



**DO NO  
HARM**  
The Coalition of Americans  
for Research Ethics

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“As to diseases ,make a habit of two things —  
to help, or at least *do no harm.*”

—Hippocrates, *The Epidemics* —

**THE “POLITICAL SCIENCE” OF STEM CELLS  
LESSON 8: BLOODY NONSENSE**

*The Senate may vote soon on whether to divert taxpayer dollars toward stem cell research that requires destroying live human embryos. In the campaign to promote such funding, political hype has often substituted for the scientific facts. This series will help members of the Senate distinguish mere politics from science.*

**POLITICAL:**

“Well, let me make it very clear about adult stem cells or cord blood. There's not a researcher of any renown out there whatsoever, who believes that they can do anything more than help with blood related diseases. As a matter of fact 14 of the 15 diseases that people most die from in the United States of America can never be addressed by adult stem cells.”

-- Representative Michael Castle (R-DE), CNN Newsnight, 5/24/05

**SCIENCE:**

**Adult stem cells “are currently the only type of stem cell commonly used to treat human diseases...The clinical potential of adult stem cells has also been demonstrated in the treatment of other human diseases that include diabetes and advanced kidney cancer.”**

National Institutes of Health, “Stem Cell Information: The official National Institutes of Health resource for stem cell research,” Frequently Asked Questions (<http://stemcells.nih.gov/info/faqs.asp#success>).

Research using adult stem cells -- including stem cells from cord blood -- has indeed had considerable success in treating such blood-related diseases as leukemia and sickle-cell anemia.

But it has also shown benefits in treating human patients for *non-blood related* diseases such as cardiac disease, cancer, stroke, Parkinson's and spinal cord injury.

Cardiac disease, cancer and stroke are the three top causes of death in the United States, according to the U.S. Centers for Disease Control (“Deaths: Preliminary Data for 2003,” *National Vital Statistics Reports*, Vol. 53, #15, 2/05; online at: [http://www.cdc.gov/nchs/data/nvsr/nvsr53/nvsr53\\_15.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr53/nvsr53_15.pdf)).

Diabetes ranks as the 6<sup>th</sup> leading cause of death. Researchers at Massachusetts General Hospital have permanently reversed Type 1 (juvenile) diabetes in animal models using an adult cell treatment. Their results were published in *Science* on November 14, 2003. They now have FDA approval to begin the first phase of clinical trials in human patients.

Parkinson's disease is the 14<sup>th</sup> leading cause of death. Scientists at the 2002 annual meeting of the American Association of Neurological Surgeons presented research using a patient's own adult neural stem cells to successfully treat his Parkinson's; they noted such adult stem cells may be useful in treating other neurological conditions. See [www.theratech.com/english/press/2002/0408-2002.html](http://www.theratech.com/english/press/2002/0408-2002.html).

To date, not one human patient has been treated for any disease with embryonic stem cells, and their success in animal models has been very limited.

For more information to help distinguish politics from science on stem cell research, see our web site at [www.stemcellresearch.org](http://www.stemcellresearch.org).

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