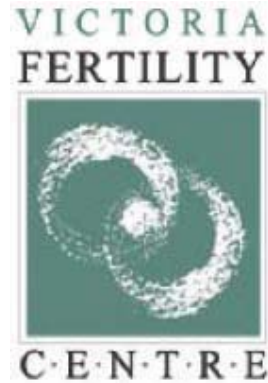


EXPECTATIONS FOR THE IVF JOURNEY



First of all, it takes courage to address the infertility issue itself. Making the decision to see a fertility specialist and visit a clinic such as Victoria Fertility Centre is probably one of the biggest steps in the whole process. For many people there is some apprehension and anxiety about the first visit for fear of hearing negative news. With this knowledge, I certainly hope that your first visit at Victoria Fertility Centre was a comfortable one. Waiting for all the investigations to be done allows the gathering of information, so that we can help identify where there may be problems which need to be addressed. For whatever reasons, which I hope has been clearly explained to you, the recommendation has been to consider in vitro fertilization.

Obviously, the decision whether or not to proceed with in vitro fertilization is a very significant one, and may be one of the most profound decisions in your life.

It is very important that you are clear about the expectations for a successful pregnancy and take-home baby. Obviously the chances for success will vary from couple to couple, although the very best that in vitro fertilization /ICSI can do is for a couple under the age of 35 for a pregnancy rate of approximately 60%. That means that even for the best possible prognosis couples, there is still a 40% chance that the technology will not result in a pregnancy the first time. For couples who are over the age of 35, or who have other relevant issues which may impair the chances of success (such as poor responding ovaries, elevated FSH levels or previous failed cycles) the chances for a successful pregnancy may be much lower. Despite these realistic expectations, however, it is always very important to maintain a positive attitude. We should remember that until about 15 years ago the best possible IVF success rates, even for women under the age of 30, was only between 15 and 20% Now we are looking at pregnancy rates of between 15 and 20% for some women in their early 40's.

It is amazing how statistics can be viewed in different ways. For instance, I may see a couple for counselling about in vitro fertilization and give them an estimated chance of successful pregnancy in the region of 25%. This would mean a 1 in 4 chance of becoming pregnant. If that particular patient happened to be 41 years old, she may, in the same conversation, ask me about the risk of Down's syndrome if she does become pregnant. For someone who is 41 years old, if the pregnancy continues beyond 12 weeks, the risk of Down's syndrome may be in the region of 1 in 40. During the same conversation, the couple may regard a chance of successful IVF of 1 in 4 to be extremely low, however, the risk of 1 in 40 for Down's syndrome to be very high. Statistics, therefore, are relative.

From start to finish the IVF cycle is a roller coaster. This can start as early as whether or not a person is even eligible to do IVF. Obviously age is a consideration, and our experience with women over the age of 43 is that the chances for a successful pregnancy are very low. One of the first assessments would be to measure ovarian

reserve. This can be done in two ways, both by measuring ovarian volume and by doing a biochemical assay, which involves measuring the FSH and estradiol levels on

Day 3 of the cycle. If the volume of the ovaries is very low and the FSH level is high, the chances for a successful outcome from in vitro fertilization are very small indeed. As such, the individual may be advised that IVF using her own eggs may not be an option.

Once on the IVF journey itself, the following steps are encountered along the way:

1. The suppression check.

Before starting with the fertility drugs to stimulate the ovaries and recruit eggs, the ovaries need to be suppressed. This is usually achieved by using either the birth control pill and/or Suprefact/Lupron. A blood test to measure the estradiol level and an ultrasound to measure the ovaries may then be used to assess suppression. If the ovaries are not suppressed the cycle cannot continue. This is usually just an annoying hassle, and would mean delaying starting the cycle for either a couple of weeks or even up to a month.

2. Ovarian Stimulation.

The next stage of the cycle involves stimulating the ovaries with fertility drugs. These fertility drugs usually include a combination of FSH and LH (Gonal-F, Puregon and Repronex). After a few days of injections a blood test is done to measure the estradiol levels. This test may indicate that the ovaries are either over-responding or under-responding. If they are under-responding, we sometimes need to increase the dosage of medications or reassess whether or not the ovaries are capable of responding at all. If they are over-responding, the drug dosage will be reduced.

