Designer babies: is it good or bad?

Science, Agriculture

The idea of designing people used to be the realm of science fiction, but now we are closer than ever with the invention of new techniques.

So how can DNA be edited?

Genome editing is the target of genome cleavage by engineered zinc finger nucleases followed by gene modification during subsequent repair".

So basically, DNA cutting enzyme called nucleus can be put into a cell that breaks the DNA at a specific place and takes out the wrong or unwanted gene. The DNA can use a synthetic sequence that replaces the wrong one as the strands are put back together. There are a couple of techniques that do this but the most recent is called CRISPR which makes it easier to target specific genes. Genes can be very long.

Some genes might be up to a thousand base pairs long. Previous types of edition could only target a few base pairs at a time. CRISPR uses RNA (Ribonucleineacid) to guide the nucleases and can target a lot more base pairs.

This technique can have huge benefits for humanity. This type of editing is already being studied as a treatment for HIV. Cutting out the bit of DNA in a cell that lets the deadly virus in, replacing it with something else could cure people of the disease.

But along all the benefits, scientists fear an application of these editing techniques for the creation of designer babies. But the process is not an exact science yet. The editing could wind up affecting affecting other genes

and other places in the DNA that it was not meant for. The exact result of a genetic modification is impossible to know until the actual birth.

Therefore, the effects will be brought to other generations where we also do not know how this editing impacts.

There are also many concerns, that this editing is almost too simple.

It would be easy to edit embryos in private fertility centers that do not have strict laws. This would lead to a commercialization of the fertility with designer babies.

Imagine you are married and you and your wife want to have a baby. The problem now is that your genetical prerequisites of you and your wife would lead to a chance of a child that has to suffer many genetical disabilities. Is it now ethical justifiable? On the genetical point of view I would say yes, but only if this are really rare genetically malfunctions. You basically eliminate disease causing genes for future generations, too.

But I think, the most important question regarding the trend of designer babies is where do we actually draw the line? Is it okay to choose the gender, eye and hair color and make specific design wishes? Is it justifiable to edit other characteristics like intelligence? Or is it just about bringing a healthy baby to birth?

I also think that as parents you take what you get. Sometimes you have problems at birth and sometimes you discover them a little bit later. That is

what parenting is about. Not choosing the perfect baby. Just love the life of your own little child without genetical improvements.

But who could not objectify that one just wanted to make sure that the baby didn´t have some genetic abnormality? I think you can easily rationalize these decisions. But I think what happens is, that a lot of these advances and especially the amount of money that people are paying for them, do make them feel entitled to have the baby that they want. These technologies can change people’s expectations of for what they have in a baby and what parenting is about.

Conclusion

Designer Babies can have many benefits but I think the decision should always be with the individual parents. Do they want a healthy baby, or do they want a baby according to their expectations and preferences?

Let´s say in about 15 years designer babies are common. Now imagine your normally born daughter plays with a genetically modified child. Isn´t there a possibility of discrimination or a feeling of being superior upon the normal born child?

Now let´s say in 30 years normal born babies do not have the same chances than genetically modified humans because of characteristics that are superior to normal born people. Will this person then has problems in finding a job, just because genetically modified persons are more intelligent?