

Lignocaine for local anaesthetic pre-intraosseous infusion

There is evidence that there is pain at the point of insertion of the Intraosseous (IO) device and again at infusion of fluid¹. The latter is modulated by pressure sensors and *significantly greater* than insertion pain.

For a larger proportion of patients in which IO is used, analgesia / [local anaesthesia](#) is not an issue as the patient is unresponsive to pain.

For patients who are responsive to pain, use of lignocaine is recommended by most authors on the subject².

What preparation is required?

All authors recommend preservative and adrenaline free lignocaine, either 1% or 2%. Most preparations used now are preservative free but check your available lignocaine.

What dosage?

A “consensus of papers” suggest² a safe and adequate dose in most instances is 40 mg in the adult (4mls 1% or 2mls 2%) and 0.5 mg/kg (0.05mL/kg of 1%) in the paediatric population. Repeat doses are half of first dose.

How should this be administered?

Give first dose of 40mg in the adult over 1 minute. Wait for 1 minute and then give 10ml normal saline bolus over 5 seconds to create the “infusion space” required to allow subsequent infusions. Give second dose lignocaine 20mg in adult over 1 minute. For ongoing pain repeat the second dose with an upper limit of total lignocaine at 2mg/kg.

¹ JEMS: Emergency Medical Services – [Pain Management with the use of IO: easing IO pain and pressure](#)

² Vidacare - [References: Management of Pain associated with IO Vascular Access](#)

³ Vidacare – [Complete industry guide](#)