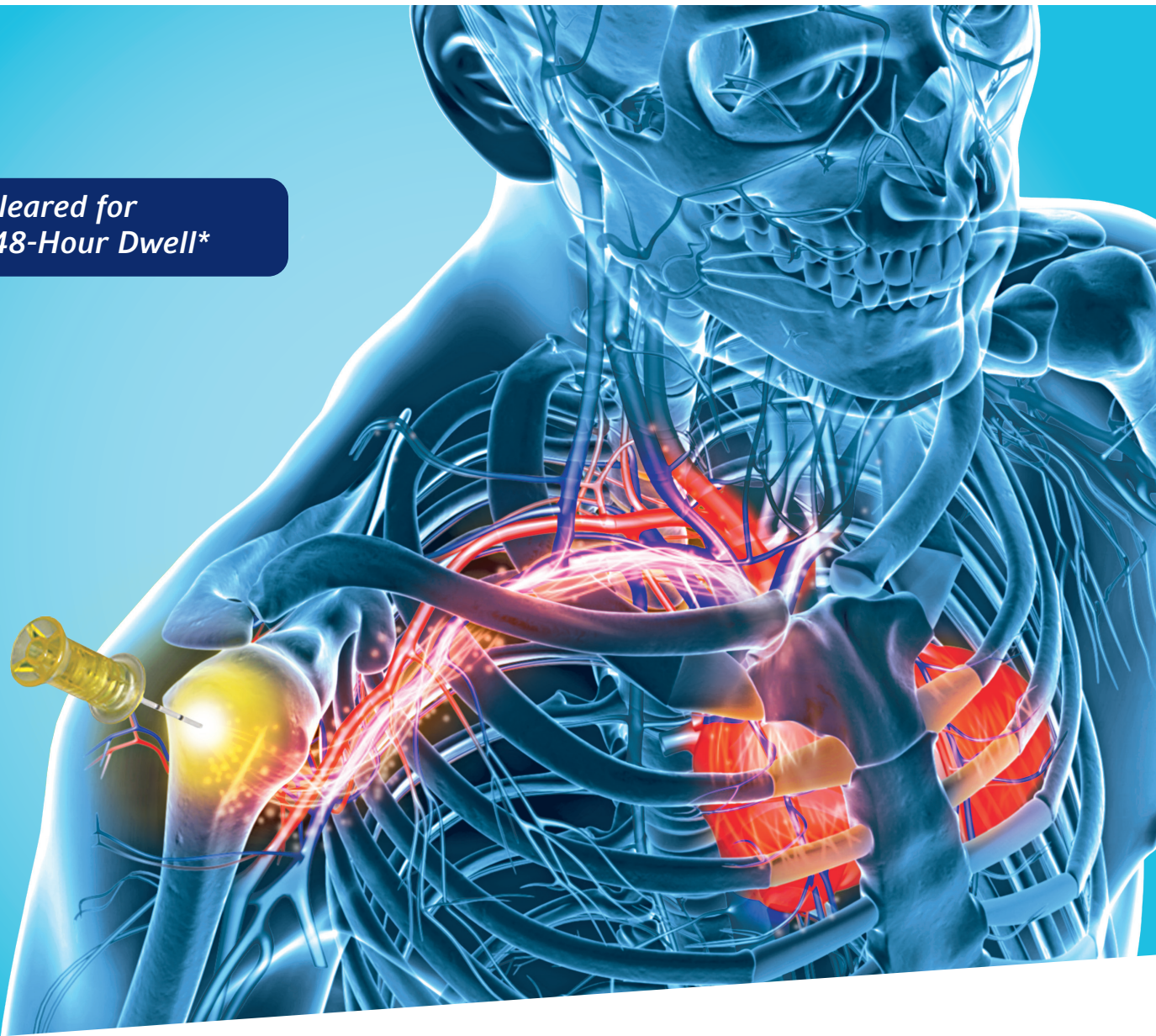


*Now Cleared for
Up to 48-Hour Dwell**



Arrow®
EZ-IO®
Intraosseous Vascular Access System

**See details inside*



Proven,¹ Fast,^{2*} Effective³

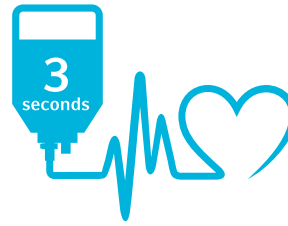
In any situation where intravenous access is difficult to obtain in emergent, urgent, or medically necessary cases, the Arrow® EZ-IO® Intraosseous Vascular Access System from Teleflex is a proven¹, fast^{2*} and effective³ solution. The system is indicated for up to 24 hours and may be extended for up to 48 hours for patients ≥ 12 years old when alternate intravenous access is not available or reliably established. The EZ-IO® System provides peripheral venous access with central venous catheter performance.^{4,5,6†}



