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STEM CELL RESEARCH

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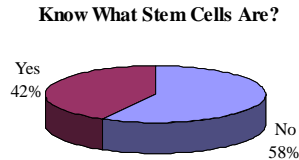
Kenneth G. Parrish

During the 2004 Presidential debates, many controversial issues were discussed. One of those issues was that of embryonic stem cell research and the benefits that it may or may not bring to mankind. There also was the ethical question as to whether or not embryos should even be used for such research. To understand this controversial issue, it is imperative that we understand what stem cells are.

According to the National Institute of Health (NIH):

“ stem cells have two important characteristics that distinguish them from other types of cells. First, they are unspecialized cells that renew themselves for long periods through cell division. The second is that under certain physiologic or experimental conditions, they can be induced to become cells with special functions such as the beating cells of the heart muscle or the insulin-producing cells of the pancreas.”

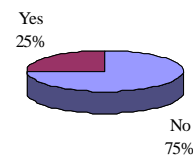
In other words, stem cells are “blank” cells that can, when prompted to do so, grow and divide forming specific functioning cells.



From a recent survey taken by myself in January 2005, 58% who responded did not know what stem cells were. Of the 42% that did say they knew, 20% were wrong or not sure. How is this possible with all the talk of stem cells in the news? I believe that little accurate information is conveyed through the media. According to Gary Bauer, President of American Values, “media has been a willing partner in deceiving American people.”

From that same survey, only 25% of the people who responded knew the difference between adult and embryonic stem cells. The difference is that one type is taken from adults while the other is taken from embryos. According to NIH, “embryonic stem cells are derived from embryos that develop from eggs that have been fertilized *in vitro* – in an *in vitro* fertilization clinic.” NIH continues to say that adult stem cells “has been identified in many organs and tissues” including the “brain, bone marrow, peripheral blood, blood vessels, skeletal muscle, skin and liver.”

Know The Difference Between Adult And Embryonic Stem Cells?



This is where the huge debate begins.

Most people do not mind research being done using adult stem cells. The arguments comes from the use of embryonic stem cells and the fact that they are harvested from embryos. One group of people claim that embryos are simply a group of cells, while another group say that this clump of cells are really human beings. Michael West, CEO of Advanced Cell Technology, described an embryo to Salon.com as being neither human life nor a person, "just an ordinary group of cells." ..

On the other hand, Dr. Elaine Shay, an ophthalmology resident at Yale-New Haven Hospital, told the *Hartford Courant* that she believed that "embryonic stem cell research is immoral" and that "the complete genetic makeup of a human being is present at conception." She further states that "the embryo is merely one of many stages in the continuum of human development, others being the fetus, infant, child, adolescent and adult."

To define when a human being becomes a human person crosses the line between science and philosophy. Sometimes the definition of personhood is based upon consciousness, rationality or the ability to sustain oneself. The medical profession uses four characteristics to define personhood, according to Bob Scheidt of the Christian Medical Association. They are related to the neocortex of the brain: rationality, self-awareness, communication/relationship with others, and happiness. There are definite problems with these definitions and characteristics. The consequence of such definitions would regulate infants, children, the mentally retarded and the elderly to a lower moral value. Some characteristics such as self-awareness and rationality, disappear when a person is under anesthesia. Would that patient under anesthesia be any less of a person?

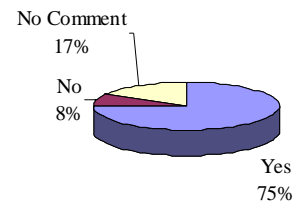
In the earlier days of America, blacks were treated as unequals because they were defined as not being a person. "We define a fetus as a non-person," Scheidt says, "and then we can do whatever we wish with it."

Dr. Shay continues along this line of thought. She writes in the *Hartford Courant*, "Nazi doctors experimented on Jewish prisoners. In the Willowbrook State School study of the 1950's, mentally retarded children were infected with hepatitis to study the effect of gamma globulin injections. In the Tuskegee study from 1932 to 1972, physicians observed the progress of untreated syphilis in 399 African American men despite the availability of penicillin."

Certain use of language can obscure true meanings. For example, instead of using the term 'baby' or 'unborn child,' terms such as pre-embryo (blastocysts), embryos and fetuses are used. Two scientists writing in the November 2004 edition of *The Saturday Evening Post* states, "A serious error in semantics is causing a tragic misunderstanding. We should be asking for 'blastocysts' for medical researchers. The term 'embryonic' should be abandoned!" According to Dr. Kelly Hollowell, who has a doctorate in molecular and cellular pharmacology and is working at the Center for Reclaiming America, says that using technical terms will "wash their hands of the dehumanizing attempts that they make at justifying the sacrifices of the unborn for the living for whatever purposes."

With all this controversy, we must ask ourselves if stem cell research, whether it be embryonic or adult in nature, is beneficial. In other words, does the end results outweigh the means? Once again, looking at the survey, 78% who responded believed that stem cell research is beneficial; 8% did not think so while 17% had no comment.

Stem Cell Research Beneficial?



Senator John Kerry made embryonic stem cell research one of the centerpieces of his 2004 campaign. He also said that scientists need to free themselves from “ideology” and concentrate on miracle cures for numerous diseases. Ron Reagan, Jr., son of President Ronald Reagan, addressed the Democratic National Convention in July of 2004. In his address, he promoted research on stem cells taken from living human embryos. “We may be able to put an end to...suffering,” he said. “We only need to try.”

John Kilner, Ph.D. and president of The Center for Bioethics and Human Dignity responded to Ron Reagan’s comments.

