

POLYCYSTIC OVARY SYNDROME (PCOS) AND EXERCISE

PROFESSIONAL

WHAT IS POLYCYSTIC OVARY SYNDROME (PCOS)?

Polycystic ovary syndrome (PCOS) is one of the most common endocrine conditions affecting about 8-13% of reproductive-aged women [1-4] with up to 70% of affected women remaining undiagnosed. PCOS is a significant public health issue with reproductive, metabolic and psychological features.

PRESENTATION OF PCOS

Females with PCOS present with heterogeneous features including psychological (anxiety, depression, body image), reproductive (irregular menstrual cycles, hirsutism, infertility and pregnancy complications) and metabolic features (insulin resistance, metabolic syndrome, pre-diabetes, type 2 diabetes and cardiovascular risk factors). All of these are further exacerbated with overweight and obesity. Presentation of the syndrome varies by ethnicity and in high-risk populations such as Indigenous women, where prevalence and complications are higher.

PCOS is now diagnosed by the Rotterdam criteria, the internationally accepted diagnostic criteria requiring any two of the following three criteria:

1. Oligo- or anovulation (as indicated by irregular menstrual cycles)
2. Clinical (hirsutism) and/or biochemical hyperandrogenism (elevated testosterone levels)
3. Polycystic ovary morphology on ultrasound (not recommended in adolescent women)

(exclusion of other aetiologies that may mimic PCOS)

SYMPTOMS OF PCOS

The symptoms of PCOS vary between women and at different life stages. These may include:

- Irregular or absent menstrual cycles (< 21 or > 35 days or < 8 cycles per year)
- Hirsutism and/or alopecia
- Acne (acanthosis nigricans) that may be severe
- Obesity and weight management problems
- Infertility
- Emotional challenges (distress, depression and/or anxiety; low self-esteem; poor body image and health related quality of life)
- Insulin resistance and increased risk of diabetes with earlier onset
- Cardiovascular risk factors

Please note, not all of these symptoms are experienced by women with PCOS.

Longer term health risks include:

- Type 2 diabetes
- Obesity
- Infertility
- Risk factors for heart disease



MANAGING PCOS EFFECTIVELY

Evidence shows that lifestyle changes, including regular physical activity and a healthy diet are recognised as the most effective ways to reduce the severity of PCOS symptoms.

WHY IS EXERCISE IMPORTANT FOR PCOS?

Exercise has many important benefits for women with PCOS including improved:

- Insulin action, reducing the risk of diabetes
- Weight gain prevention
- Emotional wellbeing
- Energy levels, motivation and self-confidence
- Period regularity
- Fertility
- Fitness, muscle endurance and strength



WHAT TYPE OF EXERCISE IS BEST?

Any exercise or activity that is enjoyable is recommended as this is likely to be more sustainable over time.

To achieve the best results exercise should include:

- Aerobic exercise – which helps improve heart health and metabolism
- Weight/resistance training – which helps to build muscle strength and tone
- Or a combination of both

Women who want to maintain health and an ideal weight should aim for:

- 150 minutes per week of moderate intensity activity, OR 75 minutes per week of vigorous activity, OR a combination
- Include weight training 2 times per week on non-consecutive days

Women who need to improve health and promote weight loss should aim for:

- 300 minutes per week of moderate intensity activity, OR 150 minutes per week of vigorous activity, OR a combination
- Include weight training 2 times per week on non-consecutive days

WHAT IS MODERATE INTENSITY AND VIGOROUS INTENSITY EXERCISE?

Moderate intensity exercise includes activities that cause a noticeable increase in your heart rate but can be performed whilst maintaining a conversation and are otherwise comfortable. Examples include brisk walking, gardening, cycling, swimming or jogging.

Vigorous intensity exercise includes activities that cause a significant increase in your heart rate, generally cannot be undertaken whilst maintaining a conversation and cause sweating. Examples include running, aerobics, hiking, competitive sports and fast swimming or cycling.

Encourage women to be physically active or exercise on most, if not all, days of the week for 30 to 60 minutes by:

- Using every opportunity to walk whenever possible
- Taking the stairs instead of the elevator
- Parking further away
- Take up a sport or activity that you enjoy (swimming, team sports, hiking)
- Invite friends and family to participate in exercise/activities

BARRIERS TO EXERCISE

Many people experience challenges to commencing exercise such as time restrictions, motivation, fear of injury and/or lack of confidence. Women with PCOS may also experience pain and incontinence.

Identifying and overcoming barriers is essential to maintaining regular exercise. Thinking simply about exercise, planning ahead and choosing activities that are more enjoyable may improve confidence and likelihood to participate. For example, walking is the most popular form of exercise reported by women and is free, easily accessible, widely applicable and socially stimulating. Walking, with progression to jogging/running in intervals may be a good place to start. Many women prefer to exercise with someone, so talking with friends, partner and family is also recommended for added support.

HOW CAN WOMEN WITH PCOS BECOME AND REMAIN ACTIVE?

- Start slowly, by trying to achieve 10 consecutive minutes of activity (i.e. 1000-1500 steps)
- Choose activities you enjoy, to help you stick to your exercise and activity plan
- When confident with your personal exercise plan include vigorous sessions (weight- or aerobic-based activities that have high intensity intermittent activities [i.e. HIIT sessions or team sports])

HOW DO I HELP MY PATIENTS GET STARTED?

Encourage women to exercise for 30 to 60 minutes on most days of the week. The intensity and length of exercise prescription will vary accordingly, but here are some suggestions:

- Individualise exercise prescription according to patient preference, current activity levels, socioeconomic, cultural and ethnic differences
- Use the SMART (specific, measurable, achievable, realistic and timely) goal setting and encourage self-monitoring
- Consider psychological factors such as stress, anxiety, depression and disordered eating
- Consider the age and BMI category of your patient for appropriate exercise prescription
- Addressing barriers such as incontinence or pain
- Consult an Accredited Exercise Physiologist or Physiotherapist to ensure their exercise plan is tailored to their abilities, disease- and treatment-related side effects.

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REFERENCES AND FURTHER INFORMATION

If you have any concerns about the safety of your patient in commencing an exercise program, please consider referral to a Sport and Exercise Physician.

Find a Sport and Exercise Physician www.acsep.org.au

Exercise is Medicine Australia
www.exerciseismedicine.org.au

Exercise Right www.exerciseright.com.au

Find a Physiotherapist www.choose.physio

Find an Accredited Exercise Physiologist www.essa.org.au

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