

A Critical Reading Of This Information Finds:

Myths and Truth About Stem Cell Research

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- 1 Adult stem cells have been successfully used to treat patients for years. Unfortunately, proponents of killing human embryos typically downplay the numerous successful results in human patients using adult stem cells while wildly hyping embryonic stem cell research on animals.

No embryonic stem cell research has helped create safer pregnancies or fewer pregnancies complications.

No clinical studies using embryonic stem cells have been approved by the FDA. One company called Geron requested approval for a clinical trial in 2008 but the study was placed on hold by the FDA in May because of safety concerns. There has been no news to suggest this clinical trial will ever get underway and there is no evidence it will start in late 2008/early 2009. Since 2004, Geron has made annual promises that it would apply for permission to start a clinical trial in the near future.

- 2 Fertility clinics in Michigan aren't regulated so no one knows how often they destroy human embryos.

Michigan law does nothing to "block embryonic stem cell research." It prevents researchers from using human embryos as research materials. Embryonic stem cell research has been occurring at the University of Michigan since 2002.

- 3 Proposal 2 would allow researchers to kill human embryos through 14 days of development for their stem cells. Proposal 2's loop-hole-filled language would also allow researchers to kill and experiment on human embryos through 7 weeks of development as long as the researchers don't remove their stem cells.

	Myth	Truth
1	<p>Embryonic stem cell research has led to no cures, and may not for decades or ever.</p> <p>Adult stem cell research is all we need to meet the needs of the sick and disabled.</p>	<p>After 50 years of research on adult stem cells, some treatments are now being brought into use. Embryonic stem cell research has been conducted for less than a decade and has already yielded promising lab trials in animals. Embryonic stem cell research has already helped researchers learn about the early stages of life, paving the way for safer pregnancies and fewer complications.</p> <p>Clinical studies using embryonic stem cells are set to start late in 2008/early 2009.</p> <p>We must support adult as well as embryonic stem cell research. Science works best when scientists can pursue all avenues of ethical research.</p>
2	<p>Embryonic stem cell research kills human embryos to harvest their stem cells. This is destroying life.</p>	<p>Embryos at in vitro fertilization clinics today are routinely destroyed as medical waste once the donors no longer need them.</p> <p>Michigan's laws do not stop that destruction, so these five- to-six-day-old embryos are discarded rather than being used for potentially life-saving medical research. Blocking embryonic stem cell research does not save lives—it prevents the search for Cures.</p>
3	<p>Embryonic stem cells come from aborted fetuses.</p> <p>Fetuses will be destroyed by embryonic stem cell research.</p>	<p>The proposed changes in Michigan's law would only allow research using five- to-six-day-old, microscopic embryos that would otherwise be thrown away. These embryos are created in a petri dish, and without implantation, would never develop.</p> <p>A fetus is 8 weeks old and beyond.</p>

4 Proposal 2 only prevents the buying and selling of human embryos for stem cell research. Its language doesn't prevent the buying and selling of human embryos for research on human embryos which doesn't involve stem cells.

5 There is no evidence that embryonic stem cell research is the "best hope" in finding treatments. Numerous obstacles (including the risk of tumors and the risk of a patient's immune system rejecting the cells) currently prevent embryonic stem cells from even being tested in human patients.

6 In numerous experiments using animals, scientists have struggled to create pure specialized cells from embryonic stem cells and when injected into animals these cells lead to formation of certain kinds of tumors called teratomas. For example, a 2004 study by scientists from the University of Alberta looking to see if specialized cells derived from embryonic stem cells could help treat diabetes in mice found that "Insulin-stained cells differentiated from (embryonic stem) cells" weren't the type of cells that the diabetic mice needed and "when the cultures were transplanted in diabetic mice they formed teratomas and did not reverse the hyperglycaemic state." In October of 2006, the Washington Post published a story on how nerve cells grown from embryonic stem cells form tumors when they were injected into the brain of rats with Parkinson's-like symptoms. The article noted, "when the animals were autopsied after three months and their brains were examined microscopically, the team found multiple tumors, indicating that some of the injected cells did not settle into the job of being neurons but rather had begun to grow uncontrollably." Researchers currently aren't close to safely using embryonic stem cells or cells derived from embryonic stem cells on human patients.

7 Same as #1 above.

	Myth	Truth
4	<p>Embryonic stem cell research exploits women by paying them for their eggs, which can be a dangerous procedure.</p> <p>Embryonic stem cell research will require harvesting of millions of eggs.</p>	<p>Modernizing Michigan's law would only allow research on embryos already in fertility clinics, with the <u>written consent</u> of donors. No embryos would be created for the purpose of stem cell research. Donors would be prevented from receiving any benefits, and no money would be exchanged.</p> <p>Under current law, these leftover embryos are simply thrown away as medical waste.</p>
5	<p>We should not waste resources researching embryonic stem cells when adult stem cells hold so much promise.</p>	<p>Embryonic stem cell research offers the medical community a vast, promising new frontier of research. It is our best hope in finding treatments and cures for numerous diseases and chronic illnesses.</p> <p>Researchers need to go where the science takes them. After 50 years, there have been a few treatments resulting from adult stem cell research, but not enough to discontinue other forms of research.</p>
6	<p>Embryonic stem cells can create tumors.</p>	<p>When specialized cells derived from embryonic stem cells have been injected in animal models in lab trials, tumors do not develop and the cells can reduce disease symptoms, reduce transplant rejection and stimulate cellular growth.</p>
7	<p>Embryonic stem cell research has led to no cures, and may not for decades or ever. Adult stem cell research is all we need to meet the needs of the sick and disabled.</p>	<p>After 50 years of research on adult stem cells, some treatments are now being brought into use. Embryonic stem cell research has been conducted for less than a decade. Clinical studies using embryonic stem cells are set to start late in 2008.</p> <p>We must support adult as well as embryonic stem cell research. Science works best when scientists can pursue all avenues of ethical research.</p>