

## Options for Surplus Embryos - Blastocyst Culturing and Vitrification

You are about to undergo IVF treatment with Affordable IVF on the Sunshine Coast. During this process you will have embryo(s) transferred at the cleavage stage (days 2 or 3). There is a possibility that you will have surplus embryos remaining at this stage. Given this you have two options, as outlined below:

1. Request that the embryos are cultured through to the blastocyst stage (days 5 or 6) and any suitable embryos are vitrified (fast frozen)
2. Request that the surplus embryos are not vitrified and are respectfully disposed of by the laboratory staff

In order to assist you in your decision making please read the information below regarding blastocyst culture and vitrification.

### What is a blastocyst?

A blastocyst is the name given to an embryo approximately 5 days after fertilization. A blastocyst embryo contains anywhere from approximately 60 to 120 cells. The cells form three distinct parts to the embryo. The Trophectoderm cells – (noted as “T” in the picture below), which if implantation occurs will become the placenta, umbilical cord and membranes. The Inner Cell Mass – (noted as “ICM” in the picture below), which will become the foetus and finally the blastocoele cavity - (noted as “C” in the picture below) which is a fluid filled cavity which expands as the embryo continues to develop.



### The benefits of culturing embryos to the blastocyst stage:

- The major benefit of culturing embryos to day 5 or blastocyst stage is the ability to select the best quality or most viable embryo(s). Some embryos will grow to days 2 or 3 and look perfectly normal, but do not progress after this stage; this is because they have not reached the stage of embryonic activation. It is expected that on average approximately a third of embryos which fertilise normally will make it to a stage which is suitable to transfer or cryopreserve on day 5.
- In a natural cycle, day 5 is when the embryo resides in the uterus, rather than the fallopian tube. It has therefore been shown that transferring an embryo at this stage into the uterus, leads to higher implantation rates due to better synchronisation between uterine lining and embryo development.

- If an embryo survives until day 5 it is more likely to be genetically normal. **However this does not mean all blastocyst embryos are genetically normal.** Studies have shown that day 5 embryo transfers have an increased chance of becoming a viable pregnancy, compared with days 2 or 3.
- It has been suggested that blastocyst cryopreservation (vitrification of a blastocyst) is more efficient than cleavage stage cryopreservation (freezing of an embryo on days 2 or 3) and has higher rates of survival.

**Things to consider when making your decision about what to do with your surplus embryos:**

- Blastocyst culture and vitrification of surplus embryo(s) have additional costs which are not covered by Medicare or your Private Health Fund. Subsequent frozen cycles will also incur charges, but Medicare rebates are available. Please speak with accounts to discuss fee charges.
- Potential psychological implications stemming from religious, social, emotional and moral beliefs. These should be discussed with your GP. You can request to speak with a counsellor. N.B. You may also be required to make a similar decision regarding surplus cryopreserved embryos at a later stage.

**Further Questions**

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If you or your partner have any further questions regarding blastocyst culture or vitrification, please do not hesitate and contact us and arrange for a time to speak to one of the scientists. These consultations are free of charge and can either be arranged as a face-to-face or phone discussion.

Affordable IVF, Monday to Friday, 8am to 4pm, on 1300 LOW COST (1300 569 267)