



病人教育

大學生殖保健部



體外人工受精

預期步驟

本手冊介紹體外人工受精的準備工作以及預期步驟。

本手冊提供有關這項手術的書面資訊，包括這項手術的風險、好處以及其他選擇方案。本手冊可作為你向醫生諮詢的補充資料。

你必須完全明白本資訊，這一點非常重要，所以，請在簽署同意書之前讀一遍本資訊並向醫生提出你的所有問題。

體外人工受精 (IVF) 和胚胎植入手術包括以下幾個步驟：

- **誘導排卵：** 首先，你將獲得一些藥物，以使許多卵子在你的卵巢內生長和成熟。
- **監視：** 你需要做血液和超聲波檢查，透過測量卵泡（卵囊）的生長和荷爾蒙上升的情況來監視你對這些藥物的反應。
- **激發：** 進行誘導排卵後，將為你注射另一種藥物，讓你的卵泡成熟並釋放卵子。
- **取卵：** 你需要接受取卵手術，此手術使用超聲引導穿刺針技術，並採取局部麻醉或全身麻醉。
- **卵子受精和選擇性輔助孵化：** 在實驗室中準備好你的卵子並用你的伴侶（或捐贈者）的精子使卵子受精。
- **胚胎植入：** 透過孵化過程而形成的胚胎（開始生長但仍然是很小的受精卵）將被移植回你的體內。進行移植時，會將一條導管（管子）透過你的子宮頸（子宮口）置入你的子宮內。胚胎將透過此導管植入。
- **植入後管理：** 醫生可能會給你開一些藥物以幫助移植（將胚胎附於子宮壁來實現懷孕），並幫助胚胎早期生長。

誘導排卵

有幾種藥物可用來生長卵泡並使你的卵子成熟。你的“大學生殖保健部” (URC) 的醫生將和你討論這些藥物的選擇。這些都是注射用藥物，透過肌肉或皮下注射送入你的體內。

在接受這些藥物期間以及之後至少 2 周內，你必須和你的 IVF 小組保持緊密聯繫。

監視

在接受藥物來刺激你的卵巢時，你將接受你的 IVF 小組的密切監視。這種監視可能是每天進行的。監視內容包括靜脈穿刺（抽血）和經陰道超聲波檢查。進行經陰道超聲波檢查時，醫生將超聲波探頭放進你的陰道內。探頭產生聲波，聲波在螢幕上生成圖像。

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如果監視顯示成功取卵的可能性較低，可能要停止誘導周期，並且不進行取卵。另一方面，如果你對誘導藥物反應太大，可能會停止使用這些藥物，並取消誘導周期，以防止過度刺激的危險。

在誘導周期第一部分期間，可能會要求其中一個或兩個伴侶服用一種口服抗生素，以降低在 IVF 期間所收集的樣本感染細菌的可能性。

激發

在監視誘導周期過程中，你的醫生將確定你的卵泡何時可以進行最後的成熟步驟。在這個步驟（亦稱為“激發排卵”）中，你將在取卵手術之前 36 小時注射一種藥物。

取卵

取卵手術是一種門診手術。你無需在醫院過夜。

手術是使用經陰道超聲波引導穿刺針技術來吸取卵泡（抽取卵泡的液體）。在此手術過程中，你將需要使用鎮定藥和/或麻醉藥。

在極罕見的情況下，這些麻醉藥物可能會給你的器官帶來風險。在麻醉過程中，你的體位可能會導致短期或永久性的神經損傷。在取卵手術過程中，你將被麻醉組密切監視，以便將這些風險減至最低。如果你的 IVF 醫療小組確定不應對你使用標準麻醉方法，可能會使用其他麻醉方法。

你的醫生在超聲波的引導下，將一根針插入你的陰道，並穿過陰道壁進入卵巢。然後用那根針將卵巢內的液體抽出。再用顯微鏡對這些液體進行分析，以確定卵子的位置。將從盡可能多的卵泡中抽出液體來搜尋卵子。

