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## ICSI (IntraCyttoplasmic Sperm Injection) PATIENT INFORMATION SHEET

ICSI is the preferred choice for fertilisation of eggs where:

- there has been previous failed fertilisation (seen in approximately 1% of IVF cycles)
- there have been poor fertilisation rates (< 25% of mature eggs fertilised)
- where the sperm parameters are poor (low sperm count, poor motility, low numbers of normal forms)
- where sperm is surgically retrieved from the epididymis or testes

You will, of course, be advised if ICSI is required.

Occasionally, the sperm quality on the day of egg collection is suboptimal for IVF and the embryologist from the laboratory will recommend ICSI but only if it is considered really necessary.

Facts relating to ICSI:

There have been many studies looking at the outcome of pregnancies and health of children following conception with ICSI.

1. Neonatal data on a cohort of 2889 infants born after ICSI (1991-1999) and of 2995 infants born after IVF (1983-1999) reported from Brussels in 2002 showed: 'The comparison of ICSI and IVF children taking part in an identical follow-up study did not show any increased risk of major malformations and neonatal complications in the ICSI group.'
2. Congenital anomalies and other perinatal outcomes in ICSI vs naturally conceived pregnancies: a comparative study (2009): 'ICSI conceived pregnancies were characterized by an increased number of gestations and live-born, and there was no increase in congenital malformations compared to naturally conceived pregnancies.'
3. When looking to see if there are any differences in ICSI outcome using

sperm that has been ejaculated compared with sperm that has been surgically retrieved: 'A large study performed in Brussels (2011) has shown no differences in neonatal health in terms of birth parameters, major anomalies and chromosomal aberrations in children born using surgically retrieved sperm compared to the outcome of children born after the use of ejaculated sperm.'

4. Perinatal outcome, health, growth, and medical care utilization of 5- to 8-year-old intracytoplasmic sperm injection singletons (2008): 'No adverse health outcomes (congenital malformations, health, growth, and medical consumption) were identified in ICSI singletons up to age 5-8 years compared to IVF and natural conception singletons, besides poorer perinatal outcomes (prematurity and low birth weight) after ICSI versus natural conception.'

[Hum Reprod.](#) 2002 Mar;17(3):671-94.

Neonatal data on a cohort of 2889 infants born after ICSI (1991-1999) and of 2995 infants born after IVF (1983-1999).

[Bonduelle M](#), [Liebaers I](#), [Deketelaere V](#), [Derde MP](#), [Camus M](#), [Devroey P](#), [Van Steirteghem A](#).

[J Assist Reprod Genet.](#) 2009 Jul;26(7):377-81. doi: 10.1007/s10815-009-9329-3. Epub 2009 Aug 13.

Congenital anomalies and other perinatal outcomes in ICSI vs. naturally conceived

[Al-Fifi S](#), [Al-Binali A](#), [Al-Shahrani M](#), [Shafiq H](#), [Bahar M](#), [Almushait M](#), [Sobandi L](#), [Eskandar M](#).

[Hum Reprod.](#) 2011 Jul;26(7):1752-8. doi: 10.1093/humrep/der121. Epub 2011 Apr 21.

Neonatal outcome of 724 children born after ICSI using non-ejaculated sperm.

[Belva F](#), [De Schrijver F](#), [Tournaye H](#), [Liebaers I](#), [Devroey P](#), [Haentjens P](#), [Bonduelle M](#).

[Fertil Steril.](#) 2008 May;89(5):1133-46. doi: 10.1016/j.fertnstert.2007.04.049. Epub 2008 Jan 3.

Perinatal outcome, health, growth, and medical care utilization of 5- to 8-year-old intracytoplasmic sperm injection singletons.

[Knoester M](#), [Helmerhorst FM](#), [Vandenbroucke JP](#), [van der Westerlaken LA](#), [Walther FJ](#), [Veen S](#); [Leiden Artificial Reproductive Techniques Follow-up Project \(L-art-FUP\)](#).