Intraosseus insertion

What is an intraosseus device?

An intraosseus (IO) tool is used to give fluids, medications or blood to adults or children when intravenous access is not readily available. It is a needle which goes into the bone marrow in the middle of large bones.



Image source: The Royal Children's Hospital Melbourne

It is used in emergencies and is basically the same as putting a needle into the vein for the same purpose, but it can be done a lot faster. This is a temporary measure that can save lives. It is a standard and well-proven best practice procedure.

How is it done?

There are many ways to place the IO device. Some of them are more mechanised and may look like drills. These devices are made specifically for the purpose of inserting an IO.

Insertion is still done in some places by hand. The basic principles are the same and a needle is screwed into the bone.



Image source: Vidacare

Does it hurt?

It can hurt, just as placing any needle can hurt. When the patient is at all aware local anaesthetic will be used, both at insertion and before the fluid begins running into the bone.

How long does it stay in?

The IO device will usually be left in place for under 24 hours.

Where can they be placed?

This depends on a number of clinical factors and the age of the patient. The IO device can be placed just below the knee, at the ankle or in the upper arm.



Image source: Vidacare

Is it safe?

This procedure is safe, particularly when the device is removed within 24 hours.

What side effects can occur?

Infection and failure of the device to work are the most common complications although with modern devices these complications are rare.

Do I need to be careful?

Patients with these devices in place are usually recovering from a critical illness. Care should be taken not to move the device when you have any patient contact.

Seeking help:



In a medical emergency go to your nearest emergency department or call 000.



Disclaimer: This health information is for general education purposes only. Always consult with your doctor or other health professional to make sure this information is right for you.