PRO LIFE

PRO LIFE REFERENCE JOURNAL

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MCFL

MASSACHUSETTS CITIZENS FOR LIFE

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Contents

Abortion

Biotechnology

Legislation

End of Life

President's Letter

Dr. Mildred F. Jefferson

Dear Reader:

If knowledge is power, ignorance must be the ultimate infirmity.

The Birth Control - World Population Control Movement, the original and permanent umbrella for the adversaries of the Right to Life Movement (no matter how often they change their individual organizational names), has seduced millions in the United States and around the world into a state of mind control by exploiting general ignorance of the facts of pregnancy and the biology of life before birth. Worldwide campaigns to substitute emotional "freedom of choice" sloganeering for factual information developed by the abortion-advocates have been quite effective in influencing government and social policy internationally against the unborn.

The MCFL *Reference Journal* and *MCFL News* are mainstays in carrying out the educational purpose of our organization as defeined in the MCFL Mission Statement. The format has been changed from its original concept and we hope that this loose-leaf binder presentation will make it easier to keep information current.

The MCFL *Reference Journal* must also record the living history of the Right to Life Movement in Massachusetts. No one else will do so accurately if we do not do so. A history of events without the names of those involved in the events is false history. Ours is a "people's movement" and the names of the people must be mentioned wherever possible.

We have built on early foundations laid by William Lynch, M.D. and Bart Heffernan, M.D.- visionaries of remarkable prescience. When Dr. Lynch and Joyce Dwyer, R.N. joined with Joseph Stanton, M.D. Henry Armitage, M.D. and others in 1970 to create an organization which became the "Value of Life Committee" (VOLCOM), this state's first public pro-life organization was born.

As impressive as internists Dr. Stanton's professional credentials and personal gifts were, his most valuable contribution was the understanding that the battle to defend the sanctity of life could not be won by any one group alone: *No One Profession, No One Religion, No One Political Party, or No One Social or Economic Group and No One*

Gender. Dr. Stanton reached me through Barbara Rockett, M.D., who I had known as a fellow Surgical Resident at Boston City Hospital (now Boston Medical Center.)

Abridging history drastically, this account is intended to whet interest in what will be recorded over time. A 1972 non-binding referendum question placed on ballots of twenty carefully selected cities and towns would have would have repealed the laws against abortion in this Commonwealth. Concerned citizens, many of whom had been reached by VOLCOM, came forward to fight the question. When the opponents won 55-45, the citizen-activists stayed together to become Massachusetts Citizens For Life. Please subscribe to the *MCFL Reference Journal* so you will learn who they were.

MCFL is a "Movement" organization. We are unlike other school, church, social, fraternal, political or civic organizations of clearly defined or limited objectives. We work with the passionate conviction of respecting the sanctity of life and defending the right to life of all innocent human beings from conception to natural death. We have taken on the responsibility for changing a death-dealing culture which is needlessly plunging toward extinction by destroying its own young. Our best weapon for all the people is sound, current, accurate and pertinent information well presented. We hope the *MCFL Reference Journal* will meet this obligation.

For Life and For Love,

Mildred F. Jefferson, M.D.
President

When They Say...You Say... Pro-Life Answers

When They Say...	You Say...
Anti-abortion	Pro-Life
It's her body	There are two bodies, one mature and another new and genetically distinct. The new life has a unique genetic code, and all it needs is time to keep developing.
If abortion is not safe and legal, it will be in the hands of back-alley butchers.	Abortion is never safe for the new life inside the womb. It always stops a beating heart and terminates the brain waves in a new creation. The mother will never be safe from the psychological trauma she has to cope with.
The Supreme Court has never recognized any other person except the mother in a pregnancy.	Seven men in 1973 did deny personhood to the preborn child, but so did a Supreme Court in 1857 deny personhood to blacks in slavery. Time changed that thinking as it will with pre-born humans.
You can't impose your religious beliefs on me.	Abortion is a religious issue only because it is a moral issue, and laws do involve morality. Laws preventing murder, rape and robbery also impose a morality on society. The right to life, however, is essentially a human rights issue.
Pro-lifers condone the killing of abortion doctors and clinic workers.	No true Pro-lifer would condone these killings. In fact, they have been roundly and categorically condemned by all the leading Right to Life organizations.
Abortion keeps the world from getting overpopulated.	Overpopulation has proved to be a relative term. Is the United States overpopulated when we have a surplus of food in silos and warehouses, and yet we destroy 1.25 million of our progeny annually?
A fetus is still only potential life.	Fetus is a medical term meaning "little one". Not only is a fetus living, but it is distinct and growing. You were also once a fetus. The pre-born human is not potential life, but life with potential.

Will you adopt all those babies?	Many Pro-lifers are now adoptive parents. There are also waiting lists of couples in the U.S. who wish to adopt. Many others are discouraged by bureaucratic delays, and obviously, much work has to be done to improve the adoption procedure.
Pro-lifers oppose abortion and favor capital punishment, which shows they're really not pro-life.	Capitial punishment is a separate issue. Some Pro-lifers favor it while others are opposed. Those who are in favor point to the distinction between an innocent pre-born in the womb and a convicted murderer who has had the benefit of due process of the law. The two key concepts are innocence and justice.
How come all those opposed to abortion are coming from a religious perspective?	Not all are. While many are proud that their religious faith motivates them, there are pro-life atheists and agnostics who see it as a civil or human rights issue.
A man can never know what a woman goes through when she is pregnant.	Many men have become closer to their mate when she became pregnant and do empathize with her. One doesn't have to be a minority to comprehend racism or to be abused to feel the pain of child abuse.
Pro-lifers don't offer anything to the pregnant woman except to tell her not to get an abortion.	On the contrary, there are more pregnancy help centers staffed by pro-lifers than there are abortion clinics, and they offer complete pre and post-natal care. You can find them in the Yellow Pages.
So-called Right to Lifers always talk about a baby, but I believe it becomes a baby when it's born.	At fertilization there are 46 chromosomes now in place - its complete genetic inheritance. Nothing is added but development and growth. At 18 days a heartbeat is detectable and at 40 days brain waves are present. At 9 weeks there are fingerprints, and yes, she does feel pain.
Rape is a violent act, and no woman should be forced to carry a child to term which has half	Rape is a violent horrible act, and the rapist deserves to be prosecuted to the full extent of the law. Abortion is also a violent act and a child conceived in this manner is still an innocent victim

the inheritance of the rapist.

and two wrongs don't make a right. The child still has a right to his or her own life.

I'm personally opposed to abortion, but I'm pro-choice and I wouldn't impose my views on others.

Are you pro-choice on rape, incest, and wife battering? Either an act is morally right or wrong, and if it is wrong, we have an obligation to oppose it. The pro-choice position is one which condones abortion and thereby cooperates with the act, making pro-choice really pro-abortion.

Abortion is part of the American landscape, and there's no way even to reduce it. It's here to stay.

People said that about slavery, and it took a long time, but this country came to see the evil of denying legal personhood to a segment of humanity. Undoubtedly, we need education about human pre-natal development and about abortion alternatives while regaining respect for the sanctity of all human life.

Abortion is safer than childbirth.

First of all, one has to remember that every abortion takes at least one life - the new one. Death of the mother in childbearing, although rare in our society, is always reported while abortion is almost totally unregulated. Abortion deaths are attributed to other causes unless they occur right on the abortion table. Mothers' deaths resulting from abortion typically occur sometime after an abortion in a place other than the abortion facility, and these deaths are attributed to other causes.

Abortion has no proven long-term psychological effect.

Definitive scientific studies simply have not been done. Dr. Beverly McMillan, a former abortionist, says in her experience "at least 90% of aborted women experience guilt and regret to a greater or lesser degree.

Abortion cuts down the number of abused children in our society.

Quite the opposite. Since abortion was legalized in the US, child abuse has escalated. What it did was devalue human life at its most vulnerable stage, and that has led to a debasement of human life in general. Abortion is the ultimate child abuse.

Pro-Life Persuasion

Ruth Pakaluk

Every pro-lifer should memorize a few basic facts and statistics which help get our point across. Here are a few of the most useful facts and figures to know.

If asked "How many abortions are performed each year in the United States?", a majority of Americans will answer "about 100,000". Given that the true number is 1.55 million, it is worth asking how and why, after 24 years, Americans are still so misinformed about the scope of abortion. In light of the amount of news generated regarding the abortion controversy, it is incredible that Americans underestimate the prevalence of abortion by such an enormous amount. Are Americans similarly misinformed about the prevalence of breast cancer or AIDS? How about deaths attributed to smoking cigarettes or people killed with guns? The fact that Americans grossly underestimate the number of abortions is just one very clear and telling indication of the pro-abortion bias of the mainstream media. There is no other way to explain how Americans could be so misled regarding the prevalence of abortion.

Along the same lines, a majority of Americans continue to think that abortion is only available in the first three months. This ignorance persists despite the fact that virtually every home in America contains a copy of the Yellow Pages, in which one can find two or three pages of advertisements for abortion facilities, several of which clearly state that they offer abortion up to 22 or 24 weeks. Last time I checked, that corresponded to five or six months into pregnancy. These ads make it clear that abortion is available on demand. They stress the ease and convenience with which one can obtain an abortion, going so far as to advetise that 'MasterCard and VISA' are accepted.

Abortion advocates, of course, will only talk about single-celled zygotes or embryos in the earliest stages of development. They try to capitalize on the difficulty of viewing such a creature as a fellow human being.

They conveniently fail to mention that abortions are never performed that early in pregnancy. In fact, the earliest point at which the typical abortion facility will consent to perform an abortion is five weeks after conception. By that time, the developing child has a recognizable human form, a head, eye, spinal chord, arm and leg buds, and a heart that has been beating for two weeks.This fact that abortion facilities will not perform abortions earlier than the fifth week after conception arises from the practical difficulty of such

an abortion. The developing life is still at that point, so small that the abortionist runs a significant risk of performing the abortion procedure, and missing the child. The woman will go home, wake up the next day still feeling sick, weeks will go by, her abdomen will continue to swell, because, -lo and behold-she is still pregnant!

Abortionists want to avoid this problem because they are then compelled to re-do the abortion (at no cost) when it is later in pregnancy, hence more difficult and more expensive. This is not efficient or profitable for the abortionist. To avoid this, they simply don't attempt abortions until the fifth week.

This is also true for the abortion pill, RU486. Women must take this pill between the fifth and seventh week after conception.

The vast majority of abortions are done for social and economic reasons. According to Planned Parenthood, 90% of all the abortions performed in the United States are chosen by women for these reasons: they can't afford a child, they are not ready for the responsibility, they are concerned about how a baby will change their life, they have problems relating to the baby's father, they feel too young, or they have as many children as they want.

Now, abortion advocates tend to focus attention on women in the 'hard cases',women who are victims of rape or incest, who suffer from a serious health problem and women who carry a handicapped child. According to Planned Parenthood, women who fall into these categories account for less than three precent of the 1.55 million abortions done each year.

This breakdown is extremely interesting since a majority of Americans think abortion should be legal only for women in these difficult situations. If you add together the Americans who want only the life of the mother exception, and those who support the rape/incest exception, you find that about 52% to 55% of Americans would support laws that prohibit 97% of all the abortions currently permitted under Roe v. Wade. It is astounding that this breakdown of public opinion has remained fairly constant despite the court-imposed abortion on demand, despite a 24-year campaign of propaganda and disinformation, and despite the culpable failure of the mainstream media to cover the abortion issue fully and fairly.

Ruth Pakaluk (1957-1998) was a devoted wife, loving mother of six, and an intelligent and articulate defender of human life. Ruth served MCFL as a Board member, creator of the LEAPS program and President.

The Problem With Roe

The Testimony of Science

Linda Thayer

One of the most serious problems with Roe v. Wade was the statement, "We need not resolve the difficult question of when life begins." (Roe v. Wade, 1973) This declaration is problematic for two reasons: before allowing the destruction of something in the womb, the first obligation required is to resolve the question of whether or not this is indeed a human life. Secondly, when a human life begins is not a difficult question, the question had already been answered by science.

The Testimony of Science

1962 "...all organisms...begin life as but a single cell. This is true of the human being...who begins life as a fertilized ovum."

Isaac Asimov, The Genetic Code.

1963 "An abortion requires an operation. It kills the life of a baby after it begins."

