



CITY FERTILITY CENTRE  
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## PICSI - Physiological Intracytoplasmic Sperm Injection

During ICSI, motile sperm are selected for injection on the basis of their morphology. The selection of sperm using this visual approach may not necessarily reflect the functionality of the sperm or its ability to fertilize an oocyte (egg). The **PICSI** dish provides a functional test to assist the embryologist's selection of sperm for injection. The test is based on the ability of sperm to bind to hyaluronan (HA) hydrogel thus mimicking the natural binding of mature sperm to oocytes in the female.

Sperm in vivo (in nature) encounters HA in the cervical mucus and in the cumulus matrix surrounding the oocyte. Penetration of the cervical mucus and cumulus matrix by the sperm in vivo are critical elements in successful fertilization and subsequent embryo implantation; HA is vital in this interaction.

PICSI takes advantage of this naturally occurring encounter. A special dish with small dots of HA on the bottom of the dish is used with the standard ICSI injection. A drop of prepared sperm is added to the HA and the embryologist selects a HA bound sperm for injection. By selecting the sperm that are bound and using them for ICSI, the embryologists are preferentially using the better quality, more mature sperm.

Publications have shown that sperm bound to HA are more likely to have less DNA damage and a normal chromosome complement. While there is usually no visible difference in the number of oocytes that fertilize, there is generally better day 3 to day 5 embryo development. Additionally, more blastocysts are available for vitrification and significantly higher ongoing pregnancy rates have been shown for patients using PICSI compared with standard ICSI.

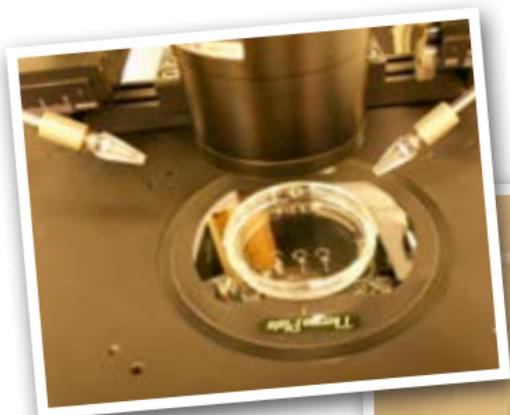
GUARANTEED APPOINTMENT WITHIN 10 WORKING DAYS  
FOR NEW FERTILITY PATIENT REFERRALS

# PICSI - Physiological Intracytoplasmic Sperm Injection

## WHO IS PICSI RECOMMENDED FOR ?\*

- Males with high sperm DNA fragmentation
- Patients with a previous history of poor embryo development day 3 to day 5
- Patients with a previous history of low or poor fertilization
- Patients with repeated implantation failure
- Patients that have had recurrent miscarriages

\*Patients using testicular sperm (where most sperm are not progressively motile) or patients with  $\leq 1$  million motile sperm in final sample preparation are unable to use this test.



MFS32



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