## 11. Control of Hirsutism and male hormone excess

The signs of male hormone excess in PCOS include unwanted male-pattern facial hair (Hirsutism), acne, excess pigmentation around the neck and upper back (acanthosis nigricans), rarely change of the voice to a more heavy pitch. Managing male hormone excess requires:

- 1. Manage Insulin resistance as outlined above (Food and Lifestyle change and Insulin Sensitizing medications)
- 2. Metformin/TZDs (Insulin sensitizing medications)
- 3. Oral contraceptive pills
- 4. Cosmetic therapy for Hirsutism—The above treatment will prevent further growth of unwanted hair. For getting rid of existing unwanted hair, the following remedies are helpful:
  - a) Laser hair removal or electrolysis
  - b) Eflornithine cream (Vaniqa 13.9%)- Used short-term for 3-6 months until the above treatment takes effect, inhibiting further hair growth. The cream slows the rate of hair growth. The result starts showing in 4-8 weeks. Unfortunately, treatment is not useful for everyone, and only one-third show good results. Some rules on the use of the cream are as follows:

Apply a thin layer of the cream and massage it into the skin twice a day

Wait for at least four hours before washing the face

Cosmetics and sunscreen are safe after the cream application

Skin irritation such as tingling, redness, ingrowth of hair follicles can occur. If that happens, cut down the application to once a day. If persistent, discontinue the treatment.

c) Antiandrogen therapy (Blocking the male hormones)- Managing Insulin resistance via food and lifestyle change, and Metformin usually helps control Hirsutism and acne. However, if these problems persist after six months of treatment, the next intervention is male hormoneblocking medication such as spironolactone (Aldactone, CaroSpir). Spironolactone is given in the dose of 25-50 mg daily only during the first ten days of the menstrual cycle. Keep in mind that the primary medications for fixing male hormone excess are oral contraceptives and Metformin.