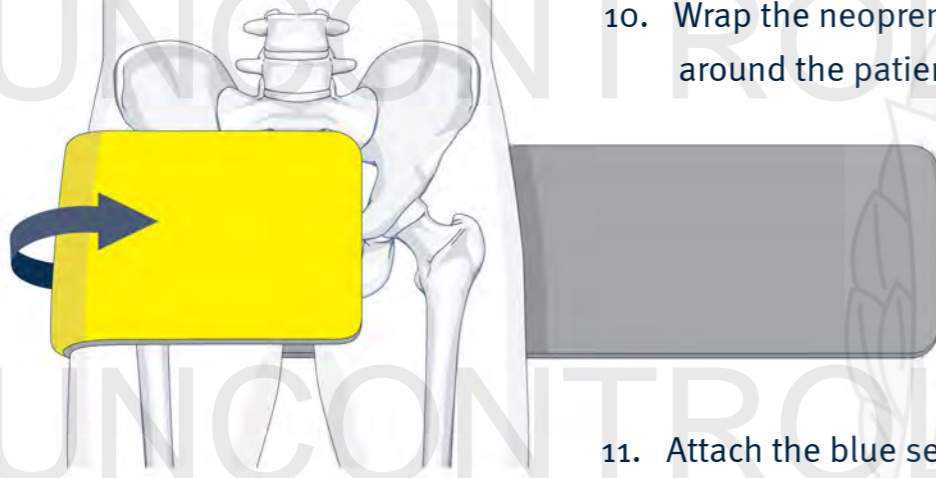


Procedure – Orthopaedic splinting – Prometheus pelvic

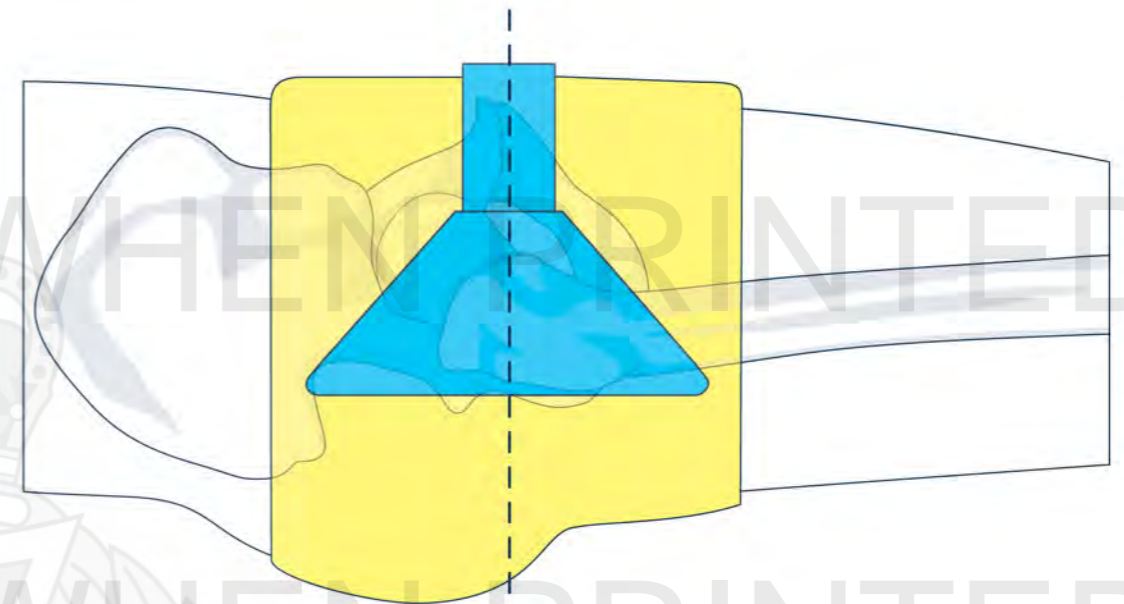
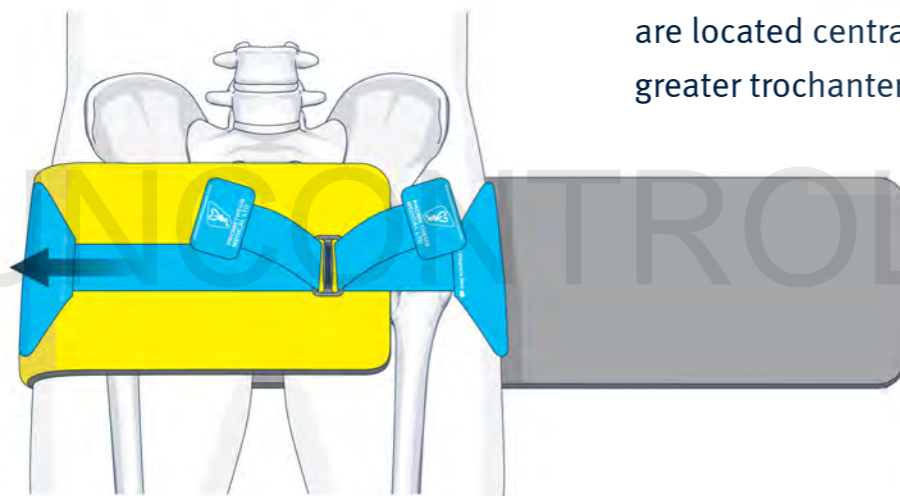
9. Ensure the centre of the band is still aligned with the greater trochanter.



