

Applying the Science:

Navigating fundamental
decisions surrounding human
sexual reproduction

A Supplement to the
Science Guide



When A Human Being Begins to Exist, Key Health Decisions & Relevant Scientific Facts

*If you do not know when a human being begins to exist,
you cannot possibly make fully informed decisions about your health.*

Scientifically **A**ccurate **F**act **E**ssentials (**SAFE**)

When it comes to your **health** and **human sexual reproduction**, some decisions can result in serious and potentially harmful personal consequences. But given that most people aren't scientists, and that scientifically accurate information about human sexual reproduction is not required (or even the standard), it is difficult to make a truly informed choice and give your fully voluntary and legally required "informed consent".

Informed decisions are better. SAFE provides important scientific facts related to critical personal health decisions and can help you make more informed and healthier personal choices.

SAFE DECISION WHEEL



? DID YOU KNOW?

Sperm are present in the fallopian tube in as early as ~10 minutes post-sexual intercourse.



Sexual Intercourse

In normal human sexual reproduction, a new whole, individual **human being** (a Stage 1a human embryo) **begins to exist** (and **pregnancy begins**) at the beginning of the **fertilization** process, when the sperm makes first contact and penetrates the oocyte/“egg”.

- Fertilization occurs (and pregnancy begins) in the woman’s fallopian tube, NOT at implantation in the woman’s uterus/womb.
- Pregnancy (and a new human being) can begin within 60 minutes of having normal sexual intercourse.

From the very beginning of the process of human sexual reproduction (fertilization, starting with the moment when the sperm makes first contact with the “egg”) or of a-sexual reproduction (where the DNA in a mere cell is regulated back to that of an organism, as in identical “twinning” or other kinds of cloning or genetic engineering) until death, there is the **SAME, WHOLE, INDIVIDUAL, INTEGRATED HUMAN BEING**.

- The single-celled human embryo formed at the beginning of the process of fertilization is not just a “cell” – rather it is a whole human organism/being that is one-cell big.



Birth Control

“**Birth control**” or “fertility control” used to refer only to “contraception”, i.e., preventing fertilization and thus preventing the reproduction of a new human being. However today it refers to **any drug, device, practice or surgery that controls or prevents the birth of new human beings WHO MAY or MAY NOT ALREADY EXIST**.

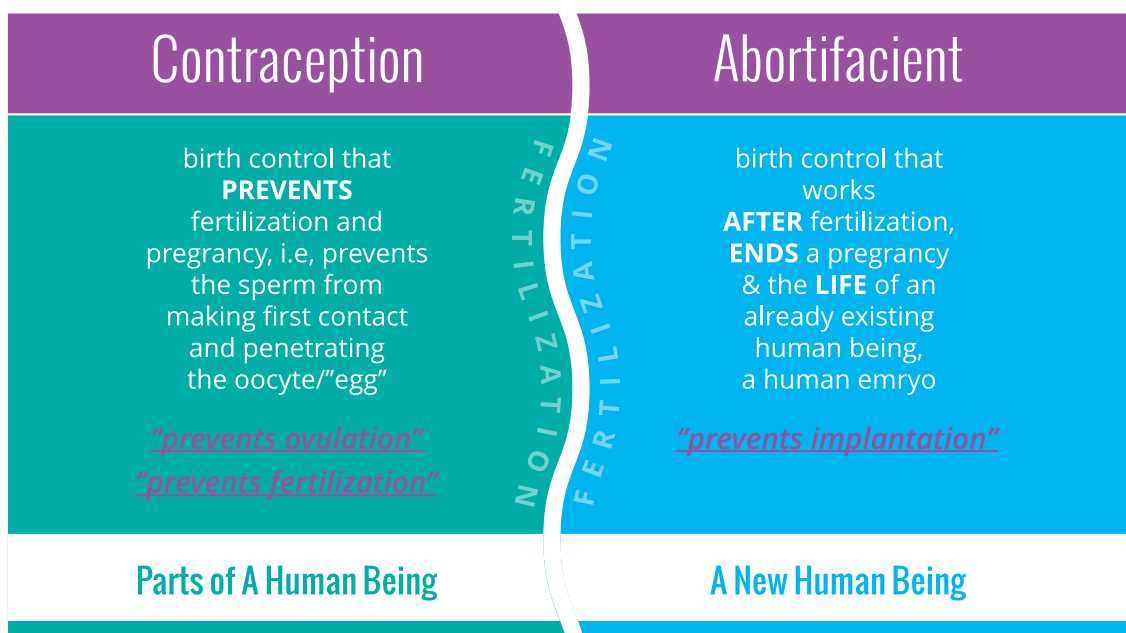
Birth control includes many methods and some of these methods are “contraceptive”, while others are “abortifacient”. The key difference between contraception and abortifacients is **WHEN** the birth control method works – before or after a new human being has begun to exist.