3. Ultrasound monitoring

An ultrasound is usually done on around Day 6-8 of fertility drug administration to check how many follicles are growing. This is another stressful step. If too few follicles are responding, the option would be either to cancel the cycle and try again another month using a more aggressive protocol, or to continue on in the hope that even though we get few eggs they may be of satisfactory quality.

4. Continued monitoring during the Stimulation phase.

We continue to monitor your blood estrogen levels and do ultrasounds to check the growth of the follicles on the ovaries. It is important to note that the follicles on the ovaries do not all grow at the same rate. There may be some follicles which are larger than others. We are looking for follicles to be between around 16 and 21 millimetres to contain a mature egg. The larger and smaller follicles may

contain either post-mature or immature eggs, which would not be of much use. We have to decide therefore on the most suitable cohort of follicles at the time we elect to administer Ovidrel (HCG or Pregnyl) to “trigger” the eggs to mature.

5. Trigger shot and egg retrieval

The injection of Ovidrel to trigger maturation is given in the evening. Thirty-five hours following the administration of Ovidrel you will be booked for your egg retrieval. You will receive some instructions about preparing for this event. We would ask you not to eat or drink from midnight the night before. Usually we ask you to be at Victoria Fertility Centre approximately one hour before the planned egg retrieval. If possible, I will usually administer some acupuncture to help relax you and reduce the discomfort during the procedure itself. After the acupuncture you will be asked to empty your bladder completely and then be taken through to the procedure room. You will be given a warm blanket and then an intravenous will be started. Your legs will then be placed in some stirrups, a speculum inserted in the vagina, and the cervix and vagina washed with warm normal saline. This can be a little uncomfortable, so just before this is done, our nurse will administer some intravenous medication for both pain relief and sedation. Some local anaesthetic will be injected into the side walls of the vagina. The ultrasound probe is then inserted, and using ultrasound guidance, a fine needle inserted through the wall of the vagina into the ovaries to aspirate the follicles and collect the eggs. The fluid collected from the ovarian follicles is collected into incubated test tubes which are immediately given to the embryologist who searches for eggs. The procedure normally takes between 10 and 20 minutes. It is usually mildly uncomfortable, however, if the ovaries are mobile and fairly high in the abdomen we sometimes have to press on your tummy to bring the ovaries down to the pelvis and allow egg retrieval. This may be a little uncomfortable, and more sedation may be required for this to be done.

Once the procedure is done, you will be given an intravenous antibiotic and then transferred back to the recovery room. In the recovery room we will offer you a drink of juice or ginger ale and some dry biscuits. Usually, within an hour or so you will be ready to go home. Either just before or just after the egg retrieval we will ask your partner to produce a semen sample. When you get home you certainly may feel quite drowsy for the rest of the day. You should rest comfortably and avoid any physical activity. We suggest you have a light lunch and snacks for the rest of the day. You can certainly use Tylenol if you have discomfort, but we request that you don't use any aspirin-like problems such as Advil or Motrin. However, you will re-start your baby aspirin on the evening of the egg retrieval and continue taking it every day. Before you leave the unit, we will tell you how many eggs we have retrieved. On average, the number of eggs retrieved during an IVF cycle is between 5 and 15. It is important to remember that we don't get an egg from every follicle, that not every egg is mature, and that not every mature egg will necessarily fertilize.

We do find that everyone is anxious before the egg retrieval. Common thoughts going through the mind areWill it be painful ? How many eggs will we get ? How many will be mature ? How many will fertilize ?

Remember that it is quality rather than quantity that is so important. We are not aiming to get masses of eggs – and ideally we like to retrieve between 5 and 15 eggs. We will let you know before you leave the unit how many eggs have been collected – but will not know at this stage what the quality of the eggs is like.

6. Fertilization

The day after the egg retrieval you will be instructed about starting your Prometrium and estrogen supplements. You may also be on other medications, about which you will be clearly advised. The day following the egg retrieval our embryologist will call you to let you know how many of the eggs fertilized. The percentage of eggs that usually fertilize may vary between 60 and 90% depending on the circumstances. However, not every fertilized egg is perfect. Sometimes two sperm may enter the egg or a sperm might enter the egg and the egg not activate correctly, etc. However, our embryologist will explain this to you.

