



# When Seconds Count - Choose the Sternal IO Route

*High Flow Rates & Fast Vascular Access Supported By Clinical Evidence*

When seconds count, you need an Intraosseous (IO) route and device that will enable you to get critical fluids and medications into the bloodstream as quickly and reliably as possible.

The answer is the Sternal IO route and the FASTTactical™ Sternal IO Device:

- Recent clinical evidence indicates the sternal route for intraosseous infusion improves patient outcomes.
- FASTTactical is an all-in-one Sternal IO device that gives you an easily identifiable and repeatable landmark, and the fast deployment and high flow rates you need to save lives.



### **Highest Flow Rates of all IO Sites According to Clinical Data**

"...the sternal site for IO access provided the most consistent and highest flow rate compared with the humeral and tibial insertion sites. The average flow rate in the sternum was 1.6 times greater than the humerus and 3.1 times greater than in the tibia."

*Pasley, Jason et. al: Intraosseous Infusion Rates Under High Pressure: A Comparison of Anatomic Sites: Journal Trauma and Acute Care Surgery, 2015.*

### **Compact Rigid Tube Packaging - All-In-One Device**



- New small profile rigid tube packaging means FASTTactical fits easily into your medical bag, while the hard tube packaging protects the device from damage.
- FASTTactical is an all-in-one device, which means you don't have to choose needles, worry about batteries, or mess around with different parts. This Sternal IO device is ready to go when you are.

**NOT ALL INTRAOSSEOUS SITES ARE EQUAL**  
Download the Sternal IO clinical review paper by Dr. Alan Moloff  
[GO.PYNG.COM/STERNAL-IO](http://GO.PYNG.COM/STERNAL-IO)

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## The FASTTactical Advantage

**Rigid Hard Tube Packaging:** The small profile packaging means FASTTactical fits easily into your medical bag, while the rigid packaging protects the device from damage and maintains sterility.

**All-In-One Device - With No Batteries Required:** FASTTactical is an all-in-one device, which means you don't have to choose needles, worry about batteries, or mess around with different parts.

**Easy Sternal Site Location -** The Sternum is the **easiest and most reliable IO site to locate** and place. The Humeral site is difficult to locate and it's hard to keep devices in place during transport. The Tibia site gives poor flow rates as compared to Humeral and Sternal IO sites.

**No Drilling. No Needles. Simply Reliable and Easy to Use:** The FASTTactical all-in-one IO is engineered for automatic depth control. This means you don't need to guess which needle to use or worry about how much pressure to apply with your drill.

**Easy to Learn for All Levels of Medical Providers:** FASTTactical was designed as an all-in-one IO in order to be as easy to learn and fail-safe as possible. After insertion, you simply remove the device and your built-in IV connector is ready for you to connect your IV tube and rapidly deliver fluids and medication into the vascular system.

**Less Pain on Insertion and Fluid Delivery:** Your patients will not only experience much less pain on insertion to the sternal site vs. the long bones, but will feel less pain with fluid delivery from the sternal site. In many cases, lidocaine is not required.

**Low Profile Tubing:** FASTTactical features low profile tubing, which lies nearly flat against the patient. This eliminates many of the bumping hazards that could dislodge the IV, especially during transport.

**Clear Plastic Protective Dome for Added Security:** Protect your IV even further with a plastic dome which fits securely over the insertion site.

## Why Intraosseous Infusion with FASTTactical Sternal IO?

Any fluid or medication that can be delivered intravenously (by IV), can be delivered via Sternal IO at approximately **the same or faster rate**.



FASTTactical can be placed & **vascular access achieved in 10 seconds** (essentially equivalent to a central venous line) with medications reaching the heart within 30 seconds.



## The Sternal IO Clinical Advantage:

[Download the Sternal IO Clinical Review Paper: go.pyng.com/sternal-io](http://go.pyng.com/sternal-io)

"Based on the present data, we recommend that sternal IO route be considered as the first choice of drug delivery during CPR when IV access has not been established..." (1)

"...the sternal IO site provided the highest flow rates compared with the humeral and tibial insertion sites. The sternal site was also associated with a 100% success rate for initial placement facilitated by its consistent anatomy." (2)

"There may also be a relationship between the anatomical location of the IO device and serum drug concentrations; the more distal the IO infusion site is from the sampling site, the longer concentrations of drug take to rise." (3)

**References:** (1) *Pharmacokinetics of Intraosseous and Central Venous Drug Delivery During Cardiopulmonary resuscitation (CPR); Hoskins, Stephen L, et al, University of Texas and Sao Paulo Medical School. Resuscitation 83 (2012) 107-112.* (2) *Comparison of Tibial Intraosseous, Sternal Intraosseous, and Intravenous Routes of Administration on Pharmacokinetics of Epinephrine During Cardiac Arrest; Burgert, James, et al, Fort Sam Houston and Northeastern University. AANA Journal, August 2012, Vol. 80, No. 4.* (3) *Time to Administration of Epinephrine and Outcome After In-hospital Cardiac Arrest with Non-shockable Rhythms: Retrospective Analysis of Large In-hospital Data Registry; Donmino, Michael W, et al, Beth Israel Deaconess Medical Center. BMJ 2014;348:g3028 doi: 10.1136/bmj.g3028. May 2014.*