Supported by more than 90 clinical trials and case studies⁷



Achieve vascular access within 10 seconds²



3 seconds to heart with medication/fluids^{8*}



97% first-attempt success rate³

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

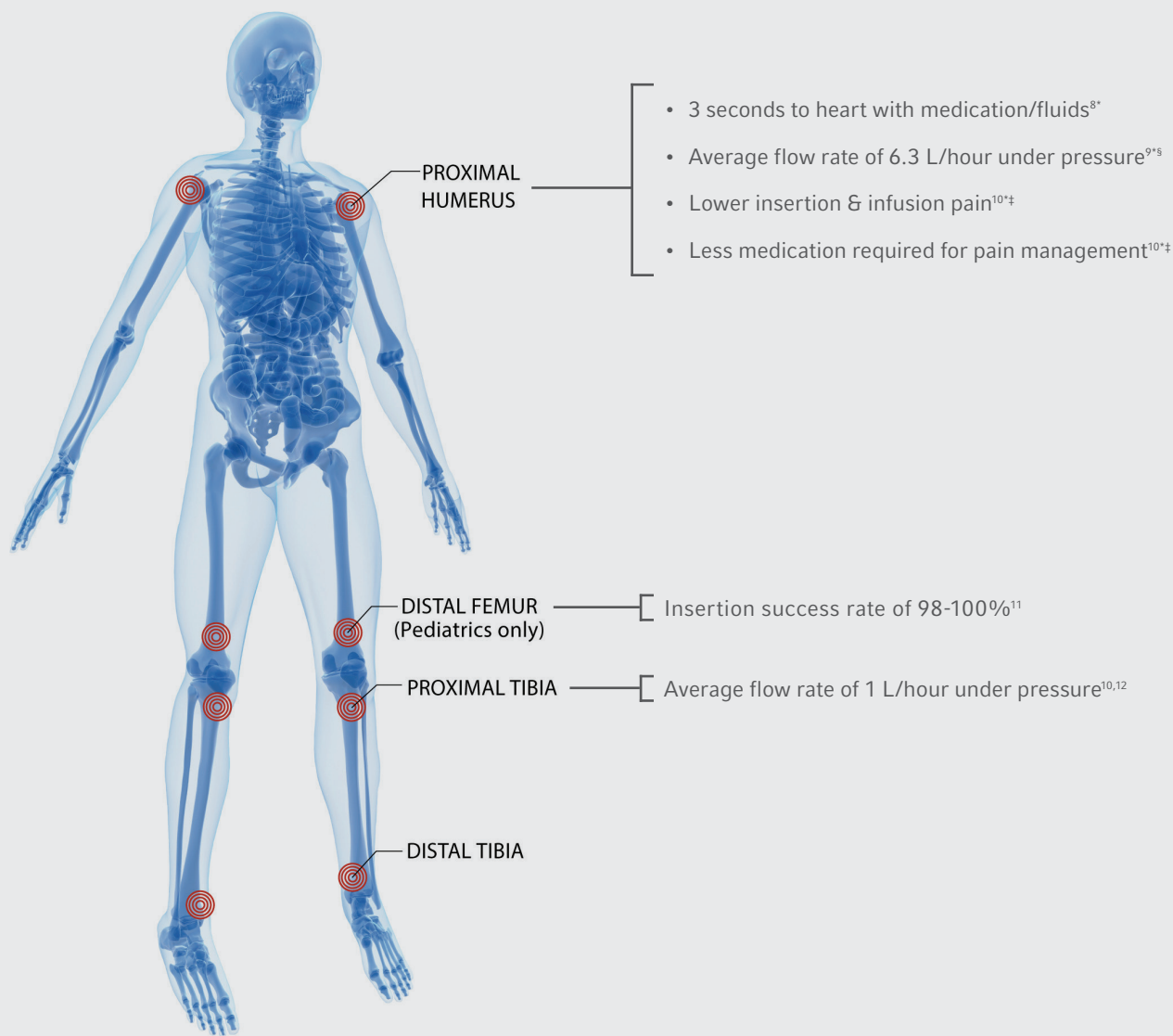


Other

- Therapeutic hypothermia
- Sickle cell crisis
- Diabetic ketoacidosis
- Pediatric illness

