

Section: Division of Nursing  
Approval: \_\_\_\_\_

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**PROCEDURE**  
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HACKETTSTOWN REGIONAL MEDICAL CENTER

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**OR**  
(Scope)

**TITLE: APPLICATION OF PNEUMATIC TOURNIQUET**

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**PURPOSE:** To outline procedure for proper application of the pneumatic tourniquet.

**SUPPORTIVE DATA:** Pneumatic tourniquets are used in the OR for surgical procedures on extremities to maintain a relatively dry, bloodless surgical site. May also be used in the administration of bier block.

**EQUIPMENT LIST:** Webril, Tourniquet Unit, appropriate sized cuff, 1010 drape tubing for tourniquet.

**CONTENT:**

**PROCEDURE STEPS:**

**KEY POINTS:**

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| 1. Exam equipment for worn tubing or parts. Pay special attention to check for cracked O-rings.  | Worn parts may cause loss of pressure.   |
| 2. Select appropriate cuff for size of limb.   | Cuff must overlap by at least two inches. Double tourniquet is used for bier block.                                      |
| 3. Explain procedure to patient (if awake).  |  |
| 4. Note skin integrity before applying cuff and document on operative record.  | Provides data for later comparison.  |
| 5. Pad limb with thin layer of webril. Use size appropriate for cuff selected.   | Webril must be smooth and free of lumps.   |
| 6. Apply cuff. Make sure coupling on cuff are oriented away from surgical site.  | Cuff must encircle limb firmly. Avoid moving cuff to prevent shearing of tissue. Cuff must overlap by at least 2 inches. |
| 7. When cuff is close to operative site, isolate cuff from moisture by applying a 1010 drape.  | Prevent contamination of cuff and pooling of prep solution under cuff.   |
| 8. Set pressure as per surgeon's orders.<br>AORN Guidelines Recommend: <ul style="list-style-type: none"><li>• 50 to 75 mm Hg to the patient's systolic blood pressure for the upper extremities of adult patients.</li><li>• 100 to 150 mm Hg to the patient's systolic blood pressure for the lower extremities of adult patients.</li><li>• 100mm Hg to the patient's systolic blood pressure for pediatric patients.</li></ul> | Do not readjust pressure after machine is activated.   |
| 9. Press the inflate button when surgeon indicates.  | Once switch is <b>on</b> , do not change until told to deflate cuff by surgeon.  |

10. Verbally and audibly state time and pressure setting of cuff. To confirm setting with physician.
11. Audibly state tourniquet length time after one (1) hour. To remind surgeon of tourniquet time.
12. Deflate cuff when physician orders.
13. Remove tourniquet and padding.
14. Check skin integrity.
15. Record on electronic record:
  - a. Location of tourniquet cuff
  - b. Pressure setting
  - c. time inflated
  - d. Time deflated
  - e. Tourniquet number
  - f. Abnormalities noted, if any document under **comments**.Usually after compression dressing in place.

AORN Standards Recommended Practices, and Guidelines Manual (2004 Edition).

Zimmer ATS 2000. Tourniquet Instruction  
- Zimmer Patient Care Division, Dover, Ohio