

UK 1st country to allow creation of embryos from 3 people

25 February 2015, by Maria Cheng

(AP)—Britain has become the first country in the world to allow the creation of human embryos from the DNA of three people, a technique intended to help mothers avoid passing on genetically degenerative diseases to their babies.

The bill granting the controversial techniques was passed Tuesday by the House of Lords, after being approved earlier this month by the House of Commons.

The methods involve altering an egg or embryo before it is transferred into a woman which had previously been forbidden by British law. They are intended to avoid passing on defects in the mother's mitochondria, which can result in diseases including [muscular dystrophy](#), heart, kidney, liver failure and severe muscle weakness.

The methods would likely only be used in about a dozen British women every year, who have faulty mitochondria, the energy-producing structures outside a cell's nucleus. To fix that, scientists remove the nucleus DNA from the egg of a prospective mother and insert it into a [donor egg](#) from which the donor DNA has been removed. That can happen before or after fertilization.

The resulting embryo would end up with the nucleus DNA from its parents but the mitochondrial DNA from a donor. The DNA from the donor amounts to less than 1 percent of the resulting embryo's genes.

"This result will be life-changing for many women living with [mitochondrial disease](#), giving them the precious chance to bear unaffected children, removing the condition from a family line and reducing the numbers faced with its devastating effects," said Robert Meadowcroft, chief executive of the Muscular Dystrophy Campaign, in a statement. He called it a "monumental moment" in the search for treatments and cures for people affected by the condition.

But critics charge the new techniques cross a fundamental scientific boundary, because changes made to the embryos will be passed on to future generations.

The Center for Genetics and Society, a U.S. advocacy group, called the decision "a historic mistake" that would "turn children into biological experiments and sell wildly exaggerated hope to women already in a challenging position."

Last year, the U.S. Food and Drug Administration held a meeting to discuss the techniques and scientists warned it could take decades to determine if they are safe. Experts say the techniques are likely being used elsewhere, such as in China and Japan, but are mostly unregulated.

© 2015 The Associated Press. All rights reserved.

APA citation: UK 1st country to allow creation of embryos from 3 people (2015, February 25) retrieved 5 May 2021 from <https://medicalxpress.com/news/2015-02-uk-1st-country-creation-embryos.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.