

# Androgen excess affects up to 1 in 5 women of reproductive age<sup>1</sup>



## Why is recognition of androgen excess important?

Hyperandrogenic symptoms are often underreported and have a negative impact on quality of life and psychological wellbeing<sup>2-6</sup>

Depression and anxiety are common amongst women with hyperandrogenic skin symptoms such as acne<sup>3-6</sup>

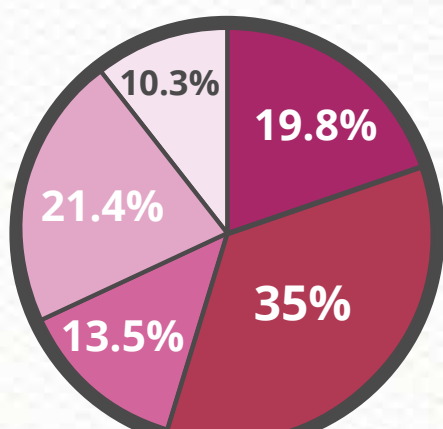
**ALMOST 50%** of women WITH ACNE suffer from **ANXIETY**<sup>6</sup>

**18%** of acne PATIENTS report **DEPRESSION**<sup>6</sup>

**DEPRESSION** **ANXIETY**  
**SOCIAL WITHDRAWAL** **POORER SOCIAL FUNCTIONING**  
**LOW MOOD** **SUICIDAL THOUGHTS** **NEGATIVE BODY IMAGE** **LOW SELF-ESTEEM**<sup>7,8</sup>

## Women with hirsutism caused by androgen excess experience high levels of psychosocial distress

More than half of women with hirsutism report the effect on their quality of life as extremely large or very large (DLQI scores of 11-30).<sup>2</sup>



Effect measured by Dermatology Life Quality Index (DLQI)

- Extremely large (21-30)
- Very large (11-20)
- Moderate (6-10)
- Small (2-3)
- None (0-1)

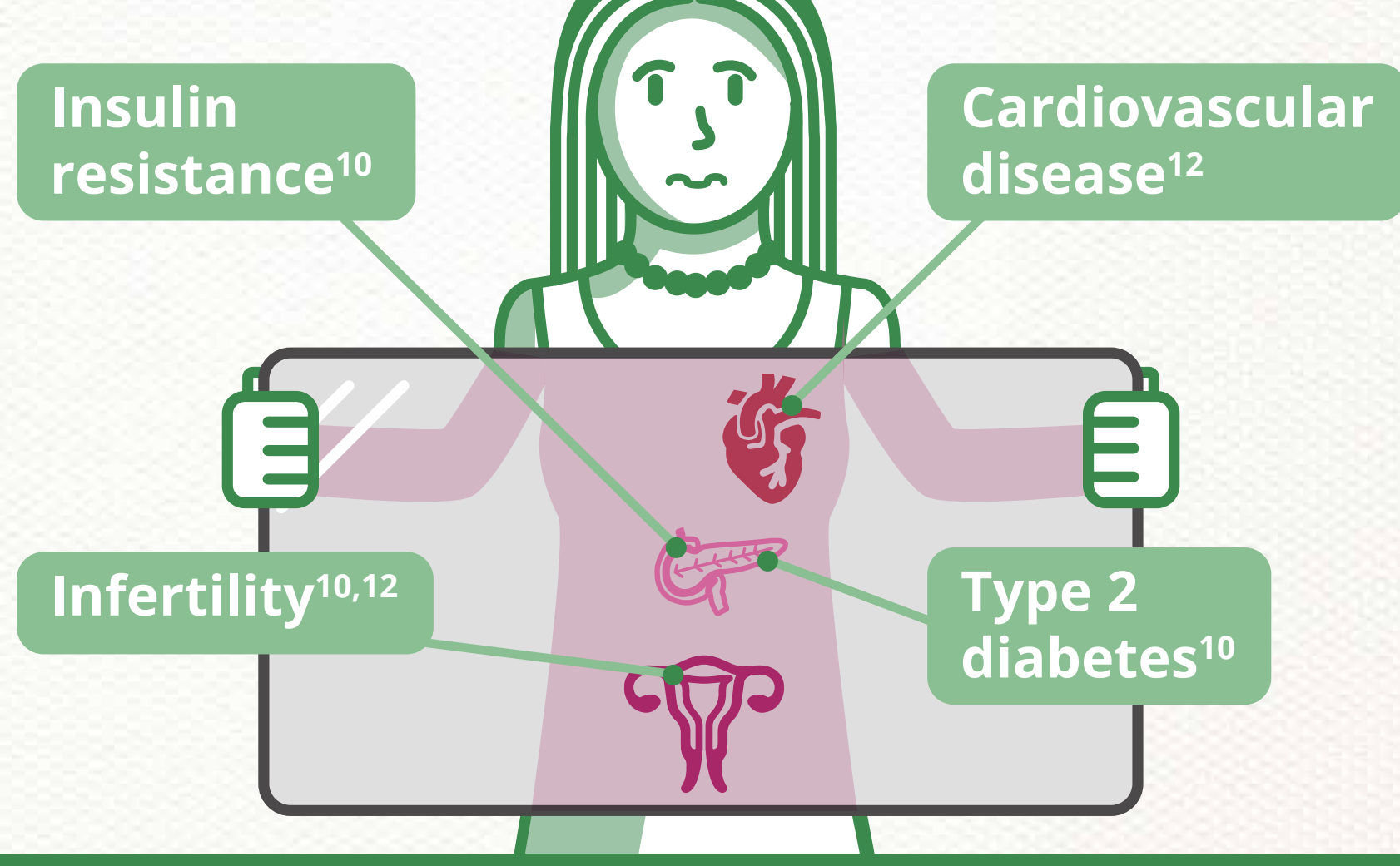
**75%** of women report anxiety<sup>9</sup>