Planned Parenthood Federation of America, Plan Your Children for Health and Happiness

1964 "It is the penetration of the ovum by a spermatozoan and the resulting intermingling of the chromosonal material...that...initiates the life of a new individual."

B.M. Patten,
Foundations of Embryology

1965 "A human being originates in the union of two *gametes,* the ovum and the spermatozoan."

J.A.F. Roberts, An Introduction to Medical Genetics

1967 "The initiation of a new life occurs at the moment when fertilization is completed by fusion of he two sets of chromosomes."

Treloar, Behn and Cowan, American Journal of Obstetrics and Gynecology

1970 "The result (of this debate) has been a curious avoidance of the scientific fact...that human life begins at conception and is continuous..."

California Medicine

1975 "The development of a human being begins with fertilization."

Medical Embryology

1988 "Human development begins after the union of male and female gametes...during a process known as fertilization (conception)."

Essentials of Human Embryology

1996 "The time of fertilization represents the starting point in the life history, or ontogeny, of the individual.

Patten's Foundations of Embryology

2003 "Zygote. This cell results from the union of an oocyte (egg) and a sperm...A zygote is the beginning of a new human being.

Embryo. The developing human during its earliest stages of development."

The Developing Human

2007 "Each of us originated as a single-celled embryo, and from that moment have developed along a continuous biological trajectory throughout our existence. To speak of 'an embryo' is to designate a human being at a particular stage."

"Advancing Stem Cell Science Without Destroying Human Life," Domestic Policy Council, The White House

Personhood

Much has been said as to whether or not the life in the womb is a "person." By definition, a person is a human being. Ordinarily, we think of a person in terms of what we usually see: a baby, a child, an adolescent, or an adult. An embryo or fetal child, by virtue of gentetics and physiology, is a living human being, a person, and is worthy of legal protection. Some have tried in the past to define a person by various capabilities or functions, self-awareness or viability, for example. However, these capabilities simply mark stages in development or maturity, and do not define our innate humanness.

person: *n.*- a human being.
embryo: *n.*- a living thing in its earliest stages of development.
pregnant: *adj.*- containing unborn young within the body.
conceive: *vb.*- to become pregnant.
fetus: *n.* - an unborn vertebrate after its basic structure is laid down.

(The word *fetus* is a Latin noun meaning "offspring" or "young one.")
The Merriam Webster Dictionary

Legal Personhood

Some have tried to claim that the unborn child was not a person "under the law." And yet, there had been precedent for legal personhood for the unborn child established in various court rulings prior to Roe v. Wade.

1795 The unborn child had the right to inherit property. *Doe v. Clark.*

1798 Unborn children were "entitled to all the privileges of other persons."
Thelluson v. Woodward.

1927 "Non-viability of a fetus should not bar recovery (of damages)." The same case also held that

the unborn child was a "person" in the eyes of the law.

Torrigan v. Watertown News Co.

1964 An unborn child needed a blood transfusion for Rh factor. The mother refused on religious grounds. The court ruled her right to practice her religion was subordinate to her unborn child's right to live.

Fitkin v. Anderson

1969 An unborn child could get social security benefits if the father died when the child was still in utero

Wagner v. Gardener.

1971 "The legal conclusions in Griswold as to the rights of individuals to determine without governmental interference whether or not to enter into the process of procreation cannot be extended to... those situations wherein a new life has begun. Once life has commenced, the constitutional protections found in the Fifth and Fourteenth Amendments impose on the state the duty of safeguarding it."

Steinberg v. Rhoades.

(From original compilations by Scientists for Life, The Handbook on Abortion, 1979 ed., and NCCB.)

More information:

"Roe v. Wade- Questions and Answers"
www.usccbpublishing.org/client/client_pdfs/RoeV.WadeWEB.pdf

Wikipedia - thorough overview of Roe v. Wade and other important Supreme Court decisions including Planned Parenthood v. Casey, Stenberg v. Carhart and Gonzales v. Carhart
http://en.wikipedia.org/Roe_v_Wade

National Right to Life - *Media Myths*
www.nrlc.org/abortion/pba/roevwademyths.html

Clarke D. Forsythe, "Who Will Fix the Supreme Court's Mess? A History of United States Supreme Court Decisions and HowThey Shaped Abortion Law."
Americans United for Life
www.aul.org/?p=152

Charles I. Lugosi, *Issues in Law and Medicine*,James Bopp, Ed., "Conforming to the Rule of Law: When Person and Human Being Finally Mean the Same Thing in Fourteenth Amendment Jurisprudence"
www.personhood.net/docs/ILM_fall06Spring07.pdf

Hadley Arkes, *Natural Rights and the Right to Choose* (New York: Cambridge University Press, 2002)

What Roe v. Wade Actually Says

The Legalization of Abortion in the United States

The Supreme Court decided two abortion cases on January 22, 1973: Roe v. Wade, challenging a Texas abortion law, and Doe v. Bolton, challenging a Georgia abortion law.

Together, the cases struck down all state laws restricting abortion in the United States and replaced them with a national policy which effectively legalized abortion for any reason throughout all nine months of pregnancy. Here is a closer look at each case:

Roe v. Wade: The Court divided pregnancy into three three-month periods or trimesters:

First trimester: The Court ruled that states could not restrict or regulate abortion in any way (although the Court clarified in a later decision that states could require that abortions be done by a licensed physician).

Second trimester: The Court ruled that states could regulate abortions only to the extent necessary to protect the "health" of the mother as broadly defined in *Doe v. Bolton.*

Third trimester: After the unborn child becomes "viable" (able to survive outside the womb with or without medical support), which the Court said occurred at approximately the beginning of the last three months of pregnancy, the Court said states could regulate or prohibit abortion, except when an abortion was done to protect the life or *health* or the mother.

Doe v. Bolton: In this companion case to *Roe*, the Court defined "health" to include "all factors-physical, emotional, psychological, familial, and the woman's age - relevant to the well-being of the patient." Under this broad definition of "health," any woman who is unhappy about being pregnant may have an abortion, even in the last months of pregnancy, to protect her "health."

The core holding of *Roe*, i.e., that a woman has a constitutional right to abortion, was reaffirmed in 1992 in the Supreme Court's *Planned Parenthood of S.E.Pennsylvania v. Casey* decision. The Casey decision also suggested the possibility of life-protective laws after the baby's viability. Thus, although the so-called right to abortion remains, the Court has said that states may enact certain protective regulations, including some that hold promise for reducing the number of abortions.

Total Abortions Since 1973

48,589,993

(Based on numbers reported by the Alan Guttmacher Institute, 1973-2003 estimates of 1,287,000 for 2004-2006)

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Life Before Birth

Linda Thayer

Day 1

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Fertilization (conception), the union of the sperm cell from the father with the ovum from the mother takes place and a new life begins. The new cell is called a zygote, and marks the beginning of the embryonic stage of development. Each parent donates 23 chromosomes to form the genetic blueprint (DNA) for the new human being. The zygote soon begins to divide and the cells begin the process of change, or differentiation, which will result in the formation of the tissues and organs of the developing life.

The First Month

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By the third week, the foundation of the brain, spinal cord and nervous system have been established, and the heart has begun to beat; by the fourth week, the backbone and muscles are forming. Arms, legs, eyes and ears have begun to show, but the embryo is small, the size of an apple seed.

The Second Month

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At about five weeks, the beginnings of fingers can be detected and the eyes begin to darken. Brain waves can be recorded at about six weeks. The appearance of the embryo is gradually becoming more recognizable as a developing baby. At seven weeks, the first spontaneous movements begin. The eyelids will soon seal over until the seventh month. At eight weeks, the developing life is a little more than one inch long and is called a fetus, Latin for “offspring” or or “young one”. The stomach and kidneys have begun to function and the fetal child responds to touch.

The Third Month

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Between nine and ten weeks, fingerprints can be seen forming and the developing baby will curve its finger around an object placed in its hand. By eleven weeks, the fetus can swallow, squint, and wrinkle its forehead. It is about two inches long and muscle movements are becoming more coordinated. By the end of the third month, the baby wakes and sleeps, and is energetically moving. It opens and closes its eyes, curls its toes, breathing the surrounding amniotic fluid.

The Fourth and Fifth Months

The sex of the child can be determined early in the fourth month. At about the end of the fourth month, the fetus is about 8-10 inches long and weighs half a pound or more. The unborn child can hear its mother's voice and other sounds. The mother may begin to feel movement at about this time. By the end of the fifth month, the developing child is about 12 inches long.

"Within the amnoitic fluid, the fetus moves around quite a lot. This fluid is constantly being renewed.Besides fetal urine and other waste products - for example, discharged cells from the fetus and fetal membranes - it contains substances necessary for the future functioning of the lungs. The fluid also serves as an excellent shock absorber." *A Child is Born*, Nilsson, Furuhjelm, Ingelman-Sundberg, and Wirsen.

The Sixth Through Ninth Months

During the remainder of the pregnancy, the child increases dramatically in size. If born prematurely and given proper care, the baby has a good chance of surviving. The skin begins to thicken in the eighth month, with a layer of stored fat for insulation and nourishment. By the end of the ninth month, the baby weighs about six to nine pounds and is ready for life outside the womb.

"Of 45 generations of cell divisions before adulthood, 41 have taken place. Four more will come during the rest of childhood and adolescence." *Milestones of Early Life*

"At the time of birth, the baby has a total of 300 bones. Some bones will fuse together later, which is why an adult has only 206 bones." *The Visible Embryo*

Recommended Reading

Melanie Hayden

Abortion

Aborted Women, Silent No More *by David C. Reardon,* Ph.D.

Comprehensive book about post-abortion trauma and pain. (Loyola Press)

The Black Stork *by Martin S. Pernick*

Eugenics and the death of "defective" babies in American medicine and motion pictures since 1915.

(Oxford University Press)

Champion of Women and the Unborn_- A Biography of Horatio Robinson Storer, M.D. *by Frederick N. Dyer*

When Dr. Storer began medical practice in the middle of the 19th century, he learned that induced aborion was common among married Protestant women. He started a campaign against induced abortion and quickly enlisted the American Medical Association in the effort. As a result of urging by physicians, laws protecting the unborn were passedby states and teritories that typically remained in effect until the supreme Court overturned them in January 1973.

(Science/History Publications)

A Child is Born *by Lennart Nilsson*

Stunning photos of an unborn chuild through all stages of development. An updated edition of the classic study of prenatal development.

(Dell)

Having Your Baby When Others Say No *by Madeline Pecora Nugent*

An excellent resource for pregnant women being pressured to abort and those trying to aid them. (Avery)

Making Abortion Rare: A Healing Strategy for a Divided Nation *by David C. Reardon,* Ph.D.

This book discusses a pro-woman, pro-life ethic which could drastically reduce abortion rates, even while abortion remains legal.

(Acorn Books)

Tilly *by Frank E. Peretti* (Fiction)

Kathy and Dan Ross are just like any other young couple. No one would ever imagine what secrets lie buried in their souls until Kathy is captivated by a simple name on a tiny gravestone that would change their lives forever.

(CrosswayBooks)

The Missing Piece *by Lee Ezell*

Lee Ezell became pregnant through rape. Despite pressure to abort, she decided to make the loving choice of adoption. This is the story of her reunion with her adult daughter, Julie Makimaa. (Vine Books)

Pro-Life Answers to Pro-Choice Arguments (Updated and Expanded) *by Randy Alcorn*

Simple question and answer format to basic inquiries as well as more complex issues surrounding abortion. (Multnomah Books)

Pro-Life Feminism: Different Voices *by Gail Grenier Sweet*

A firm pro-life position stemming from a goal of justice for women. (Life Cycle Books)

Pro-Life Feminism Yesterday and Today *by Mary Krane Derr (Editor), Linda Naranjo-Huebl (Contributor), Rachel MacNair*

Discusses why the pro-life view and feminism go hand in hand. (Sulzberger and Graham Publishing)

The Wondering Tree *by Jonna Clark*

An interactive book for parents to use with their children in discussing and disclosing an abortion experience. The Wondering Tree opens the way f or careful and open communication about a difficult subject.

