Polycystic ovarian syndrome

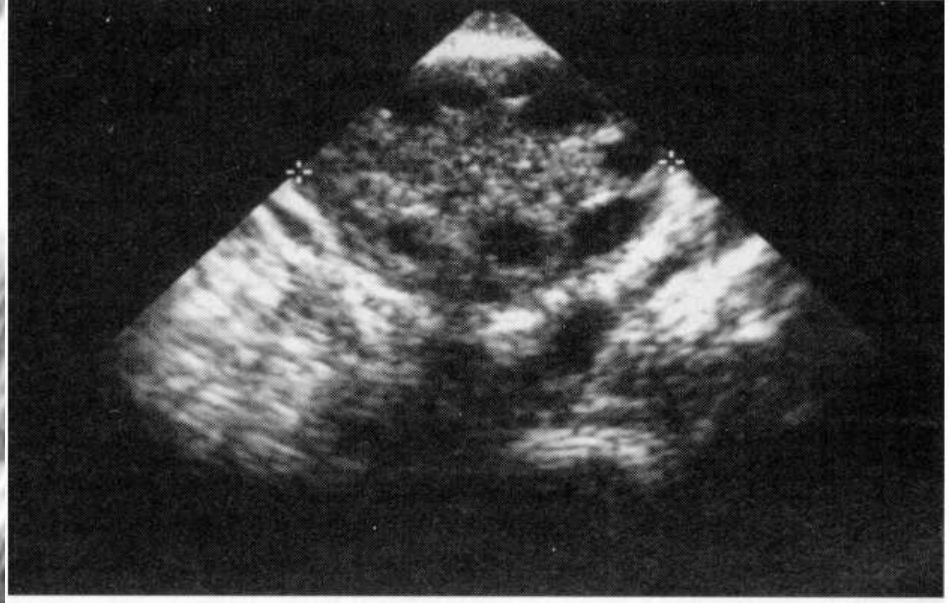
Can lifestyle modifications help??

Dr Saloni
Assistant Professor, Deptt of OBG
BPSGMC for Women,
Khanpur Kalan

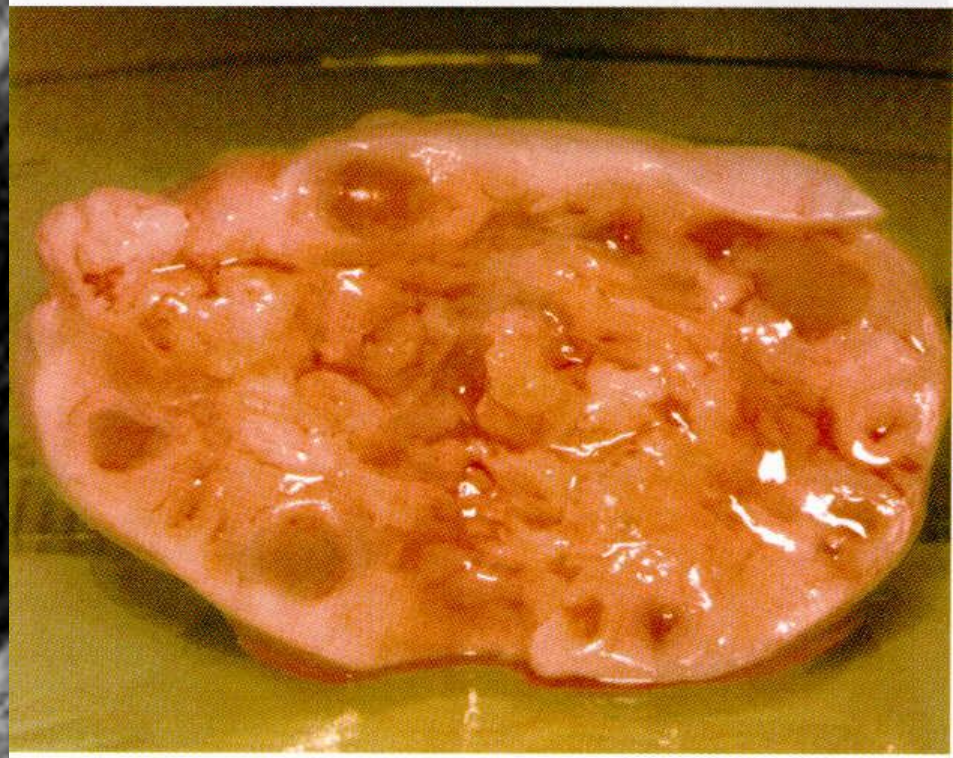

GOOD LUCK!





