

Polycystic ovary syndrome (PCOS)

Health
professional **tool**

Assessment, investigations & management

PCOS assessment

Clinical presentation

- Prevalence – most common endocrine disorder in women of reproductive age (8-13%)
- Consider PCOS if female presents with: menstrual irregularity, overweight, hirsutism, acne, fertility issues, prediabetes, gestational diabetes or early onset type 2 diabetes
- Note high-risk ethnic groups (Asian, Indigenous, Nth African)

Diagnosis: according to Rotterdam diagnostic criteria

Step 1: Irregular cycles + clinical hyperandrogenism (exclude other causes)* = diagnosis	Irregular cycles In women >3 years post menarche to perimenopause: <ul style="list-style-type: none"> • <21 or >35 day cycles indicating anovulation In adolescents: <ul style="list-style-type: none"> • no period by age 15 • >1 year post menarche cycles >90 days • >1 to <3 years post menarche cycles <21 or >45 days 	Clinical hyperandrogenism <ul style="list-style-type: none"> • hirsutism (severe in adolescents) • acne (severe in adolescents) • alopecia (androgenic)
Step 2: If no clinical hyperandrogenism Test for biochemical hyperandrogenism (exclude other causes)* = diagnosis	Biochemical androgens: <ul style="list-style-type: none"> • measure after 3-month cessation of COCP (ensure alternate contraception) • measure sex hormone-binding globulin (SHBG) in addition to total testosterone, to obtain free androgen index or calculated free testosterone 	*Refer to endocrinologist for exclusion of other causes if: <ul style="list-style-type: none"> • clinically significant hyperandrogenism or • rapid onset or severe hyperandrogenism / virilisation • testosterone levels >20% above normal limit
Step 3: If ONLY irregular cycles OR hyperandrogenism-ultrasound	Adolescents <ul style="list-style-type: none"> • Ultrasound should not be used for the diagnosis of PCOS in those <8 years after menarche, due to the high incidence of multi-follicular ovaries in this life stage • Should be considered "at risk" of PCOS and receive follow-up assessment 	Adults <ul style="list-style-type: none"> • In patients with irregular menstrual cycles and hyperandrogenism, an ovarian ultrasound is not necessary for PCOS diagnosis • Ultrasound (for PCOM) will identify the complete PCOS phenotype

* Investigations/exclusion of other causes

TSH, Prolactin levels, FSH and if clinical status indicates other causes need to be excluded (eg CAH, Cushing's, adrenal tumours etc). Hypogonadotrophic hypogonadism (generally due to low body fat or intensive exercise) should also be excluded clinically and with LH and FSH levels.

PCOS management should be considered across the lifespan and individualised, making sure that patient priorities are identified.

Consider the benefit of a GP Management Plan and Team Care Arrangement.

A team/multidisciplinary approach with GP coordination should be considered, where appropriate and available.

Referral guidance

In those with more complex PCOS or with challenges in differential diagnosis, consider referral to an endocrinologist or multidisciplinary service

Consider early referral to fertility specialist particularly if age \geq to 35 years. In younger women consider up to 12 months of intensive lifestyle intervention such as weight loss, where appropriate, before referral.

PCOS management areas include:

- lifestyle
- clinical hyperandrogenism (eg hirsutism)
- menstrual cycle regulation
- fertility
- weight management
- cardiometabolic health
- sleep apnoea
- mental and emotional health.

Note: this is a heterogeneous chronic condition and there is a need to engage each woman in prioritising her own management issues.

Lifestyle

Healthy lifestyle behaviours encompassing healthy eating and regular physical activity should be recommended in all those with PCOS to:

- achieve and/or maintain healthy weight
- optimise hormonal outcomes, general health, and quality of life across the life course.
- Realistic weight loss goals vital (5-10% body weight)
- No specific diet, focus on:
 - reducing overall caloric intake
 - sustainable behavioural change
 - regular GP and self-weighing/monitoring
- 30 minutes of moderate to vigorous exercise daily for health goals – won't reduce weight alone, need diet. Increase opportunistic movement, consider referral to exercise physiologist

Clinical hyperandrogenism (hirsutism/acne/alopecia)

- Cosmetic options: laser hair removal, depilatory creams, threading, plucking, waxing and electrolysis
- Pharmacological therapy options (6-12 months to see benefit):
 - COCP – (all will assist) aim for lowest effective dose
- Combination therapy – if ≥ 6 months of COCP is ineffective, consider adding anti-androgen to COCP
 - Anti-androgen (eg spironolactone, usual dose 100mg-200mg daily)
 - Contraception is vital to prevent pregnancy while on anti-androgens

Menstrual cycle regulation

- Lifestyle efforts can improve cycle regularity
- Combined oral contraceptive pill (COCP)
 - All COCP pills increase SHBG thereby reducing free androgens; provide contraception, endometrial protection and cycle regulation (monitor glucose tolerance in those at risk of diabetes as may increase insulin resistance)
 - No COCP has been shown to be better than another

- Cyproterone containing COCPs should be considered second-line due to increased VTE risk
- Progestogens alone may be used cyclically or as an IUD where COCP is contraindicated or not preferred (eg Medroxyprogesterone acetate (MPA) 10mg days 1-10 in January, April, July, September)
- Metformin – improves ovulation, re-establishes cycles, reduces insulin resistance, reduces progression to diabetes, may prevent weight gain, but does not cause weight loss
 - Minimise side effects with starting dose 1 x 500mg daily, increase by 500mg per fortnight up to 1500mg-2000mg average dose
 - Alcohol excess should be avoided on metformin