(Self published: order at www.gargaro.com/wonderingtree)

The Atonement Child *by Francine Rivers* (Fiction)

In one terrifying moment, Dynah Carey's perfect life is shattered by rape, her future irrevocably altered by an unwanted pregnancy and her doting family torn apart. Her seemingly rock-solid faith is pushed to the limits as she faces the most momentous choice of her life- to embrace or to end the untimely life within her. (Tyndale House)

Why Pro-Life?: Caring for the Unborn and Their Mothers *by Randy Alcorn*

Alcorn lays out the personal reasons that have driven him to advocate life and motherhood for more than thirty years. (Multnomah)

Democrats for Life: Pro-Life Politics and the Silenced Majority *by Kristen Day*

Day demonstrates how the Democratic Party has been hijacked by the

extremely liberal members of the party and special interest groups such as NARAL. She illustrates that only 25% of people in America support the party's agenda of "abortion on demand," and that this superliberal approach to abortion has driven away voters because of this issue. This book is also important for Republicans to read, giving a powerful new perspective and potential ally in Congress. Many pro-life measures in Congress could not have been passed if it hadn't been for pro-life Democrats. The Democratic Party's suppression of its pro-life members is a serious issue for all pro-life people, Democrat or Republican. (New Leaf Press)

Three Approaches to Abortion: A Thoughtful and Compassionate Guide to Today's Most Controversial Issue *by Peter Kreeft*

Kreeft's second book on the subject of abortion is divided into three parts: a logical argument as to the morality of abortion; a 15-point analysis of the motivation behind the pro-life movement; and a theoretical dialogue between a pro-lifer and a pro-choicer. (Ignatius Press)

The Cost of Choice: Women

by Erika Bachiochi, Ed.

Including essays by eminent figures such as Mary Ann Glendon, Learned Hand Professor of Law at Harvard Law School and Elizabeth Fox Genovese, Eleonore Raoul Professor of the Humanities at Emory University, The Cost of "Choice" captures the moral, legal, medical and politicla complexities surrounding abortion. (Encounter Books)

Pro-Life 101: A Step by Step Guide to Making Your Case Persuasively *by Scott Klusendorf*

Defines the pro-life argument as resting on one question: "What is it?" Also exposes faulty logic used by pro-choice advocates.

(Stand to Reason Press)

Stem Cells

A Consumers Guide to a Brave New World *by Wesley J. Smith*

Addresses all of the key issues in order to provide a clear understanding of what's at stake in the public policy debate over human embryonic stem cell research and cloning. Smith discusses how and why embryonic stem cell research receives lavish attention from the media and

showing more promise in treating patients-is downplayed or ignored. He describes the emerging science of the radical new technology of human cloning and shows how it moves forward despite the moral consensus of the world against it

. (Encounter Books)

How Adult Stem Cell Therapies Saved My Life: Medicine's Best Kept Secret Can Save Your Life, Too *by Bernard van Zyl*

Bernard van Zyl had a history of heart disease; at one point his heart atopped beating from cadiac arrest before doctors reveived him with electric shock. With virtually no conventional treatment options left to address his rapidly deteriorating condition, van Zyl's research led him to an FDA approved clinical trial using adult stem cells from the patient's own body to treat heart diseaese. The treatment, conducted at the Caritas St. Elizabeth's Medical Center in Boston, allowed van Zyl to return to a normal, active life.

(Rooftop Publishing)

When Does Human Life Begin?

Jack Willke, M.D.

A U.S. Senate Judiciary subcommittee has held hearings on a bill that would define when human life begins. By then defining all living things as legal persons, the Congress could hopefully provide the basis by which states could protect unborn human lives if they wish to.

In the first two days of hearings, seven of the first eight international medical authorities agreed that human life began at conception which they defined as the same as fertilization. Professor Rosenberg, from Yale, did not agree. He stated that "human life," as he saw it, did not exist until viability.

This has been reported as a disagreement. In fact, it was not. The first seven authorities defined human life using a yardstick of measurement that primarily judged by scientific, biologic facts. Dr. Rosenberg and some other scientists who testified later, while not denying the accuracy of the biologic facts presented, used a different primary yardstick to make their judgment. Rosenberg's judgment came from his own personal philosophic belief which was that "human life" began at viability.

In order for anyone to see this clear cut difference, the following must be understood.

I. Theological Belief or Religious Faith - This is best explained by considering three people who might state their respective beliefs as follows:

a) I believe in God. I believe He creates a soul. I believe the soul is created at conception. Therefore, I believe that human life begins at conception.

b) I also believe in God and a soul; but I don't believe the soul is created until birth. Therefore, I believe that human life begins at birth.

c) I don't believe in God or a soul.

Comment:

* the above are statements of religous faith or its absence * the above are personal beliefs * none of the above religious faith beliefs can be factually proven * each individual has a right to his or her own religious beliefs * people of good will can hold diametrically differing religious beliefs.

II. Philosophic Theories - Human life can be defined by using a wide variety of philosophic beliefs and theories These use social or pyschological rationale which can involve biologic mileposts. Examples of philosophic definitions of when human life begins include the following: when there is consciousness, when there is movement, when there is brain function, or a heartbeat, when viable, at birth, when wanted, when

there has been an exchange of love, when humanized, when a person (however "person" is defined), if mentally or physically normal, etc.

Comment:

* while admittedly arrived at through a certain reasoning process, all of the above remain theories.
* none can be factually proven by science.
* each individual has a right to hold his own philosophic beliefs.

III. Biologic Facts - Biologic human life is defined by examining the scientific facts of human development. This is a field where there is no controversy, no disagreement. There is only one set of facts, only one embryology book studied in medical school. The more scientific knowledge of fetal development is learned, the more science has confirmed that the beginning of any one human individual's life, biologically speaking, begins at conception of the union of his father's spem and his mother's ovum, a process called "conception," "fertilization,"or "fecundation." This is so because this being, from fertilization, is alive, human, complete and growing.

Comment:

* the above is not a religious faith belief
* the above is not a philosophic theory.
* the above is not debatable, not questioned, is a universally accepted scientific fact.

Can the question "when does human life begin" be answered?

The very existence of a nation state demands an answer. If a nation exists for one reason it is to provide order and equal protection by law for all its citizens.We must define "human life" and that life must be granted "legal personhood" if we are to be true to the total thrust of human rights and civil rights that has been the rock solid base of our form of government.

What yardstick, what intellectual discipline, what method of measurement can we (should we) use in making this fateful definition?

The question of when human life begins is a scientific question. Therefore, we should look to science, rather than philosophy or religion, for the answer.

Can a nation make laws on this basis, laws that, while protecting certain "human lives," also impose specific restrictions or even burdens upon others?

The ethical principle is that there is a hierarchy of rights, and the right to life itself is supreme. There is a right to free speech, but not to shout

"fire" in a theater. A man has a right to swing his fist, but that right stops at your nose. We all have the right to the pursuit of happiness, but we cannot achieve by discriminating against, stealing from, injuring, or killing others. Laws enforcing civil rights are of this nature. Abortion is a civil rights issue.

Conclusion:

Each individual human life begins at the beginning, at fertilization, and is a continuum from that time until death.

Our government has the right and duty to protect the lives of all living humans in this nation regardless of place of residence (living in or out of the womb), degree of perfection, age, sex or degree of dependency.

This protection should be guaranteed by our Constitution and be enforced through due process of law.

A civilization will ultimately be judged by how it treats the smallest, the most dependent , the most innocent, among its members. Did the nation cherish, protect, love and nourish them - or kill them?

More information:

Fetal Development, From Conception to Birth, National Right to Life Committee
www.nrlc.org/abortion/facts/fetaldevelopment.html

WPClinic.org: *Choices You Can LiveWith* www.wpclinic.org/parenting/fetal-development/first-trimester/

AbortionFacts.com
Uses *Why Can't We Love Them Both?* by Dr. and Mrs. J.C. Willke
abortionfacts.com/fetal_development/prenatal_development.asp

The Visible Embryo - computer generated graphics, 3D and 4D ultra sound images
www.visembryo.com/baby/index.html

Milestones of Early Life- Heritage House'76, Inc. (800) 858-3040
www.heritagehouse76.com

In the Womb - National Geographic Outstanding 3D and 4 D ultra sound images in DVD format.

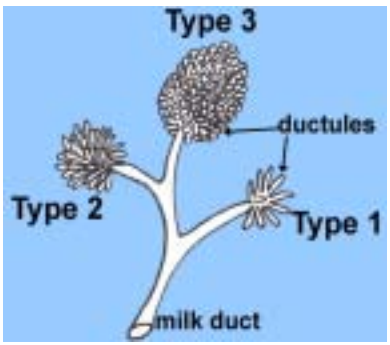
The Virtual Embryo
Dynamic Development,
Modules in Developmental Biology
www.ucalgary.ca/UofC/eduweb/virtualembryo/dev_biol.html

Prenatal Development and Birth
Will take you to a variety of sites featuring college-level tutorials with excellent graphics and photos.
www.classweb.gmu.edu/awinsler/ordp/prenatal.html

Breast Maturity & Breast Cancer Risk

Joel Brind, Ph.D.and Angela Lanfranchi, M.D., F.A.C.S.

Another aspect of breast development affecting breast cancer risk is the maturation of breast lobules from Type 1 lobules to Type 4 lobules. Breasts are composed of units of breast tissue called lobules and are surrounded by supportive tissue made of fat and stromal (connective) tissue. A lobule is composed of a milk duct with surrounding ductules which are the glands that make milk. Lobules are in turn composed of individual breast cells.

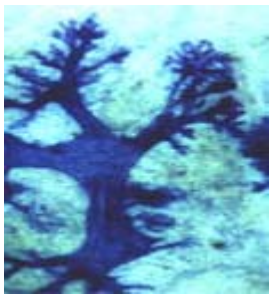


At birth, you have a small amount of breast tissue, Type 1 lobules, which are very immature and are known as TDLUs (terminal ductal lobular units). Ductal cancers which account for 85% of all breast cancers are known to arise in Type 1 lobules. An infant's breast tissue may be stimulated by the mother's hormones present in the infant at birth. This can cause a milky secretion called "witches milk" for a short time after birth. At puberty, in response to the cyclic elevations of estrogen and progesterone, the breasts start to develop further, and some Type 1 lobules are matured into Type 2 lobules, which have more ductules per lobular unit. Type 2 lobules are where up to 15% of all breast cancers start. By the end of puberty, about 75% of breast tissue is Type1 lobules and 25% are Type 2.

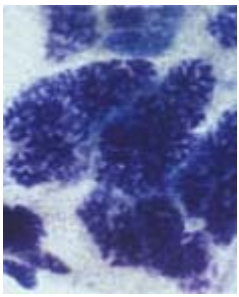
Full maturation and cancer resistant Type 4 lobules are not formed until late in pregnancy when the breast is under the influence of the pheromones hCG and hPL which are made by the fetus and placenta in the womb. Type 4 lobules contain colostrum, the first milk. By mid 2nd trimester 70% of the breast tissue is Type 4 lobules, and at 40 weeks (full term), 85% is Type 4 and cancer resistant. After weaning, the Type 4 lobules regress to Type 3, but remain cancer resistant due to permanent genetic changes which have made them cancer resistant. Each subsequent pregnancy after the first matures more of the breast tissue resulting in a further decrease in breast cancer risk of 10%

Not only do these lobules look differently anatomically, but they grow differently. For example, Type 1 and 2 lobules copy their DNA faster than Type 3 lobules. The faster DNA is copied, the higher the risk mutations or cancer cells forming.

Actual photomicrographs of human breast lobules:



Type 1 Lobule



Type 3 Lobule

The principle of breast cancer risk relating to lobule maturity can explain other well-documented breast cancer risks as well. If a woman does not have a full-term pregnancy (meaning she is childless or nulliparous), she has **increased** risk for breast cancer, since she never develops Type 4 lobules. If she has children later in life (after age 30), she has **increased** risk, because, for most of her menstrual life, her estrogen has been stimulating immature Type 1 and 2 breast lobules. If she has children as a teenager, she has **decreased** risk of breast cancer, since her breast tissue matures very early in her reproductive life to Type 4 lobules.

If a woman breastfeeds, she often has anovulatory cycles (in which estrogen is low) or misses menstrual altogether. She has **decreased** risk due to two factors: less exposure to estrogen and breast tissue maturity to Type 4 lobules. Risk decreases in proportion to duration of breastfeeding.

