INTRODUCTION

The Epimed Blunt Needle is a PND (Percutaneous Navigational Device) designed to deflect off nerves and arteries. Clinicians use the blunt needle for atraumatic access to nerve blocks, sleeve blocks, deep muscle blocks, hypogastric, paravertebral blocks, joint blocks, facets, selective nerve root, lumbar sympathetic, thoracic sympathetic, splanchnic, and celiac plexus blocks.² Based on animal studies and clinical experience, there have been no reported disasters.¹ The Coudé® (curved) version of the blunt needle includes a bend in the cannula near the distal end. It allows for precise tip placement even with difficult to reach target areas. When the device is delivered close to the target, with repeated small movements, it can navigate around structures to reach the targeted point of injection. Blunt needles do not penetrate skin and muscles easily, therefore, an introducer is needed to deliver the blunt needle as close as possible to the safest site.

The Coudé® Blunt Needle may reduce the chance of intravascular and intraneural injection or damage, excessive bleeding, damage of the organs, and segmental spinal cord arterial injection or damage. I am unaware of any reported cases of serious intra-arterial or intraneural injection-related complications.

Designed with PointGuard[™] Advantage, the blunt needle features an atraumatic distal tip with a circular side port for safety, maximum flow rate, and strength. It includes depth markings to assist in indicating accurate placement and printed arrows on the hub to show direction of the curve and side port.

Epimed offers multiple gauge sizes and lengths to accommodate different approaches, target sites, and patient sizes. Our 25g blunt needle is the smallest blunt needle on the market.

| 20g | BLUNT NEEDLES | | INTRODUCERS |
|--------|--------------------|----------|-------------------|
| Length | Coudé [®] | Straight | Coudé® / Straight |
| 4.5" | 117-2045 | 116-2045 | Included |
| 6.0" | 117-2060 | 116-2060 | Included |
| 8.0" | 117-2080 | 116-2080 | Included |

^{*20}g blunt needles are packaged with an introducer and sold separately.

^{*5.7&}quot; introducer(#135-1857) is also available and sold separately.

| 22g | BLUNT N | NEEDLES | | INTRODUCERS | | |
|--------|----------|----------|--------------|--------------|----------|--|
| Length | Coudé® | Straight | Length | Coudé® | Straight | |
| 3.0" | 117-2230 | 116-2230 | 2.5" | 135-1825 | 135-1825 | |
| 4.5''' | 117-2245 | 116-2245 | 3.0" 3.7" | 135-1837 | 136-1730 | |
| 6.0" | 117-2260 | 116-2260 | 3.0" 3.7" | 135-1837 | 136-1730 | |

^{*22}g blunt needles are **not** packaged with an introducer, only sold separately.

| 25g | BLUNT NEEDLES | | INTRODUCERS | | |
|--------|--------------------|----------|-------------------------|----------|--|
| Length | Coudé [®] | Straight | Coudé® | Straight | |
| 2.5" | | 116-2525 | Introducer not Included | | |
| 3.5" | 117-2535 | 116-2535 | Included | | |

^{*}Please contact your local Epimed Clinical Sales Consultant for more information.

*REFERENCE

- *Epimed provides scientific articles & literature regarding the use of blunt needles. For a complete list, please visit www.epimed.com
- 1. The Blunt Needle: A Percutaneous Access Device Author(s): Akins EW, Hawkins IF Jr, Mladinich C, Tupler R, Siragusa RJ, Pry R Summary: AM J Radiology. 1989;152:181-182. Published: January 1989
- 2. Sharp Versus Blunt Needle: A Comparative Study of Penetration of Internal Structures and Bleeding in Dogs Author(s): Heavner JE, Racz GB, Jenigiri B, Lehman T, Day MR Summary: Pain Practice, Vol. 3, Issue 3, 2003: 226-231. Published: November 17, 2003
- 3. Root Cause of Analysis of Paraplegia Following Transforaminal Epidural Steriod Injections: The 'Unsafe' Triangle Author(s): Glasses SE, Shah RV Summary: Pain Physician, 2010; 13:237-244, ISSN 1533-3159. Published: April 22 2010
- 4. Cervical Spinal Canal Loculation and Secondary Ischemic Cord Injury PVCS Pervenous Counter Spread Danger Sign! Author(s): Heaver JE, Racz GB Summary: Pain Practice, Vol. 8, Issue 5, 2008 399-403. Published: August 6 2008
- 5. Anatomy of the Cervical Invertebral Foramia: Vulnerable Arteries and Ischemic Neurologic Injuries After Transforaminal Epidural Injection Author(s): Huntoon M Summary: Pain 117, 2005; 104-111. Published: May 27, 2005
- 6. Cervical Transforaminal Epidural Steroid Injections: More Dangerous Than We Think? Author(s): Graham C, Scanlon, Tobias Moeller-Betram, Romanowsky SM, Wallace MS Summary: SPINE, Vol. 32, Issue 11, 1249-1256. Published: 2007
- 7. Cervical and High Thoracic Ligamentum Flavum Frequently Fails to Fuse in the Midline Author(s): Lirk P, Kolbitsch C, Putz G, Colvin J, Colvin HP, Lorenz I, Keller C, Kirchmair L, Rieder J, Moriggl B Summary: Anesthesiology, Vol. 99, No. 6, 2003; 99: 1387-90. Published: August 7, 2003
- 8. Paraplegia After Lumbosacral Nerve Root Block: Report of Three Cases Author(s): Houten, Errico Summary: The Spine Journal, 2002: 70-75. Published: April 23, 2003

