

PVED Medical FAQ

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How many embryos are considered a good number in a donor egg cycle?

Since most fertility clinics transfer only two embryos or one embryo in an IVF cycle, it is not necessary to have a large number of embryos to achieve a healthy pregnancy. This is particularly true if the egg donor is young (e.g. under 32), rather than if the donor is older (such as with a “known” donor over 35). Nevertheless, when there are many embryos from one egg retrieval, the recipient is more likely to have extra embryos to freeze for future use. Having at least 6-8 fertilized eggs is certainly desirable, and frequently there are more than this.

How is embryo quality assessed?

The most widely used criteria for selecting the best embryos for transfer has been based on cell number and the appearance of the cells. Some programs identify early cleaving 2 cell embryos at 25 to 26 hours after insemination, because these may be more likely to lead to blastocysts and clinical pregnancies. By 42-44 hours after insemination, the best embryos have four or more cells and less than 20% fragmentation. Some embryos will have uneven or asymmetrical cells and some will have one or more cells that are disintegrating. Cellular fragments that result from this disintegration are only an indicator of quality when they are severe. By 72 hours, or Day 3 of development, the most favorable embryos consist of at least 6 cells, and an embryo with 7 or 8 cells is considered ideal. By Day 4, an embryo with high implantation potential should form a morula, and by Day 5, the top embryos form blastocysts. Blastocysts are graded by their degree of expansion and the appearance of the cells that ultimately form the baby (“inner cell mass”) and the placenta (“trophectoderm”).

Should we automatically request ICSI (intracytoplasmic sperm injection) for our DE cycle?

ICSI should be performed if sperm testing has revealed abnormalities that may affect the ability of the sperm to penetrate the egg. ICSI is also recommended if the couple has had a poor fertilization rate in a past IVF cycle. Many clinics will utilize ICSI if frozen sperm is being used, or if the man is taking a calcium channel blocker medication for hypertension or a heart condition. ICSI does not increase the chance of a live birth if the sperm quality is normal.

Estrogen shots vs. tablets vs. patches?

There are many different estrogen products that may be used to prepare the endometrium for the embryos. These include intramuscular injections of estradiol valerate (Delestrogen) every 3 to 4 days, twice or three times daily intake of oral estradiol, insertion of vaginal tablets of estradiol once or twice daily, or the continuous application of several estradiol skin patches. The length of treatment with estrogen and the dose of the medication affects endometrial development. Some clinics will use a combination of two of the above estrogen products in women who have a uterine lining that is slow to thicken. Vaginally administered estradiol and progesterone are absorbed well and lead to high endometrial levels of hormone.

Is it O.K. to combine the estrogen and progesterone shots into one syringe?

According to a pharmacist who is the director of a large national pharmacy, it may not be the best idea to mix the two products. The volume of the estrogen preparation is very small and you may have up to a 10% loss with any injection. This could result in a lower amount of estrogen injected than prescribed. However, there is no problem with mixing the preservatives of the two products, as long as you're injecting them right away.

What are typical hCG levels in early pregnancy?

Most women with a normal pregnancy will have an hCG titer greater than 50 if drawn 14 days after the egg collection. However, I've occasionally seen successful pregnancies when the initial hCG level has been less than this. From two weeks to four weeks after the retrieval, the hCG level should approximately double every two days. This expected rise in hCG slows when the titer is greater than 10,000. A recent medical study showed that the slowest or minimal rise for a normal viable intrauterine pregnancy was 53% over a two day period. A blood level may vary depending upon the equipment and laboratory assay method being used, so it is best to have your hCG blood tests drawn in the same lab.

Are there foods I should eat or avoid during my DE cycle?

Eating whole grains, beans, vegetables and whole fruits, all of which are good sources of slowly digested carbohydrates and fiber, helps prevent gestational diabetes, a common and worrisome problem for pregnant women and their babies. Minimize trans fats, the artery-clogging fats found in many commercial products and fast foods that increase insulin sensitivity. Eat more protein from plants and less from animals. Avoid fish like tuna and swordfish that are high in mercury. <http://www.thegreenguide.com/gg/pdf/fishpicks0607.pdf>

Should I avoid cold food and drinks – Is this a myth or is this possibly true? (My acupuncturist thinks cold food or drinks will cause a miscarriage – does this mean no more ice cream?)

According to traditional Chinese medicine (TCM) principles, "Cold in the Uterus" can make the uterus weak and affect embryo implantation and its subsequent nourishment by the mother's body. To prevent cold invasion, TCM practitioners may recommend that women take care not to consume cold drinks or cold food during the menses. Cold foods are raw fruit and vegetables. Vegetarians are advised to balance consumption of Cold foods with warming soups, teas and high quality protein. *"I suspect that your RE would be glad to give you permission to have a scoop of Haagen Dazs every once in a while as long as you agree to eat your green beans and take your folic acid daily."* - Dr. Hesla

TCM practitioners may recommend consumption of warming meats or meat broth during menses to those who can eat meat, fish or fowl. These TCM principles have not been studied for their scientific validity using methods of statistical analysis of data.