The risk factors of estrogen exposure and breast immaturity can also act in concert with one another, causing greater risk. For example, if a teenager, who has not had a full-term pregnancy (she is nulliparous), takes birth control pills, her risk of breast cancer is much higher than it is for a woman who has had several children and then takes birth control pills.

A woman who gets pregnant increases her estrogen level 2,000 percent by the end of the first trimester. If her pregnancy goes to full term, she will have lower breast cancer risk by developing full breast maturity. If it ends before 32 weeks, by very premature birth or induced abortion, she will have increased risk as she will not get the benefit of full breast maturation, but instead be left with more places for breast cancer

to start. Spontaneous abortions in the first trimester do not increase breast cancer risk because they are associated with low estrogen levels.

Cigarette smoking, before a full-term pregnancy can **increase** a teenager's breast cancer risk substantially, because her breast lobules are immature and rapidly growing.

"Breast Maturity and Breast Cancer Risk, " Chapter 5 from *Breast Cancer Risks and Prevention, Fourth Edition.* Reprinted unedited and in full with permission of The Breast Cancer Prevention Institute.

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More information

AbortionFacts.com has a wealth of articles and research studies on the abortion/ breast cancer connection. Go to the home site and click on Breast Cancer, www.abortionfacts.com or www.abortionfacts.com/breast_cancer_connection/breast_cancer_connection.asp

"Abortion and Breast Cancer: The Missing Link in Awareness Campaign," Joel Brind, Ph.D.,*National Right to Life News*, October 2007 www.nrlc.org/news/2007/NRL10/Brind.html

Dr. Brind is a professor of human biology at Baruch College, City University of New York and is President of the Breast Cancer Prevention Institute. Also by Dr. Brind:

"Scientific Developments Relating to the Effect of Abortion on Risk of Future Breast Cancer." Testimony presented to the Select Committee on Science and Technology of the United Kingdom Parliament. August 2007. www.bcpinstitute.org/resources

"The Abortion-Breast Cancer Connection", *National Catholic Bioethics Quarterly* 303-29. Summer 2005 www.bcpinstitute.org/resources

"Induced Abortion as an Independent Risk Factor for Breast Cancer: A Critical Review of Recent Studies on Prospective Data" *Journal of American Physicians and Surgeons,* Vol.10, No.4:105-10, Winter 2005. www.bcpinstitute.org/resources

Criteria Met to Establish Causal Relationship Between Abortion and Breast Cancer

Angela Lanfranchi, M.D.

Dr. Angela Lanfranchi, M.D., F.A.C.S., explains that there is sufficient evidence to establish a cause and effect relationship between abortion and breast cancer. **Scientists use six criteria to decide whether there is a causal relationship (and not just an association) between a particular factor and a disease. In the case of abortion-breast cancer research, all six criteria have been met.** Speaking of the high bar of absolute proof of a link, that some individuals have erroneously demanded for this women's health issue, she said:

"The only proof would be if you took 100 closely matched women and impregnated them, aborted 50 of them and then followed them to see who got more breast cancer. Since that is an unethical thing to do to a human, we have been able to do that to rats. [Rat physiology is remarkably similar to human breast physiology.] Russo and Russo 1980 showed that more aborted rats get breast cancer when exposed to a carcinogen than virginal rats or rats that have had litters of pups." [1] However, there are Six Criteria that epidemiologists use to determine if an association is in fact causal. Certainly, the abortion-breast cancer (ABC) studies show a causal relationship.

Criteria #1

"First, the **exposure or risk must precede the disease**, which it does in all of the studies.

Criteria #2

Second, the **preponderance of the studies must show an association.** In the case of the ABC link, 28 oput of 37 studies report an association between abortion and breast cancer.

Criteria #3

"Third, **the studies must included statistically significant studies.** There are 17 statistically significant studies.

Criteria #4

"Fourth, **there must be a plausible biologic basis .** In the case of the ABC link, if a pregnancy is terminated before 32 weeks, the woman is left with increased numbers of type 1 and 2 lobules which are most sensitive to carcinogens. It is **only after 32 weeks [of pregnancy]** that type 3 and 4 lobules resistant to carcinogens are formed.

It is the same reason why (Melbye et al. 1999 reported) **women who have premature deliveries before 32 weeks more than double their risk of breast cancer and why women who have children have alower risk of breast cancer.** [2,3] Women who never have children are also at increased risk because of their lack of type 3 and 4 lobules.

Criteria #5

"Fifth, **there should be a dose effect, meaning the more you are exposed to a risk, the higher the risk.** In the case of the ABC link, this is more difficult to show than the case of a drug that causes cancer. However, Melbye et al 1997 showed that for every week you delay an abortion, the risk of breast cancer increases by 3 percent, so that this study showed a statistically significant increased risk of breast cancer among women with second trimester abortions. [4]

Criteria #6

"Sixth, **there must be a relative risk of over 3.0 or a 200% increased risk.** In subsets of women, the relative risk is **greater than 3.0**: Teenagers less than age 18 who have abortions between 9 and 24 weeks have an 800% increased risk or a relative risk of 9.0 according to the NCI commissioned study, Daling et al. 1994. This team found a relative risk of infinity among teenagers procuring abortions when they also had a family history of breast cancer. This was because all women in her study who had a family history of breast cancer and an abortion by age 18 or younger developed breast cancer by the age of 45. [5]

"As a breast surgeon, I became aware of younger and younger patients with breast cancer. When I had a large number of patients in their thirties with breast cancer, I analyzed my own data. Thirty percent of women in their thirties with breast cancer had no family history, but did have abortions. Every person in this country is aware that breast cancer is becoming a disease of young women. It is not a grandmother's disease any more."

Angela Lanfranchi, M.D., F.A.C.S. (September 16,2002) Department of Surgery Robert Wood Johnson School of Medi-

cine University of Dentistry and Medicine of New Jersey Breast Center, Somerset Medical Center, Somerville, New Jersey

References:

1. Russo & Russo (1980) Am J Pathol 100(2):497-512.
2. Melbye et al. (1999) Br J Cancer 80(3-4):609-13
3. BeralV (July 20,2002) The Lancet 360:187-95
4. Melbye et al. (1997) N Engl J medicine 336(2):81-5.3.
5. Darling et al. (1994) J Natl Cancer Inst 86(21):1584-92.

The Bradford Hill Criteria

Dr. Lanfranchi relied on the Bradford Hill criteria, the same criteria which the Surgeon General used in 1964 to show causality between smoking and lung cancer.

"Sir Austin Bradford-Hill (1897-1991), a British medical statistician, established nine widely used criteria to determine the strength of an association between a disease and its supposed causative agent. These criteria are used as a way of determining the causal link between a specific factor (e.g., cigarette smoking) and a disease (such as cancer)." See the SV40 Cancer Foundation at www.sv40foundation.org/Bradford-Hill.html

More information on the Bradford Hill Criteria is available at these sites:

Hills Criteria of Causation - Presents Hill's criteria in their application in epidemiology.

www.drabruzzi.com/hills_criteria_of_ causation.htm

Wikipedia- article on Epidemiology (study of the incidence and distribution of diseases)

en.wikipedia.org/wiki/Epidemiology

To read Austin Bradford Hill's 1965 essay on causality, "The Environment and Disease: Association or Causation?," *Proceedings of the Royal Society of Medicine*, 58 (1965), 295-300
www.edwardtufte.com/tufte/hill

For application of the Bradford Hill criteria by the U.S. Surgeon General
www.surgeongeneral.gov/library/reports/htm

Dr. Lanfranchi refers to the Bradford Hill criteria in her recent article in the Spring 2008, *Journal of American Physicians and Surgeons*,Vol. 13, No.1 "The Federal Government and Academic Texts as Barriers to Informed Consent"

Stem Cell Research, Cloning and Human Embryos

Rev. Dr. Tadeusz Pacholczyk

Stem Cells

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.

Why Are Stem Cells Important?

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

What Are the Two Broad Classes of Stem Cells?

The two basic types of stem cells are embryonic type and adult type:

"Embryonic type" – embryonic stem cells and embryonic germ cells.

"Adult type" – umbilical cord stem cells, placental stem cells, and adult stem cells.

Where Do Embryonic Type Stem Cells Come From?

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.

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

Where Do Adult Type Stem Cells Come From?

Umbilical Cords, Placentas and Amniotic Fluid – adult type stem cells can be derived from various pregnancy-related tissues.

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.

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

How Do Embryonic and Adult Stem Cells Compare?

Embryonic Stem Cell Advantages

1) Flexible- appear to have the potential to make any cell.

2) Immortal - one embryonic stem cell line can potentially provide an

endless supply of cells with defined characteristics.

3) Availability - embryos from in vitro fertilization clinics.

Embryonic Stem cell Disadvantages

1) Difficult to differentiate uniformly and homogeneously into a target tissue.

2) Immunogenic - embryonic stem cells from a random embryo donor are likely to be rejected after transplantation.

3) Tumorigenic - Capable of forming tumors or promoting tumor formation.

Adult Stem Cell Advantages

1) Special adult type stem cells from bone marrow and from umbilical cords have been isolated recently which appear to be as flexible as the embryonic type.

2) Already somewhat specialized - inducement may be simpler.

3) Not immunogenic - recipients who receive the products of their own stem cells will not experience immune rejection.

4) Relative ease of procurement - some adult stem cells are easy to harvest (skin, muscle, marrow, fat), while others may be more difficult to obtain (brain stem cells). Umbilical and placental stem cells are likely to be more readily available.

5) Non-tumorigenic

6) No harm done to the donor.

Adult Stem Cell Disadvantages

1) Limited quantity - can sometimes be difficult to obtain in large numbers.

2) Finite - may not live as long as embryonic stem cells in culture.

3) Less flexible (with the exception #1 above) - may be more difficult to reprogram to form other tissue types.

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 the adult body, where they tend to cause tumors and immune system reactions. Most importantly, adult stem cells have already been successfully used in human therapies for many years. As of the date of this publication, 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.

Treatments From Adult Stem Cells

Spinal Cord Injury

Laura Dominguez participated in a Washington, DC hearing on adult stem cell research in 2004. As a result of a car accident in 2001, Laura broke her neck and was paralyzed from the chest down. She was treated with a mix of adult stem cells and other cells obtained from olfactory tissue inside her nose. The cells were transplanted across the injury site in her damaged spinal cord, and several months after the surgery, she was able to move her foot. She can now walk with braces. Her remarkable progress is continuing, and several other spinal cord patients like her are also showing benefits from the transplant surgery. Dr. Carlos Lima performed the surgery in Portugal, but neurologists in the US are seeking FDA approval to begin offering Dr. Lima's therapy in the Unites States.

Leukemia

Patrizia Durante was diagnosed with acute leukemia six months into her pregnancy. Her daughter, Victoria Angel, was born healthy; but Durante was given only six months to live. The stem cells from the blood of her daughter's umbilical cord were used for a transplant. Several years later, Durante is in full remission. "She saved her mommy," Durante told reporters. "She's a little miracle. That's why we named her Victoria Angel. She's my little angel."

Krabbe's Leukodystrophy

Gina Rugari was born with Krabbe's leukodystrophy. This is a rare, degenerative enzyme disorder of the nervous system, in which the baby shows initial signs of irritability and developmental delay or regression. Seizures and fevers often follow, then blindness and deafness until the baby dies, usually before age 2. Gina was tested for Krabbe's leukodystrophy shortly after she was born, because she had a brother who had died from the disease. Doctors treated Gina with chemotherapy to destroy her immune system, and introduced new umbilical cord blood stem cells from a closely matched donor. The transplanted cells produced the missing enzyme. Her body accepted the cells, and she is thriving several years after the transplant

Parkinson's Disease

Dennis Turner was diagnosed with Parkinson's Disease and by early 1991 he suffered extreme shaking

of the right side of his body and became unable to use his right arm. Neurosurgeon Dr. Michele Levesque removed a small tissue sample from Mr. Turner's brain and isolated adult neural stem cells. He multiplied and matured these cells into nerve cells, and injected them back into the left side of Mr.Turner's brain, which controls the right side of the body. Soon afterward, the Parkinson's symptoms began to improve in his right side. His trembling decreased, until to all appearances it disappeared. Neurological evaluation indicated a marked improvement in his symptoms, which lasted for about 5 years. Because Parkinson's is a progressive ailment, his condition is continuing to deteriorate, but as Mr. Turner recently testified at a U.S. Senate Committee hearing, "...I have no doubt that because of this treament I've enjoyed five years of quality life that I feared had passed me by." He enthusiastically expressed a willingness to undergo a repeat surgery of this sort to further slow the progression of his symptoms.