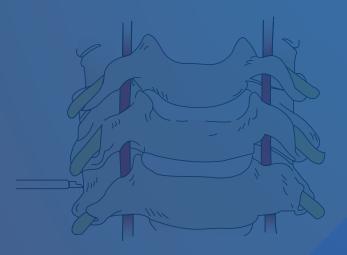


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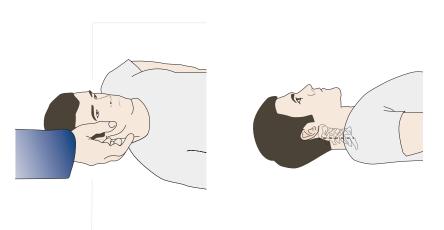
Disclaimer: This brochure is intended for general education only. Please refer to current literature for volumes and medications used for injection.

CERVICAL TRANSFORAMINAL

Step-by- Step Guide on Coudé® Blunt Needle Placement By Dr. Gabor B. Racz M.D., FIPP, ABIPP, DABPM

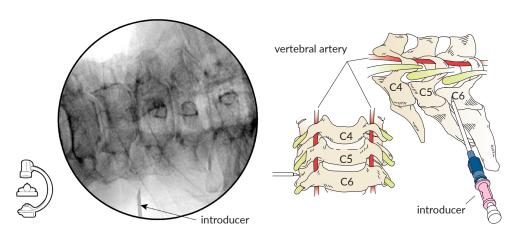


Minimizing Risk. Every Procedure. Every Time. / EPIMED



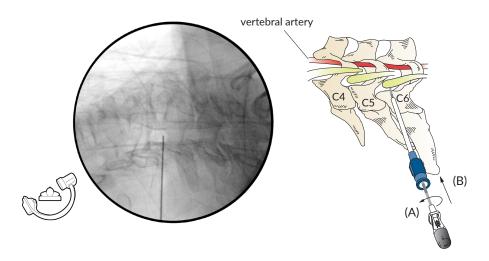
Place the patient in the supine position. Palpate the posterior lateral border of the cervical spine. Using a marking pen, mark the posterior border of the transverse process.





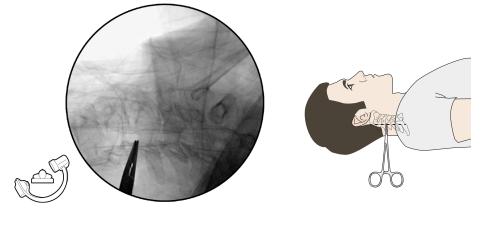
After infiltration of local anesthetic at the needle entry site, place the C-arm in an A/P position. Advance the introducer needle to the target site at the lateral (arrow) border of the transverse process until bony contact is encountered.





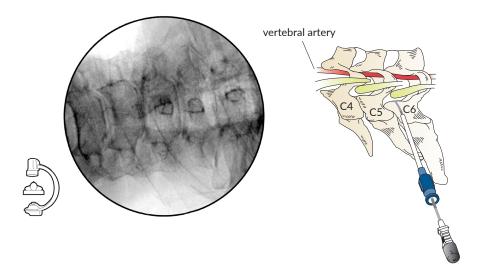
(A) Rotate the C-arm to the 30° oblique view from horizontal. Rotate the Coudé[®] Blunt needle 180° to the anterior position, having the arrows of the hub readily visible. (B) Advance the needle tip until it is visible in the neural foramen.

2



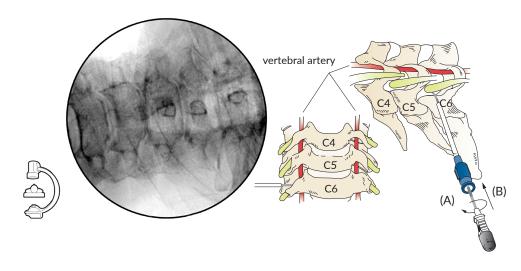
Under fluoroscopy, find the target neural foramen using a 30° oblique fluoroscopic view and place a pointer over the target site. Mark the level on the previously placed line, outlining the posterior border of the transverse process which will be the entry site for the introducer cannula.

4



Remove the metal needle of the introducer. Maintain an A/P C-arm position and introduce the Coudé[®] Blunt needle through the blue hub with the arrows of the needle tip facing posterior. Advance the blunt needle until you experience bony contact on the lateral border of the transverse process.

6



(A) Rotate the Coudé® Blunt needle back to 180° to a posterior direction and advance allowing for the needle to slide on a bone behind the nerve root. Rotate the C-arm to the A/P position. (B) On the A/P view, advance the needle to mid facet position. First aspirate, then inject contrast to verify the absence on the intravascular injection. Once this has been verified, the local/steroid of choice is injected.

*Please refer to current literature for volumes and medications used for injections.