Addressing human embryo stem cell research

_If they Say..... _You say......_

Embryonic stem cell research is one of the most controversial issues of the day. The following information gives examples of arguments for the side advocating the killing of embryos for research and then gives rebuttals to these arguments. For many people, the reality that stem cells can be obtained from adults, fat and umbilical cord blood is unknown. Educating others that stem cell research can be pursued without taking the life of a human embryo is needed. Prolife people also want to see cures for diseases, but not at the expense of members of the human race.

_If they say...._
Stem cells aren’t alive. If stem cells possess life-saving possibilities, why shouldn’t they be used for research?

_You say...._
You are right, stem cells aren’t alive. However, a living human embryo must be destroyed in order to obtain embryonic stem cells. Every time embryonic stem cells are extracted from a human embryo, a unique individual is destroyed. The removed stem cells would have developed into the child’s heart, kidneys and all of the 210 different kinds of tissue found in the human body1.

Embryos have the 46 chromosomes that make them human. It is already decided if they will be a boy or a girl. It is already decided what color eyes they will have. From the first day of conception until death, nothing has or will be added to them except food and oxygen.

_If they say...._
It’s just a frozen fertilized egg. What’s the big deal?

_You say...._
This statement is false. A fertilized egg is the term used to describe a one-cell human in its first day of development. A fertilized egg does not have any stem cells to extract because it is only one cell. Embryonic stem cells are removed from embryos who are around a week old. These embryos are called blastocysts and they number several hundred cells.

Life begins at conception. We all began life when a sperm joined an ovum. The size of a human body doesn’t give life value. Is a 6’5, 300-pound man more valuable than a newborn child?

It is also important to mention that an embryo is no less valuable if she is frozen than if she is in her mother’s womb. The stage of development, temperature, and size of a child don’t determine its value. The fact that an embryo is a human life is what makes her priceless.

_If they say...._
It doesn’t even look like a human.
You say....
Actually, it does look human. This is exactly how every human looks during this stage of development. Every human looked the same shortly after conception. Just because people aren’t as familiar with this stage of development doesn’t mean that an embryo isn’t human and doesn’t look like a human.

Many people have different deformities or peculiarities that take away from their ability to look like the “ideal human.” That doesn’t mean that they’re not human and that they don’t have the same rights as other humans. The way something looks doesn’t make it human.

Some believe stem cells from human embryos are human enough for research, but not human enough to join the human family. This logic defiles the reality that life begins at conception, a truth some researchers and politicians would like to ignore.

If they say....
All of these embryos will just be destroyed anyway, so why not use them for helpful research?

You say....
Embryonic research advocates act like all of the embryos in fertility clinics that aren’t used will be thrown away. This, however, is simply not the case. The parents generally have at least two other options. First, preserve the embryos for possible future use (chosen by about 90%). Two, donate the embryos to another couple so they can have a child.

Even if the embryos are going to be destroyed that doesn’t mean that we have the right to experiment with their bodies. Was it right for Nazi doctors to experiment with concentration camp prisoners that were going to be killed? Is it right for us to experiment with convicts on death row? The obvious answer is no. As a civilized society, we recognize the importance of human life. In order to stay a civilized society we can’t abandon our respect for every individual human being.

It is theorized that embryos from fertilization clinics will be used for the initial experiments. However, if these experiments are successful, some in the biotechnology community have anticipated that the supply of embryos from clinics wouldn’t be enough. This is where human cloning enters the picture. During a Congressional Committee, Biotechnology Industry Organization said that the cloning of embryos “are a critical and necessary step in the production of sufficient quantities of vigorous replacement cells for the clinical treatment of patients.”

If they say....
Embryos are the only place to find stem cells.

You say....
There are many life-affirming alternatives to stem cells taken from destroyed embryos. Initially, alternative stem cell research was not extensive because alternative stem cells were thought to be less available and versatile. However, there have been many recent breakthroughs in the use of stem cells that are derived from alternatives to embryos. The most promising of these alternative methods is the use of adult stem cells. All people have stem cells located in blood, bone marrow, and brains. In rats and mice, it has been found that scientists can use
key cells from adult bone marrow and can rebuild a damaged heart—actually creating new heart muscle and blood vessels. The British Medical Journal has stated that research on embryonic stem cells “may soon be eclipsed by the more readily available and less controversial adult stem cells.” Adult bone marrow stem cells have been shown to form tissues including bone, muscle, fat, liver, and neural cells. There is also the case of an 18 year-old woman whose spinal cord was severed in automobile accident. Thanks to white blood cells from her own skin and bone marrow that have been injected into the damaged area, she now has regained bladder control and recovered significant motor function in her legs.