Is Stem Cell Research Ethical?

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

Embryonic Stem Cells - always morally objectionable, because the human embryo must be destroyed in order to havest its stem cells.

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.

Placentally-Derived Stem Cells - morally acceptable, since the afterbirth is no longer required after the delivery has been completed.

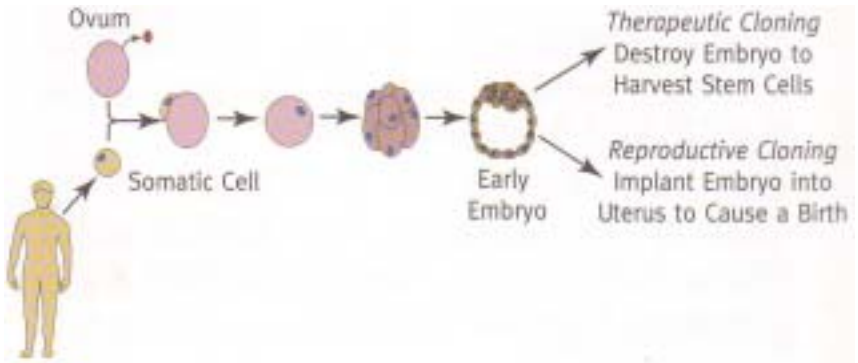
Adult Stem Cells - morally acceptable, assuming informed consent from the adult donor.

Cloning

What Are The Two Types of Cloning?

The first and most well known type of cloning is cloning to reproduce children, or "reproductive cloning."

The second type of cloning is cloning for biomedical research, or "therapeutic cloning."



What is Reproductive Cloning (Cloning to Produce Children)?

Humans may one day be able to be cloned using a procedure similar to the one used to generate Dolly the sheep. This kind of cloning involves taking the nucleus of a body (somatic) stem cell and inroducing it into an egg cell (ovum) which has had its nucleus removed. The resultant cloned embryo is then implanted into a uterus to bring it to birth. The cloned embryo is an identical twin of the person who donated the starting somatic cell. Cloning is simply another approach to mimicking the biology that generates identical twins.

What is Therapeutic Cloning (Cloning for Research)?

Therapeutic cloning involves making a cloned embryo by the same series of steps as reproductive cloning, but instead of implanting it into a uterus to be born, the embryo is destroyed to harvest its stem cells. Hence, therapeutic cloning is identical to reproductive cloning except for the final step. Therapeutic cloning is sometimes referred to as the "clone and kill" technique. The aim is to obtain rejection-proof stem cells for transplantation into the person from whom the clone was made. Because stem cells from the clone are actually from the identical twin of the person cloned, they should theoretically be a good match and not be rejected.

Why is Human Reproductive Cloning Wrong?

Cloning participates in the basic evil of moving human procreation out of the setting of committed marital intimacy and into the laboratory. Human procreation should not take place in the laboratory because it is inherently dehumanizing to bring new life into the world through means which replace the marital act.

Each one of us has a right to be brought into the world as the fruit and expression of marital love, rather than as the product of technical domination and manufacturing protocols. Procreation is not meant to be replaced by production. There is a dignity both to the process of procreation as established by God through sexual self-giving, and the dignity of the life itself which is engendered by that process. Cloning threatens human dignity on both of those levels.

Cloning also represents a sort of genetic engineering. Instead of choosing just a few of the features you'd like your offspring to have, like greater height or greater intelligence, cloning could allow you to choose all of the features, so it represents an extemely serious form of domination and manipulation by parents over their own children. It represents a type of parental power that parents are not intended to have. Ultimately, cloning is a type of human breeding, a despotic attempt by some individuals to dominate and pre-determine the make-up of others. With cloning you also distort the relationships between individuals and generations. For example, if a woman were to clone herself using her own egg, her own somatic cell, and her own womb, she wouldn't have a man involved at all. Oddly enough, she would end up giving birth to her own identical twin - a twin sister who would also be her daughter.

Why is Human Therapeutic Cloning Wrong?

If human reproductive cloning- the bringing to birth of a new child who is an identical twin to somebody else- is wrong, then therapeutic cloning is worse. Therapeutic cloning is the creation of that same identical twin for the premeditated purpose of ending her life in order to harvest her tissues. In sum, there is a grave evil involved in therapeutic cloning because life is created for the explicit purpose of destroying it. With a cloned birth, at least we would end up with a baby that is alive. Human therapeutic cloning, the artificial creation of human life for the sole prupose of her exploitation and destruction, will always be gravely unethical even if the desired end is a very good one, namely the curing of diseases. Therapeutic cloning sanctions the direct and explicit exploitation of one human being by another, in this case, the exploitation of the weak by the powerful.

The danger of therapeutic cloning lies in the intentional creation of a subclass of human beings, made up

of those still in their embryonic or etal stages, who can be freely exploited and discriminated against by those fortunate enough to have already passed beyond those early embryonic stages.

Therapeutic cloning raises further serious slippery slope concerns. The temptation to make embryos that can be exploited for their stem cells offers the further temptation to grow those cloned embryos within a uterus to the point of a fetus. Such a fetus can then be aborted and conveniently harvested for needed organs, avoiding the trouble of having to start from scratch with undifferentiated stem cells.

Human Embryos

Where Do Human Embryos Come from?

4 day-old human embryo at the 16-cell stage

- **From the combining of sperm and egg (fertilization)**
- **From embryo splitting (fission)**
- **From somatic cell nuclear transfer (cloning)**

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 toward 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 an event that mimics fertilization, like cloning), you are a new member of the 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 stripming them for their cells or tissues.

The 10 Great Myths
In the Debate Over Stem Cell Research

Myth 1: Stem Cells Can Only Come From Embryos. In fact, stem cells can be taken from umbilical cords, the placenta, amniotic fluid, adult tissues, and organs such as bone marrow, fat from liposuction, regions of the nose, and even cadavers up to 20 hours after death.

Myth 2: Christians Are Against Stem Cell Research. There are four categories of stem cells: embryonic stem cells, embryonic germ cells, umbilical cord stem cells, and adult stem cells. Given that germ cells can come from miscarriages that involve no deliberate interruption of pregnancy, Christians in general oppose the use of only one of these four categories, i.e., embryonic stem cells. In other words, Christians approve of three of the four possible types of stem cell research.

Myth 3: Embryonic Stem Cell Research Has Shown the Greatest Promise. Up to now, no human

being has ever been cured of a disease using embryonic stem cells. Adult stem cells, on the other hand, have already cured thousands. For example, bone marrow cells from the hipbone have repaired scar tissue on the heart after heart attacks. Research using adult cells is 20-30 years ahead of embryonic stem cell research and holds greater promise. This is in part because stem cells are part of the natural repair mechanisms of an adult body, while embryonic stem cells do not belong in an adult body (where they are likely to form tumors and to be rejected as foreign tissue by the recipient). Rather, embryonic stem cells really belong only in the microenvironment of a rapidly growing embryo, which is a radically different setting than an adult body.

Myth 4: Embryonic Stem Cell Research is Against the Law.

In reality, there is no law or regulation against destroying human embryos for research purposes. While President Bush has banned the use of federal funding to support research on embryonic stem cell lines created after August 9, 2001, it is not illegal. Anyone using private funds is free to pursue it.

Myth 5: President Bush Stem Cell Research. The 1996 Dickey Amendment prohibited the use of federal funds for research that would involve the destruction of human embryos. Bush's decision to permit research on embryonic stem cell lines created before a certain date thus relaxes this restriction from the Clinton Administration.

Myth 6: Therapeutic Cloning and Reproductive Cloning Are Fundamentally Different From Each Other. The creation of cloned embryos, either to make a baby or to harvest cells, occurs by the same series of technical steps. The only difference is what will be done with the cloned human embryo that is produced. Will it be given the protection of a woman's womb in order to be born? Or will it be destroyed for its cells?

Myth 7: Somatic Nuclear Cell Transfer is Different From Cloning. In fact, "somatic cell nuclear transfer" is simply cloning by a different name. The end result is still a cloned embryo.

Myth 8: By Doing Somatic Cell Nuclear Transfer, We Can Directly Produce Tissues or Organs Without Having to Clone an Embryo. At the present stage of research, scientists are unable to

bypass the creation of an embryo in the production of tissues or organs. In the future it may be possible to inject elements from the cytoplasm of a woman's ovum into a somatic cell to "reprogram" it into a stem cell. This is called "de-differentiation." If so, there would be no fundamental moral objection to this approach to getting stem cells, so long as an embryo is not created.

Myth 9: Every Body Cell, or Somatic Cell, is Somehow an Embryo and Thus a Human Life.

People sometimes argue: "Every cell in the body has the potential to become an embryo. Does that mean that every time we wash our hands and are shedding thousands of cells, we are killing life?" The problem is that this overlooks the basic biological difference between a regular body cell, and one whose nuclear material has been fused with an unfertilized egg cell, resulting in an embryo. A normal skin cell will only give rise to more skin cells when it divides, while an embryo will give rise to the entire unique adult organism. Skin cells are not potential adults. Skin cells are potentially only more skin cells. Only embryos are potential adults.

Myth 10: Because Frozen Embryos May One Day End Up Being Discarded By Somebody, That Makes it Allowable, Even Laudable, to Violate and Destroy Those Embryos.

The moral analysis of what we may permissibly do with an embryo doesn't depend on its otherwise "going to waste," nor on the incidental fact that those embryos are "trapped" in liquid nitrogen. Consider a radical case in which a group of children are permanently trapped in a schoolhouse through no fault of their own; that would not make it morally acceptable to send in a remote control robotic device which would harvest organs from those children and cause their demise.

Rev. Dr. Tadeusz Pacholcyzk earned a Ph.D. 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.

"Stem Cells, Cloning and Human Embryos," 2004. Reprinted in full and without alteration with the permission of the Family Research Council,
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www.frc.org

Exploitation of Pre-Born Babies for Fetal Tissue

Gertrude Murphy., M.D.

This article is about ethical problems with human embryonic stem cell research and is also about the exciting treatments and cures through the use of adult stem cells. Finally, mention will be made of the horrendous industry of trafficking in tissues and body parts from aborted babies for research.

The term "embryo" refers to the stage of development from the one cell formed at fertilization until about 8 weeks when all basic structures are in place at which time the preborn baby is called a fetus or "young one" (Latin). Embryonic stem cells (ESCs) are taken from the living, growing and developing 4-5 day old embryo (blastocyst) when the cells are in one group (called the inner cell mass), which will become the body of the baby. The other outer cells will become the membranes surrounding the baby and the placenta. To obtain ESCs it is necessary to end the life of the embryo.

ESC research is legal in the US but prior to August 2001, no federal funds could be used to suport ESC research. On August 9, 2001, President Bush liberalized the policy to allow public money to support research using the ECS lines already established. The policy prohibited public money for any new ESC lines established after that date.(1)

There is no prohibition on the use of private money. Venture capitalists are apparently reluctant to support this research because, so far, there have been no cures of diseases even in animals and the ESCs tend to form lethal tumors. As of this writing, researchers in Massachusetts are poised to receive taxpayers' money to support research on ESCs. The Governor and his supporters are strongly pushing for the legislature to approve a one billion dollar spending bill to support this type of research. Political and media hype has made a lot of people, including many celebrities, believe that ESCs will be able to cure every disease imaginable, including Alzheimer's, Parkinson's, Diabetes, and heal damaged tissue such as spinal cords and hearts.