有少數婦女，不能通過其陰道進入卵巢。對於這些病人，需要採用腹腔鏡檢查或其他腹部手術來取卵。在腹腔鏡檢查中，使用一根細小光管（腹腔鏡）來觀察你的體內，並從腹部進入卵巢。如果你需要做另一種手術，你的 IVF 醫生將在取卵前向你說明該手術的步驟。

在取卵過程中，可能會做其他手術，以便使胚胎植入更為容易。這些手術可能包括將一根“牽引”縫線置入你的子宮頸上，幫助將子宮頸周圍的子宮頸管拉直。

在你的 IVF 周期開始之前，你的 IVF 小組將決定你是否需要做“模擬植入”。在模擬植入中，醫生將一條軟導管插入你的子宮，模仿實際的胚胎植入，藉以及早發現可能會出現的困難。

在取卵過程中，你可以選擇將一些卵子冷藏（冷凍）起來。此程序讓你可以在以後做 IVF。如果你患有癌症或某種慢性疾病，這也許是個很重要的選擇。並不是所有冷藏的卵子解凍後都能生存，以及並不是解凍後的卵子都會接受精子（這些卵子將不會受精）。

卵子受精

精子是在取卵之前從你的男性伴侶（或捐精者）收集的。這些精子用來讓從你體內取出的卵子受精。在某些情況下，亦可以在取卵的前一天收集精子以作備用。這些精子將用一種稱為冷藏的程序冷凍貯藏起來。

卵子取出後，你的卵子將由一個胚胎學家進行評估，並準備進行受精。胚胎學家專門研究胚胎的生長和發育。

可以用以下兩種方法中的一種嘗試受精：

- **授精**：將卵子放入一個培養皿內，讓卵子暴露於已清洗過和處理過的精子。
- **單一精子卵質內顯微注射 (ICSI)**：將單個精子直接注射進每個卵子。ICSI 比授精複雜很多，費用也更高。當用授精方法實現正常受孕的可能性顯得較低時，便會使用這種方法。

你的 IVF 小組將根據你的不育史、過去沒有成功的生育治療，以及你的精子和卵子的數量或質量來決定你需要採用授精方法還是 ICSI 方法。他們可以回答你對這個決定提出的任何問題。

選擇性輔助孵化

你的 IVF 小組將用顯微鏡對你的胚胎進行評估，以決定是否應該對任何胚胎進行“選擇性輔助孵化”。此程序經常用來為胚胎移植做準備。是否需要做這個手術是根據每個胚胎的外表、女性伴侶的年齡，以及女方的病史來決定。

你將會得到一本“輔助孵化”手冊，你的 IVF 醫生將會和你討論輔助孵化手術。

胚胎植入

取卵後大約 3 至 5 天，醫生將幾個發育的胚胎用一根導管穿過你的子宮頸植入到你的子宮內。不能保證任何植入的胚胎都將導致懷孕。

你的 IVF 小組將根據你的年齡、胚胎質量以及其他醫療因素等準則來決定植入多少個胚胎。他們選擇的數量將可獲得最高的懷孕可能性，同時使多胞胎（同時懷上多於 1 個嬰兒）的可能性減到最低。**你將會獲得另一本由“美國生殖醫藥協會”編寫的資訊手冊，叫做“植入胚胎的數量準則”。**你的 IVF 醫生亦會和你討論這個問題。

有些胚胎可能會被作為**受精卵**（受精的卵子，第 1 天）、**分裂期胚胎**（第 2 至 4 天），或**胚泡**（第 5 至 7 天）來冷藏，以便可以在以後的 IVF 周期中使用。**胚胎冷藏需要更多步驟以及更多費用。**

