



Bioethics and the Human Embryo

The human embryo is the focus of many bioethical debates. In the late 19th century, science discovered that we begin life as a single cell called a zygote created by the fusing of the nuclei of the father's sperm and the mother's egg cell. The dark side of modern scientific development in embryology largely began with *in vitro* fertilization (IVF) in the 1970s when human beings began to be conceived in laboratories in large numbers. These were used in "fertility treatments" and transferred to their mother's or even a surrogate mother's womb for gestation. The IVF process created "spare" or abandoned human embryos available for use in experiments and killed.

Many scientific discoveries have showed a fundamental change happens at the moment of conception. The newly conceived child quickly "takes charge" of the pregnancy by producing high levels of human chorionic gonadotropin (HCG) that prevents his or her mother from menstruating or ovulating during the pregnancy. Amazing ultrasound videos and pictures of the growing embryo, or later, the fetus in the womb, show the real miracle of life before birth.

The Catholic Church follows scientific discoveries in embryology closely. She is also extremely cautious when it comes to making doctrinal declarations, for example, the moment when the soul is infused into the human body. Pope Saint John Paul II in his encyclical letter *Evangelium Vitae* had this to say. "Even if the presence of a spiritual soul cannot be ascertained by empirical data, the results themselves of scientific research on the human embryo provide 'a valuable indication for discerning by the use of reason a personal presence at the moment of the first appearance of a human life: how could a human individual not be a human person?'" He did not officially proclaim that God creates a new human soul at the moment of conception, but he points out that this is the most logical moment, and it is hard to imagine another time in our development that would make greater sense.

Bioethics is sometimes seen as mainly interested in the beginning stages of human life and the end-of-life. It is certainly true that human beings are particularly vulnerable and require special ethical safeguards as embryos or fetuses or as they approach death. There have been attempts to justify the massive killing of human embryos and preborn babies in many countries. One of the great struggles from the latter 20th century to our time has been the attempt to have legal recognition of the personhood of human beings at the earliest stages of life. This recognition would then protect against killing through laboratory experiments or abortions.

Some scientists and ethicists attempted to circulate the term "pre-embryo." They were hoping to make a meaningful distinction between newly conceived embryos in the first few days after fertilization and later after they implant in the uterus, but it did not achieve broad [scientific acceptance](#). In laboratories, the term was used for human embryos from conception up to 14 days afterwards. It was a rather transparent attempt to avoid the stigma of abortion for killing early embryos. The one development factor that could be referenced was the start of the "primitive streak" in the human embryo at 14 days. This change marks the beginning of

symmetry in a human being's bodily development, but it is hard to see why this is a particularly significant moment in our continuous growth from conception to full maturation.

Regulatory bodies were under pressure to restrict the possibility of growing human embryos in laboratories and so the "14-day rule" was instituted in many countries. This was a ban on allowing human embryos to develop in a lab beyond 14 days. The proposal first came from the Ethics Advisory Board of the US Department of Health, Education, and Welfare in 1979, but it was the UK Warnock committee's recommendation in 1984 that really launched the [14-day rule](#). This in many ways was intended to give the impression to the general public that limits were in place, but it had little practical effect since it was not scientifically possible to keep human embryos alive *in vitro* past 9 days. In recent years, however, scientists have managed to sustain embryos to 14 days and so predictably there suddenly was a push to permit research beyond 14 days by the International Society for [Stem Cell Research](#) (ISSCR).

A terrible ongoing tragedy is the killing of human embryos for their stem cells. The first [human embryonic stem cells](#) were isolated and grown in a lab in 1998 at the University of Wisconsin. This was the beginning of billions of dollars of scientific research based on the killing of human embryos. Extravagant promises were made over the years about how these embryonic stem cells would lead to numerous therapies and cures for diseases. Thankfully these promises were not fulfilled, since it would have led to even more killing of tiny human beings for their stem cells. Instead, so-called adult stem cells taken from individuals after birth, and induced pluripotent stem cells created ethically starting from ordinary cells, did lead to several effective cures.

Catholic bioethics relies on such magisterial teaching as [Donum Vitae](#) and [Dignitas Personae](#) to guide Catholic scientists and others concerning reverence for the dignity of the human person from the moment of conception and respect for the marital act in its unitive and procreative dimensions. These documents explain why IVF is not acceptable to the Church as a means of procreation. IVF destroys the unitive dimension of a couple's love by conceiving their child in a lab through the actions of a third party. This is a grave violation of the right we all have to come into the world through a loving marital act by our parents. *Dignitas Personae* also re-affirmed that experimentation on human embryos or fetuses that is not for their therapeutic benefit is never ethically permitted. Ethical medical research involving preborn children requires informed consent from the parents and proportionality between the anticipated risks and benefits of the therapeutic research on preborn children.

Our Catholic view is that human beings have inestimable worth and must be protected from artificial conception and manipulation. Sadly, much of the secular world sees embryonic human beings as possessing no right to life and instead endorses IVF, deadly experiments, and even in some cases, manipulation of the human genome.

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