Another problem with the use of embryonic cells is that the DNA of these cells will be different from that of the person to be treated, and thus be rejected. In order to prevent rejection it will be necessary to form an embryo, which is a clone of the person to be treated, in which donor women's eggs are used. This cloning is also called "somatic cell nuclear transfer" (see Diagram on page B22). Then there is a problem with obtaining enough donor eggs.Women are more aware of the risks to their health and are reluctant

to donate especially if they will not be paid. Now, the most exciting news is that there are alternatives to ECSs. Adult, including umbilical cord stem cells, have already cured several diseases and are showing more promise every day. Bone marrow stem cell transplants have been treating and curing diseases of blood cells for many years (leukemia, lymphomas, etc.) It was previously thought that these cells could not develop into other tissues of the body. But recent developments have shown (in mice) that human bone marrow cells can turn into heart muscle and possibly other tissues. There is a trial underway at Caritas St. Elizabeth's Medical Center by Dr. Losordo and others in which patients with severe heart disease (angina) are being treated with their own bone marrow cells injected directly into their hearts. The preliminary results are very good, indicating that a person's own bone marrow stem cells can repair damaged heart muscle.(2)

Our country is lagging behind other countries in using ASCs. A program on PBS called "Miracle Cell" in 2004 highlighted the exciting results in Frankfort, Germany of Dr. Andreas Zeiker in healing several persons with serious heart disease through ther use of their own marrow cells. A 16-year-old boy with two third of his left heart muscle destroyed by a nail gun accident in Michigan has recovered dramatically since his own blood was transfused into his heart. The same program reported on partial but ongoing improvement of several American spinal cord injured young adults through the use of their own cultured nasal nerve cells in Lisbon, Portugal by Dr. Lima.(3) In Australia, Griffith University Professor Alan MacKay has shown that the same olfactory cells can become "almost any kind of cell."

Recently, the Boston Globe reported that juvenile diabetes has been cured in mice at Massachusetts General Hospital through the use of spleen cells. Another significant breakthrough reported by Paul Elias, AP (4), is about finding that amniotic fluid contains immature stem cells that may have the same promise as ESCs, according to Dr. Anthony Atala of Wake Forest University and others at Harvard. For older women with urinary incontinence there's a great report from the Medical University of Innsbruck, Austria where doctors have used the patients'own blood and muscle cells to repair the bladder problem with significant success (USA Today, 5-21-07.) (5)

Most recently, another important "breakthrough," reported by the New York Times (6) and the Weekly Standard (7) has been announced. Studies published the week of November 19, 2007 in the journals

"Cell" and "Science" state that scientists in Japan and Wisconsin have used genes to "reprogram" adult human cells to revert back to their embryonic state of pluripotency (iPS cells or induced pluripotent stem cells), which means they can become any one of the 220 cell types in the human body. Even Dr. Wilmut, who created Dolly, the cloned sheep, has welcomed this discovery stating that he will use it in the future. This is the new age of regenerative medicine, healing through the use of adult stem cells. We do not need to spend money or waste time supporting ethically challenged embryonic stem cells.

Fetal tissue is a related issue. Is there any ethical problem with using tissues and body parts from already dead aborted babies for research? The problem with this is similar to that of using the bodies of people murdered in Auschwitz and other concentration camps. Women may be more likely to decide to have abortions if they can reason that some good will come of it and women may be persuaded to have later abortions if there is a demand for more mature fetal tissue.

Trafficking in fetal body parts has been going on for 20 to 30 years. There is hardly any mention of it in the news media. Companies, such as Opening Lines, are not allowed to charge for the tissue which is donated by the baby's mothers, but are allowed to charge for processing, transporting, etc. The companies actually publish a list of prices for various body parts, asking $999 for brain, $150 for skin, $325 for spinal cord tissues, etc. The National Institute of Health (NIH) has been funding fetal tissue research.

Even more alarming than the trafficking in fetal tissue is the prospect of "fetal farming." Biotech scientists are finding that animal embryos cannot be used to make whole organs unless they are allowed to develop further into the fetal stage. Therefore they are now transferring cloned animal embryos into surrogate mothers' wombs where they develop further. They are then aborted to use for their organs. Father Tadeusz Pacholcyzk talks about this in his article, "Fetal Farming and the New Slavery."(9)

In yet another development, scientists have found that ESCs treated in a cloned animal to cure a disease of the animal cloned, will only do so if the embryo is allowed to develop all the way into a newborn.

At that time adult stem cells taken from the newborn animal will cure the disease. (10) When will this technique be proposed for humans? The late Rep. Henry Hyde spoke for all of us when he said in 1999, "I de-

plore any medical procedure that treats human beings as chattel, as subjects fit for harvesting."

What can you and I do about this? We can start by demanding that our government cease funding any research that ends the lives of embryonic human beings or that degrades human life by trafficking in fetal body parts and tissues. Then we need to urge Congress to outlaw these practices.

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More information

Life Dynamics - Mark Crutcher

The Marketing of Aborted Babies

115 page report includes exact copies of baby body parts orders, wholesalers, price lists and promotional material. (800) 800-LIFE www.lifedynamics.com/Abortion_Information/Prolife_Product/?id=5

The Marketing of Aborted Baby Parts-online report by Crutcher. www.lifedynamics.com/Abortion_Information/Baby_Body_Parts/

Mona Charen, *Body Parts for Sale - Fetal Harvesting*, www.prolife.com/HarvestingAbortedBabies.html

Hope For The Child With Congenital Defects

Gertrude Murphy, M.D.

There are many categories of congenital defects. Some are detectable before birth; others are not recognized until the child is older. Fortunately, only 2 to 3 % of babies will have some type of significant anomaly; 1.5% recognized at or before birth. The use of genetics, ultrasound and other imaging techniques has greatly improved the ability to diagnose defects before birth. Whatever the abnormality, the pro-life approach is to seek out the cause and find a cure or treatment, not to eliminate the defect by killing the child.

The culture of death attitude is seen in statements that list "therapeutic" abortion as a means of "prevention" of birth defects. Congenital anomalies are classified according to their etiology. There are genetic disorders (e.g. phenylketonuria, muscular dystrophy, metabolic disorders, congenital anemias), chromosomal abnormalities (e.g. Down syndrome), tumors such as Wilms, infections (e.g. rubella, herpes virus, cyto-megalovirus, toxoplasmosis, HIV and syphilis). There are those caused by maternal exposure to teratogens (e.g. cocaine and other drugs, tobacco, alcohol), those associated with maternal nutritional deficiencies (e.g. spina bifida or neural tube defects partially due to deficiency of folic acid), others caused by some accident in utero such as a twisted cord or abnormal development (diaphragmatic hernia, twin to twin transfusion syndrome).Some conditions are treatable; some are not. Some are preventable by appropriate counseling of women before pregnancy (nutrition, vaccination for rubella, abstinence education to help prevent sexually transmitted diseases, cessation of smoking, etc.) Some defects can wait for treatment until after birth; others will cause significant harm to the baby if not treated before birth.

The good news is that there are now new treatments and surgical techniques available to correct some defects or to prevent a condition from progressing to a more serious problem before birth. Fetal interventions include giving medications to the mother to correct a problem such as abnormal heart rhythm. Fetal surgical interventions include use of a fetoscope (tiny telescope) inserted through a small incision in the mother's abdomen and uterus to view and treat the baby and more invasive open fetal surgery.(1) There is a serious condition in which the left ventricle of the heart fails to develop. This is called "hypoplastic left heart syndrome". In the past, babies born

with this would die unless a cardiac transplant could be performed. Now there is a new treatment before birth, which involves the use of a balloon catheter to dilate the aortic valve to allow more blood flow into the left ventricle so that it will develop in a more normal manner. This procedure may be done with "fetal image-guided surgery through the mothers abdomen or it may require open surgery. This technique is very new but also very promising.(2)

Other conditions such as urinary bladder obstructions can be treated with catheters that shunt the urine from the bladder directly to the amniotic fluid space to prevent damage to the kidneys until birth when the problem can be surgically corrected. Hydrocephalus (fluid collection in the ventricles of the brain) that develops during pregnancy and threatens brain development can also be treated with a catheter that shunts the excess fluid directly into the amniotic fluid space. These techniques are less invasive than fetal surgery. Open fetal surgery requires an incision into the mother's abdomen and uterus and then an incision into the amniotic sac that encloses the baby. The baby is then partially removed for the surgical procedure, and then returned to the uterus. All incisions are repaired and the pregnancy is allowed to continue so that the baby can continue to develop, hopefully, to a time closer to term. Drugs have to be given to the mother to prevent premature labor. Surgery is only undertaken for those conditions that are known to grow worse and threaten the life of the baby or that will cause further harm if not treated before birth.

One example is an open spinal lesion called myelomeningocele associated with spina bifida (defect of the bony spine). Everyone probably remembers the astounding photos published in 1999, of the baby's hand grasping the finger of the surgeon during surgery to repair this defect. The reason for the surgery was to try to prevent paralysis from damage to the spinal cord known to occur in this condition. It is still not certain whether surgery does indeed prevent further damage. There are presently ongoing clinical trials to evaluate this. (3)

Open surgery is used to treat lung cysts, tumors or other conditions that threaten the life of the baby before birth. The treatment of diaphragmatic hernias that allow contents of the abdomen to enter the chest and prevent development of the lungs has changed recently. In the past, repair of the hole in the diaphragm muscle was the treatment, but now

there is a procedure called tracheal occlusion in which the baby's windpipe or trachea is blocked so that fluid collects in the baby's lungs which keeps them from collapsing so that they can develop normally. Of course the occlusion is removed at birth so that the baby can breath normally. Another condition called " twin to twin transfusion syndrome" or TTTS in which one twin is receiving most of the blood supply from a shared placenta and as a result of which, one twin develops heart failure from too much blood and the other twin fails to grow due to starvation, is now treatable with laser photocoagulation through a fetoscope of the abnormal blood vessel(s) thus saving the lives of both twins.(4),(5)

Whether congenital defects are treated before or after birth depends upon how serious and progressive they are. Umbilical cord stem cells are now being used instead of bone marrow stem cell transplants after birth for some congenital anemias such as sickle cell anemia because they are more readily available and don't have to be a perfect match. Recently there are ongoing animal experiments in which small bits of tissue are taken during pregnancy from a fetal organ, which is defective. This tissue is then grown in the lab to a useable size and then transplanted back into the fetus to repair the affected organ such as the bladder. This is called tissue engineering. (6) This sounds promising as long as other living fetal babies are not sacrificed for this tissue. Some of the conditions that are not curable at the present time include chromosomal abnormalities such as Down syndrome, Trisomy 18 and others. When these are diagnosed before birth, abortion is frequently recommended. Yet many of us know parents who have courageously raised a child with Down syndrome who has enriched the lives of all who knew him or her.

As people who value all human life, we need to be constantly alert to the advances of science and bioengineering so that we can support those ethical procedures that heal congenital disorders without destroying the lives of others. We must also object to the option of abortion as a means of "prevention" of a birth defect so that more effort will be given to finding ethically sound prevention and healing.

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5. Laser Photocoagulation Treatment of TTTS www.health.ucsd.edu/specialities/fetal surgery/treatment
6.Birth Defects Fixed with Fetal Surgery and Tissue Engineering, *Doctors Guide*, July 23, 2007. www.pslgroup.com/dg/3170a.htm

More information:

The Advanced Fetal Care Center at Children's Hospital, Boston

Treats fetuses with life-threatening congenital anomalies. Innovative program allows expectant parents to talk with other parents whose born baby had the same problem in utero. Web site includes Research and Publications section with links to current research, abstracts, textbook chapters, presentations, publications and lectures. The site allows you to download webcasts, videos, and brochures. www.childrenshospital.org

"Fetoscopic Surgery: Encouraged by Clinical Experience and Boosted by Instument Innovation" - *Semin Fetal Neonatal Medicine* 2006 Dec ;11-(6):398-412 Find at pubmed.gov

NCBI PubMed- A Service of the U.S. National Library of Medicine and the National Institutes of Health. Database that provides abstracts from medical journals and links to related articles, great source for research on advancements in medicine. www.pubmed.gov

Fetal Treatment Center at the UCSF Children's Hospital - Wonderful web site with illustrations and types of fetal surgery, videos, information on the latest in fetal surgery innovation www.fetus.ucsfmedicalcenter.org

What's New in Adult Stem Cell Treatments
Exploring ClinicalTrials.Gov

Helen Cross

ClinicalTrials.gov is a registry of federally and privately supported clinical trials conducted in the United States and around the world. The site gives you information about a trial's purpose, who may participate, locations, and phone numbers for more details.

You may search to find trials for a specific medical condition in the registry. CinicalTrials.gov currently has 53,956 trials with locations in 154 countries.

Resources include: "Understanding Clinical Trials" - information on benefits and risks, safety, criteria for participation in a trial, protocols, different types and phases of clinical trials, etc.

