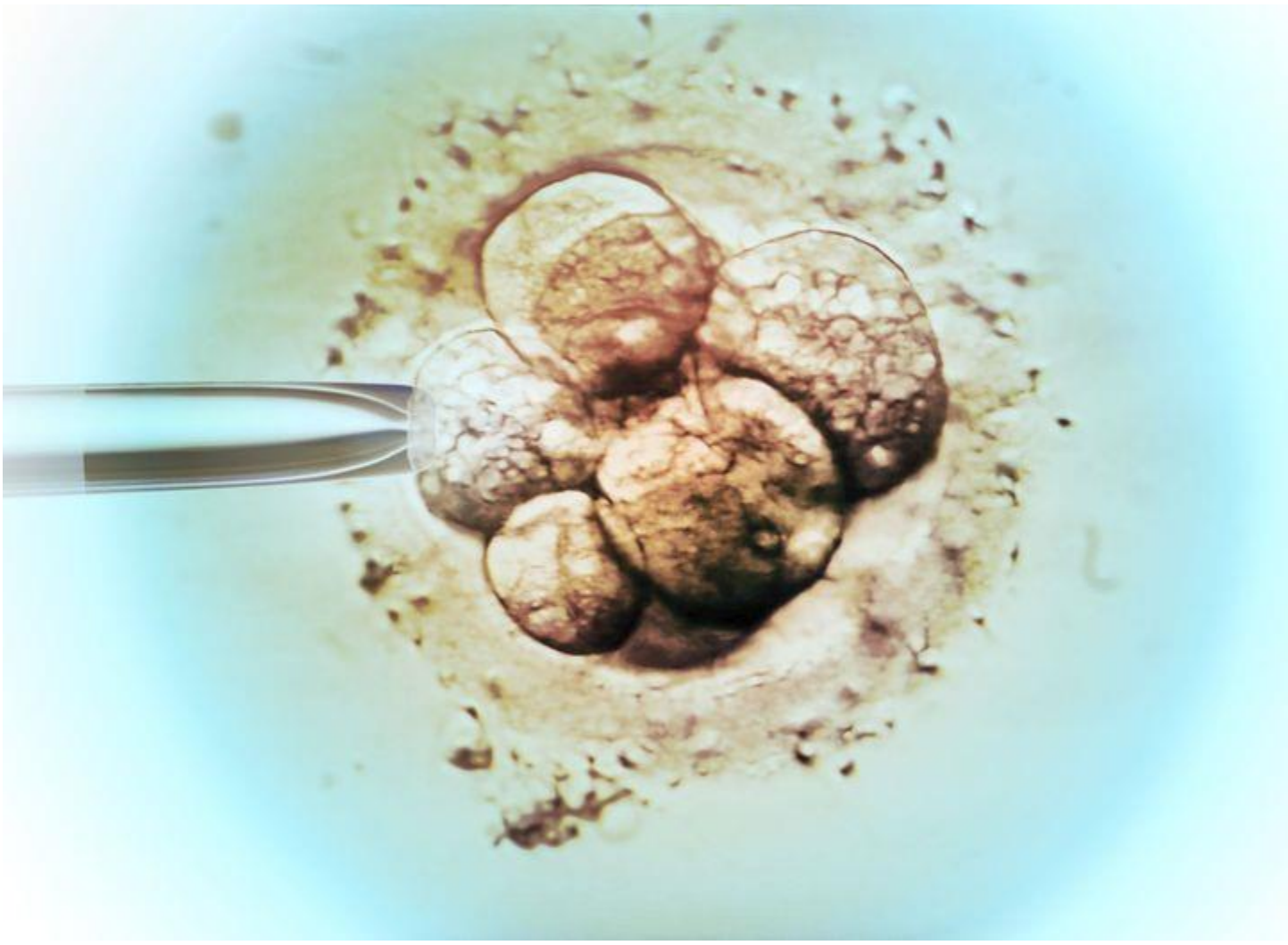
What to Expect Along the Path to Conceiving With IVF

By Rachel Gurevich - Reviewed by a board-certified physician. April 20, 2017

Deciding to Start IVF



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Starting the IVF treatment process can be an exciting and nerve-wracking experience. Usually, IVF is pursued only after other fertility treatments have failed. You may have been trying to conceive for months or, more likely, for years and years.

But this is not always the case. Sometimes, IVF is the very first treatment tried.

