Polycystic ovary syndrome affects up to 1 in 6 women of reproductive age¹



Why is recognition of polycystic ovary syndrome important?

Menstrual irregularities, clinical symptoms and infertility associated with PCOS can lead to decreased HRQoL and psychological impairment²



Women with PCOS are at risk of impaired quality of life as well as psychological and behavioural disorders including³⁻⁶:









What is polycystic ovary syndrome?

The Rotterdam criteria defines PCOS by the presence of two of the following⁷*

- Androgen excess the presence of clinical and/or biochemical hyperandrogenism
- Irregular menses
- Polycystic ovary morphology

A phenotypic approach to defining PCOS helps to identify those women at greatest risk of metabolic dysfunction⁸

Those with 'classic' PCOS phenotypes i.e. A and B are at greatest risk of metabolic dysfunction

PCOS features	Phenotype A	Phenotype B	Phenotype C	Phenotype D
Androgen excess	~	~	~	×
Ovulatory dysfunction	~	\checkmark	×	\checkmark
Polycystic ovarian morphology		×		\checkmark

Table adapted from Lizneva D et al, 2016

*after exclusion of other androgen excess related disorders such as thyroid disease, hyperprolactinemia, nonclassical congenital adrenal hyperplasia, pregnancy, adrenal or ovarian tumors, acromegaly and Cushing syndrome.⁹

PCOS is associated with multiple long-term cardiovascular and reproductive health risks^{3,9,10}



CARDIOVASCULAR RISK

At risk:

- Obesity
- Cigarette smoking
- Hypertension
- Dyslipidemia
- Subclinical vascular disease
- Impaired glucose tolerance
- Family history of premature cardiovascular disease

At high risk:

- Metabolic syndrome
- Type 2 diabetes
- Overt vascular, renal or cardiovascular disease

REPRODUCTIVE RISK



Insulin resistance

Dyslipidaemia

Type 2 diabetes

Cardiovascular disease



Cancer risk



Presenting symptoms at all life stages: Quality of life impairment, clinical hyperandrogenic symptoms (seborrhea, acne, hirsutism, alopecia).

Red flags^{14,15}

Women with clinical features of androgen-secreting tumor:

- Sudden, rapid onset of hair growth
- Severe hirsutism
- **Obvious signs of virilisation**
- Palpable abdominal or pelvic mass

Women in whom further investigations reveal:

Serum total testosterone >4 nmol/L

Elevated 17-hydroxyprogesterone levels



Women with irregular bleeding and suspicion of malignancy¹⁵

References

- 1. Azziz R, Carmina E, Chen, Z et al. Polycystic ovary syndrome. Nat Rev Dis Primers. 2016 Aug 11;2:16057
- 2. Brady C, et al. Polycystic ovary syndrome and its impact on women's quality of life: More than just an endocrine disorder. Drug, Healthc and Patient Saf 2009:1 9-15
- Sirmans SM, Pate KA. Epidemiology, diagnosis, and management of polycystic ovary syndrome. Clin Epidemiol 2014;6:1–13
 Zafari Zangeneh F, Jafarabadi M, Naghizadeh MM, Abedinia N, Haghollahhi F. Psychological distress in women with polycystic ovary syndrome from Imam Khomeini hospital, Tehran. J Reprod Infertil. 2012;13(2):111-15
- Jones GL, Hall JM, Balen AH, et al. Health-related quality of life measurement in women with polycystic ovary syndrome: a systematic review. Hum Reprod Update. 2008;14:15-25
 Azziz R, Marin C, Hoq L, Badamgarav E, Song P. Health care-related economic burden of the polycystic ovary syndrome during the reproductive life span. J Clin Endocrinol Metab. 2005;90:4650-8
- Rotterdam ESHRE/ASRM-sponsored PCOS consensus workshop group. Revised 2003 consensus on diagnostic criteria and long-term health risks related to polycystic ovary syndrome (PCOS). Hum Reprod 2004;19:41-7
- Lizneva D, et al. Criteria, prevalence, and phenotypes of polycystic ovary syndrome. Fertil Steril 2016;106(1)6-15
 Fauser BCJM, et al. Consensus on women's health aspects of polycystic ovary syndrome (PCOS): the Amsterdam ESHRE/ASRM-Sponsored 3rd PCOS Consensus Workshop Group. Fertil Steril 2012;97:28–38
- 10. Legro RS, et al. Diagnosis and Treatment of Polycystic Ovary Syndrome: An Endocrine Society Clinical Practice Guideline. J Clin Endocrinol Metab 2013;98:4565–92
- 11. Redmond GP. Androgens and women's health. Int J Fertil Womens Med. 1998 Mar-Apr;43(2):91-7
- 12. Yildiz, B. Diagnosis of hyperandrogenism: clinical criteria. Best Practice Res Clin Endocrinol Metabol 2006;20(2):167–76
- 13. Hamilton-Fairly D & Taylor A. ABC of subfertility. Anovulation. BMJ. 2003;327:546-9
- 14. Bode D, et al. Hirsutism in women. Am Fam Physician. 2012 15;85(4):373-80
- 15. Singh S, et al. SOGC Clinical Practice Guideline. Abnormal Uterine Bleeding in Pre-Menopausal Women. J Obstet Gynaecol Can 2013;35(5 eSuppl):S1-S28

Find further FREE educational materials from 'The Global AWARE Group' on the European Menopause & Andropause Society website:

https://www.emas-online.org/nonemaseducationalmaterials

The Global AWARE Group is an independent panel of physicians with expert interest in the treatment of androgen excess in women. Formation of the group and its ongoing work is supported by Bayer AG.

