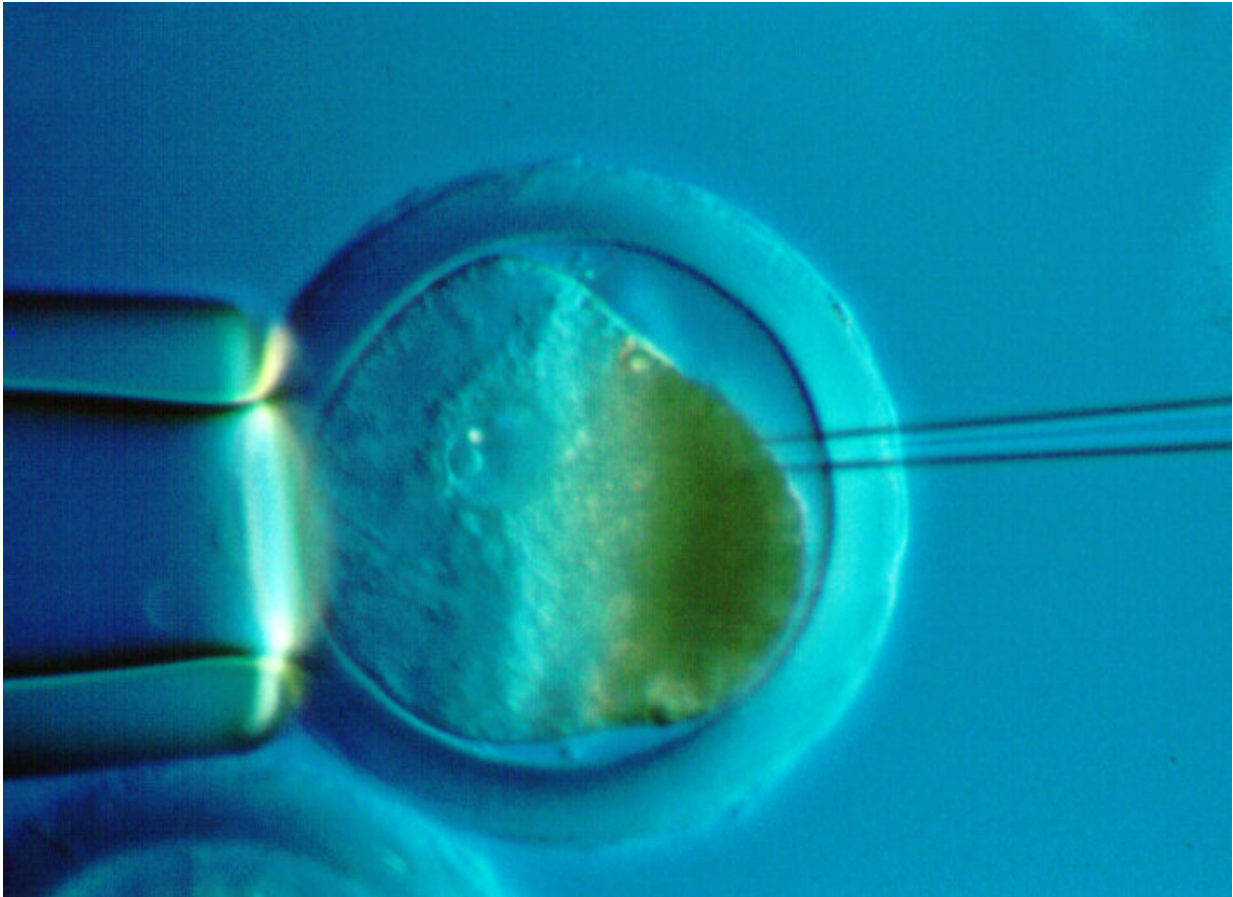


New fertility hope for the sons of IVF

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Credit: Hudson Institute of Medical Research

Infertility concerns have eased among men conceived by the most common form of IVF, with new research showing little or no difference in their reproductive health compared to men conceived naturally.

Until now it was believed that these men were likely to inherit their fathers' infertility issues.

However, the world's largest study on the [health](#) of adult men conceived using [intracytoplasmic sperm injection](#) or ICSI—the most [common type](#) of assisted reproductive technology (ART)—found similar sperm output between men conceived with ICSI and other men. The study was published in *Fertility and Sterility*.

Reproductive health of ICSI-conceived men

The work, led jointly by the Hudson Institute of Medical Research and Murdoch Children's Research Institute with contributions from The Raine Study (Perth), is the first to categorize fathers by their underlying cause of infertility and look at whether these causes affected the [reproductive health](#) of their sons.

The Hudson team was headed by [male fertility](#) expert Professor Robert McLachlan AM and Ph.D. student Dr. Sarah Catford, who found very limited research in the area, and ongoing concern that men conceived with ICSI may have impaired reproductive function.

The MCRI team brought a wealth of experience to the conduct of such studies in ART offspring conceived using conventional IVF.

"We invited men conceived using ICSI and their parents to take part in a study about the overall health and reproductive and metabolic health of men conceived with ICSI, due to a very limited pool of knowledge on this subject. Results from the reproductive study have recently been published, with our metabolic data soon to follow," Dr. Catford said.

Professor Roger Hart from the University of Western Australia provided the comparison data from a group of young men conceived without

reproductive assistance, who were born into the Raine Study between 1989 and 1992. The men completed questionnaires, underwent [physical examination](#), and provided biological samples at 20 years old. Additional data was sourced from antenatal questionnaires completed by their mothers at 16, 18 and 34 weeks of gestation.

The Raine Study is the world's first and longest-running prospective pregnancy cohort study. It has followed a group of 2,868 children who were born into the study between 1989 and 1991. Research based on data from the Raine Study has previously confirmed that there is no genetic difference and or longer-term health implications for children born IVF compared with those conceived naturally. The Raine Study is recognized internationally as a highly unique resource.

Male infertility not inherited

"The good news is that poor semen quality or infertility is not necessarily inherited or transferred from father to son, unlike hair or eye color," she said.

"This study provides reassurance to parents of young men who were conceived with ICSI, prospective parents, and the young men themselves, that men conceived with ICSI are likely to have comparable reproductive health to their peers conceived naturally."

"The data also provides reassurance to clinicians about the safety of ICSI and paves the way for ongoing research on the health of adults conceived with ICSI," Dr. Catford said.

More information: Sarah R. Catford et al, Reproductive function in men conceived with in vitro fertilization and intracytoplasmic sperm injection, *Fertility and Sterility* (2022). [DOI: 10.1016/j.fertnstert.2021.12.026](https://doi.org/10.1016/j.fertnstert.2021.12.026)

Provided by Hudson Institute of Medical Research

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