Do you have any advice for surviving bed rest?

Although there is a wide range of opinions on what activities (or lack thereof) are most likely to promote embryo implantation after transfer, most clinics recommend that patients take it easy for the first day after the embryos are placed inside the uterus. Please follow the advice of your doctor for your particular situation.

For bedrest:

Good movies - not ones that make you cry, but keep you entertained.

Good book that you've been wanting to read; but haven't gotten a chance to.

Eat bon bons (**not really**).

Have a healthy diet planned.

Visitors can be nice if they are uplifting.

Resist the internet if possible.

Listen to music that you find pleasurable.

Ask for help – Your partner or support person can assist you during bed rest.

Consider Dr. Alice Domar's "The Relaxation Experience" CD or tape

(https://www.domarcenter.com/store/relaxation_cd.html).

Suggestions to minimize injection soreness?

For all, using warm moist heat and massage after the injection helps the most. Make sure the injection actually gets into the muscle - injections that aren't given in the muscle but in the subcutaneous tissue can cause more irritation. Some like to use ice before the injection to ease the discomfort. Walking around after the injection helps distribute the medication (promotes blood flow).

Typical side effects of PIO (Progesterone In Oil)?

Side effects can include localized pain, itching, and redness at the injection site, a "lumpy" sensation under the skin, and a generalized rash. Additional effects that may occur include breast tenderness, headache, bloating, fatigue, insomnia, nausea, vomiting, and diarrhea. Patients who experience an allergic reaction that may be characterized as difficulty breathing, closing of the throat, swelling of the lips, tongue or face, or hives should seek emergency medical attention immediately. Such reactions are very rare.

What's an HSG and the purpose behind it?

An HSG, or hysterosalpingogram, is a radiologic test that evaluates the uterine cavity and fallopian tubes. A small catheter is inserted into the uterus during a speculum exam, and clear liquid is injected to fill the cavity and the tubes. Several x-ray images are taken to document the findings.

Recipient women may undergo this screening study before their treatment cycle to ensure that there are no abnormalities of the cavity, such as a submucosal fibroid, large polyp, or uterine septum that would affect the chance of the embryo implanting and growing well. If the HSG identifies a dilated, distally occluded fallopian tube (called a hydrosalpinx), the RE will usually recommend that the damaged tube be removed or proximally ligated (to tie or bind with a ligature or suture.) by laparoscopy before proceeding with IVF. A hydrosalpinx that is not ligated can leak tubal fluid into the uterine cavity, and this may impair the implantation of the embryo.

What are some of the common tests will I need before my DE cycle?

Studies that are commonly performed before donor egg IVF include a semen analysis, uterine cavity evaluation by hysterosalpingogram, hysteroscopy, or sonohysterogram, “mock” or “trial” embryo transfer (to make sure that the soft embryo transfer catheter passes easily through the cervical canal into the uterine cavity), and infectious disease testing. Also, many patients are asked to undergo a “mock” medication cycle, where the woman uses estrogen for two weeks to stimulate endometrial growth, and then an ultrasound study is performed to confirm appropriate endometrial thickness. The mock cycle aids in tailoring the medication protocol to meet the needs of the individual patient and her uterus. Another aspect of preparing for egg donation is a counseling session with a therapist who specializes in egg donation and parenting following egg donation.

What is a mock cycle?

See above.

Why does my RE measure my progesterone and E2 levels during the cycle and early pregnancy? What do the numbers mean? Does an increase or decrease in dosage mean something is wrong?

Women who conceive through egg donation take estrogen and progesterone to support the pregnancy. Since the recipient women have not ovulated during the treatment cycle, their ovaries are not making these hormones during the first few weeks. This support is critical until the placenta has grown enough to make these essential hormones. Programs may adjust the dose of hormonal medications in order to keep the woman’s blood levels of estradiol and progesterone in a certain therapeutic range. An increase does not usually mean that there is a problem that will lower the chance of pregnancy, and the medication doses may be decreased in a pregnant patient because the placenta is beginning to contribute to the total body pool of these hormones.

Why do I need Lupron if I have POF (Premature Ovarian Failure) or am menopausal?

Lupron controls the body’s production of estrogen and progesterone. Women who are still having menstrual cycles are usually treated with Lupron, even if they have high FSH levels, because the ins and outs of shared risk programs financing a DE cycle.

There are many different types of shared risk programs and any potential client making financial arrangements should carefully consider the economic implications of the “fine print” of any agreement.

What are the pro’s and con’s of PGD (Preimplantation Genetic Diagnosis)?