For example, IVF may be the first option if...

- an egg donor is being used
- a surrogate is needed
- in severe cases of male infertility
- if a woman's fallopian tubes are blocked

Still, even in these cases, IVF may come after years of trying to get pregnant and several fertility tests.

Here's the good news: IVF is pretty successful. According to a study of approximately 156,000 women, the average live-birth rate for the first cycle was 29.5 percent. This is comparable to the success rates for a natural cycle in couples with healthy fertility.

Your best odds for success may come from repeated treatment cycles. This same study found that after six IVF cycles, the cumulative live-birth rate was 65.3 percent. These six cycles usually took place over two years.

Age does play an important role in your success, as does the reason for your infertility. Using an egg donor will also affect your success. If you're feeling overwhelmed, I understand. You are not alone. IVF treatment is quite stressful.

Just looking over the schedule of ultrasounds, blood work, injections, and so on can have you feeling fragile. (And that's before the drugs can mess with your moods!)

Add to that the cost of IVF, especially if you're paying out-of-pocket, and it's no surprise you're feeling worried. The more you understand what's coming next, the more in control you'll feel. You may be wondering how everything will come together. I'll explain.

While every clinic's protocol will be slightly different and treatments are adjusted for a couple's individual needs, here is a step-by-step breakdown of what generally takes place during in vitro fertilization.

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The Cycle Before Treatment

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The cycle before your IVF treatment is scheduled, you may be put on birth control pills. This may seem backward—aren't you trying to get pregnant?

Actually, using birth control pills before a treatment cycle has been shown to potentially improve your odds of success. Also, it may decrease your risk of ovarian hyperstimulation syndrome and ovarian cysts.

But not every doctor uses birth control pills the cycle before. Another possibility is that your doctor will ask you to track ovulation the cycle before. Most likely, she will recommend using an ovulation predictor kit. However, she may also suggest basal body temperature charting, especially if you have experience charting your cycles.

Then, you will need to let your doctor know as soon as you detect ovulation.

Sometime after ovulation, the fertility clinic may then have you start taking a GnRH antagonist (like Ganirelix) or a GnRH agonist (like Lupron). These are usually injectable drugs, but some are available as a nasal spray or implant.

These drugs allow your doctor to have complete control over ovulation once your treatment cycle begins.

If you don't get your cycles on your own, your doctor may take yet another approach. In this case, he may prescribe progesterone in the form of Provera. This would bring on your period.

In this case, your doctor will probably ask that you start taking the GnRH agonist or antagonist about six days or more after your first Provera pill.

Again, though, this may vary. Always follow your doctor's instructions.

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When You Get Your Period

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The first official day of your treatment cycle is the day you get your period. (Even though it may feel like you've already begun with the medications you started *before* in step one.)

On the second day of your period, your doctor will likely order blood work and an ultrasound.

Yes, this will be a transvaginal ultrasound. No, an ultrasound during your period isn't exactly pleasant. But what can you do? Just remember this is the same for every woman going through IVF.

These first-day ultrasounds and blood work are referred to as your baseline blood work and your baseline ultrasound. In your blood work, your doctor will be looking at your estrogen levels,

specifically your E2 or estradiol. This is to make sure your ovaries are "sleeping." That's the intended effect of the Lupron shots or GnRH antagonist.

The ultrasound is to check the size of your ovaries. Your doctor will also look for ovarian cysts. If there are cysts, your doctor will decide how to deal with them. Sometimes your doctor will just delay treatment for a week. Most cysts resolve on their own with time. In other cases, your doctor may aspirate the cyst (suck out the fluid) with a needle.

Usually, these tests will be fine. If everything looks OK, treatment moves onto the next step.

