

# Single Embryo Replacement



Concept  
Fertility  
Centre

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The very early IVF pregnancies in the late 1970's were conceived from natural cycles, but the pregnancy rate (i.e. babies produced) per attempt was very poor. The use of ovulation stimulation with drugs and the replacement of multiple embryos saw the pregnancy rate increase. Some units still use natural cycle IVF, mainly for philosophical reasons, but although success rates are better than those from earlier days they do not match those from ovulation stimulation and multiple embryo replacement.

With improvements in embryo culture systems, equipment and techniques the success rates continue to get better and in general, embryo quality continues to improve. Hence, there is a worldwide trend to replace only single embryos.

The problem with multiple embryo replacement is, of course, multiple pregnancies. Concept generally replaces only a single embryo – particularly for women under 40 years. When two embryos are replaced the risk of twins is one in every five (20%) if the procedure is successful. This rate has not changed despite reducing embryo replacement numbers from three to two. In women of less than 35 years old however, the multiple pregnancy rate is over 30%.

By replacing one embryo, we can drastically reduce the multiple pregnancy rate and yet we believe still produce the same number of conceptions from each oocyte collection.

Twin pregnancies have problems. They have almost twice the stillbirth and early death rate as single births. There are more cerebral palsy children from twin pregnancies. There are more congenital abnormalities in twins. The risk of late miscarriage and early (premature) birth rate is higher. The total figures of risk are not high but they are very much higher than for single births.

It is now an Australia-wide requirement that IVF units replace a single embryo (unless there are special circumstances). This means that the chance of conception per replacement will be slightly less but the chances of multiple pregnancy are greatly reduced. With the freezing of surplus embryos there will be an increase in the number of replacements from each egg collection.

Single Embryo Transfers at Concept during the period 1997 to present:

- Increased from 10% to 90% of embryo transfers
- Resulted in a reduction in twins from 20% to <10%

During this time period the pregnancy rate gradually increased due to improvements in embryo culture methods so Concept's single embryo transfer policy has not negatively affected the overall pregnancy rates.



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