Contraception is birth control that prevents fertilization and pregnancy (i.e, prevents the sperm from making first contact and penetrating the oocyte or “egg”). There are many different types of contraception and they work in different ways (e.g., preventing ovulation, damaging/killing sperm, providing a barrier between sperm and the oocyte or “egg”).

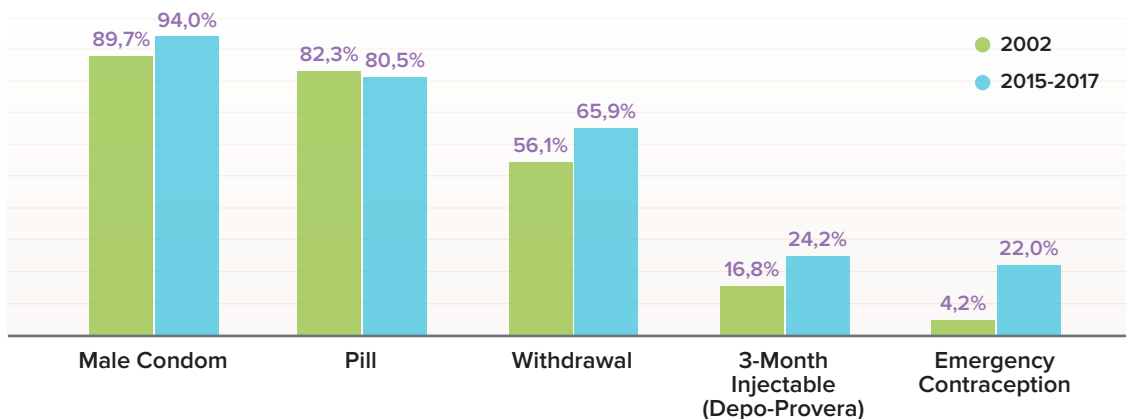
Birth control that works at any point in time after the beginning of the process of fertilization (when a new human embryo begins to exist and pregnancy begins), is an abortifacient (a method that induces abortion – destroys the new human being and ends a pregnancy).

- For example, implantation occurs five to seven days after a new human being begins to exist (and pregnancy begins). Thus birth control that causes the new embryo to move too slowly, or too fast, or that damages the lining of the uterus (womb) is abortifacient – not contraceptive.

Many methods are both contraceptive and abortifacient. They work to prevent fertilization and pregnancy (human sexual reproduction, i.e., first contact between a sperm and an oocyte or “egg”), but also employ mechanisms to destroy a new human embryo and end a pregnancy in the event that fertilization occurs and a new human being begins to exist.



Most Common Birth Control Methods
among women who have ever had sexual intercourse



*Note: Male condom and withdrawal are strictly contraceptive methods of birth control
Source: Special tabulation by the National Center for Health Statistics (NCHS)



Emergency “Contraception”

Birth control is any drug, device or practice that controls or prevents the birth of human beings, who may or may not already exist. Birth control that works before fertilization (when a new human being begins to exist and pregnancy begins) is contraception. Birth control that works after fertilization is an abortifacient (a method that induces abortion – destroys the new human being and ends a pregnancy).

