Polycystic ovary syndrome (PCOS)
Patient Information leaflet

Enlarged follicle

Cysts

Normal ovary
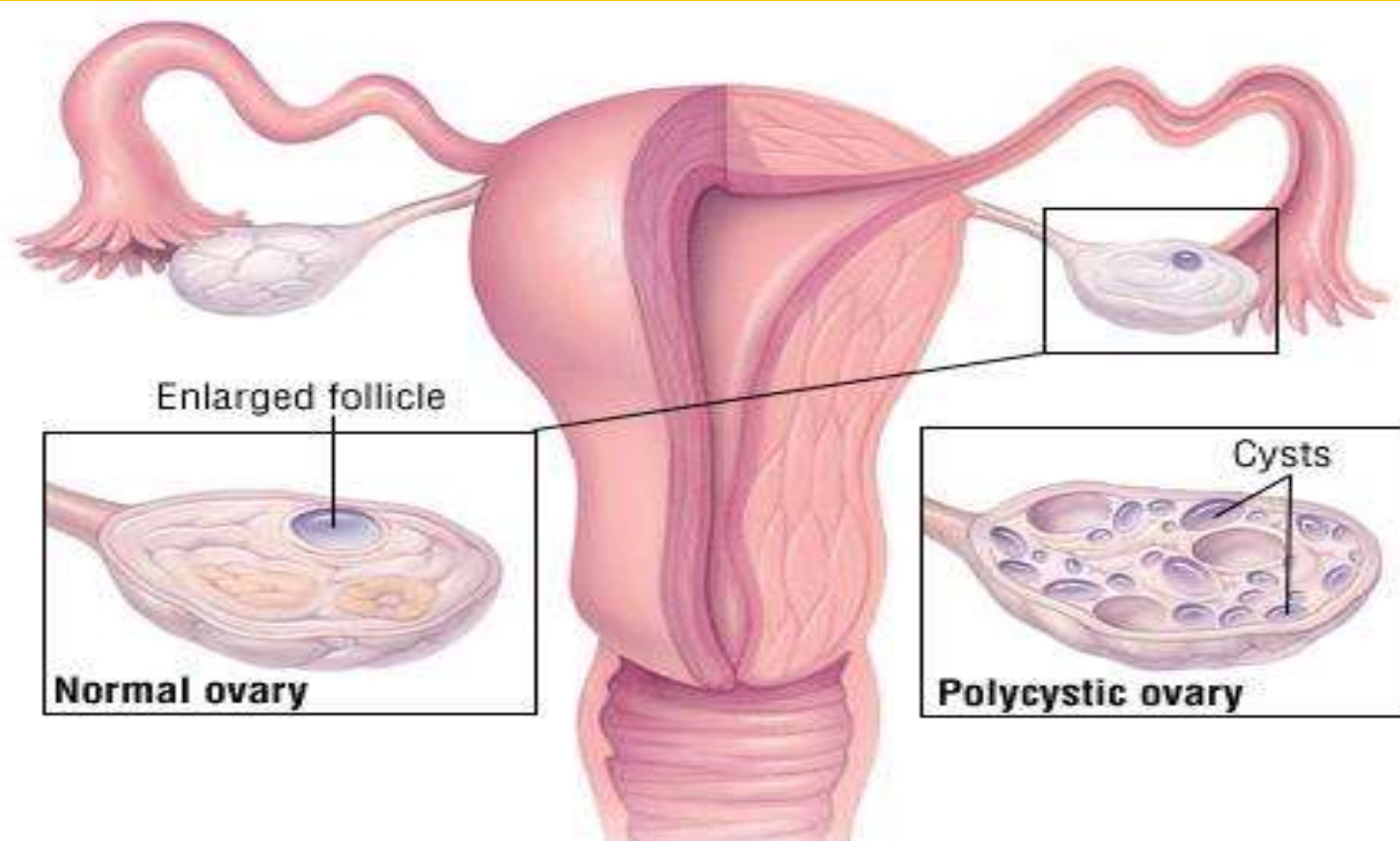
Polycystic ovary

What is Polycystic Ovary Syndrome

- ❖ Polycystic ovary – is the appearance of the ovaries when they are seen on an ultrasound scan. The polycystic ovary syndrome (PCOS) is the name given to a condition in which women with polycystic ovaries have one or more additional symptoms.
- ❖ PCOS - affects an estimated 10% of women of childbearing age

What causes PCOS?

- ❖ There is often a hereditary link and a link with diabetes in the family.
- ❖ PCOS is thought to be due to a hormonal imbalance where the ovaries produce a little too much male sex hormone.
- ❖ In PCOS there is a 'resistance' of cells in the body to insulin, so the pancreas makes more insulin to try and compensate.
- ❖ The excessively high levels of insulin have an effect on the ovary, causing a rise in androgen (testosterone) levels and preventing ovulation.

What are the symptoms of PCOS?