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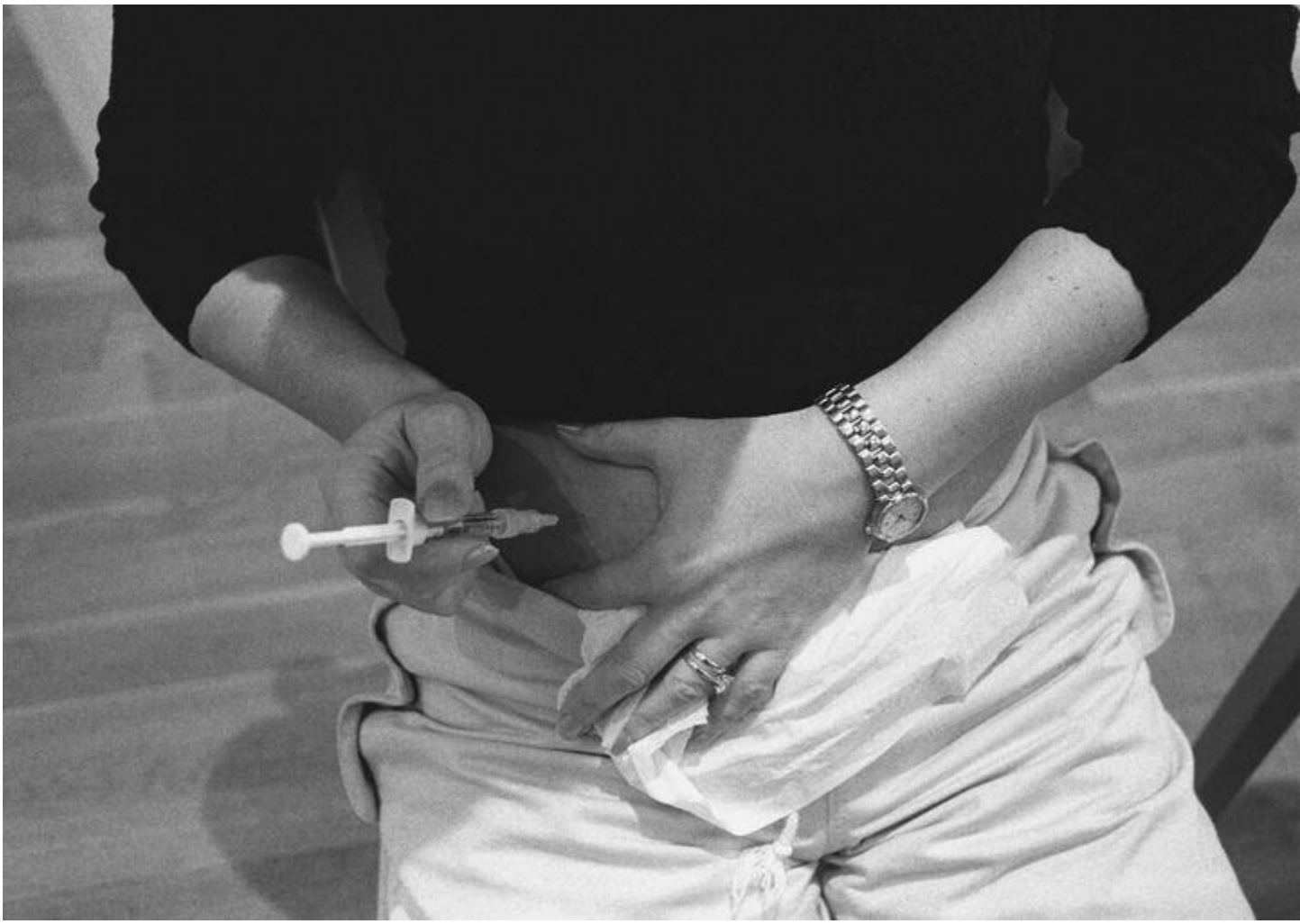
Ovarian Stimulation and Monitoring



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Ovarian stimulation with fertility drugs is the next step.

Depending on your treatment protocol, this may mean anywhere from one to four shots every day for about a week to 10 days. (Ouch!)

You are probably a pro at self-injection by now, since Lupron and other GnRH agonists are also injectables. Your clinic should teach you how to give yourself the injections before or when your treatment begins. Some clinics offer classes with tips and instruction.

Don't worry. They won't just hand you the syringe and hope for the best!

You can read more about the fertility drugs you may take during IVF here:

- All About Gonadotropins
- Gonadotropin Side Effects
- GnRH Agonist (Lupron) Side Effects
- GnRH Antagonists (Antagon, Ganirelix, Orgalutran, and Cetrotide) Side Effects
- Commonly Prescribed Fertility Drugs

During ovarian stimulation, your doctor will monitor the growth and development of the follicles.

At first, this may include blood work and ultrasounds every few days. Your doctor will be monitoring your estradiol levels. During the ultrasounds, your doctor will monitor the oocyte growth. (Oocytes are the eggs in your ovaries.)

