



## GLOSSARY OF INFERTILITY TERMS

**Adapted from the American Society for Reproductive Medicine (ASRM).** A nonprofit, professional medical organization of more than 9,000 health care specialists interested in reproductive medicine. Contact info: American Society for Reproductive Medicine, 1209 Montgomery Highway, Birmingham, AL 35216; (205) 978-5000; [asrm@asrm.org](mailto:asrm@asrm.org); [www.asrm.org](http://www.asrm.org).

**Adrenal glands.** Glands located on top of the kidneys, in the area of the back near the waistline, that produce hormones (cortisol, adrenaline, androgens, and other hormones) that help the body withstand stress and regulate metabolism. Altered function of these glands can disrupt menstruation.

**Adrenal hyperplasia.** An abnormal or unusual increase in the production of androgens by the adrenal glands. This disorder is the result of a genetic problem.

**Adenomyosis.** A benign (non-cancerous) invasion of endometrial tissue into the uterine wall.

**Adhesions.** Bands of fibrous tissues that bind the abdominal or pelvic organs together.

**Amenorrhea.** The complete absence or suppression of menstrual periods.

**Amniocentesis.** A procedure in which a small amount of amniotic fluid is removed through a needle from the fetal sac at about 16 weeks into a pregnancy.

The fluid is studied for chromosomal abnormalities which may affect fetal development.

**Androgens.** Hormones produced by the testes, ovaries, and adrenal glands responsible for encouraging masculine characteristics. Often referred to as “male” hormones. Androgens are produced in males and females, but males have much higher levels.

**Assisted reproductive technology (ART).** A fertility-enhancing procedure that most commonly refers to in vitro fertilization and embryo transfer. Also includes procedures in which unfertilized eggs and sperm are placed into the fallopian tube (gamete intrafallopian transfer - GIFT), or fertilized eggs are placed into the fallopian tube (zygote intrafallopian transfer - ZIFT).

**Atresia** (ovarian). The natural process by which eggs age and degenerate.

**Biopsy.** The removal of a tissue sample for microscopic examination. The term also refers to the tissue removed.

**Cervix.** The lower narrow end of the uterus that connects the uterine cavity to the vagina

**Chorionic villus sampling.** A procedure in which a small sample of cells is taken from the placenta early in a pregnancy for chromosomal testing.

**Chromosomes.** Rod-shaped structures located in the nucleus of a cell which contain hereditary (genetic) material. Humans have 23 pairs of chromosomes (46 total). Two of the 46 are the sex chromosomes, which are the X and Y chromosomes. Normally, females have two X chromosomes and males have one X and one Y chromosome.

**Clomiphene citrate.** An anti-estrogen drug used to induce ovulation. Brand names are Clomid® and Serophene®.

**Computerized tomography (CT scan).** A technique of x-ray imaging that creates a three-dimensional image.

**Controlled ovarian hyperstimulation (COH).** Treatment with clomiphene, human menopausal gonadotropin or follicle stimulating hormone injections to cause more than one egg to develop and release during ovulation.

**Cortisol.** A hormone produced by the adrenal glands, which are located on top of the kidneys in the area of the back near the waistline. Cortisol is responsible for maintaining the body's energy supply, blood sugar, and control of the body's reaction to stress

**Clomiphene citrate challenge test (CCCT).** A test of ovarian reserve in which serum FSH is checked on days three and 10 of the menstrual cycle and clomiphene citrate is taken on days five through nine.

**Corpus Luteum.** Literally, a “yellow body.” A mass of yellow tissue formed in the ovary from a mature follicle that has collapsed after releasing its egg at ovulation. The corpus luteum secretes estrogen and large quantities of progesterone, a hormone that prepares the lining of the uterus (endometrium) to support a pregnancy.

**Cryopreserved.** Frozen. Sperm or embryos may be frozen and stored for future use.

**Dehydroepiandrosterone (DHEA).** A hormone naturally made by the adrenal glands. The body turns it into other hormones such as estrogen and testosterone.