Researchers have also found stem cells in human fat. Researchers at the University of Pittsburgh and UCLA got fat from liposuction patients and then collected stem cells from this fat which grew into muscle, bone, and cartilage cells.

Another important note is that stem cells derived from the bodies of patients don’t face the possibility of rejection, unlike embryonic stem cells. This rejection can lead to death since the cells can’t be extracted once the are injected.

Yet another promising alternative to embryonic stem cell research that doesn’t have ethical implications is research on stem cells found in the blood of umbilical cords. The small amount of blood found in umbilical cords after birth is rich in stem cells. Researchers have said “Umbilical cords discarded after birth may offer a vast new source of repair material for fixing brains damaged by strokes and other ills, free of the ethical concerns surrounding the use of fetal tissue.”

These preceding examples are only a few of the many alternatives to human embryo stem cells. For a long list of alternative research and findings to go to and look at the current clinical and potential applications of adult stem cells.

If they say....
Without embryonic stem cell research, the great potential of stem cells is wasted.

You say....
As mentioned above there are many life-affirming alternatives to embryonic stem cell research. Continued research is needed for these kinds of research but if the federal government begins to fund embryonic stem research that means that there will be less federal funds for research on adult stem cells. On March 8, 2001, a group of plaintiffs, including the Christian Medical Association filed suit against the NIH to prevent federal funding of embryonic stem cell research. The lawsuit argued that federal funding of embryonic stem cell research would cut the funding available for adult stem cell research.

If they say....
Scientists should be allowed to do the research. Who is the government to stop them?

You say....
The Bush administration isn’t deciding if embryonic stem cell research should be illegal. It is deciding if federal funds should go towards supporting this kind of research. There is a law, call the “Dickey Amendment,” which states that federal funds can’t be used for “research in which a human embryo or embryos are destroyed, discarded, or knowingly subjected to risk of injury or death.” The Clinton administration got around this law by accepting the NIH (National Institutes of Health) Guidelines that separated the research on the embryonic stem
cells from the act of obtaining those stem cells. So researchers would have to privately fund the obtaining of stem cells through the destruction of human embryos but could get public funds for research on those cells. Our government shouldn’t be involved in promoting research that involves and requires the destruction of innocent human lives.

If they say....
Embryonic stem cells have already helped people. Isn’t that evidence enough?

You say....
Actually, embryonic stem cells have probably done more damage than help to humans. The whole argument behind research on embryonic stem cells is based on potential cures not current cures. There are a few problems with using embryonic stem cells in actual surgeries.

One problem is that these cells are completely undifferentiated so they don’t always become what researchers want them to become. There was an experiment in China, where a man with Parkinson’s was injected with fetal and embryo cells. He died unexpectedly after improving briefly. His autopsy revealed that his death was caused by the “unexpected growth of bone, skin, and hair in his brain, material the authors theorized resulted from the transformation of undifferentiated stem cells into non-neural, and therefore deadly, tissues.”

Another problem is that the undifferentiated stem cells could become cancer cells. In an interview with Technology Review, a Massachusetts Institute of Technology publication, University of Pennsylvania bioethicist Glenn McGee said, “The emerging truth in the lab is that pluripotent (embryonic) stem cells are hard to rein in. The potential that they would explode into a cancerous mass after a stem cell transplant might turn out to be the Pandora’s box of stem cell research.”

If they say....
This kind of research could save lives and we should explore all areas of research that could find ways to cure such a wide array of diseases.

You say....
Even though this research could be helpful, it is still never ethically correct to sacrifice the life of one human to save another without their consent. This kind of utilitarian thinking was the same kind of rationale used by Nazi scientists and during syphilis experiments on African Americans in Tuskegee, Alabama.

Medical advancement should continue but not through the taking of human life. No human being should be forced to be made the subject of research without their permission, especially if that research leads directly to their destruction.

Notes:
1 Prentice, D., No Fountain of Youth, Regeneration Online.
2 Bazell, R. “Approach may repair heart damage,” NBC Nightly News, 3/30/01.
3 Jofeson, D., Adult Stem Cells May be Redefinable, British Medical Journal, January 30, 1999; 318, p. 282.
4 Prentice, D., No Fountain of Youth, Regeneration Online.
5 Lemonick, M., Who Will Live Longest?, Time, April 23, 2001, p. 64
6 “Umbilical cords could repair brains,” Associated Press, 2/20/01.
8 Smith, W. “The Politics of Stem Cells: The good news you never hear.” The Weekly Standard, March 26, 2001/Vol 6, Number 27