

### **12.3.9.1 SINGLE EMBRYO REPLACEMENT FOR IVF**

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 culture systems, equipment and techniques the success rates continue to get better and in general, embryo quality continues to improve.

The problem with multiple embryo replacement is, of course, multiple pregnancies. Concept encourages the use of single embryo transfers particularly for women less than 36 years of age. 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 eliminate 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 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 seems appropriate to offer couples the choice of replacing a single embryo, admitting that it is likely the chance of conception per replacement will be less but the chances of multiple pregnancies are virtually eliminated. With the freezing of surplus embryos there will be an increase in the number of replacements from each egg collection.

At Concept single embryo transfers now make up around 50% of embryo transfer procedures, with two embryo replacements making up the vast majority of the remaining cases. Only in very special circumstances will three embryos be replaced.

If you are interested in this process please discuss the matter with your doctor, or the co-ordinating sister, or the counsellor.