DHEA sold as a “natural” supplement is made from plant chemicals and is not regulated by the FDA. It is often marketed as an anti-aging medication, but its safety and effectiveness are controversial.

**Diabetes mellitus.** A condition due to a lack of insulin or lack of response to insulin, resulting in glucose (sugar) levels that are too high

**Donor egg.** An egg from a fertile woman that is donated to an infertile woman to be used in an assisted reproductive technology procedure such as IVF. The woman receiving the egg will not be biologically related to the child but will be the birth mother on record.

**Donor sperm.** The sperm donated by a fertile man who is not the recipient’s partner.

**Down syndrome.** A genetic disorder caused by the presence of an extra chromosome 21 and characterized by mental retardation, abnormal facial features, and medical problems such as heart defects.

**Dysmenorrhea.** Painful menstrual cramps.

**Dyspareunia.** Painful intercourse; sometimes a symptom of endometriosis.

**Early menopause.** Also called premature ovarian failure. Cessation of menstrual periods due to failure of the ovaries before age 40.

**Eggs.** Also called oocytes or ova. The female sex cells produced by the ovaries, which, when fertilized by a male's sperm, produce embryos, the early form of human life.

**Egg donation.** The process of fertilizing eggs from a donor and transferring the resulting embryos to the recipient's uterus. The recipient will not be biologically related to the child, although she will be the birth mother on record.

**Embryo.** The earliest stage of human development after a sperm fertilizes an egg.

**Endometrial biopsy.** The removal of a small sample of endometrium (lining of the uterus) for microscopic examination.

**Endometrioma.** A blood-filled "chocolate" cyst that can occur when endometriosis tissue develops in the ovary.

**Endometriosis.** A condition in which endometrial tissue, which normally lines the uterus, develops outside of the uterine cavity in abnormal locations such as the ovaries, fallopian tubes, and abdominal cavity.

**Endometrium.** The lining of the uterus that is shed each month during menstruation. The endometrium provides a nourishing site for the implantation of a fertilized egg (embryo).

**Estradiol.** The predominant estrogen (hormone) produced by the follicular cells of the ovary.

**Estrogen.** The female sex hormones produced by the ovaries responsible for the development of female sex characteristics. Estrogen is largely responsible for stimulating the uterine lining to thicken during the first half of the menstrual cycle in preparation for ovulation and possible pregnancy. Estradiol and estrone are the main two estrogens.

**Expectant management.** Period of "watchful waiting" without active treatment.

**Fallopian tubes.** A pair of tubes, attached one on each side of the uterus, where sperm and egg meet in normal conception.

**Fertilization.** The fusion of sperm and egg.

**Follicle.** A fluid-filled sac located just beneath the surface of the ovary, containing an egg (oocyte) and cells that produce hormones. The sac increases in size and volume during the first half of the menstrual cycle and at ovulation, the follicle matures and ruptures, releasing the egg. As the follicle matures, it can be visualized by ultrasound.

**Follicle Stimulating Hormone (FSH).** In women, FSH is the pituitary hormone responsible for stimulating follicular cells in the ovary to grow, stimulating egg development and the production of the female hormone estrogen. In the male, FSH is the pituitary hormone which travels through the bloodstream to the testes and helps stimulate them to manufacture sperm. FSH can also be given as a medication. The U.S. trade names are Fertinex™, Follistim™, and Gonal-F®.

**Genetic.** Referring to inherited conditions, usually due to the genes located on the chromosomes.

**Gestational Carrier.** A woman who agrees to have a couple's fertilized egg (embryo) implanted in her uterus. The gestational carrier carries the pregnancy for the couple, who usually has to adopt the child. The carrier does not provide the egg and is therefore not biologically (genetically) related to the child.

**Gonadotropins.** Hormones including FSH and LH used for ovulation induction. Gonadotropins include hMG (human menopausal gonadotropin – Pergonal®, Humegon™, Repronex™); hFSH (human follicle stimulating hormone – Metrodin®, Fertinex™, Bravelle™); rFSH (recombinant follicle stimulating hormone – Gonal F™, Follistim™); and hCG (human chorionic gonadotropin – Profasi®, APL®, Pregnyl®, Novarel™, Ovidrel®).

