

UK proposes rules for embryos made from 3 people

December 17 2014, by Maria Cheng

(AP)—New rules proposed in Britain would make it the first country to allow embryos to be made from the DNA of three people in order to prevent mothers from passing on potentially fatal genetic diseases to their babies.

In a statement issued on Wednesday, the department of health said it had taken "extensive advice" on the safety and efficacy of the proposed techniques from the scientific community.

"(This) will give women who carry severe mitochondrial disease the opportunity to have children without passing on devastating genetic disorders," Dr. Sally Davies, the U.K.'s chief medical officer, said in a statement.

Experts say that if approved by parliament, these new methods would likely be used in about a dozen British women every year who are known to have faulty mitochondria—the energy-producing structures outside a cell's nucleus. Defects in the mitochondria's genetic code can result in diseases such as muscular dystrophy, heart problems and mental retardation.

The techniques involve removing the nucleus DNA from the egg of a prospective mother and inserting it into a donor egg, where the nucleus DNA has been removed. That can be done either before or after fertilization.

The resulting embryo would end up with the nucleus DNA from its parents but the mitochondrial DNA from the donor. Scientists say the DNA from the donor egg amounts to less than 1 percent of the resulting embryo's genes. But the change will be passed onto future generations, a major genetic modification that many ethicists have been reluctant to endorse.

Critics say the new techniques are unnecessary and that women who have mitochondrial disorders could use other alternatives, such as egg donation, to have children.

"Medical researchers are crossing the crucial ethical line that will open the door to designer babies," said David King of Human Genetics Alert, a secular group that opposes many genetics and fertilization research.

British law currently forbids any genetic modification of embryos before being transferred into a woman.

Earlier this year, the U.S. Food and Administration held a meeting to discuss the techniques, and scientists warned it could take decades to determine if they're safe.

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