

Fertility Preservation for Trans People Who Produce Sperm



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Many trans people are interested in becoming parents and want to know their options. While many trans people will choose to conceive on their own or with a partner, this info sheet helps trans women, transfeminine, non-binary, and gender non-conforming people with sperm understand their assisted reproductive options. As hormone therapy and surgery may have an impact on your fertility, it is helpful to think about your options early.

This info sheet is specifically about fertility for people who produce sperm. There is another info sheet available for people who have ovaries and focuses on fertility preservation.

When should I be thinking about this?

Ideally, you should discuss your reproductive options with your health care provider before starting hormone therapy. You can store sperm at a sperm bank or fertility clinic before starting hormone therapy.

There are still options if you have already started hormone therapy.

If you are thinking about surgery to remove your testes, this is your last chance to either preserve your fertility or conceive.

Trans People as Parents

Many trans people do not choose to access medical interventions as part of their transition (i.e., undergoing gender-affirming surgery/ies and/or following a gender-affirming hormone regimen). For those who do, some have children before accessing medical interventions and some have children after.

Of the 2452 Trans PULSE Canada participants who responded to the question about parenthood, 15.78% reported that they are a parent. This includes people with adult children and those who are fostering, adopting, or co-parenting children (Trans PULSE Canada, personal communication, November 8, 2022).

Some trans people feel that having a genetic link to their child(ren) is important, while for others this is less important or not at all.

Impact of Feminizing Hormones on Fertility

Taking hormones can affect the quality of the sperm you produce and may make it difficult to fertilize an egg. If you are following a feminizing hormone regimen (e.g., estrogen and/or a testosterone-blocker) and are ready to conceive or ready to bank sperm, you can talk to your health care provider about your options, such as temporarily stopping hormone therapy to improve sperm quality. Getting a semen analysis – a lab test your health care provider can order – will give you a lot of information about your fertility.

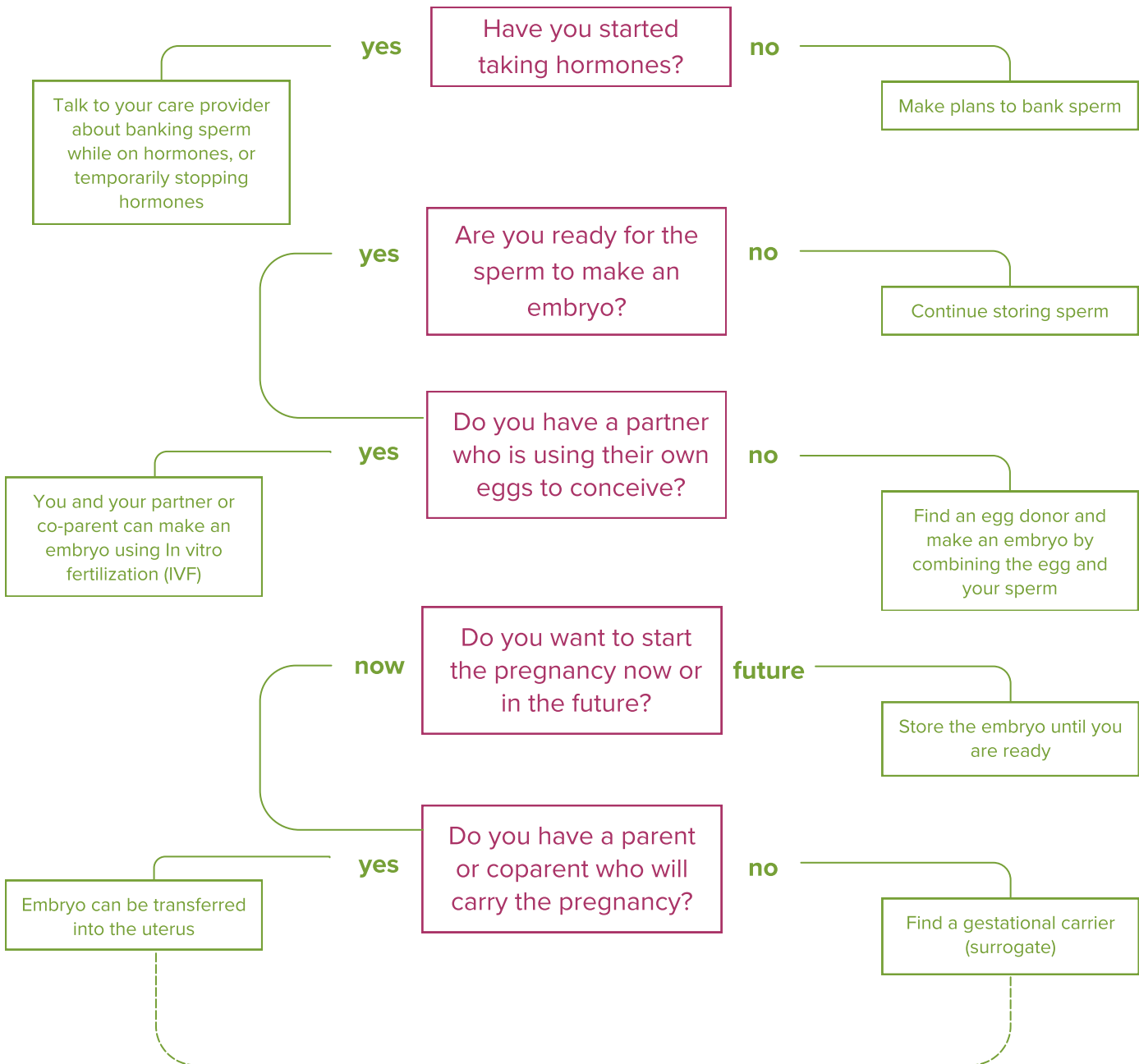
You should not rely on hormone replacement therapy as a form of contraception. If you are having sex that could result in pregnancy and you do not wish to conceive, use barrier methods such as a condom.