“History is littered with misguided attempts to relieve suffering by cutting ethical corners. All that Ron Reagan advocated can be achieved through adult stem cell research. But he amazingly never mentioned adult stem cells. Instead, his misleading language covered up the fact that producing the cells he seeks requires cloning human beings and then destroying them.”

Furthermore, no scientists ever told John Kerry that embryonic stem cells can cure such diseases as Parkinson’s, diabetes, or spinal-cord injuries. In fact, approximately 57 scientists from many different disciplines, wrote a letter to John Kerry about this very thing. Not only are these scientists alarmed by what Senator Kerry said, but they also indicate that he misrepresented science.

According to Dr. David Prentice of the Family Research Council and a doctorate of biochemistry, the “basic truth is though in over 20 years, not a single mouse has been cured using embryonic stem cells.” In fact, no embryonic-stem-cell-based therapy is even in clinical trials. Elizabeth Long, the woman who asked Senator Kerry about stem cells, says “Thousands of people have already been cured or treated by the use of adult stem cells or umbilical-cord stem cells. However, no one has been cured by using embryonic stem cells.”

Besides being morally wrong, there are technical problems with using embryonic stem cells. It is most likely a scientifically and economically poor choice for medical research. Also, because of their very plasticity, these cells have proved difficult to coax into becoming normal specialized cells and have in some animal studies produced tumors instead. And, because the embryonic cells come from someone else’s body, patients may reject them.

Adult stem cells “have demonstrated a remarkable ability to transform into a variety of cells, including liver, muscle, cardiac, kidney, lung and neuronal cells.” Improvements have been reported by researchers following adult stem cell injections in such disorders as varied as Parkinson’s disease, liver cirrhosis, myocardial infarction, sickle-cell anemia and stroke.

Dr. Hollowell recounts a story about a South Korean lady who, after 20 years of paralysis, got out of bed due to adult stem cell therapy. This particular story was reported internationally, but never in the United States.

Other headlines include:

- November 22, 2004: **Non Embryonic Stem Cell Treatment Allows Paralyzed Brazilian To Walk, Talk Again** (AFP)
- November 29, 2004: **Paralyzed Woman Walks Again After [Umbilical Cord] Stem Cell Therapy** (APP) (The Korea Times)
- December 9, 2004: **Marrow Stem Cell Implant Effective In Treating Cerebral Infarction** (The Korea Times)
- December 16, 2004: **Adult Stem Cells To Treat Liver Harm** (BBC)
- December 17, 2004: **Stem Cells From Fat Used to Repair Skull** (AP)
- January 5, 2005: **Stem Cells From Umbilical Cord Treat Heart Attack** (Health India)
- January 11, 2005: **Russian Scientists Conduct Successful Stem Cells Experiment To Cure Spinal Cord Ruptures** (Pravda)
- January 19, 2005: **Paraplegic Improving After Adult Stem-Cell Implant** (Knight Ridder)
- January 21, 2005: **Good Results from Autologous Stem Cell Transplants for HIV Lymphomas** (Cancer Consultants)
- February 7, 2005: **Studies Suggest Adult Stem Cells Heal Hearts** (Philadelphia Inquirer)
- February 11, 2005: **Cord Blood Research Presents New Hope for Blind** (The Korea Times)
- February 11, 2005: **Bone Marrow Stem Cell Research May Hold Promise for Treating Alzheimer’s** (UCF Press Release)
- March 15, 2005: **Brain’s Own Stem Cells Might Fight Alzheimer’s** (HealthDay)
- March 22, 2005: **Adult Stem Cells Can Produce Brain Cells** (HealthDay)

In *The Epidemics*, Hippocrates, a Greek physician who lived about 2400 years ago, says, “As to diseases, make a habit of two things – to help, or at least do no harm.” He goes on to say in the Hippocratic Oath, “I will give no deadly medicine to anyone if asked, nor suggest such counsel, and in a like manner I will not give a woman a pessary to induce an abortion.” By continuing with embryonic stem cell research, we are doing more harm than good. Adult stem cells have already proven, and continue to prove, their usefulness in treating diseases.

God tells us through His word, the Bible, that the unborn child has great value. *“Lo, children are an heritage of the Lord: and the fruit of the womb is his reward.”* (Psalm 127:3). Even the ancient Hebrews realized the value of an unborn child, and had strict laws governing the injuring of pregnant women (Exodus 21:22-23). They believed the protection of the child was crucial, even while in the womb. Because it was just a blob of meaningless cells? No, but because it was a human being!

In Deuteronomy 30:19, we read *“...that I have set before you life and death, blessing and cursing: therefore choose life, that both thou and thy seed may live.”* It is very obvious from this passage that God is pro-life. Both Isaiah and Jeremiah were called by God while they were still in the womb (Isaiah 49:1,5 and Jeremiah 1:5). The unborn child is not just a lump of cells, but life sophisticated enough to have a relationship with God.

Human beings are special. We have value because God created us. Out of all the creatures on the Earth, mankind is the only one who is created in God’s own image (Genesis 1:26-27). With His own mouth He breathed the breath of life into us, forming a living soul (Genesis 2:7). D. James Kennedy says in his book *What if Jesus Had Never Been Born?* *“We have vastly greater penalties for anybody breaking or touching endangered turtle eggs than we have for killing a fetal human being, who is also in a sense in an egg.”*

Does the ends justify the means as far as embryonic stem cell research is concerned? No, it does not. Human beings are too valuable to be thrown away. Many diseases can now be cured or treated using adult stem cells. God finds us valuable, and so should we.

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