**30%** of women report depression<sup>9</sup>

**29%** of women report both anxiety and depression<sup>9</sup>

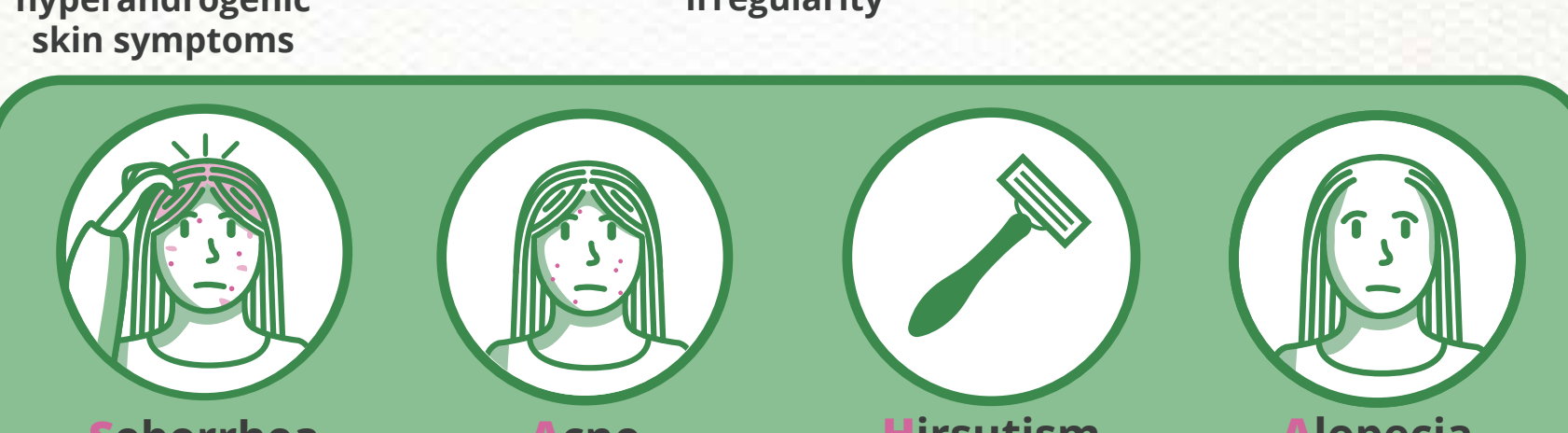


## Androgen excess is linked to long-term medical problems, particularly in women with polycystic ovary syndrome<sup>10-12</sup>



## What are the signs and symptoms of androgen excess?

Women can present with a combination of different symptoms<sup>7,13</sup>



In some cases, women present with all four hyperandrogenic skin symptoms, described as the SAHA syndrome.<sup>11,14</sup>

## Androgen excess can be clinical, biochemical or both<sup>11,12</sup>

CLINICAL HYPERANDROGENISM	BIOCHEMICAL HYPERANDROGENISM
<p>Increased sensitivity to pilosebaceous unit</p> <ul style="list-style-type: none"> <li>Women may have normal serum androgen levels.</li> <li>The pilosebaceous unit has increased sensitivity to androgens leading to skin symptoms such as hirsutism or acne.</li> </ul>	<p>Increased androgen levels</p> <ul style="list-style-type: none"> <li>Women have excessive production and/or secretion of androgens which may be of ovarian or adrenal origin.</li> <li>This leads to less obvious systemic symptoms of menstrual irregularity or infertility.</li> </ul>
+ <p>Increased sensitivity to pilosebaceous unit + Increased androgen levels</p> <p><b>CLINICAL AND BIOCHEMICAL</b> Some women may have excessive production and/or secretion of androgens AND increased sensitivity of the pilosebaceous unit to androgens.</p>	

## Red flags<sup>15</sup>

- 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 nanomol/L
  - Elevated 17-hydroxyprogesterone levels
- Women with irregular bleeding and suspicion of malignancy<sup>16</sup>**

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