

Money-Back Fertility Treatment Payment Plans

Money-Back Payment Plans

Money-back fertility treatment payment plans or shared risk plans are payment plans that offer unsuccessful patients a portion of their money back. They usually include two or three fresh IVF cycles followed by the transfer of resulting frozen embryos. Money – back fertility plans commonly include fertility financing programs, fertility medication program and some re-arrange or restrict benefits through employer (sponsor) or insurance plan. All together called the bundle.

Who Qualifies for Money-Back Fertility Treatment Payment Plans?

IVF programs that offer money back plans usually require certain age limits and normal to excellent ovarian reserve markers. Older women and those with low egg reserve usually do not qualify for such plans. Programs also place contingencies on ovarian reserve and transferring more embryos. Hence they exclude women interested in a single embryo transfer.

Some of the money – back fertility enterprise do not operate clinical IVF programs. They offer the financial scheme for payment and in some instances fertility drugs. They refer patients to clinics but do not conduct the treatment. The specifics of the couple may not coincide with the contingencies for money – back arrangement. The result is either you are alert to dismiss the plan or follow the plan and take your chances with the success rate. This is the most disturbing aspect of money-back fertility plans.

The delivery rates after fresh IVF in women commonly included in money back plans is close to 40% with single embryo

transfer, 50% with two embryo transfer. Use of frozen embryos add approximately 30% chance for delivery after transfer of frozen embryos from the first fresh IVF cycle. In other words they are the least likely to require multiple cycles in the IVF population. Moreover, they are the most likely to get pregnant with multiple babies. The cost for money back fertility treatment plan is maybe higher than a single fresh IVF cycle and a transfer of frozen embryos. Interest is associated with monthly payment plans. Medicine and multiple treatment cycles are also sometimes bundled. In addition cost can escalate due to obstetric care for multiple pregnancy.

At New York City IVF we educate women and recommend single embryo transfer up to age 38.

One opinion about money back fertility treatment plans is [New York State Department of Health Task Force Report: Executive Summary on ART](#)

Payment plans that offer unsuccessful patients a portion of their money back create significant ethical concerns.

Physicians whose payment depends on the success of treatment have an incentive to accept only those patients with a strong chance of success (perhaps patients who do not qualify as infertile under generally accepted standards) and to turn away needy patients whose outcome may be less certain. In addition, when payment is linked to outcome, physicians may encourage patients to accept aggressive treatments that increase the chance of success without due regard for the risk those treatments may entail.

Nonetheless, while the Task Force members are deeply troubled by the risks created by money-back payment plans, they do not believe that these plans are inherently unethical in all cases. Programs that offer money-back payment plans should clearly inform patients of all essential terms of the plan. No plan should require patients to provide a blanket consent

to all treatments and procedures recommended by their physician.

Patients enrolled in money-back payment plans should receive a prorated refund if they withdraw from treatment before they have completed all of the cycles covered under the plan. The most appropriate definition of "success" in the context of money-back payment plans is a live birth. The condition of the child should never be a factor in the definition of success

IVF programs can address this ethical question using different arrangement. Reducing fees for the second cycle as opposed to selling multiple cycles together would be one suggestion.

Endometriosis will not Lower IVF Success

Endometriosis will not Lower IVF Success

Effects of [endometriosis](#) on fertility treatment success has always been a controversy. When a woman is diagnosed with endometriosis, she receives multiple contradicting advises from multiple sources. It is very difficult for women to sort through these recommendations and pick the **one that are suitable for her symptoms and reproductive plans**. Indeed reproductive plans and symptoms are by far more important than the nature of the problem, anatomically, as well as what one reproductive surgeon or a fertility specialist think you

should do.

Reproductive Plans in women diagnosed with endometriosis

Simply do you want to have a baby or did you complete your family?. If you want to have a baby, then an initial infertility evaluation is required: testing for ovulation, [ovarian reserve](#), male factor and Fallopian tube patency is required. Sometimes other forms of pelvic imaging e.g MRI is needed to test for [ovarian cysts or endometriomas](#)..Endometriosis itself may require laparoscopy and biopsy for accurate diagnosis.

Women are then categorized according to findings: endometriosis only, endometriosis with other factor or endometriosis with low egg reserve. That will facilitate further advice.

One very important indicator that you are not talking to the right person if he or she did not complete the evaluation for male factor and egg reserve. These are essential tenets of fertility and failure to test them will have impact on success. It would be absurd to do surgery for endometriosis for example to discover later that you have a severe male factor that require IVF -ICSI.

If you desire future fertility, reproductive endocrinologists should tailor their advice to preserve reproductive tissues and minimize surgery. There is a strong evidence that surgery in the ovary reduces ovarian reserve, irrespective of technique used.

Pain in women diagnosed with endometriosis

If the main symptom is pain, in different forms, then medical or surgical treatment can be employed. in women who completed

their families. Medical treatment e.g non cyclic oral contraceptive pills or GnRH agonists (depot lupron) prevent pregnancy. From a practical stand point, surgery in many cases may not promote pregnancy in women with mild and severe endometriosis.

