



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**.

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

When would SWI benefit clients?

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)

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

"Pain inhibits pain"

"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?

Intradermal

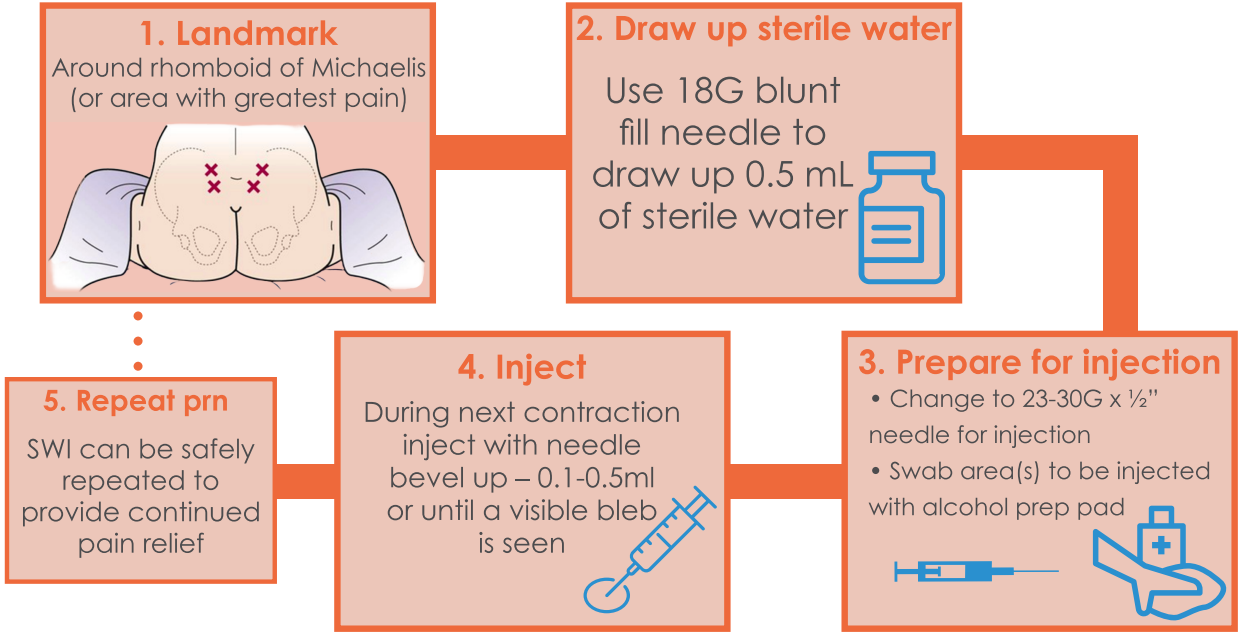
- **Quick** bleb with **less volume** (0.1 mL)
- **Superficial**
- More **common** in practice

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

Subcutaneous

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

How to administer SWI



Supplies needed:

- Sterile water ampoule (10 mL)
- 1 mL syringe
- Blunt fill needle (18G)
- Injection needles (23-30G x 1/2")
- Alcohol prep pad



References:

1. Bahasadri S, Ahmadi-Abhari S, Dehghani-Nik M, Habibi GR. Subcutaneous sterile water injection for labour pain: A randomised controlled trial. The Australian and New Zealand Journal of Obstet and Gynaecol. 2006;46(2):102-6.
2. Derry S, Straube S, Moore RA, Hancock H, Collins SL. Intracutaneous or subcutaneous sterile water injection compared with blinded controls for pain management in labour. Cochrane Database of Systematic Reviews. 2012.
3. Koyucu RG, Demirci N, Yumru AE, Salman S, Ayanoglu YT, Tosun Y, Tayfur C. Effects of intradermal sterile water injections in women with low back pain in labor: a randomized, controlled, clinical trial. Balkan Medical Journal. 2018 Mar 1;35(2):148-54.
4. Lee N, Kildea S, Stapleton H. "No pain, no gain": The experience of women using sterile water injections. Women and Birth. 2017;30(2):153-8.
5. Marzouk T, Abd-Elftah H, Nabil H. Effect of subcutaneous sterile water injection at the lumbosacral region on labour back pain. J of Nursing Education and Practice. 2015;5(10):98.
6. Rai R, Uprety D, Pradhan T, Bhattarai B, Acharya S. Subcutaneous sterile water injection for labor pain: A randomized controlled trial. Nepal Journal of Obstet and Gynaecol. 2013;8(2):68-70.
7. Rezaie M, Shaabani S, Jahromi F, Jahromi M, Dakshesh S. The effect of subcutaneous and intracutaneous injections of sterile water and normal saline on pain intensity in nulliparous women: A randomized controlled trial. Iranian J of Nursing and Midwifery Research. 2019;24(5):365.