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< Fertility Medication

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# Does Needle Gauge Make a Difference? Here is What a Fertility Nurse Says

**ARTICLE**

Reviewed by Melissa Bell, RN

You might wonder, does the needle gauge make a difference for IVF injections? Perhaps you love using the very small needle for the Lupron injection. Can you use small needles for other injections?

Actually, the gauge and length of the needles you use for your IVF injections *does* matter. The majority of IVF medications are injected subcutaneously, meaning they are injected into fatty tissue underneath the skin's surface. The needles used for this are short in length and thin in diameter because they don't have to go all the way into the muscle layer. However, if a medicine needs to get to the muscle layer these thinner needles won't be effective.

## Needle Measurement

With needles, there are two important measurements to consider.

**Gauge:** The diameter, or thickness, of the needle. The higher the number, the finer or thinner the needle. For example, a 30-gauge needle is smaller than a 27-gauge needle.

**Length:** How long the needle is. This is measured in inches.

## Injection Route

The gauge and length of the needle used for each medication is determined by the injection route.

Let's compare injection options for IVF medications:

Subcutaneous injection (SC):

- Injected into the fatty tissue under the skin
- Usually given with 27-, 28-, or 30-gauge 0.5-inch needles

## Intramuscular injection (IM)

- Injected directly into the muscle
- Usually given with 21-, 22-, or 25-gauge 1- or 1.5-inch needles

The needle for your IVF medication may come permanently affixed to the syringe, or you may be able to twist or push it on and off.

Your IVF medication may come pre-mixed or require mixing. Here are some examples and what to expect for the injections:

## IVF medications That Are Pre-mixed

Your medication may come packaged from the manufacturer with the syringes and needles to be used for administration. These include:

- The Leuprolide acetate (Lupron) two-week kit. This comes in a pre-mixed multi-dose vial with syringes that have 28-gauge 0.5-inch needles affixed for SC injection.
- The Follistim and Gonal-f pens. These come with a supply of the 29-gauge 0.5-inch needles that must be twisted onto the pen before each use.
- The Gonal-f Multi-Dose vials. These come with syringes with 27-gauge 0.5-inch needles affixed.
- Several medications like ganirelix acetate and Ovidrel come in pre-filled, one-time use syringes with a 27-gauge 0.5-inch needle affixed.

## IVF Medications That Require Mixing

There are other medications used in IVF cycles that require mixing a diluent with powdered medication to make a solution that can be drawn up and injected. These include Menopur, Novarel, Pregnyl and human chorionic gonadotropin (hCG).

In this case, your nurse will order the appropriate syringes and needles for you to use. In general, you will use a 3cc syringe with a 22-gauge 1.5-inch needle to do the mixing and drawing-up, so you have both the length and diameter to make it easy to move liquid into and out of vials and syringes.

If you are then instructed to do an intramuscular injection, you can simply leave that same needle on for the injection. If you have been instructed to do a SC injection, you will carefully recap the needle, twist it off and replace with a 28- or 30-gauge 0.5-inch needle to do the injection.

Another option is a progesterone in oil for IM injection. This comes in a 10 ml multi-dose vial with needles and syringes ordered separately. Because the progesterone in oil is thicker than the water-based medications, some nurses order 18-gauge 1.5-inch needles to withdraw it from the vial. This needle can be intimidating due to its large size, but is only used to draw up the medication. You will use a 22-gauge 1- or 1.5-inch needle to do your injection.

*Melissa Bell is a nurse manager at Reproductive Medicine Associates of New York. After graduating from Our Lady of the Lake College nursing school in Baton Rouge, Louisiana, she moved to New York and fell in love with the field of reproductive medicine. Melissa is passionate about helping individuals and families meet their family planning goals. She is currently working on research for the American Society of Reproductive Medicine and strives to be an influential leader for her nurses and an advocate for her patients.*

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