Women diagnosed with endometriosis and report pelvic pain should focus on getting pregnant. Pregnancy can suppress endometriosis for a long time after delivery

Fertility Treatment in Women Diagnosed with Endometriosis

Absolutely avoid doing surgery in the ovaries in women interested in pregnancy. This is crucial. Opening endometriomas and tripping their walls leads to significant loss of egg reserve. The only indication to remove endometriomas is if they are complicated e.g rupture or suspicion of malignancy. There are many reports of finding eggs in the wall of endometriomas after removal and reduction in egg reserve markers after surgery. Bilateral surgery for endometrioma can lead to menopause, irrespective of the skill of the surgeon.

In minimal and mild endometriosis with reasonable egg reserve, normal sperm analysis and open fallopian tubes, ovarian stimulation and IUI can be entertained in young women (38 years).

In women with moderate or severe endometriosis e.g endometriomas, blocked tubes.. or those with associated male factor infertility or low egg reserve, IVF yields a much higher pregnancy rate.

IVF Success in Women with Endometriosis

Recent analysis of IVF cycles performed in women with

endometriosis with or without other factors (tubal, male, unexplained infertility) indicates that

Isolated endometriosis is associated with similar IVF success and live birth to other infertility factors, though the number of eggs retrieved may be smaller.

Endometriosis when associated with other factors e.g male or tubal factor may have lower success rates. The live birth rate is still excellent 35 to 45% per cycle.

[Endometriosis-and-IVF](#)

Treatment of Endometriosis related pain

Both medical treatment and surgery are effective for treatment of pain. Endometriomas do not respond to medical treatment. Endometriosis on the peritoneum and other organs respond to medical and surgical treatment. Adenomyosis (endometriosis of the uterus) is a surgical disease and respond only to surgery.

In general medical treatment is successful but requires patience and can be used for a longer period of time with add back therapy.

If you are diagnosed with endometriosis there is wide range of treatment options. Treatment should be personalized to your reproductive goals and symptoms not to physician expertise and bias. There is really little controversy about what need to be done in each situation. Women just need to be specific about what they want: get rid of pain or have another baby. IVF success is not impaired in women with endometriosis.

Anatomy of Ovarian Stimulation Protocol for IVF

Anatomy of Ovarian stimulation Protocol for IVF

Understanding the anatomy of ovarian stimulation Protocol for IVF or how is the ovary stimulated to produce multiple eggs, helps you understand different medications you are administering prior to IVF. Understanding the endocrine make up of a woman is essential before selecting and optimizing a protocol including

- i. ovarian reserve (and predicting before starting treatment if she is a high, average or low responder)
- ii. Age and what is a reasonable response for a pregnancy to ensues
- iii. Differentiating between PCOS, hypothalamic amenorrhea and normal ovulatory women.
- iv. Other gynecologic problems e.g endometriosis
- v. other factors that may lower the response : prior ovarian surgery, medical disorders, chemotherapy exposure ..
- vi. What are the specific aims of IVF in addition to pregnancy e.g PGD..

After evaluating these factors for each woman, different options are selected for stimulation prior to IVF. There is o place for one protocol fits all. Its a diligent thinking of what works best, one patient at a time.

Adjuvants

These are medications given prior to menses or during the cycle to improve response to gonadotropins

Estradiol: oral or vaginal to synchronize the follicles, so that they are equal before starting stimulation so that they end the cycle close to each other at the time of egg retrieval

Antagonist: to prevent a premature growth of follicles prior to starting stimulation so that we obtain a synchronized group of follicle.

Oral contraceptive pills: we do not use birth control for timing of the cycle most of the time but sometimes to obtain a regular group of follicles before starting stimulation

Testosterone: testosterone gel for 2-3 weeks has been shown in randomized clinical trials likely because of sensitizing the ovary to the effects of stimulation medication. No other androgen preparation has been demonstrated to improve pregnancy outcome including DHEA.

Clomid or letrozole: these oral medications may improve response through release of internal FSH from the master gland.

Other medications suggested to improve response with weak evidence that they actually improve the pregnancy rates e.g Growth Hormone

Prevention of premature ovulation

One landmark improvement in stimulation protocols is the addition of medicine that prevents the master gland in the brain from triggering ovulation prematurely. Two options are available agonist or antagonist

Agonist in a short protocol (flare lupron) or long protocol

Antagonist starts during the cycle when the largest follicle

reach 14mm and estradiol level 300pg/mL

Each have its advantages and merits and they are generally used for women with different endocrine environment. Antagonist protocols gained more dominance in the past decade.

Gonadotropins

Two main types of gonadotropins exist in the US; Pure FSH and a mixed FSH + LH preparation. FSH is the main stimulating medicine but in some women the addition of LH improves the response. Many women receive mixed FSH and LH protocols.

The dose of such medicine starts at the highest dose then is drops gradually, the step down protocol. The initial dose depends on egg reserve, weight and expected response. Usually the maximum starting dose is a total of 450 units.

Some reproductive endocrinologists recommend Minimal stimulation IVF in select patients. There is no proof that the concept one healthy egg is correct. As a matter of fact many women produce many healthy eggs in the same cycle. There is no evidence that cycle for cycle they produce comparable pregnancy rate. Proponents of multiple stimulation recommend multiple cycles to produce multiple embryos.

Ovulation Trigger

When your reproductive endocrinologist perceive that the eggs are close to maturity, she or he employs a triggering agent to finalize follicle maturity and prepare the eggs for retrieval. Two agents are available

hCG given in muscle or under the skin. Its associated with higher incidence of ovarian hyperstimulation.

Agonist (Lupron) trigger given under the skin and has a short duration of action. It prevents ovarian hyperstimulation syndrome.

