

Stem Cell Research and "Therapeutic" Cloning: A Christian Analysis

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<http://www.cbhd.org/resources/stemcells/overview.htm>

In November of 1998, scientists reported that they had successfully isolated and cultured human embryonic stem cells—a feat which had eluded researchers for almost two decades. This announcement kicked off an intense and unrelenting debate between those who approve of embryonic stem cell research and those who are opposed to it. Some of the most prominent advocates of the research are scientists and patients who believe that embryonic stem cell research will lead to the development of treatments and cures for some of humanity's most pernicious afflictions (such as Alzheimer's disease, Parkinson's disease, heart disease, and diabetes). Among the most vocal opponents of the research are those who share the desire to heal, but who object to the pursuit of healing via unethical means. CBHD's view is that because human embryonic stem cell research necessitates the destruction of human embryos, such research is unethical—regardless of its alleged benefits. Ethical alternatives for achieving those benefits should be actively pursued.

1. What are human embryonic stem cells and how are they obtained?

Human embryonic stem cells are the cells from which all 200+ kinds of tissue in the human body originate. Typically, they are derived from human embryos—often those from fertility clinics who are left over from assisted reproduction attempts (e.g., in vitro fertilization). When stem cells are obtained from living human embryos, the harvesting of such cells necessitates destruction of the embryos.

2. How are adult stem cells different from embryonic stem cells?

Adult stem cells (also referred to as "non-embryonic" stem cells) are present in adults, children, infants, placentas, umbilical cords, and cadavers. Obtaining stem cells from these sources does not result in certain harm to a human being.

3. Is it ethical to obtain stem cells from human fetuses and umbilical cords?

Fetal stem cell research may ethically resemble either adult or embryonic stem cell research and must be evaluated accordingly. If fetal stem cells are obtained from miscarried or stillborn fetuses, or if it is possible to remove them from fetuses still alive in the womb without harming the fetuses, then no harm is done to the donor and such fetal stem cell research is ethical. However, if the abortion of fetuses is the means by which fetal stem cells are obtained, then an unethical means (the killing of human beings) is involved. Since umbilical cords are detached from infants at birth, umbilical cord blood is an ethical source of stem cells.

4. Have scientists been successful in using *non-embryonic* stem cells to treat disease?

Yes. In contrast to research on embryonic stem cells, non-embryonic stem cell research has already resulted in numerous instances of actual clinical benefit to patients. For example, patients suffering from a whole host of afflictions—including (but not limited to) Parkinson's disease, autoimmune diseases, stroke, anemia, cancer, immunodeficiency, corneal damage, blood and liver diseases, heart attack, and diabetes—have experienced improved function following administration of therapies derived from adult or umbilical cord blood stem cells. The long-held belief that non-embryonic stem cells are less able to differentiate into multiple cell types or be sustained in the laboratory over an extended period of time—rendering them less medically-promising than embryonic stem cells—has been repeatedly challenged by

experimental results that have suggested otherwise. (For updates on experimental results, access www.stemcellresearch.org.)

5. Have scientists been successful in using embryonic stem cells to treat disease?

Though embryonic stem cells have been purported as holding great medical promise, reports of actual clinical success have been few. Instead, scientists conducting research on embryonic stem cells have encountered significant obstacles—including tumor formation, unstable gene expression, and an inability to stimulate the cells to form the desired type of tissue. It may indeed be telling that some biotechnology companies have chosen not to invest financially in embryonic stem cell research and some scientists have elected to focus their research exclusively on non-embryonic stem cell research.

6. What is the relationship between embryonic stem cell research and "therapeutic" cloning?

Another potential obstacle encountered by researchers engaging in embryonic stem cell research is the possibility that embryonic stem cells would not be immunologically compatible with patients and would therefore be "rejected," much like a non-compatible kidney would be rejected. A proposed solution to this problem is to create an embryonic clone of a patient and subsequently destroy the clone in order to harvest his or her stem cells. Cloning for this purpose has been termed "therapeutic" cloning—despite the fact that the subject of the research—the clone—is not healed but killed.

7. Why should we value the human embryo?

Underlying the passages of Scripture that refer to the unborn (Job 31:15; Ps. 139:13-16; Lk. 1:35-45) is the assumption that they are human beings who are created, known, and uniquely valued by God. Genesis 9:6 warns us against killing our fellow human beings, who are created in the very image of God (Gen. 1:26-27). Furthermore, human embryonic life—as well as all of creation—exists primarily for God's own pleasure and purpose, not ours (Col. 1:16).

8. Shouldn't it be ethical to allow the destruction of a few embryos in order to help the millions of people who suffer from diseases such as Parkinson's and heart disease?

Many proponents of human embryonic stem cell research argue that it is actually wrong to protect the lives of a few unborn human beings if doing so will delay treatment for a much larger number of people who suffer from fatal or debilitating diseases. However, we are not free to pursue gain (financial, health-related, or otherwise) through immoral or unethical means such as the taking of innocent life (Deut. 27:25). The history of medical experimentation is filled with horrific examples of evil done in the name of science. We must not sacrifice one class of human beings (the embryonic) to benefit another (those suffering from serious illness). Scripture resoundingly rejects the temptation to "do evil that good may result" (Rom. 3:8).

9. What does the law say and can I have a voice?

No forms of stem cell research or cloning are prohibited by federal law, though some states have passed partial bans. Private funds can support any practice that is legal, whereas federal funds cannot be used for research on embryonic stem cell lines unless they existed before August 9, 2001. You can object to all forms of human cloning and research that destroys human embryos, as well as encourage adult stem cell research, by writing, telephoning, or emailing your U.S. Senators and Representatives. Contact information for Congress is available at www.senate.gov or www.house.gov, and through the Capitol switchboard at (202) 224-3121. Also contact your state legislators. You can stay informed via the web sites www.cbhd.org and the CBHD-maintained stem cell web site: www.stemcellresearch.org.