Donor sperm: indications and donation process

What donor sperm means in reproductive medicine

Donor sperm refers to sperm provided by someone who is not intended to be the social or legal father or co-parent of the child, unless a specific directed-donor arrangement and legal framework says otherwise. The sperm may come from a licensed sperm bank, a clinic-recruited donor program, or a known donor chosen by the recipient or recipient couple.

Clinically, donor sperm is a form of third-party reproduction. It can be used to fertilize an egg inside the body through IUI or outside the body through IVF. With IUI, washed and prepared sperm is placed directly into the uterus around ovulation. With IVF, eggs are retrieved from the ovaries and fertilized in the laboratory, sometimes using ICSI, in which a single sperm is injected into an egg.

Although the laboratory and treatment steps may seem technical, donor conception is not only a medical intervention. It also raises questions about donor identity, future disclosure to the child, family roles, legal parentage, and cultural or religious beliefs. A good fertility team should treat these issues as central to care.

Indications: when donor sperm may be considered

Donor sperm may be discussed in several situations. The indication can be medical, genetic, social, or a combination of these.

Severe male factor infertility: This may include azoospermia, very low sperm concentration or motility, or sperm function problems that make conception with a partner's sperm unlikely or impossible. Some people explore surgical sperm retrieval or IVF with ICSI first, while others choose donor sperm earlier based on prognosis, cost, time, or personal preference.
Absence of a sperm-producing partner: Single women, lesbian couples, transgender and nonbinary people, and couples in which neither partner produces sperm may use donor sperm to build a family.
Genetic disease risk: If an intended parent carries a serious inherited condition and other options such as preimplantation genetic testing are unsuitable, unavailable, or not preferred, donor sperm may reduce the risk of transmission.
Infectious disease concerns: In selected circumstances, donor sperm may be considered when there is a significant concern about passing on an infection, although modern reproductive care often offers risk-reduction strategies that should be discussed with specialists.
Repeated unsuccessful treatment using partner sperm: After multiple failed cycles, especially when sperm factors are significant, some patients consider donor sperm as part of a revised treatment plan.

The decision should not be framed as a failure. For many families, donor sperm is a medically appropriate and emotionally meaningful path to pregnancy. A reproductive endocrinologist, urologist specializing in male infertility, genetic counselor, and mental health professional can help patients compare options without pressure.

Types of sperm donors

People often begin by asking whether to use a sperm bank or a known donor. Each option has benefits, limitations, and responsibilities.

Anonymous or non-identified donors: Recipients select a donor through a sperm bank or clinic without receiving identifying information. Depending on the

jurisdiction and sperm bank policy, true lifelong anonymity may not be guaranteed, especially in the era of consumer DNA testing.
Identity-release donors: These donors agree that donor-conceived offspring may access identifying information when they reach a specified age, often adulthood. This model may help families balance privacy with a child's future interest in genetic origins.
Known or directed donors: A recipient chooses someone they know, such as a friend or relative of a partner. This arrangement requires careful medical screening and strong legal boundaries. Clinics usually require formal counseling and documentation before accepting directed donor sperm.
Sperm bank donors: Banks typically provide donor profiles, medical and family history, infectious disease screening, genetic carrier screening information, and details such as physical characteristics, education, interests, or personal statements.

No donor type is universally best. Some families value future identifiability; others prioritize privacy, medical screening efficiency, or personal connection. The safest choice is one made after reviewing clinic requirements, legal advice, and psychosocial implications.

Medical screening and donor eligibility

Donor screening is designed to protect recipients, pregnancies, and donor-conceived children. Requirements vary by country and clinic, but screening commonly includes a detailed personal and family medical history, physical evaluation, semen analysis, infectious disease testing, and genetic carrier screening.

Infectious disease testing may include screening for HIV, hepatitis B and C, syphilis, gonorrhea, chlamydia, and other infections according to regulatory standards and clinical policy. Donor sperm is often frozen and stored before use, and some systems require quarantine and repeat testing before release.