The Length of Stimulation

In general, shorter the stimulation the better the outcome. The earlier the the trigger shot is administered the better the quality of the eggs. Longer stimulation increases the exposure of eggs to gonadotropins and likely lower the quality of eggs.

Luteal phase Support

Every woman stimulated for IVF require luteal phase support as progesterone production after retrieval is defective. Two preparations exist

Progesterone in the muscle. This is the classic way of supplementing progesterone. Its very stable but require injections and also can cause allergy.

Vaginal progesterone. Recently introduced, used twice a day using an applicator in the vagina.

Many aspects of stimulation protocol need to be considered in each patient to ensure optimal stimulation of the ovaries, best possible egg yield and subsequently the highest number of good quality embryos and highest pregnancy rate. Sometimes changing the protocol is better for women than to continue with a protocol that is less productive and associated with low pregnancy rate. The talent, care and experience of reproductive endocrinologist is central to selection appropriate stimulation regimen

How to Select an Egg Donor

How to Select an Egg Donor

Egg donation entails the fertilization of eggs of a young woman and transfer of the resulting embryo or embryos into the intended mother uterus. In the majority of cases, women are interested in egg donation when their ovarian reserve is diminished in quantity and quality, commonly after multiple unsuccessful IVF cycles. The eggs of young women are usually high in quality making the chance for pregnancy and delivery very high. Women can select an egg donor from one of two pools



Egg Donors

Eggs from a Live Donor

An young woman is selected for donation, her ovaries are stimulated then eggs are retrieved. Two types of egg donors exist:

i. Known Egg donor

The egg donor is known to the intended mother. The donor could be a related e.g. sister or not a relative but agreed to open identity egg donation.

ii. Anonymous Egg donor

The egg donor is not known to the recipient. The majority of eggs donated are contributed by anonymous donors. If you select a closed identity donor you will still be able to know a great deal about her as age, ethnicity, religion, education, medical and family history, prior donations, physical features, childhood or even adult photo. Anonymous egg donors are usually recruited by a third party: IVF clinic or an egg donation agency.

Shared Donor cycle: Sometimes the eggs from one donor are shared between two recipients to reduce cost. Sharing however may yield lower chance for pregnancy per couple.

Donor Egg Bank

An egg bank will recruit the donors, stimulate their ovaries and freeze them. Recipient select from an already frozen inventory. The advantage is that they do not need to wait for a donor to be found, tested and her eggs harvested. In addition it is cheaper because only some of the eggs resulting from stimulation are obtained and no expenses incurred for donor travel and accommodation. On the other hand, it may yield lower chance for pregnancy (eggs are frozen and fewer of them are available). Donor selection is also restricted to available inventory of eggs that were already donated at an earlier time.

Results of Donor Egg Cycles Based on Donor Selection

Based on hundreds of thousands of donor egg cycles some general expectations of pregnancy and live birth rates can be made:

a. Anonymous cycles usually yields a higher pregnancy rates than known donors. Anonymous donors are selected on pure medical grounds first. They tend to have better ovarian reserve and are commonly younger than known donors. Many times

known donors are based on other grounds e.g sister donor or a friend that will donate without compensation

b. Donor egg cycles distributed to one recipient are more successful than those shared between two recipients due to more eggs and embryos being available for selection and transfer.

c. Fresh eggs from live donors produce more babies than frozen donor eggs. A study of 11,148 egg donation cycles performed in 380 U.S. clinics in 2013, including 2,227 that used frozen eggs indicated that

for each IVF cycle the live birth rates were 50% with fresh eggs, and 43% with frozen eggs and

for each embryo transfer, 56% of embryos created with fresh eggs resulted in a live birth, compared to 47% of embryos created with frozen eggs.

The Process of Selecting an Egg Donor

The process of selecting an egg donor is complex that involves you, your partner, your reproductive endocrinologist and sometimes other parties. The guiding principals for selecting a donor are

a. Selecting a donor with good ovarian reserve b. Protecting the mother from the transmission of infectious diseases
c. Protecting the babies from the transmission of genetic diseases d. Protection of the egg donor from potential complications of IVF e. Partners preferences.

Ovarian reserve: an egg donor should have an excellent ovarian reserve. This predicts excellent response to treatment with fertility medications and the collection of large number of mature good quality eggs. Egg reserve is assessed through history taking, vaginal ultrasound estimation of antral follicle count, day 3 FSH and estradiol assay and AMH levels.

Donors should be younger than 32 years and preferably younger than 30.

Infectious disease screening: donor are screened using first a thorough history and examination. Donor practicing in high risk behavior and those that lived in certain geographical areas are excluded. Lab tests are obtained for hepatitis B, hepatitis C, HIV I/II, Syphilis, gonorrhea and chlamydia. Other tests for infectious diseases could include testing for human T lymphocyte virus I/II, West Nile virus and South American trypanosomiasis. Tests are run at initial encounter then repeated in specialized labs within 30 days of retrieval to minimize the possibility of acquiring any of these infections at a later time.

Genetic screening: Extensive genetic and family history is first obtained from the donor. This is followed by screening for at minimal cystic fibrosis and any genetic disease related to donor ethnicity e.g hemoglobin abnormalities in African, Asian and Meditranean donors-Ashkenazi pannel in Jewish donors. Spinal muscular atrophy and fragile X syndromes are commonly also screened. More recently a universal genetic test that include 100 most common genetic diseases is routinely used. If an abnormality is found, a genetic counselor is consulted.

