Polycystic Ovary Syndrome (PCOS)

What is it?
PCOS is a condition that leads to an imbalance in female sex hormones. It can affect a woman’s menstrual cycle, ability to have children, hormones, heart, blood vessels and appearance. Its name comes from cysts that may form around a woman’s ovaries that look like a ‘string of pearls’. The cause of PCOS is unknown, but genetics seem to play a role.

What are the symptoms?
Common symptoms include irregular or missed periods, hirsutism (hair growth on the face, chest, stomach, around the nipples, back, thumbs or toes), infertility due to lack of ovulation, decreased breast size, acne, thinning of scalp hair, weight gain (usually around the waist and difficulty in losing weight), and acanthosis nigricans (dark or thick skin markings and creases around the armpits, groin, neck, and breasts). Women may also experience increased muscle mass and ability to gain muscle quickly, due to higher levels of testosterone.

How is it diagnosed?
There is not a single test for PCOS, but rather a number of steps that a doctor can take to diagnose the condition. The first step is to assess your medical history, including menstrual periods as well as any weight changes. Next, a physical exam including blood pressure, waist circumference, and assessment of hair growth/patterns may take place. A pelvic exam can identify if ovaries are swollen or enlarged due to the presence of cysts. Blood tests check the amount of the hormone androgen in your blood as the condition is characterized by hyperandrogenism. Glucose and insulin testing may be done as well as checking cholesterol and other lipids. Finally, a vaginal ultrasound can detect the presence of cysts on your ovaries.

What are the side effects?
Conditions that are association with PCOS include:
- Increased risk for endometrial cancer
- Obstructive sleep apnea
- Depression
- Hypothyroidism
- Cardiovascular risk factors, including hypertension, hyperlipidemia, insulin resistance and type 2 diabetes and metabolic syndrome.

How is it treated?
- Exercise
  - Regular, varied physical activity
  - 4-5x/week for 45-60 minutes
  - Cardiovascular and strength activities

- Dietary Intervention
  - Lifestyle modification is the primary treatment for PCOS
  - Reduce carbohydrate intake to 35-40% of calories
  - Focus on whole grains vs. refined
  - Minimum of 25 g/fiber each day
Polycystic Ovary Syndrome (Continued)

- **Protein intake 15-30% of calories**
  - Lean protein source with all meals and snacks

- **Fat should be 35-45% of calories each day**
  - Focus on monounsaturated and polyunsaturated fatty acids
  - Less than 7% of total calories from saturated fat

- **Eat every 3-5 hours**

- **Vitamin D supplement of 1,000 IU daily**

- **Supplementation of iron if stores are low**

- **Fish oil and d-Chiro-inositol may be added as adjunct therapies to reduce insulin, triglyceride levels and overall risk of cardiovascular disease**

- **Discuss supplements with your doctor or dietitian as everyone’s needs are individual**

- **Medication**
  - Hormonal contraception to induce regular periods, may help with acne

  - Spironolactone-effective for hirsutism and alopecia

  - Metformin-lowers insulin levels, aids weight loss, decreases testosterone levels, induce ovulation, improves lipid profile and lowers blood pressure

- **Regular lab tests**
  - Women with PCOS often have altered lab values

  - Regular lab work can make deficiencies known so that they can be corrected

  - Many women with PCOS have low iron stores as well as vitamin D