

At 10 weeks nails and fingerprints begin to emerge in patterns that will uniquely identify this child throughout life.

By 11 weeks the fetus can produce a variety of facial expressions, including a smile.

Between 12 and 16 weeks fetuses often touch their mouths, up to 50 times an hour. Teeth begin to grow by 13 weeks.



Beginning at 14 weeks behavioral differences between boys and girls appear: female fetuses move their mouths much more frequently than males.

By 16 weeks an unborn child produces many of the same hormones as adults, for example, a painful procedure will trigger the release of cortisol and other stress hormones.

Rapid eye movements—the pattern of movements seen during dreaming—begin between 18 and 21 weeks after conception. Between 20 and 24 weeks after conception, the unborn child responds to loud noises, pressure, movement, pain, taste, light, heat, and cold.

Children born at 24 weeks post-conception have a greater than 80% chance of survival.

Long before the completion of full-term pregnancy at 38 weeks from conception, the unborn child is listening and learning from the external environment. Newborns prefer their mother's voice to any other; they prefer familiar lullabies heard before birth to those heard only after birth.

Every child, at every age of development, *brings us God's smile and invites us to recognize that life is his gift, a gift to be welcomed with love and preserved with care always and at every moment.*

How then can Americans remain indifferent to the killing of these marvelous little boys and girls in fertility clinics, and laboratories, and in abortion facilities *throughout all nine months of pregnancy*? We must work with urgency to change our attitudes and laws, helping others to discover, celebrate, and cherish the miracle that is every human being, from the beginning of our life's adventure at conception to our last breath before entering eternity.

To get involved in such pro-life efforts, go to [www.usccb.org/prolife/getinvolved.shtml](http://www.usccb.org/prolife/getinvolved.shtml).

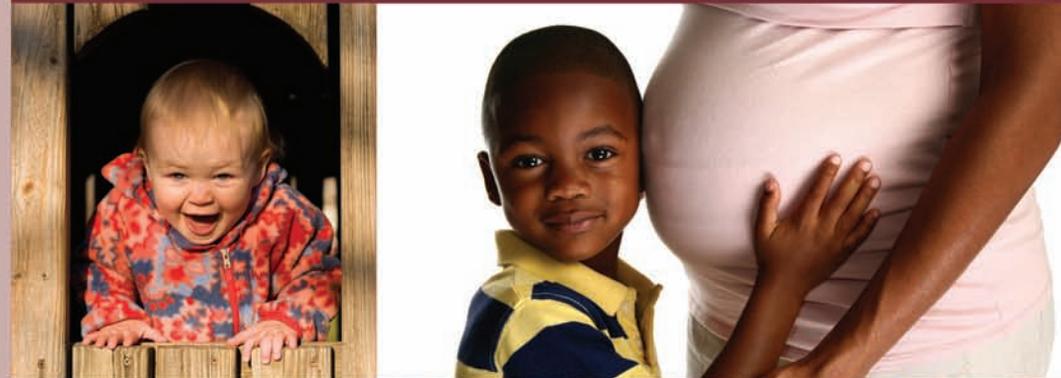


SECRETARIAT OF PRO-LIFE ACTIVITIES  
United States Conference of Catholic Bishops  
3211 Fourth Street, N.E. • Washington, DC 20017-1194  
Tel: (202) 541-3070 • Fax: (202) 541-3054  
Website: [www.usccb.org/prolife](http://www.usccb.org/prolife)



# EVERY CHILD BRINGS US GOD'S SMILE

POPE BENEDICT XVI



RESPECT LIFE

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and invites us to recognize that life is his gift,  
a gift to be welcomed with love and preserved with care  
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—POPE BENEDICT XVI

The birth of one's first child is the event most Americans cite as the "high point" of their lives. New parents are understandably awed by the miracle of their new son or daughter. They are awed by a love that stretches their hearts almost to bursting, and awed (and a little terrified) by their responsibility to protect and nurture this precious life entrusted to them.

Pope Benedict's observation quoted above—that every child brings us God's smile—reflects this truth and much more.



Even on a literal level, it's clear that children are bubbling wellsprings of joy amidst the serious and sometimes stressful world of adults. Who is not moved by a toddler's giggle-fit? Given a reasonably secure and caring environment, young children have an extraordinary capacity for love and laughter: one researcher found that the average American child laughs 400 times a day; the average adult, only 15.

On a deeper level, every little boy and girl is a unique and irreplaceable creature designed by the God of love, his personal gift that comes to us bearing his image and likeness. While biological parents assist in God's creative act, God contributes the child's eternal soul—his or her intellect, consciousness, will, and the capacities to reason and love, to hope and aspire.

Children also inspire the self-giving love of family members, increasing the happiness and holiness of all.

Human beings have always sensed these truths, but the advent of contraception and the legalization of abortion brought about a widespread disdain for unborn children. In the United States over one million boys and girls are killed by abortion every year. The bodies of many aborted children have been used in fetal research. Fertility clinics manufacture, freeze, and discard human embryos like biological products, and some scientists create and destroy little human beings for embryonic stem cell research.

While many today readily acknowledge the dignity and value of human life *after* birth, they seem to think that ascribing dignity and value to lives *before* birth is a throwback to outmoded religious beliefs, having no place in our modern scientific world. Yet it is science that is proving them wrong. Science shows us the humanity and personhood of children in the womb who, far from being inert and passive tissue, actively direct their own development.

A new human being comes into existence at conception, when a sperm cell enters an ovum, resulting in a one-celled individual called a zygote. Even before the first cell division at about 24 to 30 hours after conception, the zygote's 23 chromosomes from mom and 23 from dad already contain the baby's unique DNA—the entire genetic blueprint and instructions for developing from a single-celled person to an adult.

Within minutes of conception, the zygote sends out chemical signals to change its outer protein layer to block other sperm from entering. When only a few hours old, the zygote sends out "ovum factor" to signal the mother's immune system not to attack. The protein "early pregnancy factor" (EPF), which suppresses the mother's immune response, is detectable in her blood before her child is 24 hours' old.

About 6 days after conception the embryo's outer cells bind to the lining of the mother's womb and release enzymes that digest and separate maternal cells to permit implantation, so the child can begin receiving nutrition from the mother.

By 8 days after conception, the embryo produces a hormone called hCG. It interrupts the mother's normal menstrual cycle by signaling her ovarian follicle to continue producing estrogen and progesterone. Pregnancy tests can detect hCG in the mother's urine and blood by 8-9 days after conception.

By day 21, the three primary sections of the brain can be identified.

On day 22, the embryo's heart begins beating. The little heart will beat nearly 54 million times *before he or she is born!*

Between 4 and 5 weeks after conception, the child's brain develops at an incredible rate, and the stomach, esophagus, pancreas, intestines, kidneys, and even reproductive organs are all developing. Between 5 and 6 weeks the embryo begins to move spontaneously and reflexively—e.g., in response to touch the embryo will withdraw.

By 6 weeks plus 2 days an embryo's brain waves have been recorded by EEG.

Bones are forming, the immune system is maturing, and by 7 weeks, the ovaries appear in females, while testes begin to differentiate in males. The child is now called a fetus, which means "offspring" in Latin.

Fingers and toes are fully separated by 7 1/2 weeks, at which time fetuses can bring their hands and feet together and kick their legs.



By 8 weeks the digestive system is working and kidneys are producing urine. When fetuses are touched, they may squint, move their jaw, try to grasp, or point their toes. Already 75% of fetuses show right-handedness, and the rest are lefties or have no preference.

By 9 weeks, the unborn child begins thumb-sucking. He can grasp objects, open and close his jaw, sigh, and stretch.