Donor related precautions: Egg donors should have the ability and intelligence to understand the process. This is evaluated by a trained psychologist. egg donors are counseled that the process does not impair their ability to conceive children of her own. Stimulation is tailored to avoid excessive stimulation and ovarian hyperstimulation syndrome. Donor are followed up after the procedure to monitor for any complications form retrieval and that the ovaries regained their normal size after stimulation.

Partners preference: Partners are offered a session with a psychologist to express their feelings about the process and

to discuss some of the early and long term aspects of the process including legal issues and disclosure to children when they reach maturity. Partners may prefer certain race or ethnicity e.g Asian, Jewish...Some agencies specialize in recruiting donors of specific demographics. Physical features are also strongly considered and discussed with couples. Academic achievements are also desired by many couples.

Other considerations: Male partner sperm analysis and labs are obtained. The mother is assessed for any medical disorder and the ability to carry a pregnancy safely. The uterine cavity is evaluated using hysteroscopy or saline sonography. The endometrium is evaluated for its response to hormones. The cervix is mapped to avoid difficult embryo transfer.

The process of egg donation is commonly satisfying to recipients, donors and physicians and is flexible to allow for safe selection of an egg donor and still consider your preferences and aspirations.

Egg Freezing what Do you Hope to Accomplish?

Egg Freezing what Do you Hope to Accomplish?

The best approach to motherhood is to actually try to get pregnant. Though methods of fertility preservation are very helpful, none is a guarantee to make a baby in the future. So the primary advice is "try to get pregnant if you can" after checking different fertility factors (male, tubal and ovarian

factors as well preconception screening). If getting pregnant is not feasible in the short term, due to medical or social issues, egg freezing is considered. *A reproductive endocrinologist is faced with the challenge of foreseeing if a specific woman, when stimulated and her eggs are harvested and frozen, has a reasonable potential to conceive using these eggs at one time in the future.*

Indication for Egg Freezing

Women should consider [egg freezing](#) when specific medical or age related situations threatens their ability to have a child in the future.

1. Fertility preservation: When a medical disorder or its treatment can diminish ovarian reserve and reduce the chance for conception e.g cancer treatment (most common is breast cancer), lupus nephritis requiring treatment with chemotherapy, blood diseases requiring bone marrow transplantation, premature ovarian dysfunction and others. About 2 weeks should be available for an egg freezing cycle.
2. Fertility extension (no male partner): women with no male partner and declining the use of donor sperm can freeze their eggs to use in the future when in a committed relationship.
3. Fertility extension (with a male partner): women with a male partner can elect to freeze some of their eggs unfertilized. Unfertilized eggs are under the control of the woman alone, unlike embryos that cannot be used without the consent of both partners.
4. IVF with failed sperm retrieval or ejaculation: In some cases with male factor with failed retrieval of sperm from the testes or failed ejaculation, eggs can be frozen and used later when sperm are available.
5. Children undergoing treatment for cancer and other diseases with the ascent of their parents.

What should you consider before proceeding to egg freezing

i. Women <38 years with good ovarian reserve: are excellent candidates for egg freezing. Good reserve is indicated by antral follicle count >10 as seen on vaginal ultrasound and AMH levels > 1.75 ng/mL. They will likely produce a good number of oocytes to freeze in a single cycle. These eggs are relatively healthy as they are young. Age <36 years was the best predictor of egg freezing so far in scientific reports.

ii. Women <38 years with diminished ovarian reserve: are still good candidates for egg freezing. They produce lower number of eggs after stimulation but their oocytes are relatively healthy (chromosomally normal). They can undergo more than one cycle of egg freezing if the first cycle yields <8 mature eggs.

iii. Women 38-40 years with good reserve: can still consider egg freezing with no further delay.

vi. Women 38-40 years with diminished ovarian reserve: should consider egg freezing with caution. They will not produce a good number of eggs and may require multiple cycles of egg freezing.

V. Women >41y are not good candidates for egg freezing even if they have a good reserve as the majority of their oocytes are not chromosomally normal. Although pregnancies were reported from vitrified oocytes up to age 44, the chance of pregnancy is quite low in women older than 40.

Realistic Expectations for egg freezing

Not only should the number and quality of eggs be considered, but also the survival of thawed eggs, fertilization and ultimate ability to implant. These issues are very sensitive to the method of ovarian freezing. Vitrification (rapid freezing) is not the method of choice for low temperature

storage of eggs due to high survival and subsequently fertilization and embryo development ([more details here](#) and [here](#)).

Survival on average 85% of vitrified thawed eggs survive, irrespective of age.

Fertilization approximately 80% of thawed eggs fertilize after injecting each with a sperm (ICSI).

Age specific chance for a live birth after thawing of vitrified eggs can be presented in different ways. The delivery rate is approximately 5 to 15% per thawed egg depending upon the female age at freezing. For example, if eggs are thawed and fertilized and three embryos were transferred to the uterus, the probability of delivery would be 25% at age 30 and 15% at age 40.

If a 35 year old decided to proceed with an egg freezing cycle and produced 10 eggs, 8 eggs were mature and frozen. When she present back 10 years later to utilize her eggs and thaw all of them 7 eggs are expected to survive, 6 eggs are expected to fertilize. If three embryos were transferred her chance for delivering a baby is 20% (the remaining three embryos are frozen). If The first cycle does not succeed and the next three embryos were transferred, her cumulative chance for having a baby from the original egg freezing cycle is approximately 40%.