While the effect of hormone therapy on sperm quality varies from person to person, research has shown that following a feminizing hormone regimen long-term reduces sperm motility and density in a cumulative, dose-dependent manner. This means the longer you are on hormones and the higher your doses, the greater impact on sperm quality and the quantity you produce. Although some people have conceived after stopping hormone therapy, or while on a break from hormones, this may not be possible for everyone.

Because of this uncertainty, it is recommended that individuals who produce sperm discuss their reproductive options with a health care provider before starting hormones. While fertility declines as we age most dramatically for people who produce eggs, fertility also decreases with age for people who produce sperm as well.

Overview

If you want to have a child who is conceived with your sperm, you have many options. While it is not possible for you to carry the pregnancy yourself, you may choose for a partner, co-parent, or a gestational carrier (surrogate) to carry the pregnancy. This chart shows a few of the decisions you will need to make:



Do It Yourself – DIY Conception

Many trans people conceive without help from health care providers. Many people can and choose to get someone pregnant through having sex or at-home insemination with a partner or co-parent with eggs.

If you have a co-parent or partner who will carry the pregnancy with their own eggs, you can do a low-tech home insemination or have sex using your fresh sperm without fertility preservation. If you choose to do so, be sure to talk to your care provider about getting tested for sexually transmitted and blood-borne infections (STBBIs) beforehand.

Fertility Preservation and Medical Transition

Fertility preservation involves storing your sperm so it can be used to have a child later. If you are planning to take hormones or have surgery to remove your testes, you can make different fertility decisions as you transition. Chest, facial, or tracheal surgery will not affect your fertility.

If you know you do not want to have a child now, but would like to preserve your fertility, you have a few options. Depending on the province/territory, funding for fertility preservation or tax credits may be available if you are planning surgery. Ask your clinic about their funding eligibility policy if you are starting, or already on, estrogen as well. You can also refer to the Rainbow Health Ontario's info sheet [Assisted Human Reproduction Options and Funding Available Across Canada](#) for further details on availability of Assisted Human Reproductive technology in each province/territory as well as the funding or tax credits that are available to mitigate the costs of these procedures.



If you are:

Planning to start hormone therapy

- Have a consultation with your health care provider or a fertility specialist to talk about sperm banking and the impact hormones will have on your future fertility. Consider if you want to conceive now or pursue fertility preservation before starting hormones.
- Get a referral to a fertility clinic or call a sperm bank to start fertility preservation. Note that not all fertility clinics offer sperm banking; it's advisable to check with the clinic directly before getting a referral.

On hormone therapy

- You may choose to try to conceive while taking hormones, but this may not be possible.
- With the help of your health care provider, you can stop your hormones for three to six months before banking your sperm or attempting to conceive. This allows time for the sperm quality to improve so it will be more likely to fertilize an egg. You may wish to minimize the amount of time off hormones. If you are off hormones for medical or other reasons, this may or may not be a good time to consider fertility preservation or pregnancy.

Planning surgery

- Store your sperm at a sperm bank before undergoing orchiectomy or vaginoplasty surgery.
- If you decide to preserve your fertility prior to having surgery, discuss the timing carefully with your fertility specialist and your surgeon.

Post-bottom surgery (orchiectomy or vaginoplasty)

- After removing the testes, you are no longer capable of producing sperm. If you have had surgery to remove your testes and did not freeze sperm, you will need to consider sperm from a partner, co-parent or donor to conceive.

