“Medical technology is advancing at an incredible pace. But this advance, as welcome as it is, leads us into difficult bioethics dilemmas. The use of human embryos for stem cell research and cloning represents a critical crossroads in the life of our culture and society. Will we protect human life in all its stages or will we come to regard it as a tool to be used, a means to some end? In short, will we create a culture of life or death?”

Rev. Dr. Tadeusz Pacholczyk

{The following is excerpted from a pamphlet published by the Family Research Council and authored Rev. Dr. Tadeusz Pacholczyk entitled Stem Cell Research, Cloning & Human Embryos. Rev. Dr. Pacholczyk earned a Ph.D. in neuroscience from Yale University, after which he did post-doctoral research at Massachusetts General Hospital & Harvard Medical School. He later studied in Rome where he did advanced studies in theology and in bioethics. He has testified at state legislative hearings and given presentations on stem cells, cloning and other biotechnologies throughout the U.S. and Europe. He serves as Director of Education for the National Catholic Bioethics Center in Philadelphia, Pennsylvania.}

What is a stem cell?

A stem cell is essentially a “blank” cell, capable of becoming another more differentiated cell type in the body, such as a skin cell, a muscle cell, or a nerve cell.

Stem cells are important because they can be used to replace or heal damaged tissues and cells in the body.

There are 2 broad classes of stem cells – embryonic type and adult type.

1) **Embryonic type** = embryonic stem cells / embryonic germ cells

2) **Adult type** = umbilical cord stem cells / placental stem cells / adult stem cells

Embryonic stem cell types come from 2 sources:

1) **Embryos** – Embryonic stem cells are obtained by harvesting living embryos which are generally 5-7 days old. The removal of embryonic stem cells invariably results in the destruction of the embryo.

2) **Fetuses** – Another kind of stem cell, called an embryonic germ cell, can be obtained from either miscarriages or aborted fetuses.

Adult stem cells come from 3 sources:

1) **Umbilical cords, placentas, and amniotic fluid** – Adult type stem cells can be derived from various pregnancy-related tissues

2) **Adult tissues** – In adults, stem cells are present within various tissues and organ systems.
These include the bone marrow, liver, epidermis, retina, skeletal muscle, intestine, brain, dental pulp, and elsewhere. Even fat obtained from liposuction has been shown to contain significant numbers of adult type stem cells.

3) **Cadavers** – Neural stem cells have been removed from specific areas in post-mortem human brains as late as 20 hours following death

**Why are adult stem cells preferable to embryonic stem cells?**

**Adult stem cells are a “natural” solution.** They naturally exist in our bodies, and they provide a natural repair mechanism for many tissues of our bodies. They belong in the microenvironment of an adult body, while embryonic stem cells belong in the microenvironment of the early embryo, not in an adult body, where they tend to cause tumors and immune system rejections.

Most importantly, **adult stem cells have already been successfully used in human therapies for many years**…NO therapies in humans have ever been successfully carried out using embryonic stem cells. New therapies using adult type stem cells, on the other hand, are being developed all the time. There are many examples of success stories using adult stem cells.


**Is stem cell research ethical?**

Most types of stem cell research are morally acceptable and laudable. Only research using embryonic stem cells raises insuperable moral objections. An ethical overview:

**Embryonic stem cells:** always morally objectionable, because the human embryo must be destroyed in order to harvest its stem cells.

**PLW NOTE:** To be sure, it is not the embryonic stem cell itself that is problematic. The problem lies in its derivation, which necessitates the destruction of a human embryo; a human being.

**Embryonic germ cells**:** morally objectionable when utilizing fetal tissue derived from elective abortions, but morally acceptable when utilizing material from spontaneous abortions (miscarriages) if the parents give informed consent

**Umbilical cord stem cells:** morally acceptable, since the umbilical cord is no longer required once the delivery has been completed

**Placenta stem cells:** morally acceptable, since the afterbirth is no longer required after the delivery has been completed

**Adult stem cells:** morally acceptable, assuming informed consent from the adult donor

**HUMAN EMBRYOS**

**Where do human embryos come from?**

- From the combining of sperm and egg (fertilization)
- From embryo splitting (fission)
Are embryos human? Are they really one of us?

Embryos are no different in their essential humanity from a fetus in the womb, a 10 year-old boy, or a 100 year-old woman. At every stage of development, human beings (whether zygote, blastocyst, embryo, fetus, infant, adolescent, or adult) retain their identity as an enduring being that grows towards its subsequent stage(s); embryos are integral beings structured for maturation along their proper time line. Despite their unfamiliar appearance, embryos are what very young humans look like.

Isn’t it a matter of religious belief as to when human beings begin?

It is not a matter of religious belief, but a matter of biology. A human embryo is a human being, a being that is clearly and unmistakably human. It is not a zebra-type of being, a plant-type of being or some other kind of being. Each of us was once an embryo, and this affirmation does not depend on religion, belief systems, or imposing anything on anyone. It depends only on a grasp of basic biology. It is a matter of empirical observation. Once you are constituted a human being (which always occurs at fertilization or at an event that mimics fertilization, like cloning), you are a new member of our human race who must be protected unconditionally. The human embryo is a being that is human, and such beings are inviolable entities, because that’s what we all directly spring from at the root level.

Why is the destruction of human embryos wrong?

The well-known moral principle that good ends do not justify immoral means applies directly here. Once you’re a being who is human, you are the bearer of human rights and you should never be violated for any reason. We know that the human embryo is a human being because it possesses an internal code for self-actualization and it is an organism with an independent and inherent teleology (goal-directedness) to develop into an adult. It is physiologically alive and genetically human.

Our existence as human beings is a continuum that extends all the way back to our origins in that humble ball of cells we call an embryo. Each of us has our origins in such an embryo, and therefore human embryos should never be depersonalized or instrumentalized for research purposes by strip-mining them for their cells or tissues.

PLW NOTE: In a civilized society, there are some ethical lines that must never be crossed: killing babies for their stem cells is such a line. Pro-Life Wisconsin wants to see research progress toward the treatment of disease, and we can move forward ethically so long as we do not kill a life for the benefit of another. Wisconsinites deserve the assurance that their state can build on its lead in biotechnology without compromising its bioethics.