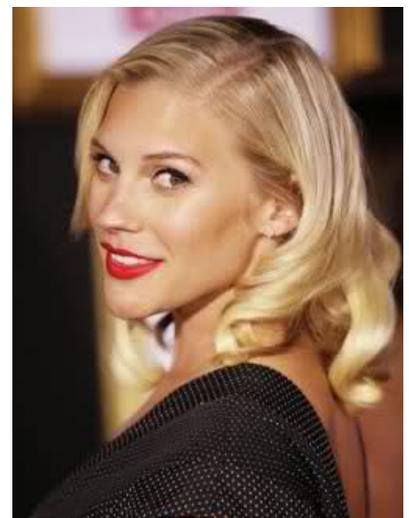
Sorting through statistics of egg freezing is difficult. No single clinic can present convincing statistic due to small number of egg thaw and transfer (not just egg freezing cycles). Most studies present select donors and selected women and not directly applicable to everyone. And then there is the safety issue and lack of long term follow up data related to safety and health of newborns.

Age is most important predictive of success of egg freezing followed by method of freezing. Vitrification much better than

older slow freezing methods. There is now reasonable body of data, though not definitive, that allows prediction of outcome for egg freezing using vitrification based on age and the expected number of retrieved oocytes. It is neither accurate nor scientific to label egg freezing with terms such as [reliable and guarantee](#). It certainly is not a guarantee of children. What is more productive is to i. try to avoid egg freezing through trying to conceive. If not possible, in a short while, then ii. understand your own personal chances of delivering a healthy baby through egg freezing and if they seem reasonable to you consider the procedure, taking in consideration the limitation of available data and filtering out the marketing hype.

Thyroid Cancer and Future Fertility

Thyroid Cancer and Future Fertility



Thyroid Cancer and

Thyroid cancer is diagnosed in 45,000 individuals each year in the US. Its treatment may affect future fertility in men and women. It is more common in women with female to male ratio of 3 to 1. It is the most rapidly rising cancer in women living in the US. Thyroid cancers are commonly diagnosed in young women in their reproductive years. Treatment of thyroid cancer generally yields excellent results, with the majority of women surviving 10 years or more after diagnosis. Some women develop thyroid cancer due to iodine deficiency in diet or prior neck radiation. Some types of thyroid cancers are related to inheriting an abnormal gene.

Several types of thyroid cancer are recognized 1. Papillary cancer 2. Follicular cancer 3. Medullary cancer 4. Anaplastic cancer 5. Thyroid lymphoma. Papillary and follicular cancers are less invasive tumors and are encountered in the majority of women diagnosed with thyroid cancer. They also respond to estrogen as they carry estrogen receptors. Estrogen may promote growth of thyroid cancer cells. Thyroid cancers are usually suspected on neck examination followed by ultrasound or Iodine scan then biopsy. In general, treatment of thyroid cancer require total thyroidectomy-surgical removal of the thyroid gland followed by radioactive iodine to ablate any thyroid remnants. This is followed by long term thyroid hormone replacement. Long term follow up is required after treatment.

Effect of thyroid cancer treatment on the ovary

Thyroidectomy followed by thyroid hormone replacement is not known to affect future fertility in men and women. Radioactive iodine can affect the number and quality of eggs remaining in the ovary. The effect is dependent on the dose of radioactive iodine and the age at treatment. Twenty to 30% of women

experience transient amenorrhea or irregular menses starting about 3 months after treatment. Normal menses resume about 6 months later. Permanent ovarian failure is rare but may occur in women at age 40 or older at the time of treatment. Increased incidence of miscarriage is reported in the first year after treatment. With the exception of miscarriages, there is no evidence that exposure to radioiodine affects the outcome of subsequent pregnancies and health of borne children.

Effects of radioactive iodine treatment on the testes

Effect of radioactive iodine treatment may be more severe in men. and is related to the total dose of radioactive iodine received. Transient reduction in testosterone and sperm count may occur but sometimes permanent reduction in sperm count and testosterone levels. Men who received large total dose sometimes sustain permanent damage to the testes with absence of ejaculated sperm-azospermia. There is no evidence of effects of radioactive iodine on their newborn children, although its advised that men avoid fathering children for 6 months after treatment.

Options for fertility preservation

Men interested in future fertility should consider sperm freezing prior to radioiodine treatment. Women should also consider fertility preservation if they will be treated with radioactive iodine and are older than 35 years. Radioiodine treatment will reduce their ovarian reserve. In addition they will be required to avoid pregnancy for a year or so. Options available for preservation of fertility in women include ovarian stimulation and egg retrieval followed by egg or embryo freezing. Ovarian stimulation can be modified to avoid estrogen exposure during stimulation. Moreover, in familial thyroid cancers, embryos can be genetically tested to avoid

transmission of the abnormal gene to children. Men and women diagnosed with thyroid cancer can benefit from consultation with a fertility preservation specialist prior to treatment to discuss effects on gonads and methods to preserve future fertility. Read more at <http://nycivf.org>

Ovarian Reserve Revisited-Do You Have Enough Good Eggs?

Ovarian Reserve Revisited-Do You Have Enough Good Eggs?