10. Wrap the neoprene band around the patient.



11. Attach the blue securing triangles to the outer surface of the neoprene band ensuring that the triangles are located centrally over the greater trochanter.

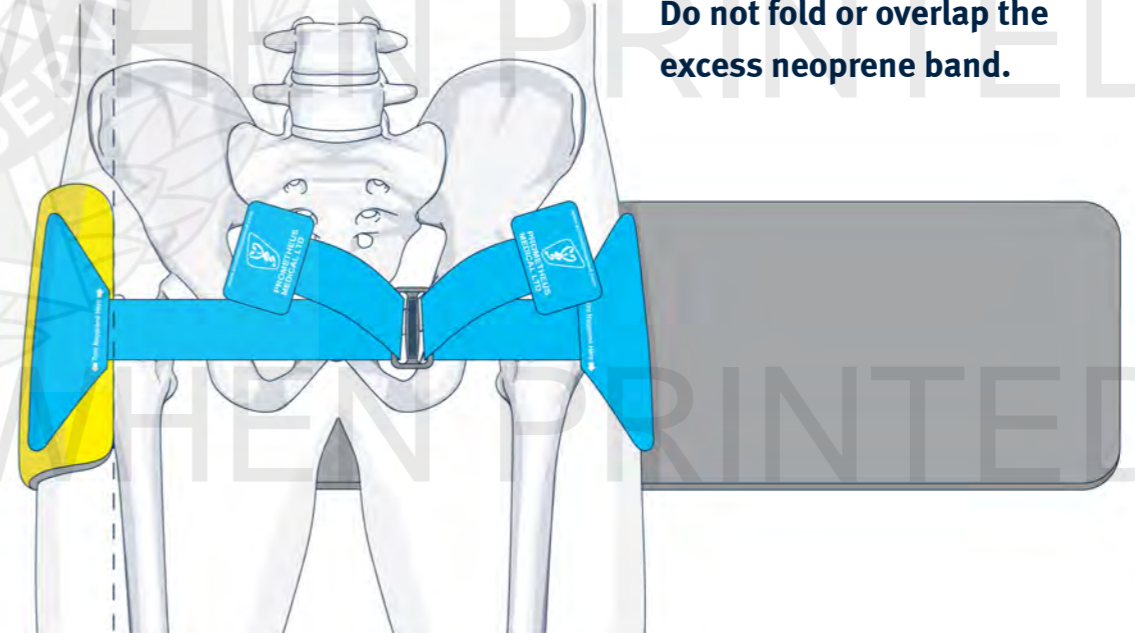


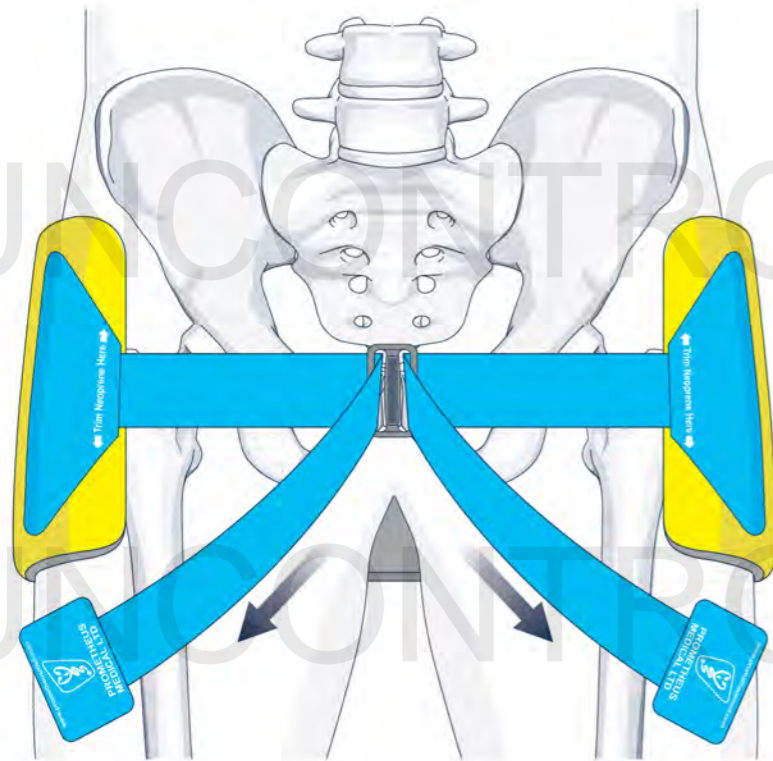
Triangle located centrally over greater trochanter

12. The excess neoprene (yellow band) must be cut to size to allow access to the inguinal region, as shown in the illustration.

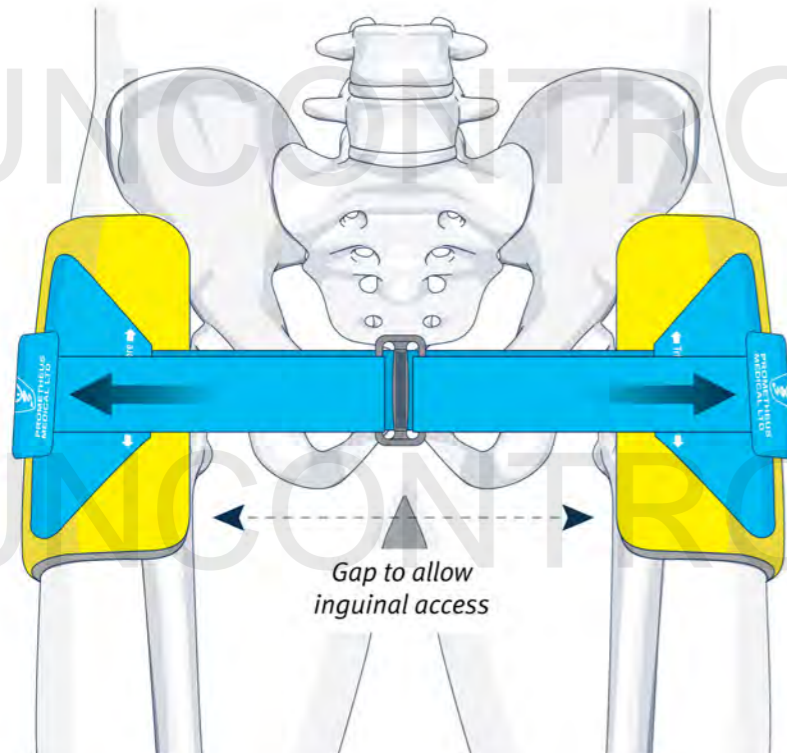


Do not fold or overlap the excess neoprene band.





13. Repeat steps 10–12 on the other side.
14. Ensure the buckle is central and apply tension to the two blue adjustment straps simultaneously until sufficient force has been applied to stabilise the pelvis.



15. Secure the blue adjustment straps to the neoprene band to maintain desired tension.

+ Additional information

- The Prometheus pelvic splint was introduced in January 2019 as a replacement for the SAM Pelvic Sling. Until all stock is exhausted ambulance clinicians should continue to use the SAM Pelvic Sling in accordance with the supplied manufacturer's instructions. The QAS indications and contraindications remain consistent across all supplied pelvic binder products.
- In cases of suspected pelvic fracture(s) where the application of the PCCD is not currently indicated, the binder must be positioned flat under the patient in readiness for rapid application.
- Patients with concurrent suspected or previous femoral fractures should have traction splint(s) applied also.
- Whenever both a pelvic splint and femoral traction splint(s) are to be applied concurrently, the pelvic splint must be applied **before** the femoral traction splint(s), to ensure both types of splint will fit correctly.
- There is evidence that log rolling patients with pelvic fractures can cause clot disruption and further haemodynamic compromise.^[3] Minimum movement log rolls should be used at all times during PCCD application to preserve clot formation.