Arrow®
EZ-IO®
Intraosseous Vascular Access System
Safe¹, Fast²,³* Effective⁴

In any situation where intravenous access is difficult or impossible to obtain in emergent, urgent, or medically necessary cases the Arrow® EZ-IO® Intraosseous Vascular Access System from Teleflex is a safe¹, fast²,³* and effective⁴ solution. The EZ-IO System is indicated for up to 24 hours and provides peripheral venous access with central venous catheter performance.⁵‒⁶,¹⁷†

Clinical Conditions for IO Consideration

**Shock**
- Septic
- Trauma
- Burns
- Dehydration
- Anaphylactic
- Post-partum hemorrhage

**Cardiac**
- Cardiac arrest
- Dysrhythmia
- Myocardial infarction
- CHF
- Chest pain

**Respiratory**
- Respiratory failure
- Intubation (RSI)
- Status asthmaticus
- COPD
- Pneumonia

**Neurologic**
- Status epilepticus
- Stroke
- Head injury
- Altered mental status
- Encephalopathy

**Other**
- Therapeutic hypothermia
- Sickle cell crisis
- Diabetic ketoacidosis
- Pediatric illness
**Arrow® EZ-IO® System Education**

**EZ-IO Systems Insertion Sites**

- Insertion success rate of 98-100%\(^{12}\)
- Average flow rate of 1 L/hour via proximal tibia under pressure\(^{14}\)

**Infusions and Medications**

- For optimal flow infuse with pressure
- Many fluids and medications that can be given via a peripheral IV can be given via the IO route using the same dose, rate, and concentration\(^{8-11}\)

**Success Rates: IO>IV**

- Success rates for intraosseous vascular access have been shown to be superior to that of IV access during cardiac arrest in comparative clinical studies\(^{15,16}\)

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*Do NOT use the powered EZ-IO Vascular Access System in the sternum*
Needle Selection

With the needle set inserted through the soft tissue and touching bone, the 5 mm mark (at least one black line) must be visible outside the skin for confirmation of adequate needle set length prior to drilling.

Consider Using Anesthetic for Patients Responsive to Pain

The following recommendations are based on published intraosseous clinical literature:

2% lidocaine (preservative-free and epinephrine-free)

- **Adult:** Typically 40 mg
- **Infant/Child:** Typically 0.5 mg/kg (NOT to exceed 40 mg)

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Lidocaine

Initial dose 120 seconds  
Dwell 60 seconds  
Rapid Flush

Lidocaine ½

Initial dose 60 seconds

≥ 4 minutes total time

Observe cautions/contraindications for lidocaine, confirm dose per solution

Disclaimer: Selection and use of any medication, including lidocaine, given IV or IO is the responsibility of the treating physician, medical director, or qualified prescriber and is not an official recommendation of Teleflex Incorporated. The information provided is a summary of information found in the cited reference materials. This information is not intended to be a substitute for sound clinical judgment or your institution’s treatment protocols. Teleflex Incorporated is not the manufacturer of lidocaine. Users should review the manufacturer’s instructions or directions for use and be familiar with all indications, side effects, contraindications, precautions and warnings prior to administration of lidocaine or any other medication. Teleflex Incorporated disclaims all liability for the application or interpretation of this information in the medical treatment of any patient. For additional information please visit www.eziocomfort.com.

24 Hour Clinical Support: 1.800.680.4977
Arrow® EZ-IO® Intraosseous Vascular Access System Ordering Information

**EZ-IO Needles**
- Diamond needle tip designed to deliver a fast and gentle insertion, and allow for manual insertion if needed.
  - 45 mm 15 gauge: >40 kg, excessive tissue, humerus
  - 25 mm 15 gauge: ≥3 kg
  - 15 mm 15 gauge: 3–39 kg

**EZ-IO Vascular Access Driver**
Enables clinician control of the insertion with proven tactile feedback.

**EZ-Stabilizer Dressing**
Designed to provide flexible securement of the EZ-IO Catheter, good adhesion and decreased risk of dislodgement.

**EZ-Connect Extension Set**
Must be primed with 1 mL of fluid prior to use.

### Arrow® EZ-IO® System Ordering Information

<table>
<thead>
<tr>
<th>ITEM NUMBER</th>
<th>DESCRIPTION</th>
<th>PATIENT WEIGHT</th>
<th>QTY/CASE</th>
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<tbody>
<tr>
<td>9058</td>
<td>EZ-IO® Vascular Access Driver</td>
<td>NA</td>
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<tr>
<td>9079P-VC-005</td>
<td>EZ-IO® 45 mm Needle Set + EZ-Stabilizer®</td>
<td>≥40 kg</td>
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<tr>
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<td>EZ-IO® 25 mm Needle Set</td>
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<tr>
<td>9018P-VC-005</td>
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<tr>
<td>9018-VC-005</td>
<td>EZ-IO® 15 mm Needle Set</td>
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<tr>
<td>9066-VC-005</td>
<td>EZ-Stabilizer® Dressing</td>
<td>NA</td>
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</tr>
</tbody>
</table>

*Each Needle Set includes a 15 gauge sterile EZ-IO® Needle, EZ-Connect® Extension Set, Patient Wrist Band and Needle Vise® Sharps Block.*
Place the patient’s hand over the abdomen (elbow adducted and humerus internally rotated).

Place your palm on the patient’s shoulder anteriorly.
- The area that feels like a “ball” under your palm is the general target area.
- You should be able to feel this ball, even on obese patients, by pushing deeply.

Place the ulnar aspect of one hand vertically over the axilla. Place the ulnar aspect of the opposite hand along the midline of the upper arm laterally.

Place your thumbs together over the arm.
- This identifies the vertical line of insertion on the proximal humerus.

Palpate deeply as you climb up the humerus to the surgical neck.
- It will feel like a golf ball on a tee – the spot where the “ball” meets the “tee” is the surgical neck. The insertion site is on the most prominent aspect of the greater tubercle, 1 to 2 cm above the surgical neck.

Point the needle set tip at a 45-degree angle to the anterior plane and posteromedial.

**PROXIMAL HUMERUS SITE ADVANTAGES**
- Flow rates average 5 L/hr
- 3 seconds to heart with medications/fluids
- Lower insertion and infusion pain
- Less medication for pain management
- No reported compartment syndrome due to IO placement

Learn more at TELEFLEX.COM/EMS
PROXIMAL HUMERUS ANATOMY

EZ-10 ADVANTAGES

- <1% serious complication rate
- Achieves vascular access with anesthesia and good flow in 90 seconds
- 97% first-attempt access success rate
- Can be placed by any qualified healthcare provider
- Requires no additional equipment or resources

Learn more at TELEFLEX.COM/EMS

Potential complications may include local or systemic infection, hematoma, extravasations, or other complications associated with percutaneous insertion of sterile devices.

2. Vidacare Internal Studies (2013); data on file. Average time for medication infusion from humerus to the right atrium with EZ-10® Device; individual results may vary.

* Research sponsored by Teleflex Incorporated (Vidacare LLC)

This material is not intended to replace standard clinical education and training by Vidacare LLC, a subsidiary of Teleflex Incorporated, and should be utilized as an adjunct to more detailed information which is available about the proper use of the product. View educational resources at www.teleflex.com/ezioeducation or contact a Teleflex clinical professional for any detailed questions related to product insertion, maintenance, removal and other clinical education information.

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