ASSISTED REPRODUCTIVE TECHNOLOGY TERMINOLOGY

by
Judy Sperling-Newton

Amniocentesis is a medical procedure used in prenatal diagnosis of genetic abnormalities and fetal infections in which a small amount of amniotic fluid, which contains fetal tissues, is extracted from the amnion or amniotic sac surrounding a developing fetus (developing mammal or other viviparous vertebrate), and the fetal DNA is examined for genetic abnormalities. Amniocentesis is carried out at 15 to 18 weeks after the last period.

Artificial Insemination (AI) is the process by which sperm are placed into a female's uterus (intrauterine) or cervix (intracervical) using artificial means rather than through intercourse.

Assisted Hatching (AH) is a procedure in which the zona pellucida (the "shell" of the egg) is perforated to help the very early embryo (blastocyst) escape in order to hatch. This technique can be performed using a needle, laser or acid. AH can increase the success rate of in vitro (in the lab) fertilization (IVF) for certain women.

Assisted Reproduction Technology (ART) refers to any procedure in which the egg and sperm are manipulated in order to result in pregnancy.

Autologous Endometrial Coculture is a treatment for patients who have experienced failed previous ART interventions or who have poor embryo quality. The patient's fertilized eggs (zygotes) are placed on top of a layer of cells from the patient's own uterine lining, creating a more natural environment for embryo development.

Blastocyst is the embryo in its earliest stages, preceded by the fertilized egg (zygote), and succeeded by the embryo. It is comprised of 70 to 100 cells, and its formation begins at day five of development.

Chorionic Villi Sampling (CVS) is a form of prenatal diagnosis to determine chromosomal or genetic disorders in the fetus. It entails obtaining a sample of the chorionic villi (placental tissue) and testing it. The

advantage of CVS is that it can be done early in the first trimester, rather than an amniocentesis which is carried out at 15 to18 weeks.

Cryopreservation is the frozen storage of sperm, eggs, embryos or other reproductive tissue for later use. Cryopreservation uses liquid nitrogen to freeze these materials so that they can be used for a period of a few months up to a couple of years after being frozen. This procedure is often performed when extra sperm or eggs are produced during ART.

De Facto Parent is a person who is not a child's genetic parent, but who cares for the child as would a parent, taking on the responsibilities of parenthood, including financial support. Many states have case law outlining the standards for establishing de facto parentage. Others do not recognize this form of parentage.

Donor Eggs are retrieved from a healthy, young (usually age 31 or under) donor's ovaries, fertilized in vitro with the sperm from the recipient's partner, a donor, or an intended father using a gestational carrier (GC), and the resulting healthy embryos are returned to the recipient's or the GC's uterus.

Donor Insemination (DI) is the procedure which uses sperm supplied by a donor to inseminate a woman.

Donor Sperm is taken from a healthy donor, so that it can be made available to women seeking to become pregnant. The sperm are used to fertilize the female recipient's or a donor's egg using ART.

Egg Donation is the procedure which uses eggs retrieved from a healthy, young (usually age 31 or under) woman to assist an individual or a couple who is not able, or chooses not, to conceive without the use of eggs from a donor.

Embryo is a multicellular mass which has developed from a fertilized egg (zygote), containing the DNA of two parents, and is somewhere between the stage of implantation through the end of the 8th week post-fertilization, after which it becomes a fetus.

Embryo Donation is the process where embryos, which are leftover following an in vitro (in the lab) fertilization (IVF) procedure, are either

donated to individuals or couples experiencing fertility problems, or donated for research.

Fetus is a developing mammal or other viviparous vertebrate (animal which gives birth to live young) after the embryonic stage and before birth. The fetal stage of prenatal development begins when the major structures have formed and lasts until birth. In humans, the fetal stage starts at the beginning of the 11th week in gestational age (the 9th week after fertilization).

Frozen Embryo Replacement (FER) or Frozen Embryo Transfer (FET) is a procedure which is used to store embryos in a special freezing chamber and then transfer them to a woman who is prepared and able to undergo implantation.

Gamete is a reproductive cell that fuses with another reproductive cell during fertilization in organisms that reproduce sexually. In species which produce two morphologically distinct types of gametes, such as humans, each individual produces only one type: the female produces the larger type of gamete - called an ovum (or egg), and the male produces the smaller tadpole-like type - called a sperm.

Gamete Intra-Fallopian Transfer (GIFT) is a process in which the eggs are removed from the uterus and subsequently joined together with washed sperm. The eggs and sperm are then implanted in the fallopian tube via a laparoscopy.

Gestation is the carrying of an embryo or fetus inside a female viviparous animal. During pregnancy, females can have one or more gestations at the same time. The time interval of a gestation plus two weeks is called the gestation period, and the length of time plus two weeks since conception is called the gestational age. The extra two weeks is added, because gestational age is calculated from the last menstrual period, rather than from the actual conception.

Gestational Carrier (GC) is a woman who carries a fetus to term for the benefit of an individual or couple who seek to participate in the conception of, and parent, a child.

Gestational Surrogacy is the process where gametes, either from the people who want to become parents (Intended Parents - IPs) or donated

for the use by the IPs, are used to create embryos which are implanted using IVF into the uterus of a woman who will carry and deliver, but not raise, the child (GC). The GC is not genetically related to the child.

Infertility is the inability to conceive during at least 12 months of unprotected intercourse.

Intended Parent (IP) is the person who wishes to become the parent of a child and has been the "prime mover" in bringing about the conception and birth of the child. He or she may or may not be the genetic parent. Case law supporting this method of establishing parentage has its roots in California, but has been adopted by many jurisdictions.

