

Blastocyst (Day 5-6) Transfer

Information Sheet on Blastocyst (Day 5-6) Embryo Transfers

The Concept

In conventional IVF and ICSI the embryos are usually transferred two or three days after the sperm are placed with the eggs (Day 2 or 3). At this stage we select the best looking and best-progressed embryos for transfer, assuming that these are the most likely to grow through to the Blastocyst stage (at about Day 5-6) when they are ready to implant in the uterus and form a pregnancy. Judging them by conventional criteria at Day 2-3 picks the best ones most of the time but not all of the time.

If we keep them in culture for another 2-3 days and transfer only those which reach the Blastocyst stage, the pregnancy rate **per embryo transfer** could be expected to be higher since embryos incapable of reaching this stage would have been selected out. The pregnancy rate **per patient having an egg pickup** however may not necessarily be better than what we already achieve. The advantage is that this approach may take a patient to pregnancy more quickly with fewer embryo transfer procedures.

The Advantages

- Patients being treated with IVF on the Day 5-6 embryo transfer protocol, who do have several embryos grow through to the blastocyst stage, will go home knowing that they have a higher chance of pregnancy than with Day 2 or 3 embryo transfer. Those whose embryos have not reached the blastocyst stage will usually still have an embryo transfer but will go home knowing they have a lesser chance of becoming pregnant. In some instances all embryos may succumb before reaching the blastocyst stage and there will be no embryo transfer. Such embryos would probably also have succumbed following a Day 2 embryo transfer and therefore couples in this situation learn of their disappointment earlier rather than waiting for a period to arrive.
- Growing embryos to the blastocyst stage before transfer could be seen also as a diagnostic procedure. Those whose embryos are usually of mediocre quality at best at the Day 2-3 stage can elect to try culture to Day 5-6 to help determine which, if any, of the embryos have the best potential to produce a pregnancy. Failure of any to reach the blastocyst stage could indicate an underlying egg or sperm problem.
- The ability to grow embryos to Day 6 allows us to perform diagnostic tests on them on Days 3-5 and still be able to transfer fresh normal embryos. There is a separate information sheet on Pre-Implantation Embryo Genetic Diagnosis.
- Growing embryos to the blastocyst stage, allowing identification of the embryos with the greatest potential to produce a pregnancy, permits single embryos to be transferred without too great an effect on pregnancy rates, significantly reducing the risk of multiple pregnancy.

The Disadvantages

- A small number of patients will **not have any embryo transfer at all** as a consequence of all of their embryos succumbing before reaching the blastocyst stage. This could occur in **up to 5%** of patients electing to try Day 5-6 culture and will be **more frequent in those having low numbers of eggs or a low fertilisation rate**.
- A considerable number of patients will not have the added benefit of having some embryos frozen, their excess embryos not transferred having succumbed before reaching the blastocyst stage. These embryos may however have had little potential for pregnancy even if they had been frozen at an earlier stage.

Day 5-6 Blastocyst Embryo Transfers and QFG

QFG makes both Day 2-3 and Day 5-6 embryo transfer available to patients having either IVF or ICSI treatment. The decision of which one to choose should be arrived at in consultation with your infertility doctor. As part of your individualised treatment for which QFG is renowned, a choice will be made incorporating the cause of your infertility, your treatment history, and your personal preferences. A further option is Day 4 embryo transfer, recently validated by QFG as having most of the benefits of Day 5-6 transfer.

We see Day 5-6 Blastocyst Embryo Transfer as being most attractive to:

- Couples whose treatment history raises doubt over the quality of their embryos and their ability to reach the blastocyst stage.
- Those who, as a result of their medical history or their personal preference, wish to have only one embryo transferred.