Blastocyst Culture
Information for Patients and Partners

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Approved by Jane Blower

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NHS Trust

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What is this leaflet about and who is it for?

This leaflet has been produced to give couples more information about culturing embryos to the blastocyst stage and what is involved.

In IVF or ICSI, each egg collected is mixed with sperm then placed in an incubator until fertilisation occurs, 12-16 hours later. The embryos remain in culture for two, three or five days following the egg collection, at which time the best one or two are transferred into the uterus.

Blastocyst culture is the term used when the embryos are cultured for five days following the egg collection. The embryo at this stage of development is known as a blastocyst and will have many cells, usually more than 100. The best blastocyst is then transferred into the uterus on the fifth day following the egg collection. As in a normal IVF/ICSI cycle, any remaining good quality blastocysts can be frozen.

Who is suitable for blastocyst culture?

- Patients who obtain two or more good quality embryos
- Patients who have six or more good quality embryos frozen from a previous IVF/ICSI cycle

Why culture to the blastocyst stage?

Once embryos have been transferred we have no way of knowing what has become of them. Some will stop growing once transferred and will not implant into the lining of the uterus. They will be re-absorbed into the body without the patient even knowing.

Culturing embryos to day five for patients with two or more good quality embryos gives us a greater chance of selecting higher quality embryos, which in turn, leads to a higher rate of implantation. As blastocysts are more likely to implant into the lining of the uterus, it is preferable to transfer only one blastocyst.
Benefits of blastocyst culture

1. Research shows that the natural selection of genetically normal embryos leads to higher implantation rates.
2. Clinicians will be able to give patients more information about the developmental competence of the embryos to be transferred, and the likeliness of achieving a pregnancy.
3. Transferring only one blastocyst back into the uterus reduces the risk of multiple pregnancies, and the associated risks to mother and baby.
4. Blastocyst transfer on day five mimics more closely the timing at which an embryo would reach the uterus in a natural conception.
5. The uterus may be more receptive by the fifth day as there may be less uterine contractions and less hostile cervical mucus. This can increase the chance of implantation

Risks of blastocyst culture

1. On average 50% of embryos will develop to the blastocyst stage in vitro. Most patients may get fewer, but better quality embryos. However, some patients may have no blastocysts develop for transfer. In order to ensure that patients have an embryo to transfer on day five, at least two good quality embryos should be available on day three. If the embryos are developing poorly, they may need to be transferred back into the uterus earlier, on days two or three.
2. It is unclear if there are any long term associated risks with extending the culture of embryos in vitro.
3. The risk of monozygotic (identical) twins after blastocyst transfer is increased, even when transferring a single embryo. Please read the HFEA leaflet regarding multiple pregnancies and births and their associated risks.

Is blastocyst culture for you?

Your consultant in clinic and the embryology team will advise you whether blastocyst culture is a suitable option for you.
Our commitment to patients

We are constantly striving to improve our services to patients and we will welcome your comments or suggestions for improvement.

Leicester Fertility Centre Contact Details

Tel: 0116 2585922
E-mail: enquiries@leicesterfertilitycentre.org.uk
Fax: 0116 2587688
Website: www.leicesterfertilitycentre.org.uk

Useful addresses:

Human Fertilisation and Embryology Authority www.hfea.gov.uk
NICE guidelines: www.nice.org.uk
NHS - Response line: 0870 155 5455
NHS - Smoking Helpline: www.givingupsmoking.co.uk / 0116 295 4141
Infertility Network UK www.infertilitynetworkuk.com / 0800 008 7464
Do you feel that you are at risk of verbal or physical abuse? If so, you may find the following numbers useful:

Domestic Violence Helpline:

United against violence & abuse (UAVA) 0808 802 0028

This information was correct at the time of printing. While the Trust makes every reasonable effort to keep its information leaflets up to date, very recent changes may not be reflected in the guidance and you should discuss this with the clinical staff at the time of your appointment.
Questions

If you have any questions write them down here to remind you what to ask when you speak to your consultant.
Today’s research is tomorrow’s care

We all benefit from research. Leicester’s Hospitals is a research active Trust so you may find that research is happening when you visit the hospital or your clinic.

If you are interested in finding out how you can become involved in a clinical trial or to find out more about taking part in research, please speak to your clinician or GP.

If you would like this information in another language or format, please contact the service equality manager on 0116 250 2959

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