Intracytoplasmic Sperm Injection (ICSI), which is used in cases of male infertility, including low sperm count or absence of sperm, is a process in which the egg is fertilized using a single sperm which is retrieved either from a semen sample or directly from the testicles. Once the sperm is collected, a needle is used to inject it into the egg (micro-assisted fertilization), which has already been retrieved from the woman. The fertilized egg is then left to culture for a period of a few days before it is transferred into the uterus.

Intratubal Insemination (II) is the procedure by which sperm are placed directly into one or both of a woman's fallopian tubes and may offer a better chance of getting pregnant, since sperm do not have to swim through the cervix in order to fertilize an egg.

Intrauterine Insemination (IUI) is a procedure in which sperm are deposited in the uterus via artificial means.

Invasive Procedure is a medical procedure that invades the body beyond the cervix and into the uterine cavity or into an ovary, usually by cutting or puncturing the skin or by the insertion of an instrument.

In Vitro Fertilization (IVF) is a process which unites egg and sperm in the lab, after which embryos are transferred into the uterus via the cervix.

Neonatal Intensive Care Unit (NICU) is the hospital nursery dedicated to the care of newborns needing special attention after birth.

Nuchal Translucency Screening or Nuchal Scan is a high definition imaging sonographic prenatal scan (ultrasound) to help identify higher risks of Down Syndrome and other less common chromosomal abnormalities in developing fetuses. The scan is carried out between the 11th and 13th week of gestation and assesses the amount of fluid behind the neck of the fetus - also known as "the nuchal translucency." The scan may also help confirm both the accuracy of the pregnancy dates and fetal viability.

Oocyte is an unreleased egg.

Ovulation is the process by which an ovary releases an egg into a fallopian tube.

Ovulation Induction is a procedure by which the ovaries are stimulated in order to assist women who are not producing eggs to ovulate, or to prepare donors for retrieval of eggs. Hormonal drugs (gonadotropins), which stimulate the ovaries to produce eggs are used.

Ovum is a female gamete, commonly called an egg.
Parentage is the establishment of legal paternity and/or maternity in the IPs.

Parentage Agreement or Surrogacy Agreement is the legal document drafted and signed by the IPs and the GC (or the Traditional Surrogate - TS) and her husband, and approved as to form by counsel, which outlines surrogacy law, the procedures involved and the terms, understandings, rights, responsibilities and obligations of the parties prior to, during, and after the conception and birth of the child.

Perinatal refers to the period of time around birth.

Post-Partum is the period of time after delivery.

Pre-Implantation Genetic Diagnosis (PGD) is a pre-natal diagnostic technique involving genetic analysis of an embryo in order to test for genetic disease prior to implantation and pregnancy. PGD is usually performed when the embryo is at the six to eight cell stage. This technique, which is used in combination with IVF, involves the removal of one cell for analysis of its DNA in order to determine whether or not the embryo is likely to develop a genetic disease.

Pre-Implantation Genetic Screening (PGS) is a process that uses genetic techniques to verify whether an embryo has the correct number of chromosomes. PGS is usually performed for older women, who are at an increased risk of conceiving children with chromosomal abnormalities, and for women who have had recurrent miscarriages, which are often due to chromosomal abnormalities.

Pre-Transfer Cycle is the period of time before a transfer during which the woman seeking to become pregnant or to donate eggs is monitored and takes hormonal drugs (gonadotropins) to prepare her body for the pregnancy or the donation.

Quarantine is the process by which sperm are cryopreserved and stored for six months or longer to avoid the possible transmission of communicable diseases, such as the AIDS virus.

Selective Reduction, sometimes called fetal reduction, is the practice of reducing the number of fetuses in a multi-fetal pregnancy, whereby a specific fetus or fetuses is/are selected for termination, usually after a congenital defect has been identified or the number of fetuses may negatively impact the welfare of the mother, the GC or all the fetuses.

Sperm is a male gamete.

Sperm Retrieval is a broad term that encompasses a variety of surgical techniques used to obtain sperm. This can be contrasted to other procedures in which sperm are obtained after ejaculation. The surgery is designed to help men who have extremely low or absent sperm levels in semen, a cause of male infertility that affects approximately 10% of all infertile men.

Surrogacy Program is a business that recruits GCs, TSs and IPs, matches them with each other, and assists all parties though the surrogacy process. These agencies are not licensed and vary greatly in quality and ethical practices.

Traditional Surrogacy is the procedure where AI is used to combine the sperm of the intended father or a donor with the egg of the woman who will carry and deliver, but not raise, the child (Traditional Surrogate - TS). The TS is the genetic mother of the child.

Traditional Surrogate (TS) is a woman who uses her own egg to conceive a child, which she carries and delivers for the benefit of an individual or couple who seek to participate in the conception of, and parent, a child. The TS is the genetic mother of the child.

Transfer is the implantation of an embryo into a woman's uterus.

Transvaginal Aspiration or Transvaginal Ovum Retrieval is the process whereby a small needle is inserted through the back of the vagina and guided via ultrasound into the ovarian follicles to collect the fluid that contains the eggs.

Tuboplasty is a surgical procedure to restore potency of obstructed fallopian tubes.

Zygote is a fertilized egg.

Zygote Intra-Fallopian Transfer (ZIFT) is a treatment that combines IVF and GIFT. In ZIFT, eggs are fertilized with sperm in vitro; once the eggs have been fertilized, they are transplanted into the fallopian tubes through laparoscopic surgery. The zygotes then travel down the uterus in order to implant.