Arrow® EZ-IO® System Education

EZ-IO System Insertion Sites



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

Infusions and Medications



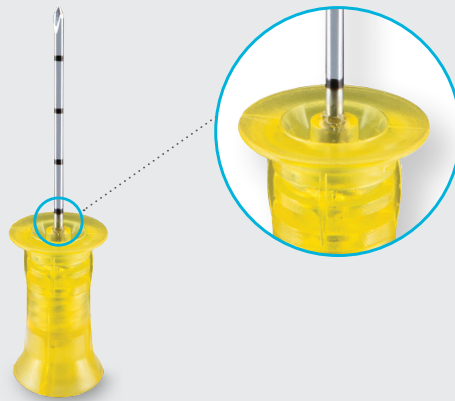
- For optimal flow infuse with pressure
- Many fluids and medications that can be given via a peripheral IV can be given via the IO route using the same dose, rate, and concentration¹³⁻¹⁶

First-Attempt 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^{17,18}

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:

IO Infusion Pain Management Using 2% Lidocaine (preservative-free and epinephrine-free)

Review lidocaine manufacturer's IFU prior to administration and observe recommended cautions/contraindications

With the stabilizer in place, carefully attach syringe **directly to IO catheter luer-lock hub**, without extension set in place

1

Slowly infuse initial dose of lidocaine over 120 seconds and allow to dwell for 60 seconds
ADULT: initial dose 40 mg • **INFANT/CHILD:** initial dose 0.5mg/kg (NOT to exceed 40 mg)

2

Flush IO catheter with normal saline
ADULT: flush: 5-10 mL • **INFANT/CHILD:** flush: 2-5 mL

3

Slowly infuse lidocaine (half of initial dose) over 60 seconds

4

Attach extension set primed with normal saline and flush

Repeat PRN. Consider systemic pain control for patients not responding to IO lidocaine
≥ 4 min total time

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. Any health care provider using this material assumes full responsibility for the medical care and treatment of their patients. For additional information, please visit www.teleflex.com

24 Hour Clinical Support: 1.888.413.3104

Arrow® EZ-IO® Intraosseous Vascular Access System

Ordering Information



Arrow® EZ-IO® System Ordering Information

ITEM NUMBER	DESCRIPTION	PATIENT WEIGHT	QTY/CASE
9058	EZ-IO® Vascular Access Driver	NA	1
9079P-VC-005	EZ-IO® 45 mm Needle Set* + EZ-Stabilizer® Dressing	≥40 kg	5
9079-VC-005	EZ-IO® 45 mm Needle Set*	≥40 kg	5
9001P-VC-005	EZ-IO® 25 mm Needle Set* + EZ-Stabilizer® Dressing	≥3 kg	5
9001-VC-005	EZ-IO® 25 mm Needle Set*	≥3 kg	5
9018P-VC-005	EZ-IO® 15 mm Needle Set* + EZ-Stabilizer® Dressing	3–39 kg	5
9018-VC-005	EZ-IO® 15 mm Needle Set*	3–39 kg	5
9066-VC-005	EZ-Stabilizer® Dressing	NA	5

*Each Needle Set includes a 15 gauge sterile EZ-IO® Needle, EZ-Connect® Extension Set, Patient Wrist Band and NeedleWISE® Sharps Block



teleflex.com/ez-io

References:

