Unit 2 Key Area 3

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| **Good knowledge of the biology of fertilisation** | is required to design contraceptive methods and treatments for infertility |
| **Men are continuously fertile due to**  | negative feedback control of testosterone which maintains a relatively constant level of FSH and ICSH |
| **Women have cyclical fertility** | and is only a small period of fertility (2 days) which occurs after ovulation |
| **Female fertile period can be indicated by** | temperature rise and thin, watery cervical mucus |
| **Treatments for infertility include:** | Drugs to stimulate ovulation, artificial insemination and In Vitro Fertilisation (IVF) |
| **Ovulation can be stimulated by using** | drugs that mimic the action of FSH and LH or prevent negative feedback of oestrogen on FSH secretion during the luteal phase |
| **Super Ovulation** | when many eggs are released, can bring about multiple births |
| **Artificial insemination involves** | freezing the semen then defrosting and releasing it into the females cervix during her fertile period |
| **In Vitro Fertilsation (IVF)**  | involves fertilisation occurring outside the body. It is used to solve the problem of blocked oviducts |
| **Intracytoplasmic Sperm Injection (ICSI)** | injecting sperm from a syringe needle directly into an egg to bring about fertilisation |
| **Pre-implantation genetic screening (PGS)** | A non-specific approach that checks the embryo for single gene disorders and common chromosomal abnormalities |
| **Pre-implantation genetic diagnosis (PGD)** | A specific approach to check for a known chromosomal or gene defect |
| **PGS and PGD are useful**  | to help scientists identify which embryos should or should not be inserted into the mother’s endometrium |
| **Contraception** | the intential prevention of conception or pregnancy by natural or artificial means |
| **Barrier methods of contraception include:**  | Condom, Diaphragm and Cervical cap |
| **Inter-uterine device (IDU)** | a T-shaped structure that is fitted into the uterus to prevent implantation of an embryo into the endometrium |
| **Sterilisation procedures in males** | is called a vasectomy and involves cutting and tying the two sperm ducts which prevents sperm from being released |
| **Sterilisation procedures in women** | involves cutting and tying two oviducts preventing eggs meeting the sperm. |
| **Oral contraceptive pills normally contain** | synthetic progesterone combines with synthetic oestrogen  |
| **The morning after pill contains** | high doses of progesterone and oestrogen and are used as emergency hormonal contraception and prevents implantation. |
| **Chemical methods of contraception include:**  | Oral Contraceptive pills, the morning after pill, synthetic progesterone. |
| **Synthetic progesterone** | thickens the cervical mucus to reduce sperm access to the uterus |
| **Synthetic progesterone can be taken in various forms:**  | mini-pills, injection or implants. |