

World's first baby born from new egg-screening technique

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Meet Oliver, the first baby in the world born using a new egg-screening technique that could double the odds of an implanted embryo taking hold in the womb, unveiled by British experts Wednesday.

Baby Oliver was born in Britain to a 41-year-old woman after 13 failed attempts at in vitro fertilisation (IVF).

The new technique, called array comparative genomic hybridisation (CGH), makes it possible to ensure eggs have a normal number of [chromosomes](#), boosting the likelihood of a successful pregnancy.

"Chromosomal abnormality plays a major part in the failure to establish a pregnancy," said Simon Fishel, managing director of the CARE Fertility Group, which oversaw the procedure.

"Full chromosome analysis may double the chance of success in couples who have a poor chance of conceiving or a history of failed treatments and miscarriage," he said.

The technique has the potential to dramatically reduce the incidence of miscarriages and multiple pregnancies in IVF patients, he said.

It could also help screen against [birth defects](#).

The most common cause of failure in IVF -- in which a woman's eggs are fertilised outside the body and then placed in the [womb](#) -- is an

abnormal number of chromosomes in the egg, studies have shown.

"Up to half of the eggs in younger women and up to 75 percent in women over 39 are chromosomally abnormal," Fisher said.

The new screening technique is faster than conventional CGH, which means that the embryo does not have to be frozen.

The results come back in 24-to-48 hours rather than five days or a week.

In the case of Oliver, of eight eggs tested from the mother only two were found to be chromosomally normal.

One of these produced the embryo that became Oliver.

Human cells have 46 chromosomes, with 23 inherited from each parent. Before an egg is fertilised, it ejects half of its full set of chromosomes to make room for the 23 coming from the sperm.

These discarded chromosomes, held in a structure called the "polar body," are a mirror image of those remaining in the egg.

Array CGH examines this cast-off genetic material. If there are too few or too many chromosomes, doctors know that the egg is not suitable for use.

The treatment is currently only available at Care Fertility, Britain's largest independent provider of assisted conception.

Oliver arrives in the midst of a controversy in Britain and elsewhere over so-called pre-implantation genetic screening (PSG).

A recent review by the British Fertility Society found that there was no

compelling evidence that PSG improves clinical pregnancy rates or reduces [miscarriage](#) rates.

BFS chairman Tony Rutherford said array CGH "offers much promise", and could help improve the accuracy of such genetic tests.

But he also urged caution.

"It is absolutely essential that these new techniques are subject to further rigorous research, and should only be offered to patients within the context of a robustly designed clinical trial," he said.

"The widespread use of this technology should await the outcome of such research to ensure we know which patients might benefit," he told journalists.

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