Trying to conceive over age 35 is generally not easy

I know because I tried for years to have a baby without success. While there are many factors which impact conception, one of the first concerns for women over 35 is if they have enough healthy eggs to get pregnant. Research has shown that women carry a reserve of eggs throughout their lives and that reserve diminishes over time. There are several tests which help to determine ovarian reserve including antral follicle testing, the clomid challenge and the AMH test which is relatively new.

The antral follicle test

Uses vaginal ultrasound to count and measure the small follicles, antral follicles, on the ovary. The higher the

number of antral follicles, the better ovarian reserve and better odds for conception.

The AMH Test

Anti-mullerian hormone test, measures the levels of AMH in a woman's blood. Since this hormone remains relatively constant over the menstrual cycle, it can be tested at any point in the month. Women with higher AMH levels tend to have a better ovarian reserve and a better chance at conception.

When I decided to try to conceive one last time at age 44

My [reproductive endocrinologist](#) began by ordering the *Clomid Challenge Test*. For the test, I took clomid, a fertility drug used to induce ovulation, for 5 days. Generally speaking, the procedure works like this:

- On Day 3 of your menstrual cycle, a blood test is given to measure your FSH, LH, and estradiol levels.
- On Day 5 of your cycle, you begin to take a 5-day supply of clomiphene citrate, 100 mg of clomiphene each day for five days.
- On Day 10, you will have another blood draw to check FSH, LH, and estradiol levels again.

Normal results include low FSH values on both Day 3 and Day 10, and low estradiol values on Day 3. Results are abnormal if your FSH values are elevated. Your doctor may decide to re-test if your results are abnormal.

My results were normal but that is a fraction of the total conception story and half of the ovarian reserve story. [Ovarian reserve](#) consists not only of the quantity of eggs but also the quality of eggs. Research tells us that while tests like the clomid challenge check for the quantity of

eggs, the quality of eggs is generally determined better by age. This is an unfortunate fact for those of us over 35.

According to Dr. James Toner in his paper "Ovarian Reserve, Female Age and the Chance for Successful Pregnancy", once women reach their mid thirties, specifically 37, their egg quantity begins to diminish at a faster rate. Tonor also reports that even if egg quantity is good, chances of a viable pregnancy drop due to the diminishing quality of eggs as women age.

Based on the research, it is clear that the averages do not look promising for women over age 35 trying to have a baby. There is, however, other information to consider. Let's take a look at the bell curve. Basically, about 2/3 of the cases for a given situation fall in the fat part of the curve meaning that averages generally apply to most people. However, there are still one third of the people who fall outside of the fat part of the bell curve and averages do not generally apply to them. As you look at your individual situation, it is your lab work, anatomy and physiology that matter. I am a classic example of defying the odds. My ovarian reserve quantity was good but that wasn't what was preventing me from conceiving a child. It took many more tests to determine that a badly placed uterine tumor was most likely preventing implantation. At age 44, the research showed that an average woman in my situation had only a 3% chance of having a healthy baby. Yet, I was able to conceive in two of 4 IUI treatments and gave birth to a healthy little girl 9 months ago at the age of 45.

There are many components to conceiving a child

Ovarian reserve is one of them. There are also many medical interventions to boost the odds of conception. Medical research provides us with excellent information about

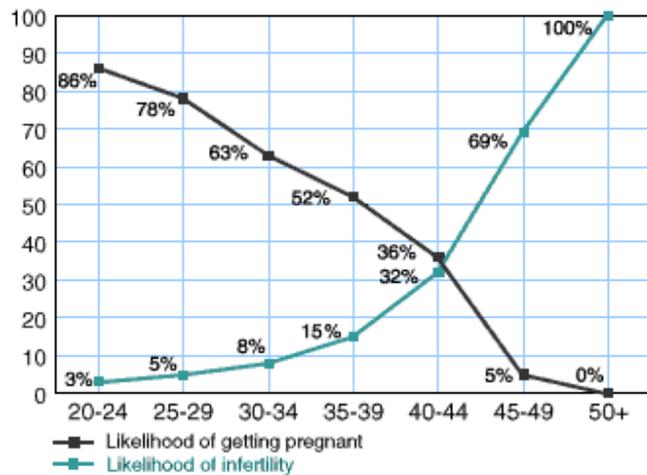
infertility and age including work on ovarian reserve. While the research tells us that the odds of getting pregnant in late 30's and 40's diminishes, one needs to remember that each woman is unique and she needs to work with her doctor to explore all options in her quest for pregnancy.

✘ *About the Author: Deborah Lynn is the creator/owner of Over 35 New Moms and a former corporate vice president. She holds degrees in Education, Kinesiology and pursued doctoral study in Physiology. She spent over 17 years working in the corporate environment and now focuses her time on raising her daughter and helping other women over 35 in their journey to have a baby. For more information, visit The Resource Guide for Pregnancy over 40 at <http://www.selfgrowth.com>*

[Fertility Options for Single Women](#)

Fertility Options for Single Women

Single women may face some challenges regarding fertility options: understanding them then picking one or more options, suitable for your reproductive plans. Clearly, a woman cannot delay pregnancy indefinitely, as the number of good quality eggs decline quickly in her 30s and older.



Decline in Fertility with age

Modern reproductive medicine enables single women to be mothers now and in the future. As with anything in reproduction, the younger you are, the more successful your efforts will ultimately be, irrespective of your choices. In addition, think of what would you accept: donor sperm? are you ready to get pregnant now or do you want to do that in the future?

