

Fertility fact sheet

Testosterone gel

Testosterone gel can be used as an optional pre-treatment ‘add on’ or adjuvant therapy in In Vitro Fertilisation (IVF) cycles for patients with poor ovarian reserve (POR) or a history of poor response to previous IVF attempts¹.

According to a 2024 Cochrane review, pre-treatment with testosterone likely improves live birth and clinical pregnancy rates in women undergoing IVF who have been identified as poor responders¹. The review looked at 14 randomised control trials (RCTs) but there is still further research required to fully understand its mechanism of action and benefits in the IVF field¹.

Based on studies, testosterone may work to:

- **increase follicle sensitivity:** testosterone may increase the activity of follicle-stimulating hormone (FSH) receptors in the ovaries, making the follicles more responsive to the fertility drugs used during stimulation¹.
- **promotes follicle growth:** testosterone may help in the recruitment and growth of early-stage (pre-antral and antral) follicles, which ultimately increases the number of eggs available to retrieve¹.
- **improve androgen deficiency:** studies have shown androgen levels decrease with age and when ovarian reserve diminishes, therefore testosterone supplementation may improve this deficiency¹.

Potential IVF benefits may include:

- Increased clinical pregnancy¹
- Increased live birth rates¹.

Administration guidance

Dose and duration:

- There are many regimens in the RCT studies, however in New Zealand we have testosterone gel available. It involves applying a low dose – one pump which delivers 1.25g of gel containing 20.25mg of testosterone of 1% testosterone gel daily – for approximately **21-28** days prior to starting the ovarian stimulation of the IVF cycle^{1,2}.



Application site:

- Apply the gel to clean, dry, unbroken skin on the **shoulders, upper arms, or abdomen**².
- **Do not apply to breasts, genitals, or other areas**².

Safety Precautions²:

- **Wash hands** thoroughly with soap and water immediately after application.
- Allow the application area to **dry completely** before putting on clothes (at least 3-5 minutes).
- **Cover the application area** with clothing to prevent transfer to other people, especially women who are pregnant or trying to get pregnant, children, and pets.
- Accidental contact area on another person should be washed well with soap and water right away.
- The gel is **flammable** until dry, so avoid heat or open flames.

Contraindications²:

- Do not use if you are pregnant, breastfeeding, or have certain conditions like breast cancer, serious heart/liver/kidney problems, or sleep apnoea.

Potential side effects²:

- With the typical low dose and short duration of use, significant side effects like voice changes or excess hair growth are uncommon.
- More common side effects can include skin irritation at the application site, acne, or mood swings.

Important considerations with its use:

- Testosterone gel is a prescription medication so should only be used under the guidance of a fertility specialist.
- Testosterone effectiveness may vary so while it is promising, the evidence supporting its use has some limitations, and further high level research is ongoing¹.

Further information can be accessed from the full Cochrane review¹ and the Medsafe datasheet². Any concerns, please contact your local FA clinic.

References:

1. Naik S, Lepine S, Nagels HE, Siristatidis CS, Kroon B, McDowell SJ. Androgens (dehydroepiandrosterone or testosterone) for women undergoing assisted reproduction. Cochrane Database of Systematic Reviews 2024, Issue 6. Art. No.: CD009749. DOI: 10.1002/14651858.CD009749.pub3. Accessed 01 November 2025.
2. Testogel Medsafe Datasheet November 2024. <https://www.medsafe.govt.nz/profs/datasheet/t/testogelGel.pdf> [Accessed 01 November 2025]