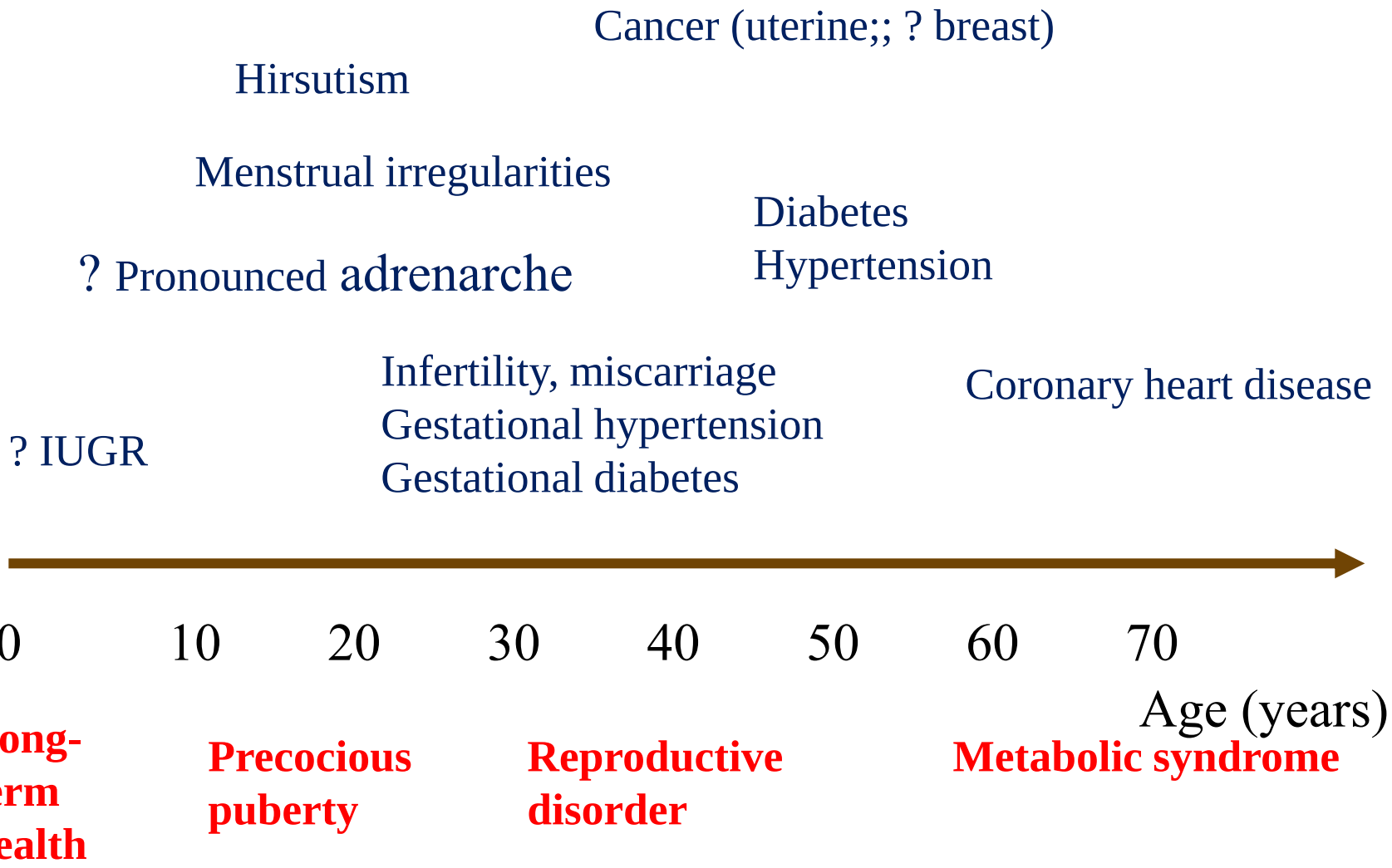


A

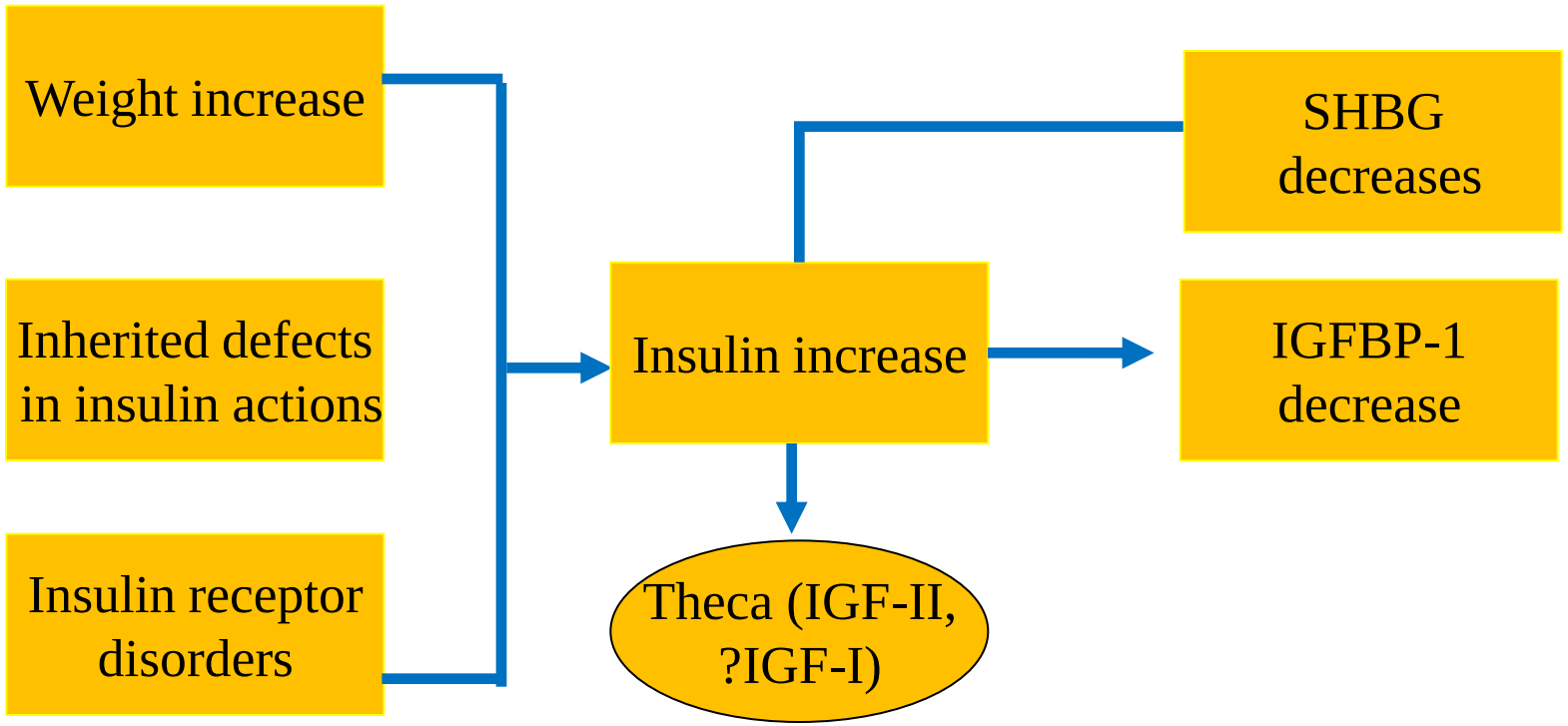


B

Life-long condition



Pathophysiology





Adapted from the Consensus Development Conference of the American Diabetes Association, Diabetes Care. 1998;21:310-314

