

Human Cloning—Is It Ethical and Necessary?
By Sharon Quick, MD, FAAP

Before health problems robbed me of my career, I had devoted my life to caring for extremely sick children as a pediatric anesthesiologist and intensivist. A genetic disorder disabled my father and took the life of my brother at age 38, leaving his wife and two young children.

Not a day goes by that I don't wish for my brother to be alive or for the ability to return to my career. My family is not alone; everyone endures some degree of physical, psychological, or emotional difficulties during their lives. Some scientists suggest that human cloning might offer hope of a cure, not only for my family, but for those who suffer from a multitude of other debilitating disorders.

There are two purposes for human cloning: "reproductive" and "biomedical research" (so-called "therapeutic"). The former refers to implantation of a cloned embryo in a uterus with the purpose of growth through birth into adulthood. The latter denotes destruction of cloned embryos or aborted cloned fetuses for harvesting of embryonic stem cells, tissue, or organs.

While most people agree that "reproductive" cloning should be banned, a debate continues around cloning of humans for biomedical research. Such cloning is unethical because it is fatally harmful to the embryos produced and potentially harmful to both the recipients of cloned products and the women donating eggs. It is also unnecessary, because use of non-embryonic ("adult") stem cells can accomplish similar medical therapeutic goals.

Whether an embryo is derived from sexual or asexual (cloning) reproduction is immaterial to the fact that a new developing human life has been created. It begins as a zygote (a one-celled embryo), which contains the full complement of genetic material responsible for producing growth to maturity. Using embryonic or fetal products from clones requires destruction of living organisms.

Cloning a human embryo, regardless of the intended purpose, amounts to experimental research on a human without the consent of the person, a practice rejected by worldwide medical codes. Research on incompetent subjects is allowed only if there is a legal surrogate, minimal risk, and therapeutic benefit for the human subject. A human rights convention stated that "the interests and welfare of the human being shall prevail over the sole interest of society and science."¹ History illustrates the horrific consequences of scientific experimentation on those classified as unworthy of full human rights; experiments were forced on prisoners at Dachau by Nazis, on Tuskegee Institute's black syphilis patients, and on mentally handicapped children at Willowbrook State School in New York.¹

Genetic mutations, malformations, and/or premature aging can be found in clones at every stage from embryo to adult.²⁻⁵ Not all the genes essential for normal development are activated in cloned embryos.⁶ The cloned sheep, Dolly, was euthenized at age 6 (half the normal life span) due to joint and lung disorders. Transferring stem cells or tissue from inherently diseased clones to a patient is potentially harmful to the recipient.

Because of the inefficiency of the cloning process, its use in humans will subject a large population of women to health risks intrinsic to harvesting the enormous quantities of eggs required. Such risks include complications from medications to increase egg production, surgical risks, and a possible increase in the probability of ovarian cancer.⁷ It is estimated that the use of cloning to treat just one patient group, the 17 million diabetics in the U.S., will require approximately 85 million women to "donate" eggs.^{7, 8} Such egg harvesting is impractical since there are only 55 million women of childbearing age in the U.S. Human eggs may become a commodity, with exploitation of disadvantaged women around the world.^{4, 5}

Some experts state that research requiring cloned^{8,9} or noncloned¹⁰⁻¹² human embryo destruction for their stem cells is not only unethical, but problematic and unnecessary. "Therapeutic" cloning is a misnomer. There are no human studies showing therapeutic applications. Animal studies do not show real therapeutic success using cells or tissue from cloned embryos. And it certainly is not "therapeutic" for dissected embryos. It is difficult to induce cloned or noncloned embryonic stem cells to differentiate into a specific tissue type without simultaneous problems such as tumor production^{8, 10, 11, 13} Ethically-derived non-embryonic stem cells are being used to accomplish the same therapeutic goals in humans; treatments for a variety of diseases already exist¹⁴⁻¹⁷ with potential benefits for other disorders.¹⁸

Would I be willing to pay any price to put an end to the disability and haunting questions I live with? While I heartily support non-embryonic human stem cell research, I am opposed to any research that harms another life in attempt to make my own better.

Human cloning is harmful, unethical and unnecessary. It is time to shatter its image as a panacea for human disease.

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