7. Embryo development

The embryos are then cultured for the next few days. We mostly do embryo transfers on Day 3 – although in selected circumstances we may culture the embryos to Day 5 and then only transfer them on Day 5 (this is called a blastocyst transfer).

There is more information on blastocyst culture on our website.

On Day 3 you will be given a time to come into the clinic for your embryo transfer. You will be advised to continue with your estrogen and Progesterone supplements as per usual. Once again you will be asked to be at VFC about an hour before the transfer is planned. You may be offered acupuncture to relax you, and then the embryo transfer performed. We usually do this with a full bladder and under ultrasound guidance. It is on this day that the final embryo assessment is done. Our embryologist will then discuss with you how many good quality embryos are available. We will make a final decision about how many embryos to transfer. We want to maximize the chance of pregnancy, though keep the risks of a multiple pregnancy down to a minimum. As a rough rule-of-thumb, although this may change depending on the circumstances, in women under the age of 35 we will normally transfer two embryos, in women aged between 35 and 40 sometimes three, and women over the age of 40 sometimes more, once again depending on the number and quality of embryos available. After the embryo transfer we will empty your bladder and we will ask you to lie in a bed at VFC for about 30 minutes. You will then be discharged home to continue with your medications as directed. At this time we will also discuss if there are extra embryos available, as to whether or not they are good enough quality to be frozen, or cultured on until Day 5 for further assessment and freezing at that time. Generally speaking, we like to freeze embryos when they are in a resting phase rather than when they are actively cleaving. It may depend therefore on the biological activity of the embryos on the day.

The quality of the embryos on day 3 is dependent on the quality of the eggs. This is of course patient specific, but can also be influenced by the medication used to

stimulate the ovaries. However some women have good quality eggs and some poor quality eggs.

8. The long wait for the pregnancy test

There is now a long wait until the day of your pregnancy test. Your pregnancy test is normally performed 12 days after the embryo transfer. This is a blood test, and measures the level of HCG (pregnancy hormone). We preferably like to see a level above 50. Sometimes we experience something called a chemical pregnancy. This means that the pregnancy test is positive, however, the levels are low. This indicates that one of the embryos has indeed implanted, though may not be successful in growing into a healthy baby. We may often ask you to have your pregnancy hormone levels repeated between 2 and 7 days later, to make sure that the levels are rising appropriately. We may also measure your estrogen and progesterone levels so that your medication can be adjusted. This is not done routinely, and once again will depend on the situation.

9. The first ultrasound

If the pregnancy test results are good and everything is going well, you will be asked to come to VFC for an ultrasound between 6 and 7-1/2 weeks. The ultrasound is done transvaginally and will assess the status of the pregnancy. Despite having a good pregnancy test result, there is still the chance that the pregnancy may not be viable. Ultrasound may identify a live foetus or something called an empty sac, which indicates a non-viable pregnancy. This is called a “missed abortion”. The commonest reason for this occurring is an abnormal embryo.

10. The first trimester

If the first ultrasound does indeed confirm a viable pregnancy, you will be advised about continuing and/or adjusting your medication. I will normally follow you at VFC for most of the first trimester of pregnancy. If the first ultrasound is reassuring, the chances for a miscarriage decrease significantly, although that first trimester does remain a high risk time for bleeding and miscarriage. Overall the risk of miscarriage is between 10 and 20 % during the first trimester – depending on your age. (At age 42 – 45 years, it may be as high as 30 – 75 %.)

11. The prenatal period

At the end of the first trimester we will then discuss the remainder of the pregnancy. Continued prenatal care is usually through your family physician or midwife. If the pregnancy is high risk (depending on past obstetrical history and whether or not this is a multiple pregnancy) you will also need to be followed by an obstetrician. We will make plans for this.

So, as you can see, the IVF cycle is a little like a roller coaster. There are definitely ups and down – and the best we can do at Victoria Fertility Centre is to keep you as well informed as possible and make sure that your expectations are realistic.

Although IVF/ICSI is a precise science, we can but apply it to the best of our ability. Our objective is obviously to give you a baby – but we may not succeed in that endeavour. We at VFC take every cycle very seriously and personally – and feel the ups and downs like you do. What is important – is that at the end of the cycle – you feel that you have been well informed and cared for. We sincerely hope that your cycle with us is successful.
