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Image of a British couple who resorted to a screening technique to protect their son from a genetic disease
Daily Mail

'Perfectly' Designed Children with Three Parents Could Be Born within Three Years

The technique is currently illegal

Sexual reproduction may be a lot of fun, but it's far from being perfect when it comes to combining the genetic material of the parents, sometimes leading to incurable genetic diseases. However, genetically engineered children could literally be born perfect in a couple of years in the UK, by replacing defective DNA strands of the embryo with that from another woman, for example, generating children with three parents, two mothers and a father. The technique has already been tested by researchers from the Newcastle University who created an embryo using this method. According to them, by doing so, the newborn children will not inherit any genetic diseases such as diabetes, blindness or heart problems from their original parents. The scientists no sooner presented their findings than critics were already claiming that this technique would eventually lead to genetically-modified children designed to order. The law in the UK states clearly that any embryos designed through such techniques must be destroyed within 14 days from the moment they have been created. The researching team focused their investigations on mitochondria, which has the role of passing the DNA from the mother to the embryo. One in 5,000 babies is born with one of the 50 or so genetic diseases, some of which can even put their life in grave danger. First they have fertilized an egg through in vitro fertilization, then the egg was made genetically defect free. The nucleus is afterwards extracted and placed into a healthy egg. Because the mitochondria are localized outside the nucleus, they will correct the genetic defects and will make the baby look as the parents contributing with genetic material. As earlier said, the procedure is so far illegal, but future updates of the current regulations could leave some openings for a modification of the law. There are however some concerns regarding the influence of mitochondria on longevity, IQ or even fertility, said professor Jonathan Van Blerkom.