1. Dolister M, Miller S, Borron S, et al. Intraosseous vascular access is safe, effective and costs less than central venous catheters for patients in the hospital setting. *J Vasc Access* 2013;14(3):216-24. doi:10.5301/jva.5000130. Research sponsored by Teleflex Incorporated.
2. Davidoff J, Fowler R, Gordon D, Klein G, Kovar J, Lozano M, Potkya J, Racht E, Saussy J, Swanson E, Yamada R, Miller L. Clinical evaluation of a novel intraosseous device for adults: prospective, 250-patient, multi-center trial. *JEMS* 2005;30(10):s20-3. Research sponsored by Teleflex Incorporated.
3. Cooper BR, Mahoney PF, Hodgetts TJ, Mellor A. Intra-osseous access (EZ-IO®) for resuscitation: UK military combat experience. *J R Army Med Corps*. 2007;153(4):314-316
4. Hoskins SL, Nascimento P Jr., Lima RM, Espana-Tenorio, JM, Kramer GC. Pharmacokinetics of intraosseous and central venous drug delivery during cardiopulmonary resuscitation. *Resuscitation* 2011; doi:10.1016/j.resuscitation.2011.07.041. Research sponsored by Teleflex Incorporated. (preclinical study)
5. Hoskins SL, Zachariah BS, Copper N, Kramer GC. Comparison of intraosseous proximal humerus and sternal routes for drug delivery during CPR. *Circulation* 2007; 116:II_993. Research sponsored by Teleflex Incorporated. (preclinical study)
6. Based on Adult Proximal Humerus EZ-IO® System Insertion data
7. Data on File. Teleflex Incorporated. 2018
8. Montez D, Puga T, Miller LJ, et al. Intraosseous Infusions from the Proximal Humerus Reach the Heart in Less Than 3 Seconds in Human Volunteers. *Annals of Emergency Medicine* 2015;66(4S):S47. Research sponsored by Teleflex Incorporated.
9. Puga T, Montez D, Philbeck T, Davlantes C. Adequacy of Intraosseous Vascular Access Insertion Sites for High-Volume Fluid Infusion. *Crit Care Med* 2016; 44(12):143. Research sponsored by Teleflex Incorporated. Based on healthy volunteer study.
10. Philbeck TE, Miller LJ, Montez D, Puga T. Hurts so good; easing IO pain and pressure. *JEMS* 2010;35(9):58-69. Research sponsored by Teleflex Incorporated.
11. Truemper EJ, Beamer CL, Miller LJ, et al. Distal Femur site Is a viable option for IO vascular access in pediatric patients. *Ann Emerg Med* 2012;60(4):S90. Research sponsored by Teleflex Incorporated.
12. Based on Adult Proximal Tibia data.
13. Voigt J, Waltzman M, Lottenberg L. Intraosseous vascular access for in-hospital emergency use: A systematic clinical review of the literature and analysis. *Pediatr Emerg Care* 2012;28(2):185-998. Research sponsored by Teleflex Incorporated.
14. Von Hoff DD, Kuhn JG, Burris HA, Miller LJ. Does intraosseous equal intravenous? A pharmacokinetic study. *Am J Emerg Med* 2008; 26: 31-8.
15. Neumar RW, Otto CW, Link MS, et al. Adult advanced cardiovascular life support. 2010 American heart association guidelines for cardiopulmonary resuscitation and emergency cardiovascular care. *Circulation* 2010;122(suppl3):S729-67. doi:10.1161/CIRCULATIONAHA.110.
16. Monsieurs KG, Nolan JP, Bossaert LL et al. European Resuscitation Council Guidelines for Resuscitation 2015 Section 1. Executive summary. *Resuscitation* 2015;95: 1-80
17. Clemency B, Tanaka K, May P, et al. Intravenous vs. intraosseous access and return of spontaneous circulation during out of hospital cardiac arrest. *Am J Emerg Med* 2016. doi: 10.1016/j.ajem.2016.10.052
18. Bramlett E, Fales W, West B, LaBond V. Rate of Return of Spontaneous Circulation in Relation to Primary Vascular Access During Out-of-Hospital Adult Cardiac Arrest. *Ann Emerg Med* 2016;68(4S):S120
19. Miller L, Philbeck T, Bolleter S, Garcia G. Tactile feedback comparison of three types of intraosseous access devices for needle insertion accuracy. *Ann Emerg Med* 2010;56 (3):S133. Research sponsored by Teleflex Incorporated.

Download the EZ-IO® System App



Teleflex is the home of Arrow®, Deknatel®, Hudson RCI®, LMA®, Pilling®, Rüschi® and Weck® – trusted brands united by a common sense of purpose.

Corporate Office

Phone +1 610 225 6800, 550 E. Swedesford Road, Suite 400, Wayne, PA 19087, USA

Regional Offices

United States: Phone +1 919 544 8000, Toll Free 866 246 6990, cs@teleflex.com, 3015 Carrington Mill Boulevard, Morrisville, NC 27560, USA

*Based on Adult Proximal Humerus EZ-IO® System insertion data

** Consult with the laboratory to determine acceptability of IO blood specimens for analysis

†Compared to single lumen Central Venous Catheters (CVCs)

‡Compared to EZ-IO® System tibial insertions

§ Based on 300 mm Hg of pressure

Teleflex, the Teleflex logo, Arrow, Deknatel, EZ-Connect, EZ-IO, EZ-Stabilizer, Hudson RCI, LMA, Pilling, Rüschi, and Weck are trademarks or registered trademarks of Teleflex Incorporated or its affiliates, in the U.S. and/or other countries. All other trademarks are trademarks of their respective owners. Information in this document is not a substitute for the product Instructions for Use. The products in this document may not be available in all countries. Please contact your local representative. All data current at time of printing (08/2020).

© 2020 Teleflex Incorporated. All rights reserved. MC-003337 Rev 1