"What's new" allows you to search for recently added studies, search for studies within a range of given dates, archives and links to PubMed medical research service.

A Glossary is available to explain many of the common terms used in clinical trials. Study topics are listed in four different ways: by condition, drug intervention, sponsor, or location.

A recent search of clinical trials using stem cells found only six using embryonic stem cells and 1,958 clinical trials using adult stem cells. Refining the search for trials using adult stem cells to treat heart failure, resulted in a total of 25 studies.

Of those studies, 8 are being done in the United States, 4 are located in Germany, with other studies coming from Italy, Denmark, Israel, Taiwan, Netherlands, Slovenia and Brazil.

Studies are currently underway to assess the safety and effectiveness of stem cell therapy in treating injuries such as brain trauma in children, tibial fractures, and burns. Studies have already shown that two types of bone marrow stem cells migrate to the site of brain injury and differentiate into neurons and cell supporting elements, improving functional outcome in animals. (1) Before testing on human beings is allowed, any new therapy must be supported by laboratory research and then proceed to animal testing. It is exciting news that the promise of stem cells to repair damaged tissue has moved into the realm of treatment.

The site may also be used to keep tabs on unethical embryonic stem cell research. Stanford University has several studies in the works. Cursory reading of the study title would lead one to believe that somatic cell nuclear transfer (cloning) had already been accomplished in humans. (2)

www.clinicaltrials.gov

1) "Safety of Autologous Stem Cell Treatment for Traumatic Brain Injury in Children"

2) "Derivation of Primary Donor Cell Lines for Human Somatic Cell Transfer."

New Stem Cell Discovery Causes Seismic Shift in Research Debate

Marie Sturgis

Discoveries like the Rosetta stone and the Enigma machine have enabled researchers to unravel codes, comprehend encryption techniques, and understand ancient writings such as hieroglyphics.

Just as long ago as yesterday, information was released to the press regarding another major scientific unraveling of an ethical stem cell research method known as "reprogramming" or "somatic cell differentiation". This new method would allow scientists to go forward with their research without harming or destroying an embryonic human life. Scientists are hailing this new discovery and saying that this procedure will impact the embryonic stem cell research debate.

Articles written by the discovery teams were first published in two major science publications; *Science* and *Cell.* Professor Shinya Yamanaka at Kyoto University and Dr. James Thompson at the University of Wisconsin heralded the fantastic discovery and conclusively reported that the reprogrammed cells - using any test methods- behave exactly as human embryonic stem cells.

Essentially, scientists introduce four genes into ordinary skin cells and are able to cause the stem cells to return to the pluripotent state. This process is known as direct reprogramming. The new cells are known as induced pluripotent stem cells (iPSCs).

The reprogramming process was described by a researcher who spoke at a recent hearing on stem cells on stem cell bills at the University of Massachusetts. She likened the stem cell reprogramming method to erasing or wiping out the hard drive in a computer and stated that the erasure would allow you to "reprogram" your computer and enable you to introduce exactly what you want. Her commentary validated the process and provided laymen with an easy way of understanding it. Please note that she is not pro-life stating she had no problem with working on human embryos. So for us in the pro-life movement, this explanation and presentation was all the better.

Another benefit of the reprogramming method is that the cells (iPSCs) are genetically matched to the person who donated them. This averts any chance of the body's rejection concerning applied therapies and provides the ultimate genetic match.

There is well-founded speculation that the cells have the equivalent strength of embryonic stem cells.They are versatile in that they have the ability to become any cell type.

Professor Ian Wilmut, who paved the way for cloning by creating Dolly

the sheep, offered his imprimatur to the new reprogramming process when he announced recently that he is not going to pursue the renewal of his license for cloning from the British Government - so that he may focus on these new methods.

In spite of these discoveries, groups such as the International Society for Stem Cell Research have indicated that they plan to continue cloning research, but will use the new beneficial process. This statement sends a clear signal to pro-life lawmakers that we need to pass legislation to ban cloning.

Some experts are saying that reprogramming will make therapeutic cloning obsolete and could, overtime, replace embryonic stem cell research. Reprogramming bypasses the need to obtain human eggs in order to create human embryos that will be used for research and then destroyed, or using embryos or eggs for cloning. This scientific gift could ultimately become the protection shield for innocent human life and thus eliminate any remaining controversy in the stem cell research debate.

More information

Do No Harm: The Coalition of Americans for Research Ethics - Outstanding resource for stem cell news, commentary and information.

"Two Major Studies Show: Human Pluripotent Stem Cells Without Cloning or Destroying Embryo" www.stemcellresearch.org/statement/pptalkingpointsweb.pdf

National Catholic Bioethics Center conducts research, consultation, publishing and education to promote human dignity in health care and the life sciences. www.ncbcenter.org

Westchester Institute for Ethics and the Human Person, In Focus Special Report- "Reprogramming, Tremendous Breakthrough in Stem Cell Research" and "Do We Still Need Embryos and Cloning?" Answering Common Claims About Induced Pluripotent Stem cells (iPSCs), an ethically unproblematic alternative to human embryonic stem cells (hESCs) www.westchesterinstitute.net

The Center for Bioethics and Human Dignity engages the issue of bioethics using the tools of research, conceptual analysis, publication and education through the perspective of Western culture and biblical values. www.cbhd.com

The President's Council on Bioethics - Advising the President on ethical issues related to advances in biomedical science and technology. www.bioethics.gov/topics/stemcells_index.html

Cloning
(Somatic Cell Nuclear Transfer)

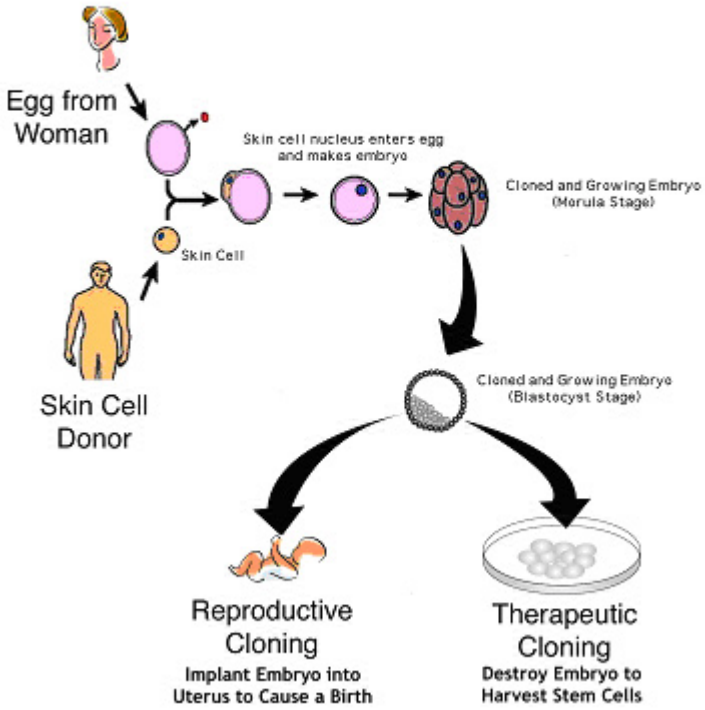

Diagram used with permission of Rev. Tadeusz Pacholcyzk, Ph.D.

A Human Life Begins At Conception

Linda Thayer

Recently, the Massachusetts Legislature passed legislation which, among other things, would allow the creation and destruction of human embryos for stem cell research. In order to do this, they essentially overturned a Massachusetts Law which defined an unborn child accurately and scientifically as the individual human life in existence and developing from fertilization (conception) until birth. They rewrote the law to define an individual human life as beginning at implantation (which occurs from 5 to 8 days after fertilization), when the embryo buries itself in the lining of the womb. In doing so, they ignored the consistent testimony of embryologists that an individual human life does, in fact, begin at conception.

In the most recent edition of The Developing Human, the authors define zygote or fertilized ovum as "the beginning of a new human being." Scores of other statements can be easily obtained through a quick search of embryology texts from over the past several decades. At a recent event two state senators gave the following four justifications for the changes in Massachusetts law; none of them can withstand serious scrutiny:

1."At conception, a new genome [a set of genetic instructions] **is formed."** This statement is correct, but incomplete. At conception (fertilization), a new human genome is formed within the physiology of a living cell. The single cell that results from conception [zygote] is genetically human, self-developing and therefore is an individual human being. Through a series of divisions, the single cell becomes a multi-cellular embryo and matures through various stages to become an adult.

2. "Individuality is conferred later." [twinning occurs at up to 14 days gestation; chimeras]

Identical twins occur when the zygote or early embryo divides completely. This occurs in only 3 or 4 of every thousand births - 0.3 - .4 %. **This means that over 99.6% of conceived humans are and remain individuals from the moment of conception.** The formation of identical twins is not completely understood; however, recent studies indicate that this may not be an ordinary part of emnbryonic development, but is caused by external factors, such as variations in the thickness of the membrane that surrounds the embryo.

The most recent advances in embryology confirm that the embryo is not a mere cluster of unspecialized cells but an integrated, individual human being. Just as in a multi-cellular

adult, the embryo's cells work in cooperation and communication with one another for its own growth, development and continued existence. Differentiation into cells with different roles and functions begins with the very first cell division and proceeds according to an internal plan. The cells of an intact embryo are parts of an individual regardless of their potential when separated externally or artificially.

Chimeras are individuals formed when two individual embryos are combined. There are only about 30 recorded instances in recent medical literature. The formation of a chimera simply means that two individuals have ceased to be and a third has come into being from their parts.

Rather than rewriting laws to mistakenly identify implantation as the beginning of an individual, we should maintain the accuracy of fertilization (conception) as the beginning of a human life, and, include in accord with the intent of the law, twins, triplets, clones, etc.

3. "Life vs. Personhood."

[Catholicism, Judaism, Islam disagree on the status of the early embryo]

By definition, a person is a human being. Ordinarily, we think of a person in terms of what we ususally see: a baby, a child, an adolescent, or an adult. An embryo or a fetal child, by virtue of genetics and physiology, is a living human being, a person, and is worthy of legal protection. Some have tried in the past to define a person by various capabilities or functions, self-awareness or viability, for example.However, these capabilities simply mark stages in development and do not define our innate humanness. An embryo is a person at a very early stage of life.

4. "When does life begin for the embryo created through nuclear transfer (no conception; no sperm)?"

The purpose of fertilization (conception) is to form a *complete set of genetic instructions* (diploid number of chromosomes) for the new individual, and to initiate division and differentiation of the cells. Ordinarily this is accomplished when the sex cell of each parent contributes half of the genetic material. In nuclear transfer, the purpose of fertilization is accomplished when a *complete set of genetic instructions* from a body cell is transferred to an ovum, whose own set of instructions has been removed, and development of the resulting zygote is externally stimulated. This is cloning; a conception **has** taken place; a new life has begun. It is the same method by which the first mammal was cloned - a sheep named Dolly - in 1997.

In addition to its flawed reasoning in formulating this legislation, our lawmakers have avoided credible evidence that certain kinds of adult stem cells exhibit the same type of flexibility as embryonic stem cells, and have demonstrated far more potential to provide therapies for various medical conditions. In doing so, they have unnecessarily initiated a moral crisis by allowing, for the first time in our history, the creation of human beings for the sole purpose of experimentation and destruction. Hopefully, the citizens of the Commonwealth will contact their legislators and urge them to repeal this legislation and restore respect for human life.

References
The Developing Human, K. Moore, 2003; "Modern Embryology and the 'Pre-Embryo,'" R. Doerflinger, 2003; "What Does It Mean To Be Human?" F. Beckwith, 2003.)

More information:
Massachusetts Citizens for Life
www.masscitizensforlife.org
Click on Issues, "Stem Cell Research/ Human Cloning" for fact sheets and testimony on legislation relating to these issues in Massachusetts. "Issues" also contains information on a variety on pro-life topics, including abortion and the end of life. Find research, downloadable forms, links, pro-life arguments, etc.
"Legislation" links you to the Massachusetts Elections Divisions web site for information on your state legislators. Or Call MCFL at (617) 242-4199

National Right to Life Committee
The latest news and information on all right to life issues. Click on: "Legislative Issues-In Depth Information" to research current federal and state legislation as well as proposed and pending legislative issues. Provides key documents, testimony, relevant media responses.
NRLC Legislative Action Center
Action Alerts and voting records for both the US Senate and the US House.
Write to Congress:
By typing in your zip code, you can find your elected representatives in Congress. Send free e-mails to your congressional representatives on key pro-life issues.
Web Site: www.nrlc.org
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Quick Facts About the Massachusetts Health Education Frameworks

Linda Thayer

The Massachusetts Health Curriculum Frameworks are currently the *recommendations* of the state as to what should be taught in public schools; local districts have some discretion as to how they are implemented.