**Gonadotropin Releasing Hormone (GnRH).** The natural hormone secreted by the hypothalamus that prompts the pituitary gland to release follicle stimulating hormone (FSH) and luteinizing hormone (LH) into the bloodstream. This in turn stimulates the ovaries to produce estrogen, progesterone, and to ovulate. Factrel® and Lutrepulse® are brand names.

**HAIR-AN Syndrome (Hyperandrogenism, Insulin Resistance, Acanthosis Nigricans).** A genetic disorder associated with very high circulating levels of insulin and androgens.

**Hirsutism.** The growth of long, coarse hair on the face, chest, upper arms, and upper legs of women in a pattern similar to that of men. Hirsutism may be due to ethnic background or to excess levels of androgens.

**Hormone.** A substance secreted from organs of the body, such as the pituitary gland, adrenal gland, or ovaries, which is carried by a bodily fluid such as blood to other organs or tissues where it exerts a specific action.

**Hyperandrogenism.** A condition in which women have elevated levels of androgens (male hormones).

**Hypothalamus.** A thumb-sized area in the brain that controls many functions of the body, regulates the pituitary gland, and releases gonadotropin releasing hormone (GnRH).

**Hysterectomy.** The surgical removal of the uterus. Hysterectomy may be performed through an abdominal incision (laparotomy), through the vagina (*vaginal hysterectomy*), or through laparoscopy assisted vaginal hysterectomy (LAVH). Sometimes the ovaries and fallopian tubes are also removed.

**Hysteroscope.** A thin, lighted, telescope-like instrument which is inserted through the vagina and cervix into the uterine cavity to allow viewing of the inside of the uterus.

**Hysterosalpingography (HSG).** An x-ray procedure in which a special iodine-containing solution is injected through the cervix into the uterine cavity to illustrate the inner shape of the uterus and degree of openness (patency) of the fallopian tubes.

**Implants.** Small, flat patches of endometrial-like cells growing outside their normal location.

**Intramural fibroids.** Fibroids located in the muscular wall of the uterus.

**Intrauterine insemination (IUI).** An office procedure in which prepared sperm cells are placed into the uterus.

**In vitro fertilization (IVF).** A method of assisted reproduction that involves combining an egg with sperm in a laboratory dish. If the egg fertilizes and begins cell division, the resulting embryo is transferred into the woman's uterus where it will hopefully implant in the uterine lining and further develop. IVF bypasses the fallopian tubes and is usually the treatment choice for women who have badly damaged or absent tubes.

**Infertility.** Infertility is the result of a disease (an interruption, cessation, or disorder of body functions, systems, or organs) of the male or female reproductive tract which prevents the conception of a child or the ability to carry a pregnancy to delivery. The duration of unprotected intercourse with failure to conceive should be about 12 months before an infertility evaluation is undertaken, unless medical history, age, or physical findings dictate earlier evaluation and treatment.

**Inhibin.** A substance produced by granulosa cells in the ovaries in females and the testes in males. It signals the pituitary gland to slow down the release of follicle stimulating hormone (FSH).

**Insemination.** Placement of sperm via a syringe into a female's uterus or cervix for the purpose of producing a pregnancy.

**Laparoscopy.** A surgical procedure in which a laparoscope, a thin, lighted

viewing instrument with a telescopic lens, is inserted through a small incision in the navel to examine the female reproductive organs and abdominal cavity. Other long, slender instruments may be inserted through additional incisions.

**Laparotomy.** A procedure in which a surgeon makes an incision in the abdomen, usually several inches

**Leiomyoma.** Benign (non-cancerous) tumors of the uterine muscle wall that can cause abnormal uterine bleeding. Also called fibroids or myomas.

**Leiomyosarcoma.** A malignant tumor arising from smooth muscle tissue such as the uterus.

**Libido.** Sexual drive and desire.

**Luteinizing hormone (LH).** In women, the pituitary hormone that triggers ovulation and stimulates the corpus luteum of the ovary to secrete progesterone and androgens during the second half of the menstrual cycle.