PCOD

Non-obese

GH ↑

LH ↑

Obese

Insulin resistance
Hyperinsulinemia

LH and IGF-I effect on theca cells ↑

IGFBP-I ↓

IGF-I ↑

Different hormone concentrations in obese and non-obese PCO patients

Cytochrome p-450c 17-alpha activity ↑

SHBG ↓

Androgen secretion ↑

SMALL CHANGES MAKE A BIG DIFFERENCE



LIFESTYLE MODIFICATIONS

- Weight reduction includes a combination of **caloric restriction**, **increased physical activity** and **behaviour**



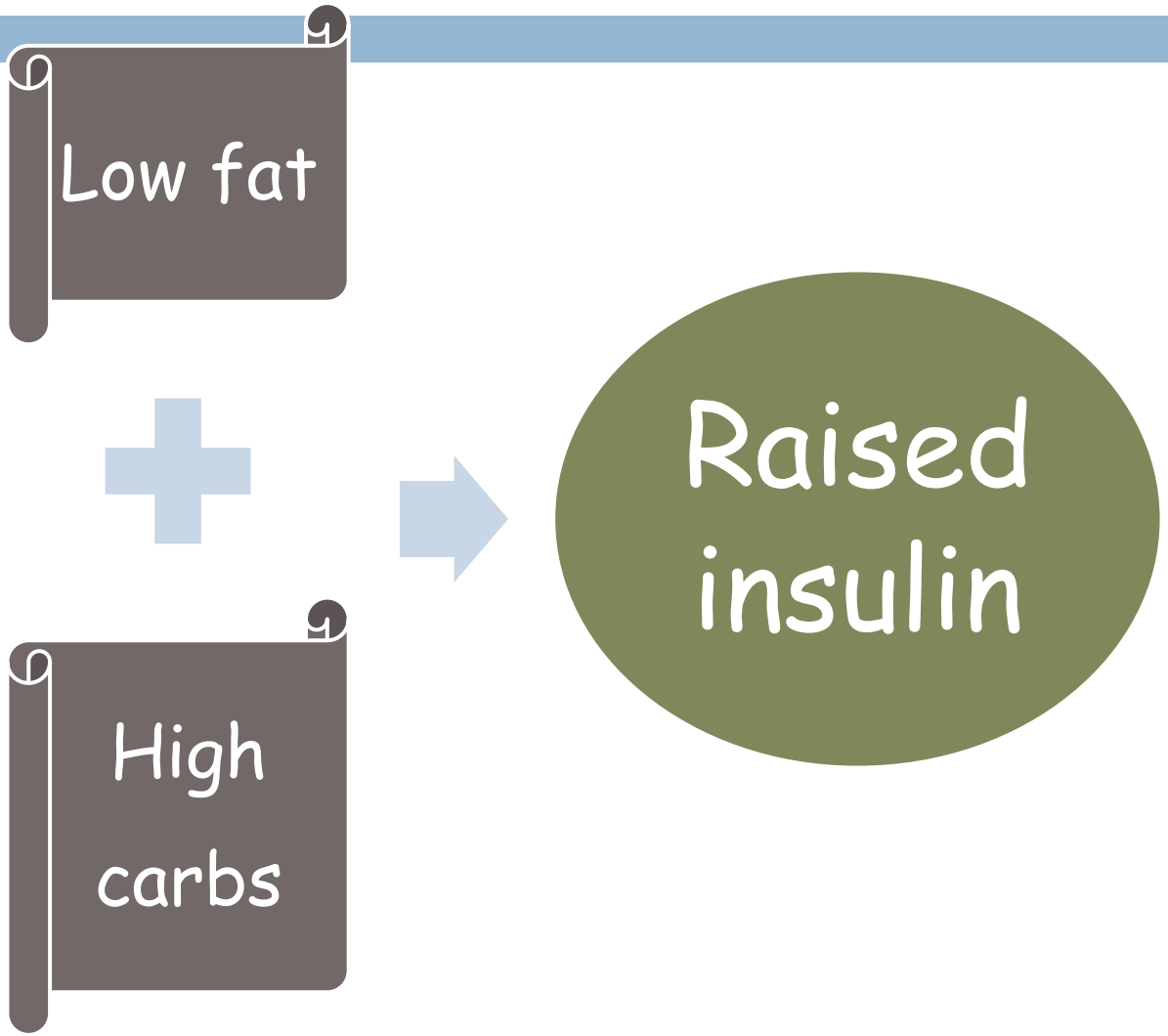


Dietary Modifications

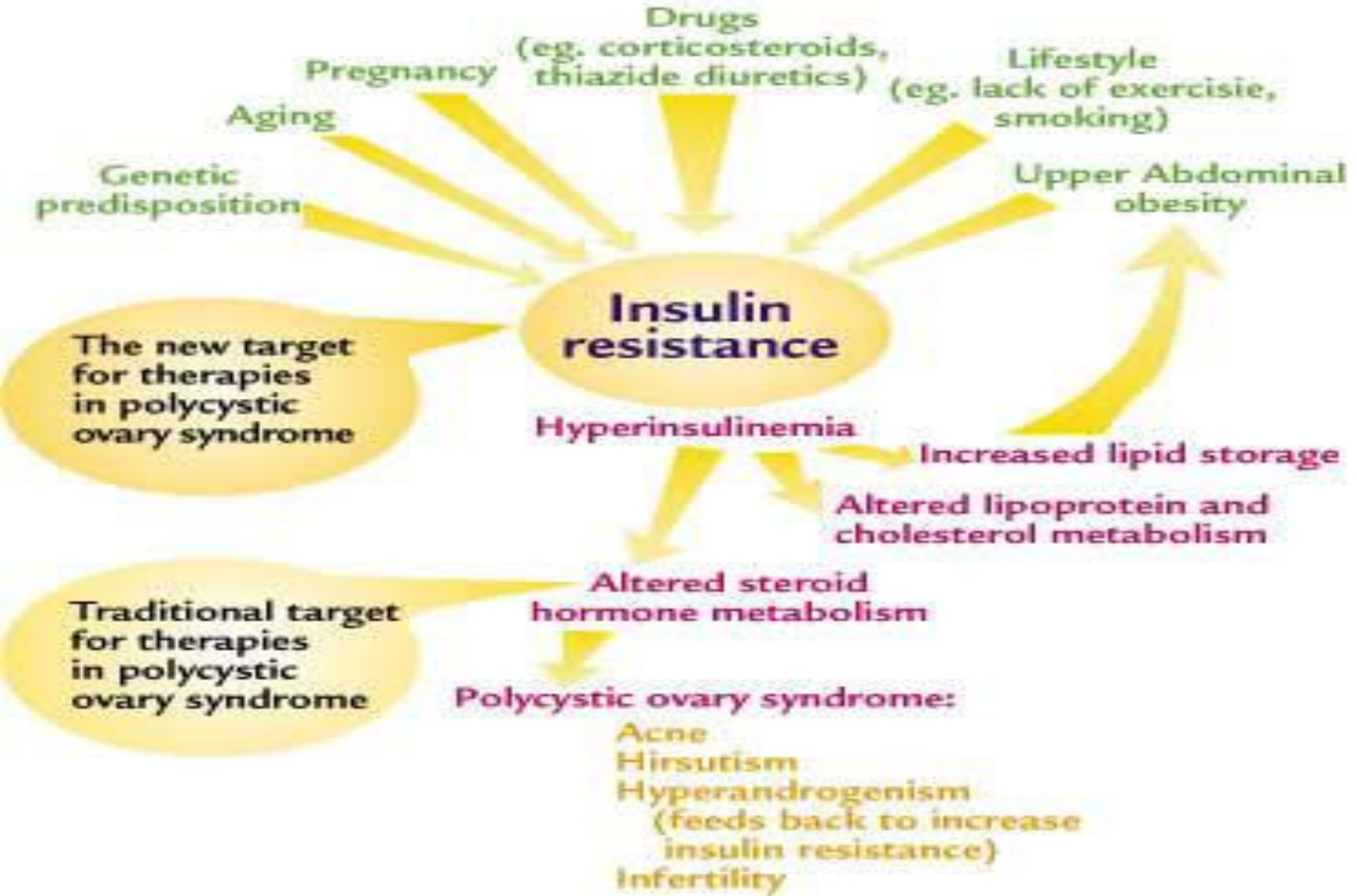
- Carbohydrate: 55%
- Protein: 15%
- Fat: 30% (<10% from saturated fat)