Key messages:

- Women with PCOS have increased risk of endometrial cancer with prolonged amenorrhoea; aim for >4 periods/ year unless on COCP
- If cycles <4 per year – progestogen (eg, MPA) to induce a withdrawal bleed if patient does not want to commence COCP

Fertility

- BMI >25 – weight loss first-line
- 5-10% weight loss may assist in cycle control and fertility
- Pharmacological therapies for infertility include letrozole or clomiphene, but in primary care, metformin can be started before fertility specialist referral informing women that it is not as effective
- Referral to fertility specialist if unable to conceive at
 - 12 months if <35 years
 - 6 months if >35 years

Key messages:

- PCOS may limit fertility, but can be treated
- Women with PCOS have similar family sizes overall, but often need some assistance
- Fertility for all women decreases in early 30s and significantly after 35 years
- Advise early family initiation (<35 years) where practicable
- Being overweight, obese or underweight can affect fertility
- Prevent weight gain and aim for weight loss if needed

Weight management

- Monitor weight regularly, important for:
 - targeting prevention of weight gain in all (if a healthy weight or overweight)
 - achieving at least 5-10% weight loss if overweight
- Note: education alone and setting unachievable goals are generally unsuccessful
- Encourage simple behaviour change – prioritisation of healthy lifestyle, family support, lifestyle and exercise planning, setting of small achievable goals
- Calorie deficit of 500-750 cal daily required for weight loss (ie 1200-1500 cal daily intake), with no one diet preferred
- 250 min moderate exercise/week or 150 min vigorous exercise/week required for weight loss
- Consider referral via team care arrangement if appropriate:
 - dietitian (tailored dietary advice, education, behavioural change support)
 - exercise physiologist (exercise motivation, education)
 - psychologist (motivational interviewing, behaviour management techniques, emotional health and motivation)
 - group support (diet and exercise program)

- medical and/or surgical weight loss treatments

Key message:

5-10% weight loss will greatly assist in symptom control

Cardiometabolic health

Screen for cardiovascular risk factors:

- smoking – advise cessation
- BP: check annually
- Lipid profile at baseline if BMI >25, then according to overall CVD risk: check every 2-4 years

Diabetes:

- 3-5 fold increased risk and earlier onset of gestational, prediabetes and diabetes in PCOS; these also occur in lean and in young PCOS women
- Screen with OGTT, fasting glucose or HbA1c. If high risk use OGTT (eg, history of GDM, IFG, IGT, family history of diabetes, hypertension or high-risk ethnicity)
 - Every 1-3 years (annually if IFG/IGT)

Key message:

Increased cardiovascular risk factors and prevalence of GDM, IGT and type 2 diabetes in PCOS

Mental & emotional health

- In women with PCOS there is a high prevalence of moderate to severe anxiety and depressive symptoms
- Screen for anxiety and depressive symptoms at diagnosis
- Eating disorders, negative body image, low self-esteem and psychosexual dysfunction should also be considered
- If screening is positive, assess risk factors and symptoms using an appropriate assessment tool (GAD7 or PHQ)

If treatment is required, consider a Mental Health Treatment Plan (MHTP), ongoing support and/or referral to a mental health professional

Key message:

Assess mental and emotional health for:

- depression and/or anxiety
- body image
- eating disorders and disordered eating
- psychosexual dysfunction

Sleep apnoea

- Monitor clinically for sleep apnoea (strongly associated with excess weight)
- The Berlin tool can be useful for screening

Additional information

Health practitioner tools and resources

jeanhailes.org.au/health-professionals/tools

jeanhailes.org.au/health-professionals/active-learning-modules/diagnosis-and-management-of-polycystic-ovary-syndrome-pcos-2019

monash.edu/medicine/sphpm/mchri/pcos/resources/practice-tools-for-health-practitioners

Mental and emotional wellbeing

Use assessment tools such as:

- Patient Health Questionnaire (PHQ)
- Generalised Anxiety Disorder Scale (GAD7)

phqscreeners.com

Clinical hyperandrogenism

Hirsutism

Use standardised visual scale eg

- Modified Ferriman Gallwey score (mFG)

Alopecia

- Ludwig visual score

Patient resources

jeanhailes.org.au/health-a-z/pcos

monash.edu/medicine/sphpm/mchri/pcos/resources/resources-for-women-with-pcos

This resource is informed by the 'International evidence-based guideline for the assessment and management of polycystic ovary syndrome' (Monash University 2018).



Jean Hailes for Women's Health gratefully acknowledges the support of the Australian Government.

© Jean Hailes for Women's Health 2012



To order copies:
jeanhailes.org.au

Education and Knowledge Exchange

Jean Hailes for Women's Health
PO Box 33314, Domain LPO
Melbourne VIC 3004
Phone: 1800 JEAN HAILES (532 642)
Email: education@jeanhailes.org.au

Clinics

Jean Hailes Medical Centre for Women
173 Carinish Road
Clayton VIC 3168
Jean Hailes at Epworth Freemasons
412 Victoria Parade
East Melbourne VIC 3002

Phone: 03 9562 7555

Updated October 2018