

# Human genetic engineering

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Human Genetic Engineering BY Oxbow In this essay I will be discussing the controversial topic of human genetic engineering and its pros and cons from a biological and social point of view while also trying to answer the question "Should human genetic engineering be legal." Genes control health and disease, as well as human traits and behavior. Researchers are just beginning to use genetic technology to unravel the secrets to these (observable trait caused by a gene). They are also discovering a range of other potential applications for this technology.

For instance, ongoing advances make it more and more likely that scientists will soon be able to genetically engineer humans to have certain desired traits (this is already done on mice). Of course, the use of human genetic engineering raises a number of ethical and legal questions, although such questions almost never have a clear and straightforward answer. The research of psychologists, sociologists, anthropologists, and other social scientists can tell us about how different citizens, cultures, and religions view the moral boundaries for the uses of human genetic engineering.

If human genetic modification is fully legalized it will be done on the early, early stages of reproduction: from when it is just a sperm and an egg to the fetus stage, maybe a slight amount later. At this point of time it is only legal to perform two types of "advanced reproductive technologies" on humans. The first is fertilizing the egg with sperm in a test tube. This is used to determine the sex and what genes the baby will have, therefore knowing if using a different sperm/egg will be a better choice since one of the genes in the first tested set might be a genetic disease or the parents might prefer a different sex.

The second technique is much like the first. Embryos for a genetic disease; only selected embryos are implanted back into the mother's womb. This is called "Pre-implantation Genetic Diagnosis." Now I will discuss what good can come of legalizing human genetic engineering. Really the most useful application of human genetic engineering is preventing hereditary diseases, disabilities and defects/disorders. Examples include: Down syndrome, Diabetes, color blindness and even allergies.

Stopping these diseases/disorders before the baby is even born can help prevent a lot of issues from happening in the child's future and can possibly save lives. Eventually the disease/disorder will die out because the gene has been removed from the generations making it unable to be passed down. Another application could involve stimulating muscle growth/brain development in turn making the child more athletic or more brainy also changing your child's physical features and traits, such as eye color and hair color.

Now for the bad: Although changing your child's physical traits, deciding to make them more muscle or more smart can seem like a good thing to some people it is also viewed as a bad thing to some people. Things like "a perfect race" could arise from these problems, or "baby trends," where it is trendy that year for your kids to have blonde hair then it is for them to have black or blue eyes rather than green. This is generally the topic that is the most talked amongst the public when discussing human genetic engineering.

Other social issues can be raised such as it is against "god's will," countries creating super human soldiers, countries becoming more like the class

system [e: people who run business, there is also the issue of the child not having the choice to be genetically modified, the individuality of humans and costs of genetically modifying also comes into play, such as, can only the rich afford it? From a biological point of view genetic modification could eventually make some genes " extinct" in a way, where they are no longer needed/deemed useless or maybe they " go out of fashion. In my opinion, I think that genetic modification in humans should be legal, but should only be used for hereditary diseases, disabilities and disorders which help the child but things like letting the parent chose the child's traits do not help the child and he/she also loses their individuality. Also there is the fact that the child doesn't have a choice at what the parents will make them look like. Changing the traits of a child through genetic engineering does not benefit the child and only pleases the parents.