

Designer Babies: The Science and Ethics of Genetic Engineering

<https://www.youtube.com/watch?v=k1a2larfMIA>

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Preimplantation Genetic Diagnosis
is already being used for

HUMAN PREGNANCIES

1:57 / 5:01

CC HD

The video player shows a dark-themed interface. On the left, there is a cartoon illustration of a pregnant woman with blonde hair, wearing a purple long-sleeved shirt and blue pants, standing with her hands on her hips. The background of the video is a dimly lit laboratory or classroom setting with people working at desks and a whiteboard. On the whiteboard, there is a chemical structure diagram of a complex organic molecule with multiple hydroxyl groups. The video player controls at the bottom include a play button, a progress bar, a volume icon, a timestamp of 1:57 / 5:01, a settings gear icon, and a full-screen icon.

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- Involve manipulating fertilized eggs

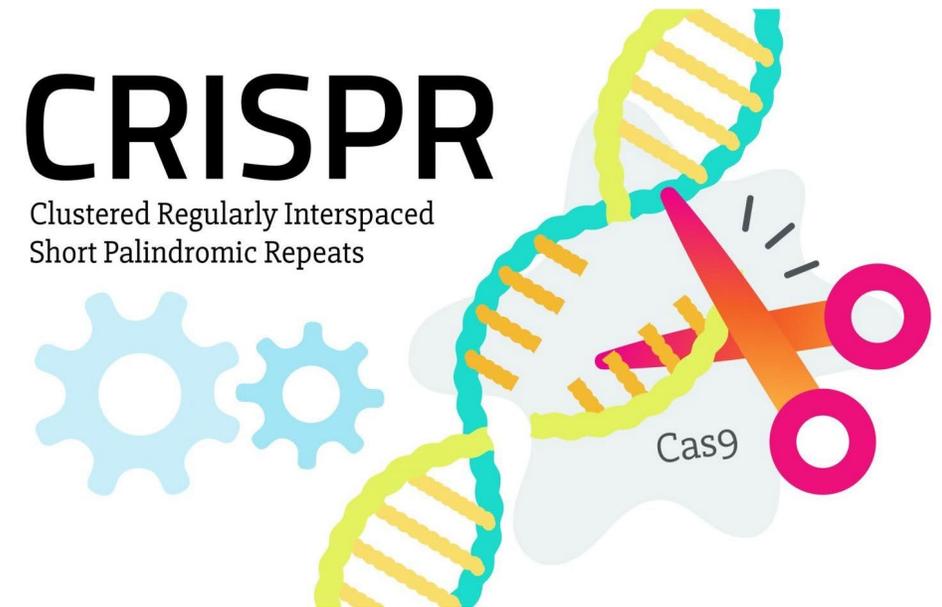
1. PGD: Preimplantation Genetic Diagnosis

- No gene editing
- Choose from viable eggs

2. TALENS: Remove specific parts of DNA

3. CRISPR: Genetic modification

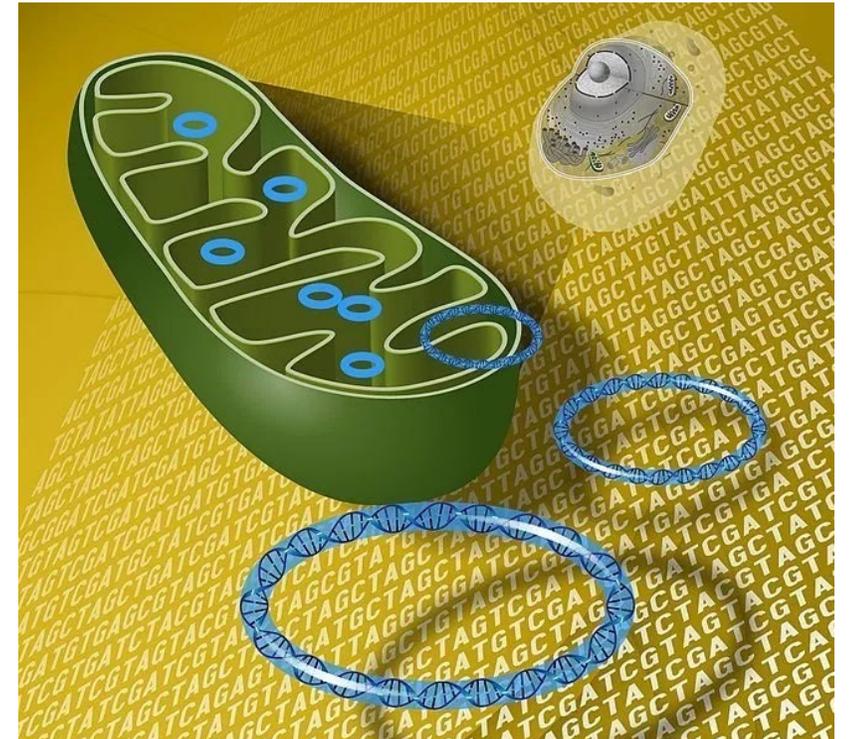
- Screening for disease is the most common, #2 and #3 is illegal in most nations