Low fat
High carbs
Raised insulin

Pathways to Insulin Resistance and Polycystic Ovary Syndrome



Dietary Modifications

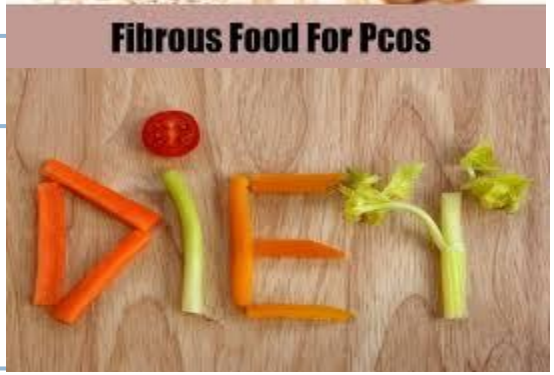
- Low carbohydrates



- High fiber

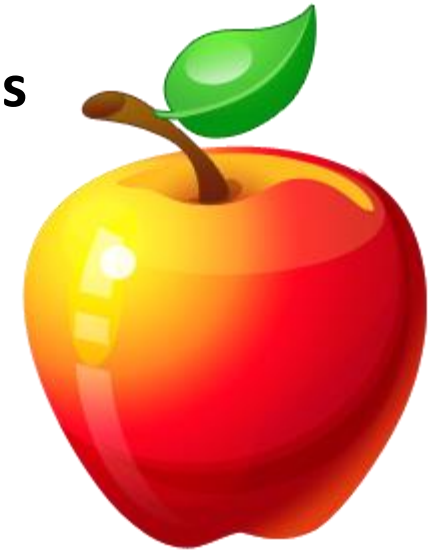


- Unsaturated fats



fiber

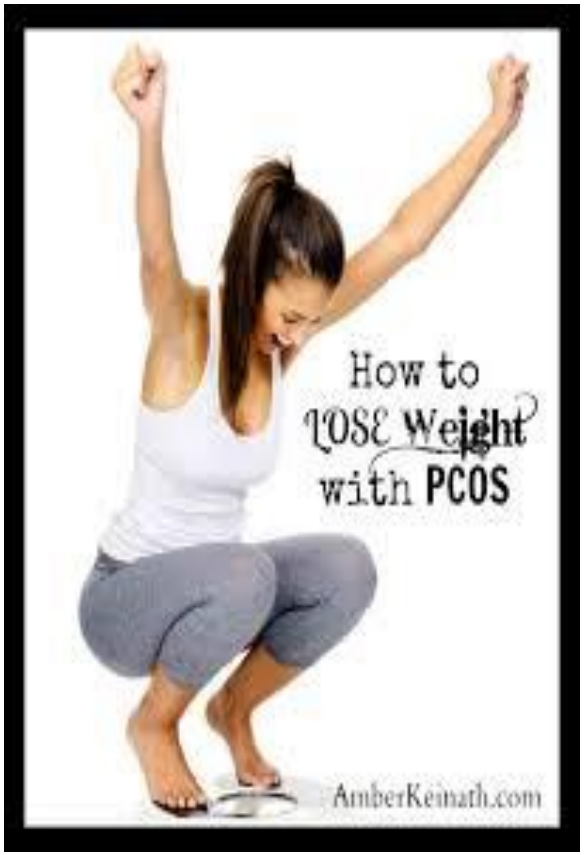
- **Examples of Insoluble Fiber:**
  - **Whole wheat breads**
  - **Wheat cereals**
  - **Wheat bran**
  - **Cabbage**
  - **Beets**
  - **Carrots**
  - **Brussels' Sprouts**
  - **Turnips**
  - **Cauliflower**
  - **Apple skin**