如果考慮胚胎冷藏，你將會得到另一份有關這方面的資訊手冊，你的 IVF 小組將會和你討論這個問題。

移植後管理

爲了增加成功移植的機會，會給你注射荷爾蒙黃酮體。給予黃酮體是透過肌肉注射，或用陰道栓劑，或用陰道藥丸執行的。通常，要持續使用黃酮體，直到用超聲波證實懷孕爲止，甚至在懷孕初期，亦可能需要繼續用藥數周。在此期間，你需要按照你的 IVF 小組的指示進行荷爾蒙評估。

被丟棄的物質

IVF 治療完成後，會有一些未用過的生物物質（組織），包括精子、未成熟或未受精的卵子，以及不正常或停止生長的前胚胎（已停止發育的胚胎）。

這些未用過的物質將被：

- 丟棄
- 或者
- 用於培訓目的或用於促進醫學科學的研究

如果這些物質用於培訓或研究，將不會產生新的胚胎或懷孕。爲了保護病人的隱私，在將這些物質用於培訓或研究之前，將會刪除掉會將你和你的伴侶或醫生與這些生物物質聯繫起來的所有資訊。

任何時候，如果你決定不想以這種方式來使用未用過的組織，請告訴我們。你的決定不會對你參加 IVF 治療有任何影響。

有哪些選擇方案可用來處理 IVF 產生的多餘胚胎？

如果你的 IVF 手術產生太多胚胎（多於選擇的植入數量），可以將多餘的胚胎冷藏，但取決於這些胚胎的質量。爲了減低這些胚胎在運送過程中受到損害的風險，在 IVF 完成後的頭幾個月，會將它們冷藏並貯存在胚胎實驗室裏。

要長期貯存，便要將胚胎移送到商業冷庫設施。該設施將承擔並管理與維護你的胚胎相關的所有責任。

如果考慮冷藏貯存，**你將得到一本“胚胎冷藏”手冊**，你的 IVF 小組將會和你討論冷藏貯存問題。

IVF 有哪些好處？

你可能從這種治療獲得以下好處：

- 懷孕
- 多餘的胚胎可被冷藏起來供你將來生孩子用

URC 的醫生和工作人員不能保證此項手術的每個步驟都能成功，以及治療過程將導致懷孕，或懷孕將能生出一個健康的，滿月的嬰兒。只有你可以決定做 IVF 可能的好處是否值得你去冒這種手術的風險。

這種治療可能會帶來哪些風險和並發症？

- 誘導排卵藥物是採用肌肉注射或皮下注射的。這可能會導致注射部位瘀傷和不適。
- 誘導排卵藥物有些共同的副作用：
 - *Lupron*：疲倦、肌肉和關節痛，以及短期的類似於停經的症狀（頭痛、臉潮紅、情緒不穩定、出汗、失眠、疲倦等）。
 - *Clomiphene citrate*：臉潮紅、腹脹、腫脹、頭痛，以及視力改變。
 - *Letrozole*：臉潮紅、頭暈、頭痛、輕微液體滯留、噁心和大便習慣改變、關節和肌肉痛，以及疲倦（用此藥誘導排卵稱為“仿單核准適應症外使用”。其意思是此藥原本不是批准用於此目的，但開此藥用於此目的卻是合法的）。
 - 促進腺激素藥物（例如 Repronex、Menopur、Gonal-f、Follistim、Bravelle、Luveteris）：頭痛、乳房痛、噁心和大便習慣改變、肚痛、注射部位反應，以及過度刺激卵巢會導致卵巢過度刺激症候群（OHSS），這種病會使卵巢腫大，導致體內液體轉移。**你將得到一本手冊**，手冊名稱是“卵巢過度刺激症候群”，你的 IVF 小組將和你討論有關 OHSS 的問題。
 - 人類絨毛膜性腺激素（Novarel、Ovidrel）：注射部位反應以及出現 OHSS。
 - 黃酮體：注射部位反應、乳房痛、噁心、腹脹、便秘。
 - 抗生素：陰道酵母菌感染、噁心，或肚痛。
 - 口服類固醇：長期使用可能導致骨質疏鬆症以及更容易受感染的風險；短期使用（例如用於 IVF），副作用則很少。

