

Bioethics

Designer Babies: When Should New Technologies Be Used to Change the Gene Pool?

With advances in cell biology, embryology, and molecular biology, scientists are able to identify phenotypes (traits) in embryos, and even in sperm and egg cells. The power of the technologies can be applied in a variety of ways.

It is obvious why couples would want to check for "healthy" sex cells and embryos. Being able to test for enzyme deficiencies (such as PKU) or chromosome abnormalities (such as Down syndrome) allows parents to decide how they might handle a pregnancy with a child that has one of these conditions. But, now, less life-threatening phenotypes can also be identified early in the reproductive process. For example, the sex of an embryo is easily determined. With new techniques, an embryo of a specific gender can be selected or aborted. This is called gender selection. Gender selection is highly controversial.

Many parents say that as long as their baby is healthy, they do not care whether it is a boy or girl. But, some parents do care. In certain cultures, having a baby of one particular gender, but not the other, is celebrated. In fact, in some countries, babies that are "the wrong gender" may be given away or killed.

How do you feel about gender selection? Is it ever justifiable? If so, when? Would you want to be able to select the gender of your babies? How much would you be willing to pay for it?



An eight-celled human embryo (blastocyst).
Photo courtesy of Joe Conaghan, PhD.

DO Using the Internet, find information about additional gender-selection techniques. Examine your own beliefs regarding gender-selection technologies.

1. Go to www.msnbc.msn.com/id/4051710/site/newsweek/ and read the article on gender selection.
2. After reading the article, list the medical or scientific technologies used to determine gender and how the techniques differ from each other.
3. Write a position statement as to whether or not you would want the right to predetermine the gender of your child. Address the following points:

If you believe couples should have the right to choose, explain your reasons. List a reason some other couple might not want the right to be able to choose. Conversely, if you do not want the right to be able to select the gender of your offspring and you think others should not have that right, explain your reasons. Give one reason why other couples might want to select the gender of their child.

4. In addition to choosing the gender of your child, are there specific traits that you would want your child to possess? List three other characteristics a couple might want to predetermine in their offspring and why.
5. Gender selection is expensive. Find a Web site for a gender-selection service. How much do they charge? How much would you be willing to spend? How did you come up with that amount?