Monitoring the cycle is very important. This is how your doctor will decide how to adjust your medications. You may need to increase or decrease dosages. Once your largest follicle is 16 to 18 mm in size, your clinic will probably want to see you daily.

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Final Oocyte Maturation

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The next step in your IVF treatment is triggering the oocytes to go through the last stage of maturation. The eggs must complete their growth and development before they can be retrieved.

This last growth is triggered with human chorionic gonadotropin (hCG). Brand names for this include Ovidrel, Novarel, and Pregnyl.

Timing this shot is vital. If it's given too early, the eggs will not have matured enough. If given too late, the eggs may be "too old" and won't fertilize properly.

The daily ultrasounds at the end of the last step are meant to time this trigger shot just right.

Usually, the hCG injection is given when four or more follicles have grown to be 18 to 20 mm in size and your estradiol levels are greater than 2,000 pg/ML.

This shot is typically a one-time injection. (Yeah!) Your doctor will likely give you *an exact hour* to do this shot. Be sure to follow these instructions!

IVM vs. IVF

Above, I said that the eggs must complete their development and growth before being retrieved. That's only for IVF treatment.

IVM treatment is slightly different. IVM stands for in vitro maturation. It's a relatively new technology that is similar to IVF but significantly differs at this point in the process.

During IVM, the eggs are retrieved before they go through all stages of maturity. You will not have a "trigger shot" during IVM. The eggs retrieved will be matured in the lab environment. Once the eggs are matured, the rest of the steps follow the IVF process.

What If the Follicles Don't Grow

We've assumed to this point that the ovarian stimulation drugs have worked properly. But that isn't always how it goes. Sometimes the follicles don't grow. Your doctor may increase the medications, but if your ovaries still don't respond, the cycle will likely be canceled.

This doesn't mean another cycle won't work. You may just need different medications. However, if this occurs repeatedly, your doctor may suggest using an egg or embryo donor.

What If You're at Risk for OHSS

Another possible problem is your ovaries respond too well. If your doctor thinks you're at risk of developing severe ovarian hyperstimulation syndrome (OHSS), your trigger shot will be canceled and the cycle will be stopped at this point.

Another possibility is your doctor will retrieve the eggs, fertilize them, but delay the embryo transfer. This is because pregnancy can worsen and extend recovery from OHSS. During your next cycle, your doctor may suggest lower doses of medications, try different medications before your cycle starts, or even suggest IVM instead of IVF (explained above.)

What If You Ovulate Prematurely

While not common, a cycle may also be canceled if ovulation occurs before retrieval can take place. Once the eggs ovulate on their own, they can't be retrieved. Your doctor will likely tell you to refrain from sexual intercourse. It's important you follow these instructions!

It's possible you've ovulated up to a dozen eggs. Maybe even more. Imagine the disaster and danger of getting pregnant naturally with even half of those eggs.

How Often Are IVF Cycles Canceled?

Cancellation happens in 10 to 20 percent of IVF treatment cycles.

The chance of cancellation rises with age, with those older than age 35 more likely to experience treatment cancellation.

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Egg Retrieval

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About 34 to 36 hours after you receive the hCG shot, the egg retrieval will take place. It's normal to be nervous about the procedure, but most women go through it without much trouble or pain.

Before the retrieval, an anesthesiologist will give you some medication intravenously to help you feel relaxed and pain-free. Usually, a light sedative is used, which will make you "sleep" through the procedure. This isn't the same as general anesthesia, which is used during surgery. Side effects and complications are less common.

Once the medications take their effect, your doctor will use a transvaginal ultrasound to guide a needle through the back wall of your vagina, up to your ovaries. She will then use the needle to aspirate the follicle, or gently suck the fluid and oocyte from the follicle into the needle. There is one oocyte per follicle. These oocytes will be transferred to the embryology lab for fertilization.

The number of oocytes retrieved varies but can usually be estimated before retrieval via ultrasound. The average number of oocytes is 8 to 15, with more than 95 percent of patients having at least one oocyte retrieved.

After the retrieval procedure, you'll be kept for a few hours to make sure all is well. Light spotting is common, as well as lower abdominal cramping, but most feel better in a day or so after the procedure. You'll also be told to watch for signs of ovarian hyperstimulation syndrome, a side effect from fertility drug use during IVF treatment in 10 percent of patients.

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Egg Fertilization

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While you're at home recovering from the retrieval, the follicles that were aspirated will be searched for oocytes, or eggs. Not every follicle will contain an oocyte.