此外，某些研究顯示生育藥物可能會增加罹患卵巢癌的風險。

- 當你使用上述誘導排卵藥物時，你可能需要每天抽血檢查。在打針的靜脈部位會有輕微不適和瘀傷的風險。經陰道超聲波檢查亦會產生某些不適感覺，但目前仍不知道這些檢查是否有醫療風險。

有任何問題嗎？

你的問題很重要。如果你有任何問題或疑慮，請致電你的醫生或其他 UWMC 保健提供者。

大學生殖保健部：
206-598-4225

網站：
[www.uwmedicine.org/
uwfertility](http://www.uwmedicine.org/uwfertility)

- 與取卵手術相關的風險包括：

- 感染
- 出血
- 其他腹部和盆腔器官受傷（罕見）

如果你出現感染，你可能需要住院接受靜脈注射抗生素。如果出現陰道出血，你的醫生可能需要為用超聲波引導的穿刺針進入的部位縫針。在極少情況下，如果出現內部出血（在你的卵巢、子宮或盆腔中的血管內），或者如果你的醫生懷疑損傷了其他器官，你可能需要入院治療。在醫院裏，你將會受到監視，並且可能需要輸血，和/或接受腹腔鏡檢查或腹部手術（腹部外科手術），以止血和修復損傷部位。

- 胚胎植入手術可能會引起某些痙攣、不適，以及小量出血。插入導管的部位有時會出現感染，但這種情況十分罕見。這出現感染時，需要用抗生素治療。
- 植入子宮的胚胎，如果數量較多和質量較好，會使 IVF 的成功機增高。但是，IVF 通常會使你有較高的多胞胎風險，當植入較多胚胎時，這種風險亦會增高。

多胞胎的風險包括：

- 早產
- 分娩出造成嬰兒，需要進行深切治療並可能會因早產而導致長期並發症

早產和分娩還可能使母親面臨剖腹產、出血和感染等更大風險。

- 有時候，IVF 小組會在將要收集卵子之前決定取消取卵。當發現的卵子數量似乎太少時，當找不到活精子時，或者因為其他醫療原因，便會取消取卵。

這種治療有哪些備選方案？

你可以決定不做 IVF 治療。你可以決定繼續進行其他生育治療，例如誘導排卵和宮腔內人工授精。其他可選擇的方案包括收養或保持沒有小孩。

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In vitro Fertilization

Chinese - Traditional

Published: 07/2010, 08/2011, 11/2011

Clinician Review: 11/2011

Reprints on Health Online: <http://healthonline.washington.edu>



In Vitro Fertilization

What to expect

This handout describes how to prepare for and what to expect when you have *in vitro* fertilization.

It provides written information about this process, including risks, benefits, and other options. This material is in addition to the talks you have with your doctors.

It is important that you fully understand this information, so please read this information packet thoroughly and ask questions before signing the consent form.

There are several steps involved in the *in vitro* fertilization (IVF) and embryo transfer process:

- **Ovulation Induction:** First, you will receive medicines to cause many eggs to grow and mature in your ovaries.
- **Monitoring:** You will have blood and *ultrasound* tests to monitor how you are responding to the medicines by measuring the growth of *follicles* (egg sacs) and rise in hormones.
- **Triggering:** After ovulation induction, another medicine is injected to prepare your follicles to mature and release eggs.
- **Egg Retrieval:** You will have an egg retrieval procedure using an ultrasound-guided needle technique, under either intravenous sedation or general anesthesia.
- **Egg Fertilization and Selective Assisted Hatching:** Your retrieved eggs will be prepared and fertilized in the laboratory using your partner's (or donor's) sperm.
- **Embryo Transfer:** *Embryos* (fertilized eggs that are beginning to grow but are still microscopic) that result from the fertilization procedure will be transferred back to your body. To do this, a *catheter* (tube) will be placed through your *cervix* (uterine, or womb, opening) into your *uterus* (womb). The embryos will be transferred through this catheter.
- **After-Transfer Management:** You may receive medicines to support *implantation* (attachment of embryos to the wall of the uterus to achieve pregnancy) and early embryo growth.

