

<b>ENG</b>	<b>Arterial Catheterization Product</b>	<b>1</b>
<b>CZ</b>	<b>Výrobek určený k arteriální katetrizaci</b>	<b>3</b>
<b>DK</b>	<b>Arterielt kateteriseringsprodukt</b>	<b>5</b>
<b>NL</b>	<b>Product voor arteriële katheterisatie</b>	<b>7</b>
<b>F</b>	<b>Produit de cathétérisme artériel</b>	<b>9</b>
<b>D</b>	<b>Besteck zur Katheterisierung von Arterien</b>	<b>11</b>
<b>GR</b>	<b>Προϊόν αρτηριακού καθετηριασμού</b>	<b>13</b>
<b>H</b>	<b>Artériás katéter</b>	<b>15</b>
<b>I</b>	<b>Prodotto per cateterizzazione arteriosa</b>	<b>17</b>
<b>PL</b>	<b>Przyrząd do cewnikowania tętnic</b>	<b>19</b>
<b>P</b>	<b>Produto de Cateterização Arterial</b>	<b>21</b>
<b>RUS</b>	<b>Устройство для артериальной катетеризации</b>	<b>23</b>
<b>SK</b>	<b>Arteriálny katetrizačný produkt</b>	<b>25</b>
<b>E</b>	<b>Producto para cateterización arterial</b>	<b>27</b>
<b>S</b>	<b>Anordning för artärkatetrisering</b>	<b>29</b>

ENG

# ARROW®

## Arterial Catheterization Product

### Safety and Efficacy Considerations:

Do not use if package has been previously opened or damaged.

**Warning:** Prior to use read all package insert warnings, precautions, and instructions. Failure to do so may result in severe patient injury or death.

The product is designed for single use only. Do not resterilize or reuse. Do not alter catheter or any kit/set components during insertion, use or removal.

Procedure must be performed by trained personnel well versed in anatomical landmarks, safe technique and potential complications.

### Indications for Use:

The Arrow® Arterial Catheterization Device permits access to the peripheral arterial circulation.

### Contraindications:

Inadequate collateral arterial circulation.

### Warnings and Precautions:\*

- Warning:** Practitioners must be aware of complications associated with arterial procedures<sup>1,7-9,10</sup> including bacteremia,<sup>7</sup> septicemia, vessel wall perforation, intravascular clotting and embolization, hematoma, arterial spasm, tissue necrosis, hemorrhage, thrombosis, peripheral ischemia and infarction, peripheral nerve damage,<sup>8</sup> air embolism,<sup>7</sup> and occlusion.
- Warning:** In brachial procedures, collateral flow cannot be guaranteed, and therefore intravascular clotting can result in tissue necrosis.<sup>11</sup>
- Warning:** In radial artery procedures, practitioners must ascertain that definite evidence of collateral ulnar flow exists.
- Warning:** Care should be exercised that **indwelling** catheter is not inadvertently kinked at hub area when securing catheter to patient. Kinking may weaken wall of catheter and cause a fraying or fatigue of material, leading to possible separation of the catheter.
- Warning:** Due to the risk of exposure to HIV (Human Immunodeficiency Virus) or other blood borne pathogens, health care workers should routinely use universal blood and body-fluid precautions in the care of all patients.
- Precaution:** Do not suture directly to outside diameter of catheter hub to minimize the risk of damaging the catheter or adversely affecting monitoring capabilities.
- Precaution:** In order to minimize the risk of problems associated with disconnects, it is recommended that only Luer-Lock connecting tubing be used with this device.<sup>1</sup>
- Precaution:** Alcohol and acetone can weaken the structure of polyurethane materials. Check ingredients of prep sprays and swabs for acetone and alcohol content. Acetone: Do not use acetone on catheter surface. Acetone may be applied to skin but must be allowed to dry completely prior to applying dressing. Alcohol: Do not use alcohol to soak catheter surface or to restore catheter patency. Care should be taken when instilling drugs containing high concentration of alcohol.

Always allow alcohol to dry completely prior to applying dressing.

- Precaution:** Some disinfectants used at the catheter insertion site contain solvents, which can attack the catheter material. Assure insertion site is dry before dressing.
- Precaution:** Indwelling catheter should be routinely inspected for desired flow rate, security of dressing, and possible migration. Do not use scissors to remove dressing to minimize the risk of cutting catheter.

### A Suggested Procedure: Use sterile technique.

- Assess for adequate collateral arterial circulation.<sup>5,12</sup>
- Prep and drape anticipated puncture site per hospital protocol.
- Utilize local anesthetic as required.
- Remove protective shield. Trial advance and retract spring-wire guide through needle using actuating lever to ensure proper function. **Precaution: Prior to insertion, actuating lever must be retracted proximally as far as possible or blood flashback may be inhibited.**
- Puncture vessel using a continuous, controlled, slow, forward motion. Avoid transfixing both vessel walls. **Precaution: If both vessel walls are punctured, subsequent advancement of spring-wire guide could result in inadvertent sub-arterial placement.** Blood flashback in clear hub of introducer needle indicates successful entry into vessel (refer to Fig. 1).