Recent legislative attempts (H. 597, S. 288), have been made to make Health a core curriculum subject, thereby making implementation of the frameworks *mandatory* in all school districts.

No one is opposed to health education *per se* (nutrtion, exercise, safety), but concealed within the Frameworks is a radical form of sex education. Under the Frameworks, students would be taught:

- how to get an abortion without parental knowledge
- how to get contraceptives
- "behaviors" for pregnancy prevention
- acceptance of "consenual" premarital sex
- acceptance of homosexual behavior

The following organizations are in favor of or are promoting the frameworks and this type of sex education:

- Planned Parenthood League of Mass.
- NARAL Pro-Choice Mass.
- AIDS Action Committee
- ACLU
- MA Gay and Lesbian Political Caucus

The frameworks undermine the rights and values of parents, particularly parents of traditional religious faiths (Protestant, Jewish, Catholic, Muslim).

Parents have the right to opt their children out of "sex education" classes of which they don't approve; however, most parents will not realize how radical this form of sex education is and will fail to opt their children out until it is too late.

Parents and concerned citizens are urged to contact their legislators and let them know they are opposed to such radical legislation, which vio-

PreK-12 STANDARD: Reproduction/Sexuality Students will acquire the knowledge and skills necessary to make effective personal decisions that promote their emotional, sexual, and reproductive health.

By the end of Grade 5, through the study of development students will:

4.1 Identify the components, functions and processes of the reproductive system

Students label the functions and/or systems of the reproductive system on a blank diagram

4.2 Identify the physical changes as related to the reproductive system during puberty

Invite the school nurse or a health care professional who specializes in children to discuss the changes that take place in boys and girls at puberty.

4.3 Define sexual orientation using the correct terminology (such as heterosexual, and gay and lesbian)

Throught the study of Wellness students will:

4.4 Recognize that diet, exercise, rest, and avoidance of risk behaiors such as smoking, drinking, and other substance use contribute to the health of the mother and fetus

Students write short answers to define the types of sexual orientation

By the end of Grade 8, through the study of Development students will:

4.5 Recognize the emotional and physical changes as related to the reproductive system during puberty

Through the study of Wellness students will:

4.6 Explain the benefits of abstinence, postponing sexual behavior, and setting limits on sexual behavior.

4.7 Describe short- and long-term consequences of sexuality-related behaviors and identify barriers and supports for making health-enhancing decisions.

Students discuss consequences around sexuality decisions. Determine and role play steps that improve decision-making (such as whom to consult, information overlooked)

4.8 Describe behaviors and methods for pregnancy prevention, including abstinence

4.9 Define the types of sexually transmitted infections (STIs), including HIV/AIDS, and how they are prevented

Students report on the policies of various states and countries regarding STIs prevention among youth

4.10 Identify sexual discrimination and harassment

Students use current events or media portrayal to discuss the consequences of discrimination based on sexual orientation

By the end of Grade 12, through the study of Development students will:

4.11 Identify the stages of the male and female reproductive systems over the life cycle

4.12 List the signs of pregnancy

4.13 Describe the effectiveness and consequences of various pregnancy, HIV, and STI prevention methods, including abstinence

Students identify ways to prevent pregnancy and sexually transmitted infections

4.14 Identify possible determinants

of sexual orientation and analyze the weight of each in light of available research.

Through the study of Wellness students will:

4.15 Explain the importance of examination of both genders for HIV and STIs before conception and the risks and precautions of delivery when HIV and STIs are present

4.16 Describe proper prenatal care and identify types of birth defects

4.17 Explain the importance of communication and setting limits in a sexual relationship

4.18 Identify and distinguish among types and degrees of sexual risk (pregnancy, sexual assault, STIs, including HIV/AIDS)

4.19 Evaluate the impact of HIV/AIDS on the community, medical resources, and family

4.20 Identify resources available for treatment of reproductive health problems

Grades 9-12, Interdisciplinary Objectives: Reproduction/Sexuality

4.a. (Law and Policy. Connectsd with History & Social Science: Civics & Government)

Identify and explain laws about reproductive services

4.b. (Law and Policy. Connects with History & Social Science: Civics & Government)

Explain the laws and relevant court rulings concerning rights about consensual sexual relationships and reproduction (e.g., Roe v. Wade, Bowers v. Hardwick)

More information:

STOPP International - A project of the American Life League, STOPP's mission is to fight Planned Parenthood through education and parental involvement. www.all.org/stopp/

"Planned Parenthood's Unseemly Empire" *Weekly Standard,* October 22, 2007, Charlotte Allen
www.nrlc.org/onlinebrochures/Downloadables/Articles/PlannedParenthoodEmpire/WeeklyStandard.pdf

Understanding Brain Death Diagnosis

John M. Travaline, M.D., F.A.C.P.

The medical concept of brain death continues to stimulate interest and debate in the fields of bioethics, philosophy, religion, law, and medicine. Even outside these spheres of interest, tragedies that involve this diagnosis routinely affect the lives of many people. Despite well-established criteria and procedures for the determination of brain death, the concept remains poorly understood, and the confusion surrounding it is particularly troublesome for a layperson who has a severely injured or ill family member. I endeavor here to clarify common misconceptions about this condition, and to explain the process of making this diagnosis.

The expression "determination of death by neurological criteria" is technically more accurate for this process, but I will use the more common phrase "brain death diagnosis" in this essay.

Background and Definition

The concept of brain death first received attention in 1968,[1]and represented a response to rapidly evolving medical technology which made it possible to sustain a patient's basic cardiopulmonary function in the presence of obvious and severe brain injury. When such technology is used, death cannot be determined with certainty by conventional criteria (cessation of breathing and heartbeat).

In addition to emerging as a response to new medical technologies, the diagnosis of brain death allows organs to be harvested for transplantation into desperately ill patients. In the United States, over twenty-two thousand organ transplants occurred from January to September 2006, with approximately six thousand deceased donors providing the organs.[2] Brain death is an important precondition for organ procurement agencies to ensure appropriate sources of transplantable organs such as kidney, heart, liver, and lung.

In essence, the criteria for brain death represent an alternative means of determining death. For legal purposes, the criteria are expressed in the Uniform Determination of Death Act: An individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brain stem, is dead. A determination of death must be made in accordance with accepted medical standards.[3]

Brain death constitutes the death of an individual, and is recognized

as death just as irreversible cessation of heartbeat and breathing is. There is one form of death, but two acceptable means of determining it.

Nature of the Diagnosis

Brain death occurs when the brain completely stops functioning. Conditions in which a physician may suspect brain death include severe head trauma and extensive bleeding into the brain from a stroke or ruptured aneurysm. In such cases, the patient's heart, because it is not dependent on any other organ to function, continues to beat, usually in a normal way. In addition, the patient will be connected to a mechanical ventilator (sometimes called a respirator) that rhythmically allows oxygen-enriched air to flow in and out of the lungs. A patient who is brain dead thus typically has a beating heart and, while connected to a ventilator, appears to be breathing. Therefore, cardio-pulmonary criteria for death are not met, and the physician may consider the diagnosis of brain death.

Key Elements in the Diagnosis

There are two key criteria for the determination of brain death. First, there must be cessation of all functions of the entire brain, including the brain stem. Determining cessation is commonly achieved by means of physical examination. Neurologists or neurosurgeons, experts in assessing brain function, perform this examination. The examination mainly comprises assessments of brain stem reflexes and of spontaneous breathing effort, the latter determined by an apnea test. These functions constitute the most basic brain activity and therefore, if absent, denote cessation of brain function.

The second key criterion for the determination of brain death is that cessation of brain function be irreversible. To ensure confidence in the neurological examination, and to help establish irreversibility, a second examination is performed several hours after the first. If an adequate assessment cannot be made by physical examination, a physician will perform a confirmatory test. Confirmatory tests include electroencephalography (EEG), and cerebral perfusion studies. EEGs reveal whether brain activity is present, and perfusion studies reveal whether the brain is receiving any blood flow.

A few important conditions may mimic brain death but are potentially reversible, and they must therefore, be excluded as diagnostic possibilities. These conditions

include specific drug intoxications, severe metabolic disorders, and hypothermia (severe reduction in body temperature). Physicians will use various clinical tools to evaluate a patient for the presence of these conditions. If such conditions are absent, and the patient meets the criteria for cessation of all brain function, the diagnosis of brain death is established.

A Closer Look at the Apnea Test

The apnea test is one of the procedures for determining brain death mentioned above. "Apnea" refers to the absence of breathing. Since the control center for breathing is located in the brain stem, this test specifically assesses a brain stem function; in the context of a brain death evaluation, the presence of apnea means that the brain stem has ceased to function.

Patients who are being evaluated for the possibility of brain death receive mechanical ventilation, which means they are connected to a machine that is "breathing for them." To assess for apnea, the mechanical ventilator must be removed. The purpose of the apnea test is to remove the ventilator and observe the patient for the presence of any breathing efforts. If breathing efforts occur, the physician knows that the brain stem is functioning, at least to some degree, and the patient is not brain dead.

A confusing aspect of the apnea test is that some people think the removal of the ventilator can precipitate or cause a patient's death depriving the patient of oxygen, which is known to be essential for brain function.This is not the case, however. To clarify this point, a basic understanding of a ventilator's function, and how a patient is connected to it, is in order.

A mechanical ventilator has two major functions. One is to deliver oxygen into a patient's lungs, and the second is to provide a means of ventilation. Ventilation basically involves the removal of carbon dioxide, an unwanted by-product of metabolism, which is normally eliminated from the body when a person exhales.

A patient receiving mechanical ventilation has a flexible plastic tube inserted through the mouth and into the trachea (windpipe). The external end of the "breathing tube" is connected to tubing from the ventilator, forming a conduit from the patient's lungs to the ventilator through which air flows so that oxygenation and ventilation can occur.

During an apnea test, the patient is temporarily disconnected from the ventilator, but the administration of

oxygen, essential for brain function, continues. Prior to the removal of the ventilator, the patient is first given pure oxygen through the ventilator. Although this maximally saturates the patient's blood with oxygen, over time the level of oxygen in the blood will decrease. If it gets too low, the patient may be harmed. To avoid this, a continuous source of oxygen is provided even after the ventilator is removed. This is achieved by connecting the patient's breathing tube to an alternative source of pure oxygen, thus ensuring that the patient receives the maximal amount of oxygen possible.

With the patient removed from the ventilator and receiving oxygen, the apnea test continues for up to ten minutes. This is done to allow carbon dioxide to accumulate in the patient's blood. Carbon dioxide is an extremely potent stimulus for the brain stem to initiate breathing: if the brain stem is functioning and the blood level of carbon dioxide is elevated, a patient's breathing effort will increase.

Since the ventilator is disconnected during the apnea test, no ventilation occurs, and carbon dioxide accumulates in the patient's blood. The threshold level of carbon dioxide (the level that stimulates breathing) is known, and a physician can ensure that it has been reached by performing a simple and routine blood test. If the stimulus is adequate and no breathing effort occurs, this function of the brain stem has ceased. Brain death is then confimed.

The brain death concept has been a part of clinical medicine for nearly four decades and is likely to remain an important diagnosis. Since the situations which involve this diagnosis are often emotionally charged, and concern a patient's death, a clear understanding of some of the clinical aspects of this diagnosis should help relieve misgivings about it.

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[1] "A Definition of Irreversible Coma: Report of the Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death," *Journal of the American Medical Association* 205.6 (August 5, 1968): 337-340.

[2] Organ Procurement and Transplantation Network, "Transplants Performed January-September 2006" and "Donors Receovered January-September 2006," http://www.optn.org/data. based on OPTN data as of January 12, 2007.

[3] National Conference for Commissioners on Uniform State Laws, "Uniform Determination of Death Act," approved by the American Medical Association October 19, 1980, http://www.law.upenn.edu/bll/ulc/fnact99/1980s/udda80.htm.