

Reproductive Care Center

Informed Consent for Assisted Hatching (AH)

Hatching of the embryo at the blastocyst stage is a critical step in the sequence of physiological events culminating in the implantation of the embryo. Failure to hatch may be one of the many factors limiting human reproductive efficiency.

Assisted hatching involves the artificial thinning or opening of the zona pellucida or shell of the embryo. It has been proposed as one technique to improve implantation and pregnancy rates following in vitro fertilization. An increased implantation rate following mechanical opening of the zona pellucida or shell was first reported in 1990. Since these early reports many assisted reproductive technology programs have incorporated the use of assisted hatching in selective instances in efforts to improve clinical outcomes.

The assisted hatching procedure is generally performed on the day of embryo transfer. The procedure includes the creation of an opening in the zona or shell of the embryo using either mechanical techniques, acidified solutions or more recently the use of a laser.

The assisted hatching procedure may rarely be associated with complications independent of the IVF procedure including damage to the embryo and damage to individual blastomeres or cells with subsequent reduction of embryo viability. In addition, assisted hatching has been associated with a slightly increased risk of monozygotic twinning.

The success rates following the use of assisted hatching in different IVF programs have varied considerably. Differences in patient populations, operative experience, hatching techniques, and study design have made it difficult to compare reports directly from the different centers. A comprehensive review and meta-analysis of the available randomized controlled trials have demonstrated a possible improvement in clinical pregnancy rates following assisted hatching in patients with prior failed IVF cycles, in older women, when only fair or poor quality embryos are available for transfer or after embryo cryopreservation. However, overall live birth rates in the groups are not significantly different. The number of live births reported in studies this far did not allow a confident conclusion regarding the clinical efficacy of the assisted hatching procedures. Results have also been inconclusive regarding the best method for assisted hatching however most embryologists now believe that the use of the laser is the safest and probably best method.

The available published evidence does not support the routine universal application with assisted hatching in all IVF cycles. **Assisted hatching may be clinically useful and is recommended at RCC in patients with a poor prognosis, including those with at least two prior failed IVF cycles, fair or poor embryo quality, embryos with a thick zona pellucida (shell), embryos formed from frozen eggs, women at least 38 years of age, and after embryo cryopreservation.**

We understand that assisted hatching involves an extra procedure fee above normal IVF or the frozen embryo transfer fee. We the undersigned, husband and wife, have requested that assisted hatching be performed on;

- All of our embryos just prior to embryo transfer (fresh transfer) or on the day the embryos are thawed if extended culture is planned.
- Approximately 50% of our embryos prior to embryo transfer or on the day the embryos are thawed if extended culture is planned.
- Embryos that have a ‘thick zona pellucida (shell)’ on the day of embryo transfer or the day they are thawed.
- None of our embryos (we do not want assisted hatching)

We have read and understand the above and all of our questions about assisted hatching have been answered.

We acknowledge that neither the Reproductive Care Center nor the physicians or staff have made any warranties with respect to the assisted hatching procedure or the outcome of any pregnancy as the result of this treatment.

Wife's Signature

Wife's Name Printed

Date/Time

Husband's Signature

Husband's Name Printed

Date/Time