There are no substantive data at this time to indicate that routine performance of embryo biopsy for chromosomal analysis increases the chance of a live birth in a donor egg cycle, unless there is a known chromosomal abnormality (e.g. a translocation) of the man providing the sperm or the woman providing the egg. The latter is very rare. Embryo biopsy carries a small risk of damaging the embryo and reducing its viability, and the procedure may be quite expensive. It is sometimes performed by clinics when patients desire sex identification for family balancing.

What is FSH and what do my FSH levels mean?

FSH is follicle stimulating hormone. This is the hormone that is released by the pituitary gland to stimulate the growth of the follicle, which is a cyst in which the egg develops. Women with markedly elevated FSH levels have fewer eggs and usually have poor egg quality.

What is triple stripe or triple pattern?

A triple stripe pattern of the endometrium is frequently seen on ultrasound studies as the lining matures. The middle stripe is the innerface of the two walls of the endometrium, and the outer stripes are the interfaces between the endometrium and myometrium (muscle layer of the uterus).

Tell me what's important about my lining and its thickness during a donor cycle.

Most women develop a lining thicker than 7 mm by the time of the egg collection. A significantly thinner lining than this may be associated with an alteration of endometrial architecture that may affect implantation. Nevertheless, normal pregnancies have occurred in women whose endometrial thickness was only 4 mm.

How about acupuncture? How does that factor in with a donor cycle?

The small medical studies that have been performed to assess the relative efficacy of acupuncture have yielded mixed findings. Some have suggested a benefit if performed on the day of embryo transfer, whereas others have demonstrated no improvement in outcome. Any positive effect of acupuncture for donor egg recipients may be related to potential changes in uterine blood flow and motility and stress reduction. Many women find acupuncture to be very enjoyable.

Settle the age old debate please: "What's the deal with bed rest? Some clinics recommend it, others don't"?

You should follow the recommendations of your treating clinic, and not try to fret about this. A little rest is good for all of us!

What's more effective: PIO, Progesterone suppositories, Progesterone Gel, or Oral Progesterone?

All of these may be used in a donor egg IVF cycle. Oral progesterone is metabolized by the gastrointestinal system and its relative uterine levels may be much lower than other products. As a result, oral progesterone is not commonly used as a primary route of progesterone support during treatment. Since the recipient woman has not ovulated during her treatment cycle, her ovary does not make any progesterone to support an early pregnancy. The progesterone medications are critically important in promoting development during the first 9 weeks, when the placenta can take over the role.

Why do different clinics have different protocols?

Think of your RE as a chef. Every chef likes his/her own personal recipes, which have been influenced by the places where he/she received training. There are many good recipes for different meals, just as there are many effective approaches to prescribing fertility drugs. All protocols should be tailored to the individual woman's unique needs and her body's responses to the medications.

What is a blastocyst?

The blastocyst is an advanced embryo at Day 5-7 of development that consists of two primary cell lines, the inner cell mass, also known as the "embryoblast", and the trophoblast. The inner cell mass gives rise to all later structures of the adult organism. The trophoblast cells combine with the maternal endometrium to form the placenta.

What does 2pn mean?

It means that the egg has fertilized normally. The embryologist looks for the sign of this approximately 18 hours after insemination. One pronucleus contains the genetic material from the nucleus of the sperm, and the second one is from the egg. When the two fuse, the chromosomes combine to form a single "diploid" nucleus.

What is vitrification?

Vitrification is the process whereby the solution containing the embryos is cooled so quickly that the structure of the water molecules doesn't have time to form ice crystals and instantaneously solidifies into a glass-like structure. It is an exciting new technique to "flash freeze" embryos and eggs and minimize the damage caused by freezing and thawing of cells.

Caffeine during a cycle - bad or good?

Best to avoid if at all possible. Certainly, coffee consumption should be less than one cup per day. Consider water-processed decaf or, better yet, soothing herbal teas or juices.

Alcohol during a cycle - bad or good?

Need you ask? All tobacco products are a no-no, too, for women and their partners.

When do the shots typically stop?

This depends upon the individual patient and the program's treatment protocols. Some women can be managed with vaginal, oral and/or transdermal products without bleeding or other complications.

What is a subchorionic Hemorrhage?

A hematoma (pool of blood) that forms from a localized separation of the trophoblast (placenta) from the uterine wall.

What is a tear in the placenta?

A subchorionic hemorrhage.

Why is bleeding more common with DE IVF pregnancies?

No one knows for sure. It may be due to alterations in the structure of early developing placenta as compared to spontaneous conceptions.

How can I increase my uterine lining?

Some physicians will prescribe longer course of estrogen, higher doses of estrogen, supplemental vaginal estrogen in addition to another form of the product (oral, injection, patch). Some physicians recommend other approaches, such as a low dose of aspirin or administration of vaginal Viagra, although there is controversy regarding the relative efficacy of these latter therapies.