1. **Menstrual irregularities:**
   - ➢ PCOS often comes to light during puberty due to period problems,
   - ➢ affects around 75% of women with PCOS.
   - ➢ Infrequent, irregular or absent periods are all common variations;
   - ➢ many finding their periods particularly heavy when they do arrive puberty.
2. **Infertility:** While women with PCOS produce follicles, which are fluid-filled sacs on the ovary that contain an egg, the follicles often do not mature and do not release an egg each month. It is these immature follicles that create the cysts. PCOS is a common cause of infertility due to irregular or absent ovulation. There are a number of possible treatments to help induce ovulation.
3. **Hirsutism (excess hair):** Excess hair growth on the face, chest or abdomen , resulting in darkening and coarsening of hair particularly in the moustache and beard areas and around the nipples is called hirsutism. This occurs because of the excess male hormone in the system .
4. **Alopecia (male-pattern baldness or thinning hair):** Hair thinning is more common on the top of the head than at the temples.
5. **Acne/Oily Skin:** Oil production is stimulated by overproduction of male sex hormones. Acne can be annoying, particularly on the face, chest or back.
6. **Obesity or weight gain:** excess weight is concentrated heavily in the abdomen.This is a double-edged sword for women with PCOS. Weight gain often worsens the other symptoms of PCOS

How is PCOS diagnosed?

- **Ultrasound scan:**
  - **In PCOS, the ovaries are found to have multiple, small cysts around the edge of the ovary.**
  - **These cysts are only a few millimetres in size, do not in themselves cause problems and are partially developed eggs that were not released.**
- **Blood tests: level of androgens (male hormones), such as testosterone.**
- **The diagnosis of PCOS is made on the basis of a combination of clinical observation (signs and symptoms) and the results of investigations.**
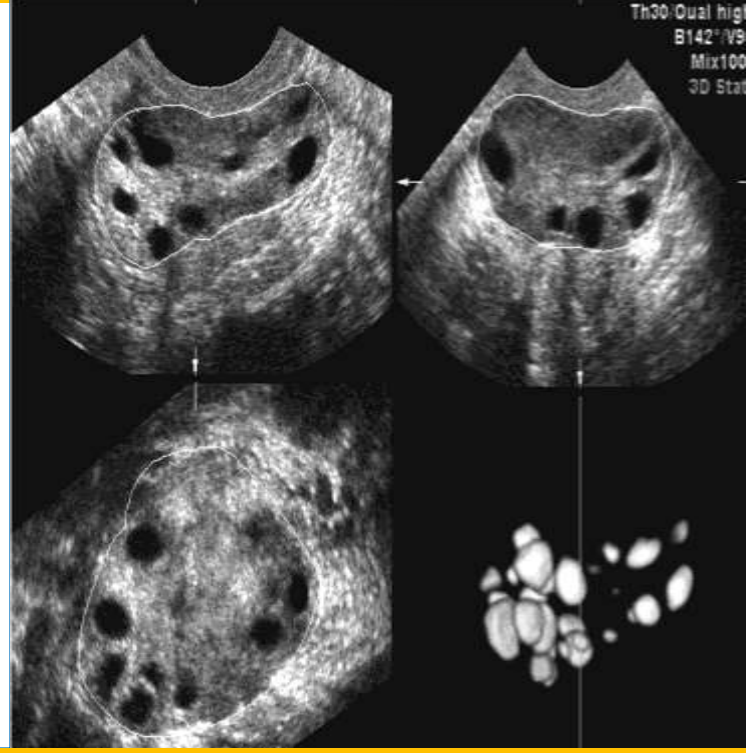
Longer-term risks of PCOS and its Treatment

- **Type 2 diabetes mellitus :**
  - The best way to reduce the risk of DM is through careful food choices, exercise, and weight loss in overweight individuals
- **Endometrial cancer :**
  - Due to high levels of the hormone oestrogen, which over-stimulates the lining of the uterus.
  - The key to reducing risk is to make sure to have some kind of "bleed" in which the lining of the uterus is shed at least every three months, preferably more often.
  - This can be accomplished through use of birth control pills or progesterone for period induction.
- **Weight loss**
  - 5% weight loss can regulate periods, lead to more ovulatory cycles, improve hairiness, reduce the risk of heart disease and lower insulin levels.
- **Insulin-sensitising drugs –**
  - Metformin : A type of drug known as an 'insulin-sensitising agent', which improves the sensitivity of the body to insulin in turn reducing the excessively high insulin.
- **Treatment of hirsutism (hairiness)**
  - Bleaching and electrolysis.
  - contraceptive pill which contains estrogen
  - Cyproterone acetate - an antiandrogen can also help.
- **Infertility**
  - PCOS is found in around 70% of women who have ovulation difficulties leading to infertility.
  - **Clomiphene citrate :**
    - Most commonly used drug to stimulate ovulation.
    - It is taken in the early days of the cycle (usually days 2-6) and results in ovulation in around 80% of women overall, and a 6 month successful pregnancy rate of 45-50%.
  - **Ovarian stimulation:** The hormone treatment must be monitored by blood tests and ultrasound scans to avoid over-stimulation
  - **In vitro fertilisation (IVF):**
    - Success rates of which depend very much upon individual characteristics such as age, length of infertility and weight.
    - Neither IVF nor ovarian stimulation is likely to be successful if a woman is significantly overweight.
  - **Laparoscopic ovarian diathermy:**
    - Also known as 'ovarian drilling'.
    - This involves a day case operation, a short general anaesthetic, and a telescope look into the abdomen.
    - The ovaries are identified and several small holes made in each ovary, either with a fine hot diathermy probe or via laser.

- **Other long term complications like : Diabetes Mellitus, Hypertension, Hypertriglyceredemia , Cardiovascular diseases :** can be prevented by → **Maintain healthy life style → → →**