Ovulation Induction

There are several possible medicines that may be used for developing follicles and maturing your eggs. Your University Reproductive Care (URC) doctor will discuss these choices with you. These medicines are given by injections that are either *intramuscular* (into the muscle) or *subcutaneous* (under the skin).

It is important that you stay in close contact with your IVF team during the time you are receiving these medicines and for at least 2 weeks afterward.

Monitoring

While you are receiving the medicines to stimulate your ovaries, you will be closely monitored by your IVF team. This monitoring may be as often as every day. It will include *venipuncture* (blood draw) and *transvaginal* ultrasound exams. In a transvaginal ultrasound, the ultrasound probe (*transducer*) is placed in your vagina. The probe produces sound waves, which create pictures on a screen.

If the monitoring shows that there is likely to be a low chance for successful egg retrieval, the induction cycle may be stopped and no egg retrieval will be done. On the other hand, if you are showing too much response to the induction medicines, they may be stopped and the cycle canceled to prevent the risks of overstimulation.

Either one or both partners may be asked to take an oral antibiotic during the first part of the induction cycle. This is to reduce the chance that bacteria may be present in the samples collected during IVF.

Triggering

During cycle monitoring, your doctor will determine when your follicles are ready for the final steps of maturation. In this step, also called “triggering ovulation,” you will inject a medicine 36 hours before having the egg retrieval procedure.

Egg Retrieval

The egg retrieval procedure is an *outpatient* procedure. You will not stay overnight in the hospital.

The procedure is done using a transvaginal ultrasound-guided needle technique to *aspirate* (draw liquid up from) the egg *follicles*. You will need sedation and/or anesthesia during this procedure.

In rare cases, these anesthetic medicines may involve risks to your organs. Your position during anesthesia may cause short-term or permanent nerve damage. You will be closely monitored by an anesthesia team during the egg retrieval procedure to minimize these risks. If your IVF team determines you should not have standard anesthesia, other forms of anesthesia may be used.

Guided by ultrasound, your doctor will insert a needle through your vaginal wall and into your ovary. The fluid inside your ovary will be drawn out through the needle. This fluid will be analyzed under the microscope to locate the eggs. The fluid from as many follicles as possible will be drawn out to search for an egg.

For a few women, it is not possible to reach the ovaries through their vagina. For these patients, *laparoscopy* or another abdominal procedure is needed to do the egg retrieval. In laparoscopy, a thin, lighted tube (*laparoscope*) is used to see inside your body and reach the ovaries from the abdomen. If you need a different procedure, your IVF doctor will talk with you about it before your egg retrieval.

During the egg retrieval, other procedures may be done to make the embryo transfer easier. These may include placing a “traction” *suture* (stitch) on your cervix to help straighten the canal around the cervix.

Your IVF team will decide whether you will need any of these procedures by doing a “mock transfer” before your IVF cycle begins. In a mock transfer, your doctor will insert a soft catheter into your uterus to mimic the actual embryo transfer. By doing this, potential difficulties can be discovered beforehand.

During egg retrieval, you may choose to have some eggs *cryopreserved* (frozen). This process allows you to have IVF at a later date. This may be an important option if you have cancer or a chronic disease. Not all eggs that are frozen will survive after being thawed and not all eggs that are thawed will accept sperm (these eggs will not fertilize).

Egg Fertilization

Sperm is collected from your male partner (or donor) before the egg retrieval. This sperm is used to fertilize your retrieved eggs. In some cases, sperm may also be collected before the day of egg retrieval to use as back-up. This sperm will be frozen in a process called *cryopreservation*.

After your egg retrieval, your eggs will be evaluated and prepared for the fertilization process by an *embryologist*. An embryologist specializes in the growth and development of embryos.

