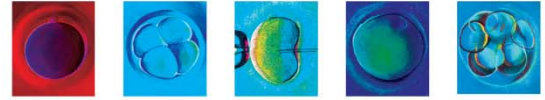


Louis Weckstein, MD
Susan Willman, MD
Mary Hinckley, MD
Deborah Wachs, MD
Carmelo Sgarlata, MD
Evan Rosenbluth, MD
Kristen Ivani, PhD



FERTILITY FACT SHEET

San Ramon / Orinda / San Jose

Birth Defects in Babies Born from IVF

In Vitro Fertilization has now been practiced now for more than 30 years with an estimated 5 million children born worldwide following IVF treatments. The vast majority of these babies are very healthy. However, based on the currently available data IVF babies may be at a slightly increased risk for birth defects (congenital anomalies).

First, it is important to realize that the biggest risk from IVF is the risk of multiple pregnancies from replacing more than one embryo. At RSC we are working very hard to reduce the risk of high order multiple pregnancies by replacing fewer embryos, often only one or two in appropriate age groups. Due to our excellent success with blastocyst culture we have been able to transfer fewer embryos with higher pregnancy rates.

It is also important to understand that couples who are experiencing infertility have a higher risk of having a child with a congenital anomaly even without treatment. Infertile couples, by definition, do not have normal reproductive function and already have a higher risk of having a child with a birth defect. Men who have very low sperm counts are at an even higher risk of having a chromosomal abnormality that could be passed on to their offspring.

Many of the reports that suggest an increased risk of congenital anomalies are limited by methodological and statistical difficulties. Congenital anomalies are rare so scientific studies require a very large number of births to see if there is an association. There are also many other confounding factors. It is important to compare the number of abnormalities in children born from IVF to the number of abnormalities in children born to infertile couples without treatment, not to the general population, as discussed above.

The risk of a child with a birth defect in the general fertile population is 3 to 5%. After an IVF cycle, the best current estimate is that the birth defect rate increases by approximately 1%. A number of studies have indicated that couples with infertility, whether conceiving on their own or through other non-IVF treatment, have the same increased risk of birth defects as those undergoing IVF. It is also possible that couples undergoing ICSI may be at a slightly higher risk for having a child with an abnormality than couples undergoing routine IVF treatment, likely because of the increase in chromosome abnormalities in men with low sperm counts.

A rare group of conditions known as "Imprinting Disorders" have been linked to IVF. Imprinting disorders are thought to be due to the inappropriate expression of a maternal or paternal gene in early embryo development. At this time, the estimated risk of an imprinting disorder with IVF is 2-5 per 15,000 while the background risk in the general population is 1 in 15,000.

The vast majority of studies to date indicate that infant development is normal in children conceived through IVF. The major risk factor in infant developmental problems is multiple pregnancies.

The good news is that IVF can help many couples have children who would otherwise be infertile. Overall, the vast majority of children born from IVF do not have a congenital anomaly. Screening during early pregnancy is available to detect the majority of the small percent of IVF babies who do have an abnormality. Further discussion with a genetic counselor is available for couples who wish to obtain more information.