**Luteal phase.** The second half of the ovarian cycle when the corpus luteum produces large amounts of progesterone. This progesterone is important in preparing the endometrium to receive a fertilized egg (embryo) for implantation.

**LH surge.** The secretion, or surge, of large amounts of luteinizing hormone (LH) by the pituitary gland. This surge is the stimulus for ovulation to occur.

**Magnetic resonance imaging (MRI).** A diagnostic imaging procedure that absorbs energy from high frequency radio waves.

**Menopause.** Natural cessation of ovarian function and menstruation. Menopause can occur between the ages of 42 and 56 but usually occurs around the age of 51, when the ovaries stop producing eggs and estrogen levels decline.

**Miscarriage.** The naturally occurring expulsion of a nonviable fetus and

placenta from the uterus; also known as spontaneous abortion or pregnancy loss.

**Morphology.** The form, structure, and shape of sperm. At least 30% of the sperm in a semen sample should have oval heads and slightly curving tails.

**Motility.** The percentage of all moving sperm in a semen sample. Normally 50% or more are moving rapidly.

**Myoma.** Benign (non-cancerous) tumors of the uterine muscle wall that can cause abnormal uterine bleeding and miscarriage. Also see fibroids or leiomyomas.

**Myomectomy.** The surgical removal of myomas (fibroids) from the uterus.

**Myometrium.** The muscular wall of the uterus.

**Non-classic adrenal hyperplasia (NCAH).** An inherited disorder in which the adrenal glands do not produce enough of the hormone cortisol and overproduce androgens. Elevation of the hormone 17 $\alpha$ -hydroxyprogesterone is characteristic of NCAH. NCAH is a genetic disorder most commonly seen in certain ethnic groups including Ashkenazi Jews, Eskimos, and French-Canadians.

**Oocyte.** The female sex cell; the egg.

**Ovarian drilling.** A laparoscopic procedure, using laser or electrocautery, to destroy the androgen-producing tissue in the ovaries. This procedure is usually a last resort for ovulation induction in PCOS patients who have not responded to hormonal treatments.

**Ovarian reserve.** A woman's fertility potential in the absence of specific pathophysiologic changes in her reproductive system. Diminished ovarian reserve is associated with depletion in the number of eggs and worsening of oocyte quality.

**Ovaries.** The two female sex glands in the pelvis, located one on each side of the uterus. The ovaries produce eggs and hormones including estrogen,

progesterone, and androgens.

**Ovulation.** The release of a mature egg from its developing follicle in the outer layer of the ovary. This usually occurs approximately 14 days preceding the next menstrual period (the 14th day of a 28-day cycle).

**Peritoneum.** A clear tissue that lines the pelvic and abdominal cavity.

**Pituitary gland.** A small hormone-producing gland just beneath the hypothalamus in the brain which controls the ovaries, thyroid, and adrenal glands. Ovarian function is controlled through the secretion of follicle stimulating hormone (FSH) and luteinizing hormone (LH). Disorders of this gland may lead to irregular or absent ovulation in the female and abnormal sperm production in the male.

**Polycystic Ovarian Syndrome (PCOS).** A condition in which the ovaries contain many cystic follicles associated with chronic anovulation (lack of ovulation) and overproduction of androgens (male hormones). The cystic follicles exist because the eggs are not expelled at the time of ovulation. Symptoms may include irregular menstrual periods, excessive growth of body hair in a male-like pattern (hirsutism), and infertility. Also called polycystic ovarian syndrome and Stein-Leventhal Syndrome.

**Premature ovarian failure.** Cessation of menstrual periods due to failure of the ovaries before age 40. Also known as early menopause.

**Progestin.** A synthetic hormone that is similar to progesterone.

**Progesterone.** A female hormone secreted by the corpus luteum after ovulation during the second half of the menstrual cycle (luteal phase). It prepares the lining of the uterus (endometrium) for implantation of a fertilized egg and allows for complete shedding of the endometrium at the time of menstruation. In the event of pregnancy, the progesterone level remains stable beginning a week or so after conception.

