Lesbian Pregnancy: Donor Insemination

(Based on an article originally published in the American Fertility Association 2010 National Fertility and Adoption Directory. Much of this information will also prove useful for women contemplating single parenthood through donor insemination.)

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Two-mommy families are now commonplace in communities throughout the country. But unlike most heterosexual couples, who face choices involving fertility treatment only when pregnancy fails to occur naturally, lesbians must make a series of decisions prior to initiating efforts toward motherhood. Who will supply the sperm? Will the sperm donor be anonymous or someone who may one day meet the child or even have an ongoing role in the family? Will one or both partners wish to experience pregnancy and childbirth? Are there issues such as age or medical conditions that might help influence who gets pregnant and when? While all prospective parents face financial issues related to raising a child, these issues present themselves prior to pregnancy to lesbian women who may need to account for costs related to sperm, insemination, and possibly other related fertility treatments prior to initiating a pregnancy. Laws vary by state, and consultation with an attorney who specializes in reproductive and family law is recommended in order to discuss possible second- parent adoption or creation of a co-parenting agreement (to give both mothers legal status as parents once the child is born), or to define the role of a known sperm donor.

Safety of donor insemination

Before the 1980s inseminations were often done using freshly ejaculated donor sperm. Insemination with thawed cryopreserved (frozen) sperm was initially developed to facilitate expansion of the pool of donors whose sperm could be conveniently used by women across the nation. In 1985, a study was published in the Lancet documenting transmission of HIV to 4 of 8 women inseminated with thawed cryopreserved sperm from a donor later found to be an asymptomatic carrier of HIV. Safety concerns then quickly led to the policy that cryopreserved donor sperm be released for insemination only after quarantine of at least 180 days and repeat negative testing of the donor for HIV and other sexually transmitted infections (STIs).

To protect women from HIV and other transmissible infections guidelines have been established by the American Society for Reproductive Medicine (ASRM). These guidelines, most recently revised in 2008, incorporate information from the US Centers for Disease Control and Prevention, the US Food and Drug Administration, and the American Association of Tissue Banks. State regulations, such as those in New York, which require that all banks providing sperm to women in New York State obtain licensure from the New York State Department of Health, are also designed to minimize infectious risks.

ASRM Guidelines for donor screening include recommendations for obtaining a detailed personal and sexual history and performing a thorough physical examination to exclude prospective donors at increased risks for STIs. Laboratory testing for STIs, genetic screening for heritable diseases, testing for cystic fibrosis carrier status, and psychological evaluation and counseling are also included in the ASRM Guidelines. Commercial sperm banks should adhere to these guidelines. Reproductive Endocrinology/Infertility specialists can assist their patients in selecting a reputable sperm bank

Choosing a Sperm Donor

Commercial sperm banks provide detailed information about their donors including ethnicity, education, occupation, physical characteristics and special interests and abilities. Most offer more detailed donor profiles for a fee. Traditionally, sperm donation is anonymous, and sperm donors have no parental rights or obligations. Some sperm banks now also offer "identity release" or "ID consent" donors, men who agree to have their identity revealed to their offspring when they reach maturity, usually age 18.

Sperm donors are required to have semen characteristics that meet or exceed criteria for normal concentration, motility and morphology (shape). Sperm banks will generally also indicate if a donor has proven fertility.

Women using a known donor should arrange for the donor to undergo the same screening and testing undergone by anonymous sperm donors. This "directed donor" sperm can then be frozen, quarantined and released to the designated recipient after repeat testing of the donor at least 180 days later. The ASRM Guidelines recommend using only sperm from donors who fulfill the same stringent criteria as for anonymous donors. If the quality of the directed donor's sperm is suboptimal pregnancy is less likely to occur, and more aggressive fertility treatment such as In Vitro Fertilization (IVF) and Intracytoplasmic Sperm Injection (ICSI) may be indicated. Alternately, a woman could choose to switch to an anonymous donor with better semen quality.

Preparing for pregnancy

Optimizing your health prior to pregnancy can help minimize the risks of pregnancy and maximize the chance of having a healthy baby. A vitamin supplement containing at least 400 micrograms of folic acid should be started at least 3 months prior to pregnancy to help prevent neural tube defects such as spina bifida. Obese women should consider weight loss prior to pregnancy, both to increase fertility and to reduce pregnancy complications that can affect mother and baby. Consulting a nutritionist can help ensure adequate nutrition during pregnancy without excessive weight gain. Underweight women may want to gain a few pounds prior to pregnancy, especially if they have irregular menstruation. Cigarette smoking can reduce fertility and hasten menopause. Prospective mothers who smoke are urged not to wait until they are pregnant to quit. Marijuana has also been linked to reduced fertility. Women who take prescription medications should

consult with their doctor regarding the possible need to stop or switch medications prior to pregnancy.