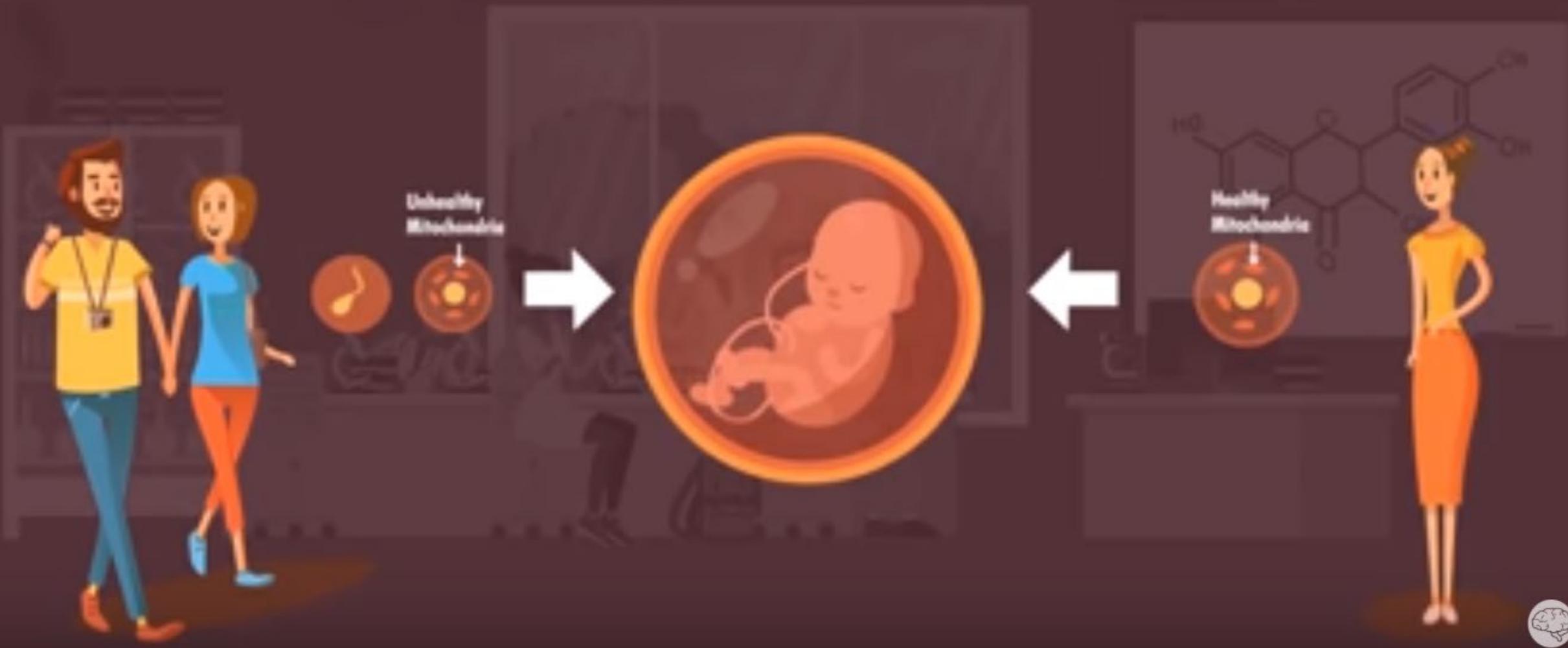
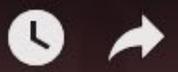
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- ✓ **3 Parents:** 1 female donates **mitochondrial DNA (mDNA)**
- ✓ **Issues/Concerns:** (In China – engineered embryos already developed)

1. Superheroes?
2. Reduced disease
3. Terminated embryos
4. Loss of individuality
5. Expensive
6. Other unpredicted consequences



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Designer Babies: The Science and Ethics of Genetic Engineering Video Recap

1. In one technology, 3 parents can “produce” a child. How?
2. What are the issues/concerns with this new technology?