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Emergency “contraception” (EC) is birth control that is used AFTER sexual intercourse. Emergency “contraceptives” include EC pills and the copper intrauterine device (IUD). EC functions in several ways: preventing ovulation, preventing fertilization and preventing implantation.

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Since implantation occurs five to seven days after a new human being begins to exist and pregnancy begins, and since EC may prevent implantation, EC is not strictly contraception but also works as an abortifacient. This type of birth control may prevent the already existing human embryo who is traveling through the woman’s fallopian tube from implanting in the uterus, causing the embryo, the new human being, to die.

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“Emergency Contraception pills usually prevent implantation, probably by altering tubal motility, interfering with corpus luteum function, or causing abnormal changes in the endometrium. These hormones prevent implantation not fertilization. Consequently, they should not be called contraceptive pills. Because the term “abortion” refers to a premature stoppage of a pregnancy, the term “abortion” could be applied to such an early termination of pregnancy.” - Ronan O’Rahilly and Fabiola Muller, Human Embryology & Teratology



Pregnancy

Fertilization occurs (and pregnancy begins) in the woman’s fallopian tube, NOT at implantation in the woman’s uterus/womb.

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Pregnancy can begin and a new human being can begin to exist within 60 minutes of having normal sexual intercourse.

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! FAST FACT:

Abstinence is the only 100% effective way to protect against human sexual reproduction and pregnancy.

? DID YOU KNOW?

As early as 24 hours after fertilization, pregnancy can be confirmed by detecting a pregnancy-specific protein called “early pregnancy factor” or EPF in the mother’s blood. Over-the-counter EPF tests are not available yet, but stay tuned...

There are companies developing over-the-counter tests so that women will more easily be able to know if they are pregnant within 12-24 hours of fertilization (EPF “early pregnancy factor” tests).



In artificial sexual reproduction in labs and clinics, the new embryo begins to exist immediately at fertilization in the test tube, but the woman is not pregnant until several days or a week later when the already existing embryo is implanted into her uterus by a clinician.



Abortion

- Abortion is the termination of pregnancy **and** a human being.



During the 8-week human embryonic period abortion involves the use of abortifacients. An abortifacient is any drug, device or practice that destroys an already existing human embryo and ends a pregnancy, at any point during the human embryonic period (from the beginning of the process of fertilization – about five to seven days before implantation – to the end of the eighth week post-fertilization (Carnegie Stage 1a to Carnegie Stage 23). During the fetal period of human development, there are medical (e.g., “abortion pill”) and surgical methods.



In Vitro Fertilization (IVF)

- In vitro fertilization is **sexual reproduction outside the body** in labs and clinics.



- The new human being/human embryo begins to exist immediately at fertilization in the test tube.



Although the woman is a mother immediately at fertilization, she is not “pregnant” until several days or a week later when the already existing embryo is implanted into her uterus/womb by a clinician. By the time the embryo is implanted he or she is already up to 200 cells big.

According to the CDC, ~1.6% of the nearly 4 million babies born in the United States each year are conceived through assisted reproductive technology (ART) like IVF.

Additional Resources

- Contend Projects - contendprojects.org
- The Endowment for Human Development - ehd.org
- Virtual Human Embryo - ehd.org/virtual-human-embryo
- Carnegie Stages of Human Embryonic Development - *Developmental Stages in Human Embryos* by Ronan O’Rahilly and Fabiola Müller. Published by Carnegie Institution of Washington
- Carnegie Stage 1 - medicalmuseum.mil/assets/documents/collections/hdac/stage01.pdf
- Human Developmental Anatomy Center - medicalmuseum.mil/index.cfm?p=collections.hdac.anatomy.index
- International Federation of Associations of Anatomists - ifaa.net
- Federative International Program for Anatomical Terminologies - fipat.library.dal.ca

Please note all website references reflect links as of March 2020.

Contend Projects, a registered 501(c)(3) education organization spreading the basic, accurate scientific facts about when a human life starts and the biological science of human embryology.

Learn more at contendprojects.org