Pre-pregnancy testing

Testing for STIs is routinely performed on women planning to undergo donor insemination. Testing for blood type and immunity to chicken pox and rubella (german measles) is also recommended, along with carrier screening for various genetic diseases, some of which are more prevalent in particular ethnic groups such as Ashkanazi Jews or those of African, Asian or Mediterranean descent. Physical examination, including pelvic and breast exam and Pap testing are also performed. Review of the medical history should focus on factors that may reduce fertility such as previous pelvic surgery or appendectomy, history of STIs, and advancing age. Fertility begins to decline in the early 30s, with a more marked decrease in the late 30s. Testing of "ovarian reserve" can help identify those women whose ovaries are aging more rapidly and who are more likely than other women their age to have difficulty conceiving. Basic hormonal testing for TSH and prolactin can help rule out subtle ovulatory dysfunction. Women with absent or irregular menses will require more comprehensive hormonal evaluation and treatment to establish normal ovulation. Women with regular menstrual cycles can undergo insemination in their natural cycle. Women at higher risk for tubal disease and women who do not become pregnant after 2-4 cycles of insemination should undergo hysterosalpingogram to check for tubal blockage or abnormalities of the uterine cavity.

Type of insemination

Intra-cervical insemination (ICI) involves placing semen in the outer part of the cervix, just as would occur with intercourse. This "turkey baster" method proved quite effective back in the day when use of fresh donor sperm was the norm. But with use of cryopreserved semen lower pregnancy rates with donor insemination were observed. Intra-uterine insemination (IUI) involves washing away the seminal plasma and injecting washed directly into the uterus, giving the sperm a "head start". Superior pregnancy rates are reported with IUI compared to ICI when using cryopreserved sperm for donor insemination.

Most sperm banks offer a choice between unwashed ("ICI") and washed ("IUI ready") sperm. Specific donors may be available as ICI, IUI, or both. Vials of sperm remain frozen in a tank of liquid nitrogen. On the day of each insemination a vial of sperm is removed from the tank and thawed. A tiny drop of the thawed sperm is examined microscopically. Washed "IUI ready" sperm is then immediately drawn up into a sterile catheter and inseminated into the uterus. The IUI procedure is usually painless and the experience can be compared to having a pap test performed. If you have experienced discomfort during pelvic examinations in the past you should discuss this with your doctor since modifications such as using a smaller speculum can reduce any discomfort. Women generally rest for 20 minutes after the insemination.

If IUI is recommended but only ICI sperm is available most fertility practices have laboratory facilities that perform sperm washing, making the sperm suitable for IUI. More than one vial of ICI sperm per insemination may be necessary for each IUI since one vial of ICI sperm may not yield a sufficient number of motile sperm after the wash.

If IVF is planned most programs prefer to prepare the sperm in their own laboratory and will recommend purchase of ICI or unwashed sperm from the sperm bank.

Timing of insemination

Inseminations are usually done on 2 consecutive days based on the triggering or detection of ovulation. Studies consistently show better pregnancy rates with 2 inseminations per cycle compared to only one.

Fertility Medications and Assisted Reproductive Technology (ART)

Most women begin the insemination process using their natural cycle. Per cycle pregnancy rates may be as high as 20-30% but decrease with advancing age. The majority of young women will get pregnant after 3-6 cycles of insemination. Women who do not conceive easily should consult with a specialist in Reproductive Endocrinology/Infertility, especially if they are over 35.

Women who do not ovulate regularly may be given fertility medications to induce ovulation. Fertility medications are also commonly given to women who do ovulate naturally to increase the odds of pregnancy. Fertility medications, some of which are given orally, others by injection, work by increasing the number of eggs released each cycle and helping correct subtle ovulatory dysfunction. Careful monitoring by a specialist in Reproductive Endocrinology/Infertility can help minimize potentially serious complications such as multiple pregnancy and ovarian hyperstimulation syndrome.

In vitro fertilization (IVF) involves fertilization in the laboratory rather than in the woman's fallopian tube. Pregnancy rates per cycle are generally higher for IVF compared to IUI. IVF involves stimulating multiple eggs to ripen with use of fertility medications. Following administration of medication to trigger ovulation a timed retrieval of the eggs is performed transvaginally under ultrasound guidance. The eggs are inseminated and checked for fertilization the next day. The fertilized eggs or preembryos are carefully maintained in the embryology laboratory for 3-5 days. Then the healthiest appearing embryos are selected for transfer to the uterus, in a procedure similar to IUI. Younger women usually receive only 1 or 2 embryos at a time, while older women can safely receive more embryos, since each embryo is less likely to implant. If good quality embryos remain in the lab they can be cryopreserved (frozen) for future use.

Even with IVF, pregnancy rates decline rapidly in the 40s. Most women who conceive with IVF in their mid to late 40s do so with the help of an egg donor. Pregnancies conceived with the help of both an egg and sperm donor are increasingly common. Egg donation has a unique application for lesbian couples, especially if the older of the two

women wishes to carry the pregnancy. The younger woman may be able to serve as the egg donor (genetic mother) while her partner serves as the egg recipient (birth mother). Laws vary by state, and legal consultation is strongly recommended. For example, in New York only the woman giving birth is legally recognized as the mother, and it is illegal to have a contract prior to birth stating that any woman other than the birth mother, even if she is the genetic mother, has parental rights. Only after the birth of the baby can arrangements for legal adoption be make in New York.

Conclusion

Planning for motherhood can be more complicated for lesbians than for heterosexual women. Organizations such as the American Fertility Association can help women of all sexual orientations find the medical, psychological, and legal resources they may need to assist in building their families.