Fertility Preservation: Freezing and Storing Sperm

Fertility preservation is one reason trans people use fertility clinics to conceive. Only some clinics have sperm banks that are well-equipped to do fertility preservation for trans people. Some sperm banks also offer a storage option for fertility preservation. It is very important to choose a clinic or bank that has experience working with trans people and has experience in fertility preservation.

How to Get Started

For fertility clinic sperm banks, typically you should get a referral from your primary care provider to their sperm banking program. For sperm banks not affiliated with a fertility clinic, simply call the bank, or check their website for information. You do not typically need a referral.

If you have chosen a clinic or sperm bank that you want to work with, bring their referral or new client form to an appointment with your doctor. You may need to provide updated testing for any sexually transmitted infections (STIs) to the clinic. The clinic may also order these and other tests prior to proceeding.

What to Expect

You will have a brief initial consultation with the staff, and you will fill out various forms. You may or may not be offered fertility tests to assess your sperm. If these tests are not offered, you may want to ask about what tests are available or what is recommended. Ask about costs of tests, procedures, and storage up front as the coverage for tests, fertility preservation interventions and sperm storage fees differ by province/territory.

You may be given detailed instructions to provide an appropriate sample before your first visit. Follow those instructions carefully. If you do not understand part of the instructions, ask the staff for clarification.

At the clinic, you will be given a specimen cup and a private space to provide a sample. The private space is generally similar to a washroom though fertility clinics often have private collection rooms. They may provide magazines or videos for you to watch, but you may wish to bring your own. You will masturbate, ejaculate into the sample cup, and then provide the sample to the clinic staff. You may provide a sample only once, or you may return to the clinic a few times to make additional deposits. If you have trouble maintaining an erection or ejaculating, discuss with the clinic what options are available to you and what strategies or treatments they recommend.

Sometimes there is an option to provide the sample at home if it can be delivered to the clinic in a timely manner. Ask the clinic about the possibility if it would make you feel more comfortable. If you are not close to a clinic, you may wish to ship or drop sperm off at a clinic or sperm bank. Talk with your fertility clinic or sperm bank about these options.

How Sperm is Frozen

The lab technicians at your sperm bank will process the sperm, dividing each ejaculation into different vials or straws. They will also assess the quality and quantity of your sperm. You should be able to use that information to determine how many deposits you should freeze to achieve your future fertility goals.

The sperm is frozen at an extremely low temperature (“cryopreserved”) and stored in large tanks of liquid nitrogen. Each sample of sperm is labelled and carefully tracked.

Frozen sperm can be stored for a very long time. Children have been born from sperm that was stored for over twenty years. When you are storing sperm with a clinic or sperm bank, you will be billed a storage fee, usually every year. Be sure to keep your sperm bank or clinic updated with your current contact information.



When you are ready to move forward

If you have stored your sperm in a fertility clinic, you can access it through that same clinic, or you may want to transfer your straws to another clinic. If you have stored sperm in a sperm bank, you will typically need to choose a fertility clinic to work with, and then have your vials transferred.

Insemination with Health Care Providers

People pursuing fertility preservation typically do not freeze enough sperm to make insemination an option. This is because an entire straw is thawed for each insemination and the chance of pregnancy per insemination ranges from only about 5-20% making it highly likely more than one insemination is required. If you are interested in insemination rather than IVF, discuss this with a fertility specialist. For this to be a viable option, you must carefully consider the quality of your sperm, and freeze enough sperm so that there will be sperm available for many inseminations.

In Vitro Fertilization (IVF)

For most people who have frozen their sperm, IVF offers a higher probability of an attempted conception resulting in a healthy ongoing pregnancy.

Why use IVF?

IVF maximizes the chance of pregnancy by allowing the clinic to work with many eggs - up to 20 or more depending on the fertility of the person producing the eggs - thereby increasing chance of success. IVF also means that it is more likely you can conceive with limited sperm available.

Once embryos are made, the pregnancy can be carried by either a partner or co-parent or by a gestational carrier (surrogate).

If your partner will be carrying the pregnancy with their own egg using your frozen sperm, IVF is typically necessary. In surrogacy, it is most common to conceive a pregnancy with an egg from a parent or donor which will then be carried by a gestational carrier who is not genetically connected to the child. IVF requires retrieving eggs from your partner, co-parent, or an egg donor, fertilizing the eggs with your sperm or donor sperm, and then implanting the embryo in the uterus of the person who will be carrying the pregnancy.

Making Embryos

To make an embryo, your sperm must be combined with eggs that have been retrieved from your partner, co-parent, or egg donor. The eggs are then fertilized through in vitro fertilization (IVF) in a laboratory.