Genetic screening is also important because all people carry some recessive genetic variants. A donor may be screened for selected inherited conditions or broader carrier panels. Recipients may be offered carrier screening as well, especially when using donor sperm for IVF or when there is known ancestry-related risk. The goal is not to find a "perfect" donor, but to reduce

the chance that donor and egg provider carry pathogenic variants in the same recessive gene.

Semen quality is evaluated before donor samples are approved. Parameters such as concentration, motility, and post-thaw performance matter because frozen-thawed sperm must remain adequate for IUI or IVF. For more background on male fertility evaluation, readers may find information on semen analysis preparation and sperm count interpretation useful, but individual results should always be reviewed by a clinician.

Recipient evaluation before using donor sperm

Before treatment, the recipient or egg-providing partner typically undergoes a fertility assessment. This may include a medical history, menstrual and ovulation review, ovarian reserve testing, ultrasound, infectious disease screening, blood type and immunity testing, and assessment of the uterus and fallopian tubes when IUI is planned.

For IUI, at least one open fallopian tube is generally needed because fertilization occurs inside the body. If both tubes are blocked, IVF is usually required. Age, ovarian reserve, ovulation pattern, endometriosis, prior pelvic infection, and previous pregnancy history may also influence the recommended treatment pathway.

Consent is a major part of the workflow. Clinics commonly require signed consent forms covering use of donor gametes, storage and shipment of sperm, legal parentage acknowledgments, disposition of unused specimens, and privacy rules. Some programs also recommend or require counseling with a mental health professional experienced in donor conception.

The donation and treatment workflow

The practical process usually begins with a consultation at a fertility clinic. The team reviews the indication for donor sperm, compares IUI and IVF, discusses success probabilities in broad terms, and identifies any medical testing that should be completed before treatment.

Next, the patient or couple selects a donor. If using a sperm bank, they may

review donor profiles and choose vials prepared for IUI or IVF. Clinics may require approval of the sperm bank, documentation of screening, and a storage or shipping agreement. The sperm is then shipped to the fertility clinic or stored according to the clinic's laboratory protocols.

In an IUI cycle, ovulation may be tracked naturally or stimulated with medication, depending on the patient's situation. Around the time of ovulation, the donor sperm sample is thawed, washed if needed, and placed into the uterus using a thin catheter. The procedure is usually brief, though it can be emotionally intense because of what it represents.

In an IVF cycle, ovarian stimulation is used to mature multiple eggs. Eggs are retrieved in a procedure performed under medical supervision, then fertilized with donor sperm in the laboratory. Resulting embryos may be transferred to the uterus or frozen for later use. IVF may be favored when there are tubal factors, advanced reproductive age, significant ovulatory issues, prior unsuccessful IUI cycles, or a need for embryo genetic testing.

Emotional, ethical, and legal considerations

Donor sperm treatment can bring relief and grief at the same time. An intended parent with infertility may mourn a genetic connection while also feeling committed to parenthood. Single parents and LGBTQ+ families may face additional questions about social recognition, donor identity, and future conversations with the child. These feelings are valid and deserve space.

Many professional groups encourage early, age-appropriate openness with donor-conceived children. Families may benefit from planning language before pregnancy, not because every detail must be solved immediately, but because secrecy can become harder to maintain and may create distress later. Donor identity policies, sibling registries, and access to medical updates are worth considering before selecting a donor.

Legal advice is particularly important with known donors. Informal agreements may not adequately protect recipients, donors, or children. A reproductive law attorney can help clarify parental rights, donor non-parent status, consent, financial expectations, and what happens if relationships change. Laws differ substantially by location, so local expertise matters.

Questions to ask your fertility clinic

Preparing questions can help make consultations less overwhelming. Consider asking:

Which sperm banks or directed-donor programs does the clinic accept?
What infectious disease and genetic screening documentation is required?
How many vials should be purchased for IUI or IVF, and what type of vial is appropriate?
What are the clinic's policies for shipment, storage, consent, and unused samples?
Should the egg provider have carrier screening before donor selection?
Is IUI or IVF more appropriate given age, ovarian reserve, tubal status, and treatment history?
Does the clinic provide referrals for donor-conception counseling and reproductive legal advice?

It is reasonable to ask for time. Donor sperm decisions can affect future family conversations for decades, and careful decision-making is part of good care.