Fertilization may be tried in 1 of 2 ways:

- **Insemination:** The eggs are placed in a culture dish and are exposed to sperm that have been washed and processed.
- **Intra-Cytoplasmic Sperm Injection (ICSI):** A single sperm is directly injected into each egg. ICSI is more complicated than insemination and may be more costly. It may be used when the chances of normal fertilization by the insemination method appear low.

Your IVF team will decide whether you need insemination or ICSI, based on your history of infertility, fertility treatments in the past that have not worked, and your sperm and egg quantity or quality. They can answer your questions about this decision.

Selective Assisted Hatching

Your IVF team will evaluate your embryos with a microscope to decide whether “selective assisted hatching” should be done with any of them. This procedure is often done to prepare the embryo for implantation. The decision to do this procedure is based on the appearance of each embryo, the age of the female partner, and the female’s medical history.

You will be given the handout “Assisted Hatching,” and your IVF doctor will talk with you about it.

Embryo Transfer

About 3 to 5 days after egg retrieval, several of the embryos that develop will be transferred to the inside of your womb using a catheter passed through your cervix. There is no guarantee that any of the transferred embryos will result in pregnancy.

Your IVF team will decide how many embryos to transfer, based on guidelines that take into account your age, embryo quality, and other medical factors. The number they choose will allow for both the best chance of pregnancy and the lowest chance of *multiple gestation* (being pregnant with more than 1 baby at the same time). **You will be given a separate information handout from the American Society for Reproductive Medicine** titled, “Guidelines on number of embryos transferred.” Your IVF doctor will also talk with you about it.

Some embryos may be cryopreserved as *zygotes* (fertilized eggs, day 1), *cleavage-stage* embryos (day 2 to 4), or *blastocysts* (day 5 to 7) for possible use in a later IVF cycle. There are more steps and costs that are needed for embryo cryopreservation. **You will be given a separate information handout** about this if it is being considered, and your IVF team will talk with you about it.

After-Transfer Management

To increase the chances of successful implantation, you may be given the hormone progesterone. This will be given either by intramuscular injection, vaginal suppository, or vaginal pills. Usually, the progesterone is continued until pregnancy is confirmed by ultrasound, and it may even be continued for several weeks in early pregnancy. During that time, you may need to have hormonal evaluations as instructed by your IVF team.

Discarded Material

After the IVF treatment, there may be unused biological material (tissue), including sperm, immature or unfertilized eggs, and abnormal or *arrested pre-embryos* (embryos that have stopped developing).

These unused materials will be:

- Discarded
- OR
- Used for training purposes or in research for the advancement of medical science

If the material is used for training or research, no new embryos or pregnancies will be created. To protect patient privacy, all information that links you and your partner or donor to the biological material will be removed before the materials are used for training or research.

Please tell us if at any time you decide that you do not want to have unused tissues used in this way. Your decision will not have any effect on your participation in IVF treatment.

What are the options for extra embryos created from IVF?

If your IVF procedure results in too many embryos (more than the number selected for transfer), the extra ones may be cryopreserved, depending on their quality. To lower the risk of damaging these embryos during transport, they will be cryopreserved and stored at the embryology lab for the first few months after your IVF.

For long-term storage, the embryos will be moved to a commercial cryobank facility. That facility will assume and handle all responsibilities related to maintaining your embryos.

You will be given a handout “Embryo Cryopreservation” about this if it is being considered, and your IVF team will talk with you about it.

What are the benefits of IVF?

You might receive the following benefits from this treatment:

- Pregnancy
- Additional embryos may be cryopreserved for your future family-building

URC doctors and staff cannot guarantee that any of the steps in the process will succeed, that the treatment process will result in pregnancy, or that the pregnancy will result in delivery of a healthy full-term newborn. Only you can decide if the possible benefits of having IVF are worth the risks.

What are the possible risks and complications from this treatment?