What is the purpose of flaxseed oil in a DE cycle.

Flaxseed is a rich source of alpha-linoleic acid, a plant source of omega-3 fatty acids. These types of fatty acids are constituents of the membranes of all cells in the body and are precursors of locally produced hormones, eicosanoids, which are important in the prevention and treatment of various diseases. An increased prostacyclin/thromboxane ratio induced by omega-3 fatty acid may theoretically facilitate pregnancy by increasing uterine blood flow. Supplementation with omega-3 FA during pregnancy lowers the risk of premature birth and can increase the length of pregnancy and birth weight by altering the balance of eicosanoids involved in labor and promote fetal growth by improving placental blood flow.

However, a recent laboratory study of mouse embryos showed that very high maternal dietary omega-3 polyunsaturated fatty acid exposure periconception reduced normal embryo development and was associated with perturbed mitochondrial metabolism. Whether this has any clinical correlations in humans is unknown, since there are little data to assess a dose-response effect in intake of these substances.

Does Pineapple really help with implantation?

My Google search has listed internet references that state that "Pineapple contains bromelain. Bromelain is a proteolytic enzyme that breaks up proteins that inhibit embryo implantation." However, I have not come across any medical studies that validate this hypothesis. Bromelain is digested by the GI system, and its metabolites may not affect the endometrium. I have done an extensive Medline computer literature search that references all articles published in major allopathic medical and scientific journals over the past 4 decades, and I could not find a single research study that supports this concept. **My recommendation is that you eat pineapple only if you enjoy it.**

Will Lupron cause me to have cancer later in life?

No.

How do immune issues play a role in IVF and implantation?

Implantation is an inflammatory reaction, and the immune system is involved with this process, as well as the complex mechanisms that prevent rejection of the embryo and fetus as tissue that is foreign to the mother.

What is IVIG?

Intravenous immunoglobulin. This is a controversial and expensive therapy that has been proposed for women with a history of recurrent miscarriages or recurrent implantation failures. The Practice Committee of the ASRM issued a statement in 2006 indicating that IVIG should be considered an experimental treatment for the management of recurrent pregnancy loss.

Can stress prevent implantation?

Excessive stress adversely affects many aspects of our general health, and stress reduction techniques appear to enhance the chance of conception.

What is hCG?

hCG is Human Chorionic Gonadotropin. Human chorionic gonadotropin (hCG) is a glycoprotein produced in pregnancy that is made by the embryo before implantation and later by the syncytiotrophoblast (cells that are part of the placenta). It is made to stimulate progesterone and estrogen production by the corpus luteum of the ovary. It also may promote the immune tolerance of the pregnancy.

What is a Beta test? Why is it called a Beta test, and what does it mean?

“Beta” refers to a unique carbohydrate and amino acid subunit of the HCG molecule. This is the part of the HCG structure that has been targeted and measured in immunological assays performed to determine whether a woman is pregnant. HCG is produced by the placenta after implantation and is measurable in the blood.

Why am I always 2 weeks farther along in pregnancy than I really am?

Pregnancies have been traditionally dated based upon the first day of the woman’s last menstrual period in the month in which she conceived, rather than the date that ovulation occurred. The OB wheel that your obstetrician uses to date your pregnancy assumes that your last menstrual period began 14 days before the eggs were retrieved and fertilized.

What is a good healthy heart rate for initial pregnancy?

It may be 100 beats per minute at 6 weeks, over 110 beats per minute at 6 ½ weeks, and over 150 beats per minute at 9 or more weeks of gestation. These numbers assume an average growth rate and accurate pregnancy dating.

What is a good healthy beta for a 3 day embryo transfer, how about a 5 day blast transfer?

A good titer would be over 50 when measured 11 days after a 3-day transfer and 9 days after a 5-day transfer. Often, the level is over 100 on these dates. However, normal pregnancies can occur with lower initial levels than these, and having a level over 50-100 does not guarantee a normal pregnancy.

endocrine and infertility issues. Prior to joining this practice Dr. Hesla was the director of in vitro fertilization and head of the reproductive surgery program at the Johns Hopkins Hospital. In 1993, Dr. Hesla founded and created the in vitro fertilization program at Emory University in Atlanta. More recently, he was the co-director of the successful in vitro fertilization program at the Colorado Center for Reproductive Medicine. Dr. Hesla has a medical degree from the Oregon Health Sciences University School of Medicine, and a bachelor degree from Harvard University where he graduated magna cum laude. Additionally, Dr. Hesla completed an obstetrics and gynecology residency at University of California at Los Angeles and fellowship in reproductive endocrinology and infertility from Johns Hopkins University and is nationally recognized for his care and treatment of infertility through his innovative methods of assisting couples achieve pregnancy.

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