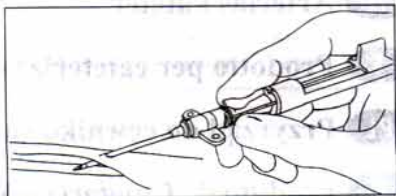


Fig. 1

- Stabilize position of introducer needle and carefully advance spring-wire guide as far as required into vessel using actuating lever (refer to Fig. 2). **Precaution: Do not advance guide wire unless there is free blood flashback.**

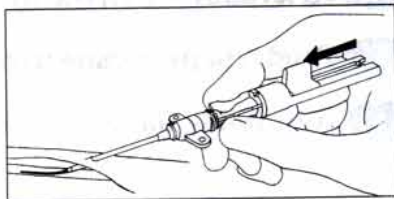


Fig. 2

- When lever is fully retracted, soft tip of spring-wire guide is at the needle tip. **Precaution: If resistance is encountered while advancing spring-wire guide do not force feed.** **Warning: Do not retract spring-wire guide against edge of needle while in vessel to minimize the risk of spring-wire guide damage.** If resistance is encountered during spring-wire guide advancement withdraw entire unit and attempt new puncture.
- Advance entire placement device a maximum of 1 to 2 mm further into vessel.
  - Firmly hold introducer needle hub in position and advance catheter forward, with a slight rotating motion, over spring-wire guide into vessel (refer to Fig. 3).

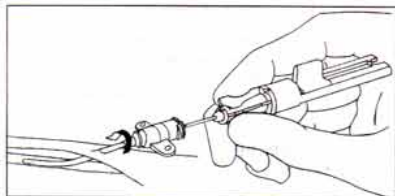


Fig. 3

- Hold catheter in place and remove spring-wire guide assembly. Pulsatile blood flow indicates positive arterial placement. **Precaution: Do not reinsert needle into catheter to minimize risk of catheter damage.**
- Attach desired stopcock, injection cap or connecting tubing to catheter hub. Secure catheter to patient in preferred manner using suture wings or suture groove. **Warning: Care should be exercised that indwelling catheter is not inadvertently kinked at hub area when securing catheter to patient. Kinking may weaken wall of catheter and cause a fraying or fatigue of material, leading to possible separation of the catheter.** **Precaution: Do not suture directly to outside diameter of catheter body to minimize the risk of damaging the catheter or adversely affecting monitoring capabilities.** Dress according to hospital protocol.

### Catheter Removal Procedure:

- Remove dressing. **Precaution: To minimize the risk of cutting catheter do not use scissors to remove dressing.**
- Warning: Exposure of arterial circulation to atmospheric pressure may result in entry of air into circulation.** Remove suture(s). Be careful not to cut catheter. Remove catheter slowly, pulling it parallel to skin. As catheter exits site, apply pressure with a dressing until hemostasis occurs. Apply light pressure dressing to site.

- Upon removal of catheter, inspect it to make sure that entire length has been withdrawn.
- Document removal procedure.

### References:

- Abadir AR, Ung KA. Complications of radial artery cannulation. *Anesthesiology Rev.* 1980;7:11-16.
- Band JD, Maki DG. Infections caused by arterial catheters used for hemodynamic monitoring. *Am J Med.* 1979;67:735-741.
- Chang C, Dughi J, Shitabata P, Johnson G, Cochl M, McNamara JJ. Air embolism and the radial arterial line. *Crit Care Med.* 1988;16:141-143.
- Clark CA, Harman EM. Hemodynamic monitoring: arterial catheters. In: Taylor RW, Civetta JM, Dirby RR, eds. *Techniques and Procedures in Critical Care.* Philadelphia, PA: JB Lippincott; 1990:218-230.
- Daily EK, Schroeder JS. *Techniques in Bedside Hemodynamic Monitoring.* 5th ed. St. Louis, MO: Mosby; 1994:71-77.
- Falk PS, Scuderi PE, Sherertz RJ, Motsinger SM. Infected radial artery pseudoaneurysms occurring after percutaneous cannulation. *Chest.* 1992;101:490-495.
- Kaye W. Invasive monitoring techniques: arterial cannulation, bedside pulmonary artery catheterization, and arterial puncture. *Heart Lung.* 1983;12:395-427.
- Kaye WE, Dubin HG. Vascular cannulation. In: Taylor RW, Civetta JM, Dirby RR, eds. *Techniques and Procedures in Critical Care.* Philadelphia, PA: JB Lippincott; 1990:204-208.
- Marshall G, Edelstein G, Hirshman CA. Median nerve compression following radial arterial puncture. *Anesth Analg.* 1980;59:953-954.
- Puri VK, Carlson RW, Bander JJ, Weil MH. Complications of vascular catheterization in the critically ill. *Crit Care Med.* 1980;8:495-499.
- Norwood SH, Cormier B, McMahon NG, Moss A, Moore V. Prospective study of catheter-related infection during prolonged arterial catheterization. *Crit Care Med.* 1988;16:836-839.
- Venus B, Satish P. Vascular Cannulation. In: Civetta JM, Taylor RW, Kirby RR, eds. *Critical Care.* 3rd ed. Philadelphia, PA: Lippincott-Raven Publishers; 1997:539-542.

Arrow International, Inc. recommends that the user be acquainted with the reference literature.

\* If you have any questions or would like additional reference information, please contact Arrow International, Inc.