Because previously frozen sperm sometimes has trouble fertilizing an egg, fertility specialists will frequently recommend a process called intracytoplasmic sperm injection (ICSI). ICSI is an advanced method of fertilization whereby a single sperm is directly injected into each egg.

A resulting embryo can be tested with pre-implantation genetic screening (PGS). This tests the chromosomal make-up of the embryo. Euploid (chromosomally balanced) embryos can then be transferred into the uterus of the person planning to carry the pregnancy, increasing the chance of pregnancy, and reducing the risk of miscarriage. If you are not ready to start the pregnancy right away, you may freeze all the embryos. If you are ready to start the pregnancy, one embryo is transferred, and any remaining embryos are frozen.

Pros and Cons

In making the decision to preserve your fertility or not, you will need to consider several factors, including the costs, risks, and benefits.

Cost of Fertility Preservation

Depending on the province/territory you live in, some of the costs of fertility preservation may be funded or reimbursable, but there are often wait lists at fertility clinics to access available funding. Without provincial/territorial funding or tax credits, the total cost for fertility preservation is approximately \$1,000 plus the cost of storage.

The cost of storage varies, but an annual fee of between \$300-600 is typical. Contact your fertility clinic or sperm bank for a complete list of costs. Many fertility clinics offer reduced storage fees for fertility preservation clients.

Cost of IVF to Conceive

Depending on the province/territory you live in, some of the costs of in vitro fertilization may be funded or reimbursable, but there are often wait lists at eligible fertility clinics to access available funding. Without provincial/territorial funding or tax credits, the total cost for a single round of IVF treatment is approximately \$5,000-15,000, plus medications.

The cost of the medications required for fertility preservation may be eligible for funding or tax credits depending on the province or territory you live in. Some private insurance plans may cover part or all these costs too. The cost for medication is \$3,000-9,000 depending on how much medication your egg donor, partner, or co-parent will need.

There can be significant additional costs associated with egg donation or surrogacy, beyond the cost of IVF.

Risks of Fertility Preservation

One risk is that fertility preservation may not result in you becoming a parent. There is the possibility that you may not have a successful pregnancy at a later time, or you may not find a time in your life when you want to become a parent. It is important to remember that there are no guarantees with fertility. If you are not able to become a parent using your sperm, there are other options for you including using donor sperm or adopting.

Sperm freezing is a well-established technology, and using IVF and ICSI to create embryos increases your chance of a successful pregnancy. This is especially true if you are using donor eggs.

There is no medical risk to providing sperm for fertility preservation. Masturbation to provide a sample may trigger feelings of gender dysphoria for some people.

If you delay hormone therapy or take a break from hormone therapy to preserve your fertility, you may experience more gender dysphoria, which may impact your mental health.

Benefits of Fertility Preservation

Fertility preservation can provide psychological and social benefits for some people.

Many parents have children who are not genetically linked to them. For some prospective parents, the genetic connection may be important. If you are unsure of whether you want to have children who are genetically connected to you in the future, fertility preservation leaves an option open for you.



Glossary

Cervix

The bottom of and opening to the uterus.

Cryopreservation

Keeping frozen sperm, eggs, or embryos at an extremely low temperature.

Egg or Ova

Reproductive cells that are produced in the ovaries.

Embryo

A fertilized egg that has the potential to mature into a baby.

Euploid Embryo

An embryo which is chromosomally balanced (has an even number of matched chromosome pairs); these embryos have a high probability of becoming healthy pregnancies.

Fertility Preservation

Freezing eggs, sperm, or embryos to allow a person to conceive a pregnancy in the future.

ICSI (“ick-see”) – intracytoplasmic sperm injection

An advanced IVF procedure to fertilize eggs by injecting a single sperm into each egg.

IUI – intrauterine insemination

Semen is prepared to separate the sperm from the semen, and then the sperm is placed in a syringe. A catheter is gently inserted through the cervix into the uterus of the person who will carry the pregnancy, and the sperm is placed in the uterus to help it get closer to the egg.

IVF – in vitro fertilization

IVF requires stimulating the production of many eggs with medication, surgically retrieving eggs from a parent or egg donor, fertilizing the eggs with sperm in laboratory and then transferring the embryo to the uterus of the person who will be carrying the pregnancy.

Testicle

Reproductive organ where sperm is produced.

Orchiectomy (“or-key-eck-toe-mee”)

Surgery to remove one or both testicles; also known as orchidectomy.

Ovary

Reproductive organ where ova or eggs are produced.

Semen

Fluid that is produced when a person ejaculates; contains sperm.

Sperm

Reproductive cells that are produced in the testicles.

For More Information

Visit RainbowHealthOntario.ca to find resources, a service provider directory and more to help you on your fertility journey.

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