- Ovulation induction medicines are given by intramuscular or subcutaneous injections. This may cause bruising and discomfort at the injection site.
- Ovulation induction medicines have some common side effects:
 - *Lupron*: fatigue, muscle and joint pain, and short-term menopause-like symptoms (headaches, hot flashes, mood swings, sweats, insomnia, fatigue, etc.).
 - *Clomiphene citrate*: hot flashes, abdominal distention, bloating, headache, and changes in vision.
 - *Letrozole*: hot flashes, dizziness, headaches, mild fluid retention, nausea and changes in bowel habits, joint and muscle pain, and fatigue. (Using this medicine for ovulation induction is called “off-label use.” This means this drug was not originally approved for this purpose, but it is legal to prescribe it for this use.)
 - *Gonadotropins* (such as Repronex, Menopur, Gonal-f, Follistim, Bravelle, Luveris): headache, breast pain, nausea and changes in bowel habits, abdominal pain, injection site reactions, and over-stimulated ovaries that can lead to *ovarian hyperstimulation syndrome* or OHSS, a condition that causes the ovaries to become swollen, which may result in fluid shifts in your body. **You will be given the handout “Ovarian Hyperstimulation Syndrome,”** and your IVF team will talk with you about OHSS.
 - *Human chorionic gonadotropin* (Novarel, Ovidrel): injection site reactions and OHSS.
 - *Progesterone*: injection site reactions, breast pain, nausea, bloating, constipation.
 - *Antibiotics*: vaginal yeast infections, nausea, or abdominal pain.
 - *Oral steroids*: long-term use may lead to osteoporosis and greater risk of getting infections; in short-term use (as for IVF), very few side effects are expected.

Also, some studies suggest that fertility medicines may increase the risk of developing ovarian cancer.

- While you are receiving the ovulation induction medicines described above, you may need to have blood drawn as often as every day. There is a risk of mild discomfort and bruising at the venipuncture site. Transvaginal ultrasound exams also may cause some discomfort, but there is no known medical risk from these.

Questions?

Your questions are important. Call your doctor or other UWMC health care provider if you have questions or concerns.

University
Reproductive Care:
206-598-4225

Website:
[www.uwmedicine.org/
uwfertility](http://www.uwmedicine.org/uwfertility)

- Risks related to the egg retrieval procedure include:

- Infection
- Bleeding
- Rarely, injury to other abdominal and pelvic organs

If you develop an infection, you may need to be admitted to the hospital to receive IV antibiotics. If you develop vaginal bleeding, your doctor may need to stitch the site where the ultrasound-guided needle entered. In rare cases, if the bleeding is internal (in your ovary, uterus, or a blood vessel in your pelvis), or if your doctor suspects other organs have been injured, you may need to be admitted to the hospital. In the hospital, you will be monitored and may need a blood transfusion, and/or a laparoscopy or *laparotomy* (abdominal surgery) to stop the bleeding and repair the injury.

- The embryo transfer procedure may cause some cramping, discomfort, and possibly a small amount of bleeding. Rarely, infection occurs where the catheter was inserted. This may require antibiotic treatment.
- A higher number and quality of embryos transferred to the womb may lead to a higher chance of success with IVF. But, IVF in general puts you at higher risk for multiple gestation, and this risk is higher when more embryos are transferred.

The risks of multiple gestation include:

- Premature labor
- The delivery of premature infants who need intensive care and could have long-term complications from being born prematurely

Premature labor and delivery may also place the mother at greater risk for Cesarean section, bleeding, and infection.

- Sometimes, the IVF team may decide to cancel egg collection shortly before it is to take place. This is done when it looks like too few eggs will be recovered, when there are no live sperm found, or for other medical reasons.

What are the alternatives to this treatment?

You may decide not to have IVF treatment. You may decide to continue other fertility treatments, such as *ovulation induction* and *intrauterine insemination*. Other options include adoption or remaining childless.

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© University of Washington Medical Center
Published: 07/2010, 08/2011, 11/2011
Clinician Review: 11/2011

Reprints on Health Online: <http://healthonline.washington.edu>