Sterile Water Injections

Association of Ontario Midwives
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Midwife tip sheet

What are sterile water injections?

Sterile water injections (SWI) are a **pain relief** technique that uses sterile water injected either **intradermally** or **subcutaneously** in a client's back for **safe** and **effective** relief of intrapartum pain for up to **3 hours.**

When would SWI benefit clients?

Most study participants with effective SWI pain relief said they would use it again in a future labour

Most participants said administration pain was "worth it" for the pain relief afterwards

- Intrapartum pain, particularly **'back labour'**
- To **avoid** pharmacological pain relief
- Relief while **awaiting** pharmacological availability
- Support **out-of-hospital** labour (ex: planned place of birth or delay hospital admission until active labour)

How do SWI work?

Exact mechanism not entirely understood

Diffuse noxious inhibitory control (DNIC)

"Pain inhibits pain"

The **osmotic irritation** from sterile water and creation of the bleb contributes to release of **endorphins**

"Non-pain sensation overrides pain sensation"

Gate control theory

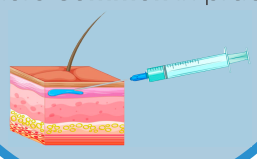
- Sensations from **secondary sources** can **override** or stop the painful sensation
- The blebs stimulate fibres (A-beta) which only carry information about **touch** - not pain - and these **override** the **pain signals** from other fibres (A-delta and C)

What type of injection is best for SWI?

- Both **effective**
- Same **onset** and **duration** of relief
- Injection **sting** lasts **30 seconds**

Intradermal

- **Quick** bleb with **less volume** (0.1mL)
- **Superficial**
- More **common** in practice



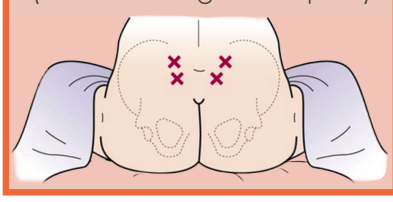
Subcutaneous

- **More volume** for bleb (0.1-0.5mL)
- **Deeper**
- **Less** painful

How to administer SWI

1. Landmark

Around rhomboid of Michaelis (or area with greatest pain)



2. Draw up sterile water

Use 18G blunt fill needle to draw up 0.5 mL of sterile water

3. Prepare for injection

- Change to 23-30G x ½" needle for injection
- Swab area(s) to be injected with alcohol prep pad

4. Inject

During next contraction inject with needle bevel up – 0.1-0.5ml or until a visible bleb is seen

5. Repeat prn

SWI can be safely repeated to provide continued pain relief

Supplies needed:

- Sterile water ampoule (10 mL)
- 1 mL syringe
- Blunt fill needle (18G)
- Injection needles (23-30G x ½")
- Alcohol prep pad

References:

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