

# Embryonic Stem Cell Research: Putting Women at Risk

## *Where will all the eggs come from?*

One of the biggest problems facing researchers who hope to use embryonic stem cells to treat disease is the issue of immune system rejection. Since embryonic stem cells from human embryos created by in-vitro fertilization have a different genetic code than patients, there is a strong possibility that a patient's immune system would reject these cells. To get around this problem, some scientists envision creating and killing cloned human embryos whose stem cells would match the genetic codes of patients. In order to create cloned human embryos and get their stem cells, researchers need human eggs. The following fact sheet examines how many eggs it would take to treat Americans suffering from just one disease embryonic stem cell researchers hope to cure: diabetes.

There are approximately 17 million patients in the United States who have diabetes.

It is estimated there would need to be 50 eggs per patient in order to extract an embryonic stem cell line from a cloned human embryo. Seventeen million patients multiplied by 50 human eggs per patient means 850 million human eggs would be needed to treat every diabetes' patient with embryonic stem cells from cloned human embryos. **Currently, no scientist has been able to extract a stem cell line from a cloned human embryo.**

To get 850 million human eggs, 85 million women of reproductive age would have to donate 10 human eggs each. In the United States, there are only approximately 60 million women who are of reproductive age.

The process of extracting human eggs from women involves taking powerful hormones to increase the number of eggs released. The injection of these hormones can require daily injections for up to 2 weeks and can require women to stop taking prescription drugs. Surgery with sedation is required for the eggs to be removed.

Ovarian hyperstimulation syndrome is the main side effect of the hormones used to stimulate a woman's ovaries to increase the number of eggs her body releases. It can occur in "up to 10 percent of women who go through in vitro fertilization" according to the National Institutes of Health. Mild symptoms include nausea and diarrhea while severe symptoms include chest pains, blot clots, marked abdominal bloating, shortness of breath, stroke and even death. If 85 million women underwent the procedures involved with egg donation, millions of women would develop ovarian hyperstimulation syndrome.

The long-term side effects of taking fertility drugs to increase egg production aren't known though some studies indicate there could be an increased risk of developing ovarian cancer later in life.

As these numbers show, using embryonic stem cells from cloned human embryos to treat a single disease would require an impossible number of reproductive-aged women to go through the onerous and sometimes dangerous process of donating their eggs. This information, however, hasn't stopped researchers from asking women to donate their eggs for future research experiments.

International Academy of Anti-Aging Medicine Director Hans J. Kugler, PhD, stated, "We believe that, on the basis of available research data, the time is right to recommend that woman of child-bearing age give it serious consideration to have a number of their egg cells collected and stored (by a cryogenic facility) for possible future needs of stem cells."

It is time to stop the madness and think about the dangerous realities of human embryonic stem cell research on the lives of women.

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# The cost of treating just one disease with stem cells from cloned human embryos

In order to treat every American suffering from diabetes with stem cells from cloned human embryos, impossible numbers of women would need to donate their eggs. It is clear that stem cells from cloned human embryos will never cure numerous diseases if it's impossible to obtain the necessary number of human eggs to cure a single disease.

Each + represents 500,000 people

Approximately 17 million people in America have diabetes

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Approximately 85 million women would be needed to produce 850 million eggs in order to treat the 17 million people with stem cells from cloned human embryos.

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In the United States, there are only approximately 60 million women who are of reproductive age

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If 85 million women underwent the egg donation process, up to 8.5 million women may develop hyperstimulation syndrome.

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While some groups falsely claim that “embryonic stem cell research is the only hope for juvenile diabetes,” research using adult stem cells and umbilical cord stem cells has proven otherwise.

In April of 2007, researchers from Northwestern University published a study in the Journal of the American Medical Association which showed juvenile diabetes had been successfully treated in 13 of 15 patients. In the study, which took place in Brazil, patients were given transplants of their own adult stem cells after chemotherapy was used to stop the patient's immune system from attacking cells which produce insulin. The adult stem cells then rebuilt their immune systems so the immune systems would no longer kill their body's insulin producing cells.

Later, in June of 2007, Reuters reported that researchers from the University of Florida had found children with juvenile diabetes can be treated with stem cells from their own umbilical cord blood. Children given infusions of their own cord blood needed less insulin than diabetic children in a similar situation who didn't receive the treatment.

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