Are you ready to Start a Family without a Partner?

This could be a difficult question considering the time, financial and emotional commitment of raising children without a male partner. A psychologist with expertise in reproductive issues can help women tackle issues as readiness and commitment, disclosure to children when mature, capitalizing on family resources, legal issues and many more. Some anonymous donors accept open identity in the future.

Starting a family without a male partner requires a selection of sperm donor. The sperm donor could be anonymous (from a sperm bank) or known (friend). In either cases, the donor is screened for infectious diseases (hepatitis B, hepatitis C, HIV, Syphilis, Gonorrhea and Chlamydia) and common genetic abnormalities. The sperm is quarantined then the donor is retested for infectious diseases. Tests are done in a

specialized high accuracy labs.

How to use donor sperm to achieve a pregnancy?

This is a question related to female ovarian reserve and other fertility factors. If the fallopian tubes are open, as indicated by HSG (hysterosalpingogram, X-ray of the tubes) then IUI (intrauterine insemination) is possible. Age is also an important factor. Women 38 or older have much higher chance of conceiving with IVF than IUI using frozen sperm. This issue require thorough evaluation by a reproductive endocrinologist.

On Starting a Family with a Partner in the Future

If the use of donor sperm is not acceptable, [egg freezing](#) is a viable option for women with reasonable ovarian reserve and younger than 40. Evaluation of antral follicle count using vaginal ultrasound and antimullerian hormone levels (AMH) can predict response to fertility medications and ultimate egg yield from the cycle. Age reflects well how many of these eggs are chromosomally normal. The ovaries are stimulated using injection medications. Eggs are retrieved under vaginal ultrasound guidance which is a minor procedure. Mature eggs are frozen 4 hours later using vitrification. Immature eggs are cultured for <24 hours and frozen if mature. The eggs can be stored for years to come.

If the number of eggs retrieved is low another egg freezing cycle can be attempted to freeze more eggs.

When pregnancy is desired the eggs are thawed and fertilized via ICSI (direct injection of the sperm into the egg) and the resulting embryos are transferred into the uterus after preparation of its lining. The pregnancy rate after egg freezing is close to fresh eggs and is age dependent.

These options allow single women achieve their reproductive goals while respecting their values and preferences.

Fertility Treatment: Do not be Distracted



Fertility Treatment: do not be distracted by worthless recommendation

Fertility Treatment: Do not be Distracted

When contemplating options for fertility treatment with your own eggs, it always boils down to continue frequent intercourse, ovarian stimulation / ovulation induction + IUI

or some form of IVF. During consultation or when weighing your options do not lose perspective of the big picture. Many suggestions may present themselves and serve to distract you. Men and Women load up on these distractions from the web, friends, primary care physicians or the couple themselves. Some of these recommendations are harmful because they shift the focus to non-proven interventions and most notably cause delay consultations with a reproductive endocrinologist and completing the infertility workup or starting treatment if needed.

Do not be distracted by these arguments

I am *Healthy*

Many women in America consider being healthy as being fertile. The media also bombard us with photos of beautiful women in their forties with babies. Truly many women, are in great shape with ideal body weight, exercise regularly, have no medical problems and feel great about themselves.

Fertility though speaks to a specific set of factors related to the ovaries, fallopian tubes and quality of sperm. Healthy women can have low egg reserve or blocked fallopian tubes or their partners have low sperm counts. Hence their fertility could be impaired. On the other hand, women not leading a healthy lifestyle or having a medical disorder can be very fertile if all fertility factors (tube, ovary, sperm) are functional.

I did not try enough

If you do not use birth control pills or condoms and you have having regular intercourse, then you are trying, irrespective of your conscious intentions. If you are you had regular intercourse for one year and are younger than 35 years or six months and 35 or older, then you have tried. Regular intercourse means two to three times a week. If you had

intercourse with reasonable frequency for 6 months to a year and you are not pregnant consult with a fertility specialist. There is a strong relationship between the length of trying and pregnancy rate. The longer that you have been trying, the lower the chance for spontaneous conception.

I did not time my ovulation

Timing your ovulation is not required at all if you are trying to conceive. Actually timing your ovulation maybe harmful to your chance to conceive. Because the methods you would use to time ovulation (cervical mucus, ovulation prediction kits, basal body temperature or intelligent thermometers and apps) are not accurate, you may miss valuable time and have intercourse at the wrong time if ovulation takes place unexpectedly early. Moreover, you cannot get higher odds for getting pregnant above and beyond having intercourse three times a week because sperm will be available all the time when you ovulate. Several studies failed to show any increase in pregnancy rates using many of these timing methods.

On Fertility Apps and other monitors

Many (>4 million) websites discuss times intercourse utilizing other methods (fertility monitor, cervical mucus, calendar methods, urine LH kits..). More recently [technology entrepreneurs](#) are delved into the “trying to conceive” area and volunteered advice. There is no evidence to support that any calculation method improves the odds of getting pregnant over frequent intercourse. These non-scientific advice is a major distraction. Even if these apps collected data on how many women got pregnant, without a comparison group, is not a prove that they actually work. [One study indicated that timed intercourse is associated with higher incidence of erectile dysfunction \(43%\) and extramarital sex \(11%\).](#)

My progesterone level is not optimal

For almost all women, low progesterone level is not a cause for infertility. In natural cycles, progesterone starts to rise after ovulation. Levels of 3 nanogram/mL or more indicates ovulation, Optimal levels to maintain the lining of the uterus are 8 to 10ng/mL. Levels less than 8 (luteal phase defect) may lead to miscarriage because progesterone is not adequate to maintain the lining of the uterus but it is not a cause for not getting pregnant (infertility). Progesterone is monitored, and supplemented if low, during fertility treatment but in itself low progesterone is not a cause for infertility.