Once the oocytes are found, they'll be evaluated by the embryologist. If the eggs are overly mature, fertilization may not be successful. If they are not mature enough, the embryology lab may be able to stimulate them to maturity in the lab.

Fertilization of the oocytes must happen with 12 to 24 hours. Your partner will likely provide a semen sample the same morning you have the retrieval. The stress of the day can make it difficult for some, and so just in case, your partner may provide a semen sample for backup earlier in the cycle, which can be frozen until the day of the retrieval.

Once the semen sample is ready, it'll be put through a special washing process, which separates the sperm from the other stuff that is found in semen. The embryologist will choose the "best-looking sperm," placing about 10,000 sperm in each culture dish with an oocyte. The culture

dishes are kept in a special incubator, and after 12 to 24 hours, they are inspected for signs of fertilization.

With the exception of severe male infertility, 70 percent of the oocytes will become fertilized.

In the case of severe male infertility, ICSI (pronounced ick-see) may be used to fertilize the eggs, instead of simply placing them in a culture dish. With ICSI, the embryologist will choose a healthy-looking sperm and inseminate the oocyte with the sperm using a special thin needle.

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Embryo Transfer

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About three to five days after the retrieval, the fertilized eggs will be transferred. The procedure for embryo transfer is just like IUI treatment. You won't need anesthesia.

During the embryo transfer, a thin tube, or catheter, will be passed through your cervix. You may experience very light cramping but nothing more than that. Through the catheter, they will transfer the embryos, along with a small amount of fluid.

The number of embryos transferred will depend on the quality of the embryos and previous discussion with your doctor. Depending on your age, anywhere from two to five embryos may be transferred. Recent studies have shown success with just one embryo transferred. Speak to your doctor to find out if this may apply to you.

After the transfer, you'll stay lying down for a couple hours (bring a book) and then head home.

If there are "extra" high-quality embryos left over, you may be able to freeze them. This is called embryo cryopreservation. They can be used later if this cycle isn't successful, or they can be donated.

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Progesterone Support and the 2 Weeks

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On or after the day of your retrieval, and before the embryo transfer, you'll start giving yourself progesterone supplements. Usually, the progesterone during IVF treatment is given as an intramuscular self-injection as progesterone in oil. (More shots!) Sometimes, though, progesterone supplementation can be taken as a pill, vaginal gel, or vaginal suppository.

Besides the progesterone, there really isn't much going on for the next two weeks. In some ways, the two weeks after the transfer may be more difficult emotionally than the two weeks of treatment. During the previous steps, you will have visited your doctor perhaps every other day. Now, after transfer, there will be a sudden lull in activity.

You may have lots of questions about the two-week wait. Can you have sex? What if you have cramps? Of course, your doctor is the number one source for any of your concerns.

All you can do is wait the two weeks and see if pregnancy takes place. It can help to keep busy with your life during this wait time and avoid sitting and thinking about whether or not treatment will be successful. I know, it's much easier said than done.

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Pregnancy Test and Follow-Up

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About nine to 12 days after the embryo transfer, a pregnancy test is ordered. This is usually a serum pregnancy test (more blood work) and also will include progesterone levels testing. The test may be repeated every few days.

If the test is positive (yeah!), you may need to keep taking the progesterone supplementation for another several weeks. Your doctor will also follow up with occasional blood work and ultrasounds to monitor the pregnancy and watch for miscarriages or ectopic pregnancies.

During IVF treatment, miscarriage occurs up to 15 percent of the time in women under age 35, 25 percent of women age 40 and up and 35 percent of the time after age 42.

Your doctor will also monitor whether or not the treatment led to a multiple pregnancy. If it's a high-order pregnancy (4 or more), your doctor may discuss the option of reducing the number of fetuses in a procedure called a "multifetal pregnancy reduction." This is sometimes done to increase the chances of having a healthy and successful pregnancy.

When IVF Treatment Fails

If the pregnancy test is still negative 12 to 14 days post-transfer, your doctor will ask you to stop taking the progesterone. Then, you'll wait for your period to start.

The next step will be decided by you, your partner, and your doctor. If this was your first cycle, another cycle may be recommended. Remember that your best chances for success are after doing several cycles.

Having a treatment cycle fail is never easy. It's heartbreaking. It's important, however, to keep in mind that having one cycle fail doesn't mean you won't be successful if you try again.

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