

## Patient Information Assisted Hatching

The success of IVF is dependent on a whole series of events, one of the final steps being implantation.

For implantation to occur, the embryo must escape from its outer coat (the zona pellucida) – this is known as “hatching”. Once the embryo has hatched through the zona pellucida it can make physical contact with the lining of the womb (the endometrium) and implantation then begins.

Failure of implantation may result from an inability of the embryo to hatch and in some women this may be why they aren't getting pregnant, even with IVF.

*Assisted hatching* is a physical or chemical treatment of the zona pellucida to try and improve implantation and at GCRM we use a laser as it is considered to be the safest and most accurate, and hence reliable, method.

Assisted hatching is performed immediately prior to embryo transfer. The aim is to create a weakness in the zona pellucida without causing a complete breach so that the cells of the embryo are not touched by the laser and this then facilitates subsequent hatching once the embryo is in the womb.

Accumulated scientific literature (see below) suggests that in selected cases there is an improvement in the clinical pregnancy rates when assisted hatching is performed. However, the same literature also indicates that there is a slightly increased chance of a multiple pregnancy. For further information please refer to our information leaflet on 'Multiple Pregnancy and its Risks'.

GCRM would recommend assisted hatching in patients who meet one or more of the following criteria but will also consider requests from patients outwith these criteria on a case-by-case basis.

- Repeated implantation failure (at least two previous transfers)
- Patients with a lower chance of implantation (AMH < 7.0 pmol/l, irrespective of age)
- Patients 37 years and older
- Patients undergoing frozen embryo transfer
- Embryos with a thickened zona pellucida

### **Safety of assisted hatching**

Because it is an incomplete breach of the zona pellucida, there is no risk to the embryo and reassuringly, all the data to date shows that assisted hatching is safe for embryos and does not increase the risk of physical or chromosomal abnormalities in the baby.

### **Costs**

If patients decide that they want assisted hatching then the cost can be found in the price list, a copy of which can be found on the website. The fee for assisted hatching is in addition to the cost of the treatment cycle but it is a fixed fee per embryo transfer procedure (regardless of the number of embryos that are treated).

### **International Review of the effectiveness of Assisted Hatching (conducted in 2009).**

This review of the available clinical trials found that the universal application of assisted hatching showed no real benefit. There was however evidence that it increases the chances of a pregnancy in specific patient groups including older patients and those with repeated failures. The authors concluded that a clinic with a success rate of 25% could anticipate improving the clinical pregnancy rate by between 4% to 10% per cycle.