**Prostaglandins.** Hormone-like chemicals produced in large amounts by

endometrial cells. They stimulate the uterine muscles to contract and are largely responsible for menstrual cramps.

**Pseudo-menopause.** A hormonal state created by taking medication and characterized by low estrogen levels similar to those found at menopause.

**Retroverted uterus.** A uterus that is tilted backwards. This is found in approximately 10% of normal women.

**Sacrum.** The last vertebrae of the spinal column; the base of the spine.

**Semen analysis.** The microscopic examination of semen (the male ejaculate) to determine its volume, the number of sperm (*sperm count*), their shapes (morphology), and their ability to move (motility) in addition to other parameters.

**Sonohysterography.** A technique which involves injecting a fluid (saline solution) into the uterine cavity through the cervix while simultaneously using ultrasound to observe the image on a monitor screen. Also known as hysterosonogram.

**Sperm.** The male reproductive cells produced by the testes that fertilize a woman's egg. The sperm head carries genetic material (chromosomes), the midpiece produces energy for movement, and the long, thin tail wiggles to propel the sperm.

**Steroids.** Hormones that are derived from cholesterol. Categories of steroids include sex steroids (estrogens, androgens, progestogens), glucocorticoids (hormones that closely resemble cortisol), and mineralcorticoids (hormones related to aldosterone and involved in fluid and electrolyte control). Man-made steroids closely resemble cortisol, a hormone naturally produced by the adrenal glands. Steroids decrease inflammation, reduce immune system activity, and are used to treat a variety of inflammatory diseases and conditions.

**Submucous fibroids.** Fibroids that are found underneath the uterine lining within the uterine cavity.

**Subserous fibroids.** Fibroids that are located beneath the outer covering of the uterus.

**Superovulation with timed intrauterine insemination (SO/IUI).** A procedure to facilitate fertilization. The woman is given ovulation inducing drugs which cause her ovaries to produce multiple eggs. When the eggs are ready to be released, the woman is inseminated with her partner's sperm or donated sperm.

**Surrogacy.** An arrangement in which a woman is inseminated with the sperm of a man who is not her partner in order to conceive and carry a child to be reared by the biologic (genetic) father and his partner. The surrogate is genetically related to the child. The biologic father and his partner usually must adopt the child after its birth.

**Surrogate.** A woman who is inseminated with the sperm of a man who is not her partner in order to conceive and carry a child to be reared by the biological (genetic) father and his partner. The surrogate is genetically related to the child.

**Terminal hair.** The long, coarse, thick hairs that normally grow in the scalp, pubic, and armpit areas of men and women, and the face, chest, abdomen, upper arms, and upper thighs of men.

**Testes.** The two male reproductive glands located in the scrotum which produce testosterone and sperm.

**Testosterone.** In men, the primary male hormone produced by the testes. It is responsible for the development of sperm, male physical characteristics, and sex drive. Testosterone is also produced in small quantities by the ovaries in women.

**Ultrasound.** A picture of internal organs produced by high frequency sound waves viewed as an image on a video screen; used to monitor growth of ovarian follicles or a fetus and to retrieve eggs. Ultrasound can be performed either abdominally or vaginally.

**Ureters.** The tubes that carry urine from the kidneys to the bladder.

**Uterine artery embolization.** A surgical procedure whereby a slurry of microscopic plastic beads is injected into the blood supply of the uterus, resulting in degeneration and shrinkage of the fibroids.

**Uterine fibroids.** Abnormal masses of smooth muscle tissue (non-cancerous tumors) that grow within the uterine wall. Also called fibroids, myomas, or leiomyomas.

**Uterosacral ligaments.** Ligaments that attach to the lowest part of the uterus and the cervix to the sacrum.

**Uterus (Womb).** The hollow, muscular organ in the pelvis where an embryo implants and grows during pregnancy. The lining of the uterus, called the endometrium, produces the monthly menstrual blood flow when there is no pregnancy.

**Vellus hair.** The soft, fine, usually short hairs that appear on the face, chest, and back of women, giving the impression of “hairless” skin.

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