- **Examples of Soluble Fiber:**
  - **Oat bran**
  - **Oatmeal**
  - **Beans**
  - **Peas**
  - **Rice bran**
  - **Barley**
  - **Citrus fruits**
  - **Strawberries**
  - **Apple Pulp**

Dietary Modifications

- Small may be more frequent meals
- Balanced meals
- Smaller plates
- Resist urge



Healthy Living Guidelines

- Minimize whole fat dairy products, such as butter and whole milk
- Cholesterol should be less than 300 mg daily
- Use low fat cooking methods: baking, broiling, grilling, boiling, rather than breading, frying
- Use liquid vegetable oil

Effects

- Weight loss of even 5-10% will help reduce insulin resistance and your androgen levels

Lifestyle Modification

- Weight loss (5-10% over 6 months) is effective in re-establishing ovarian function in >50% of obese PCOS women

Study	Weight loss	Outcomes
1995	6.3 kg	12 out of 13 + ovulations 11 out of 13 + pregnant
Hollman 1996	5.6 kg	80% ovulation rate 29% pregnancy androstenedione, insulin testosterone, estradiol
Huber-Buckholz 1999	6.3 kg (2-5% loss)	9 out of 15 + ovulations 2 out of 15 + pregnant
Hoeger 2004	6.8% loss	30% increased ovulation Decreased hirsutism score

Exercise

Exercise

Exe



Exercise



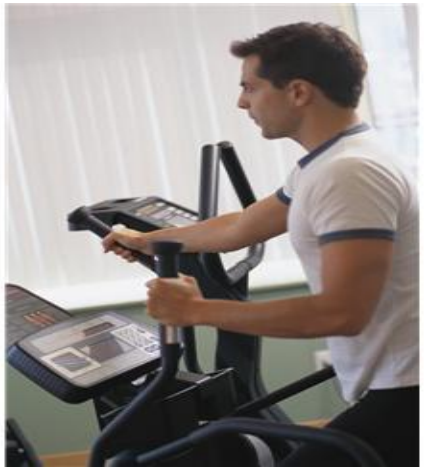




Be Physically Active



- Helps lose/ maintain weight
- **30 minutes of moderate level activity on most days of week**
- Use stairs instead of elevator, get off bus 2 stops early, Park your car at far end



Exercise



- Cardiotraining
  - *CVD*
  - *Weight*
- Strength training
  - *calorie*
  - *High BMR*





Get started



- Zumba
- Pilates
- Yoga
- Aerobics
- Cycling
- Walking
- Swimming









Effects

- Improves
  - insulin sensitivity
  - frequency of ovulation
  - cholesterol
  - body composition

META-aNALYSIS

- Lifestyle modifications versus metformin plus lifestyle modifications

- Similar improvements in menstrual cyclicity
- Significant weight loss, greater with metformin
- Androgen levels decreased - metformin group
- Glucose and insulin levels unchanged
- Lipid levels unaltered either
- Spontaneous pregnancy rates similar

Hum Reprod. 2006;21:80-89.

- Lifestyle changes (intensive exercise with a goal of ≥ 150 min/week of activity) resulting in weight loss reduced the risk of type 2 diabetes.

N Engl J Med. 2002;346:393-403.

another

- Lifestyle modifications without rapid weight loss lead to a reduction of central fat and insulin sensitivity which restores ovulation in overweight infertile women with PCOS

J Clin Endocrinol metab 84:1470-1474, 1999

Try to -



- Follow a healthy eating pattern.
- Be Active
- Not Smoke
- Control Your Weight


September
PCOS
Awareness
Month
For My Cysters
Spread the love and the hope!


THANK
YOU