On Clomid & Letrozole

Clomiphene is widely used as initial fertility treatment. This use is commonly not appropriate because

- a. clomid is used without infertility workup (checking ovarian reserve, sperm analysis and fallopian tubes)
- b. clomid is used without performing basic tests related to the safety of getting pregnant (infectious disease and genetic screening)
- c. clomid is used by women that are not likely to benefit from it e.g regularly ovulating women with low ovarian reserve and unexplained infertility. Women that are most likely to benefit from clomid are women with chronic anovulation e.g women with polycystic ovary syndrome (PCOS).
- d. clomid is commonly used with no monitoring using ultrasound. If you do not get pregnant, one would not know if you did ovulate or not. 10-20% of women do not respond to clomid. If you are destined to get pregnant, there is a possibility that you have many eggs developing in the ovary because you are unduly sensitive to the medicine. Strong response to clomid makes you at risk for multiple pregnancy

e. clomid is commonly use for extended periods of time while the majority of pregnancies take place in the first 3 months.

f. IUI is preferred to intercourse only, in clomid cycles because it can cause the cervical mucus to be thick. IUI bypasses the cervical mucus and deposit the sperm into the cavity of the uterus

g. Letrozole is similar to clomid regarding the use and indication but there is evidence that pregnancy is higher after letrozole compared to clomid.

Use clomid or better ltrozole for the right indication, with monitoring and for 3 (max 6) months only.

On Setting Time Limits

For each fertility treatment step: intercourse, ovarian stimulation + IUI or IVF define the number of cycles you will try before proceeding to the next step. Statistically, these treatments are more likely to succeed in the first three treatment attempts. Subsequently, the chance for getting pregnant diminishes and you and your physician should consider moving to another treatment.

Do not loose track of your age and ovarian reserve

You have normal fallopian tubes and partner sperm and you ovulate every month. Younger women are encouraged to try (have regular intercourse). The duration of trying on your own should be guided by ovarian reserve tests and age. Younger women with good reserve can try a bit longer than older women or women with low reserve. This recommendation should be based on scientific information not general perception. *Do not accept the advice 'keep trying' from any one without considering you age and without performing the tests for ovarian reserve (vaginal ultrasound, AMH and FSH on day 3).*

Female age is the most important factor in occurrence of a healthy pregnancy and should be the prime consideration even if ovarian reserve tests and other factors are normal.

There is a plethora of low quality information, recommendation and advice out there. Women accumulate them from multiple sources or just using their simple logic. They can lead to delay in fertility testing and fertility treatment that could be detrimental to future fertility.

Asian Women & Fertility Problems

Asian Women & Fertility Problems

Majority of **Asian Women and Men** agree that it is very important for them to have children. Unfortunately, many Asian couples face challenge trying to conceive naturally or using **fertility treatment**. The decline in **natural fertility** and the lower success of IUI and [IVF](#) in Asian women is documented in The US, UK, China, Japan, Korea and other Asian countries.

Fertility in Asian countries has declined to the population replacement rate 2.1 or lower. Many factors contribute to decline in natural fertility in Asian women;

Ovarian Reserve in Asian Women

When compared to Caucasian women, Asian women undergoing IVF significantly produce less eggs at all Anti-Mullerian hormone (AMH) levels, even in women with high AMH. AMH is the most

accurate marker for ovarian reserve.

Gynecologic and medical disorders that impairs fertility: PCOS, endometriosis and Systemic lupus (SLE) are more common in Asian women.

Vaginismus : may interfere with regular intercourse in some Asian women.

Environmental Factors: Asian women has more exposure to methyl Mercury and vitamin D deficiency.

Culture : surveys of Asian women and men indicate that they are less likely to consent to be contacted for fertility research, are fatalistic about failure to conceive, less informed about fertility issues, only 36 percent knew that chances of getting pregnant declined with age, and are less likely to suspect a male factor.

Asian women are commonly late at seeking care for infertility and overestimate the chance for getting pregnant.

Genetics : Many genes are likely involved. FMR1 is a gene on X chromosome responsible for Fragile X syndrome and its variants. High repeats at this gene may reduce ovarian reserve.

Fertility Treatment Outcomes in Asian Couples

1. Pregnancy and delivery rates are lower in Asian women following ovarian stimulation and IUI compared to white women
2. IVF: when compared to white women in the US, 31 per cent of the Asian women gave birth successfully compared to 48 per cent of the white women. Asian women were also less likely to become pregnant; 43 percent against 59 per cent even after control for many fertility factors. Endometrial lining was thinner in Asian women compared

to Caucasian women.

Asian women should be aware that [fertility treatment](#) may be less successful and seek care of a reproductive endocrinologist and fertility specialist as early as possible.

In addition there are other factors that require attention in Asian women during fertility treatment especially the higher prevalence of [chronic hepatitis B infection](#).

After conception, asian women at are a higher risk for gestational diabetes.