

SPOTLIGHT

on Adult Female Acne (and Men's Acne, too)

■ If I could have a dollar for every...you know how the saying goes. Well, in this case, if I could donate a dollar to one of our favorite charitable organizations for every adult female who comes in and asks the question: Why do I have acne or why am I still getting acne at my age, that organization might not have to do any additional fundraisers this year!

A few facts about acne in adult women from the website www.acne.org: 1) Hormonal acne can be frustrating, but easily treated; 2) More than half of adult women experience at least occasional breakouts; 3) 60-70% of women who struggle with adult acne have premenstrual flare-ups; 4) Acne can occur throughout a woman's adult life, especially in early adulthood, during pregnancy and during menopause.

So, why do women get acne in adulthood? The answer lies with none other than the hormones that many of us know and "love." All women have a certain amount of male hormone (testosterone or androgen) circulating in their blood. Some of it is bound to a circulating protein called sex hormone binding globulin (SHBG) and some is bound to another protein called albumin. The rest circulates freely in the blood and this is the testosterone that is responsible for hormone-induced acne and other problems. Androgen excess is the most common endocrine disorder in women of reproductive age.

Androgen sources in women include the adrenal glands (above the kidneys), the ovaries and peripheral tissues such as fat and skin. The liver and gut also play a minor role in making androgens. Testosterone is the only androgen with direct activity on tissues, while other such as dehydroepiandrosterone sulfate (DHEAS), dehydroepiandrosterone (DHEA) and androstenedione are all precursors to testosterone. In the tissue, testosterone is further converted to the most active form, dihydrotestosterone (DHT).



Androgens induce maleness and in the case of adult acne, the effect is mainly on the hair-follicle/oil gland unit in the skin known as the pilosebaceous unit. Some other signs of androgen excess include increased hair growth in areas such as the face, armpits, central chest and pubic skin. Deepening of the voice and obesity are other signs. In acne, the androgens cause excess oil production and shedding of skin cells inside the follicle. Acne bacteria known as *propionibacterium acnes* (*P. acnes*) proliferate and the oil is changed into inflammatory substances that cause the acne bump or breakout.

The most common cause of androgen excess in women is polycystic ovarian syndrome (PCOS). Other causes include defects in the pathways used by the body to produce androgens, pregnancy, certain syndromes and rarely, ovarian or adrenal tumors. Lab studies can detect excess androgens and imaging studies such as ultrasound, CT, MRI, and nuclear medicine studies can detect cystic ovaries or tumors.

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The treatment of adult acne includes topical therapies such as retinoids (vitamin A derivatives), salicylic acid, specially formulated washes and sometimes, low-dose antibiotics used in doses that reduce inflammation, but do not promote resistant bacteria. Often, medication therapy is prescribed to correct symptoms of androgen excess. Birth control pills are used to suppress ovarian androgens, steroids are used to suppress adrenal androgens, and anti-androgenic medication (spironolactone, flutamide, cyproterone acetate) is used to block the action of excess male hormone. Treatment must be continued for a long time as the good effects of the drugs take several months to appear. Very severe cases of acne sometimes require the use of the medication isotretinoin, which is prescribed over a five month period.

In the office, we use several innovative treatments for adult acne. For example, photodynamic therapy (PDT) reduces the *P. acnes* bacteria and shrinks oil glands. This treatment uses light and a special topical skin sensitizer (makes the skin more sensitive to light) to achieve its effect. Skin rejuvenation is a good side-benefit from this treatment. Vibradermabrasion, a type of microdermabrasion using a specifically designed vibrating paddle, is painless and proven effective at reducing pore size and smoothing the skin by building new collagen. Specifically selected cosmeceutical skin products are used to combat specific problems such as redness, persistent breakouts, whiteheads and/or blackheads.

If the acne has produced scarring (pits or wavy-surfaced skin where the acne was), the use of powerful lasers such as the Palomar Lux 1540 non-ablative fractional laser or the Palomar Lux 2940 ablative fractional laser can produce smooth skin in a matter of



weeks or months. We make use of our Candela lasers as well for skin tightening and smoothing. Dermal skin fillers (Restylane, Evolence, Radiesse, Prevelle and others) are used to fill in deeper acne scars, making them level with the skin surface. Darkening of the skin (hyperpigmentation) occurs after acne. It is more often seen in darker skin types and African Americans. Vibradermabrasion and cosmeceutical bleaching agents are used to even the skin tone and reduce the dark spots.

Men get acne in adulthood as well. While treatments such as anti-androgens are not used, topical treatments, anti-inflammatory antibiotics as well as lasers, light sources, and fillers are used with much success.

Hopefully, this article has given you some understanding of adult acne including its causes and the available treatments for both the acne itself and the cosmetic problems of scarring, skin discoloration and redness among others that result from it. If you are frustrated by acne or its after-effects, see your board-certified dermatologist so that he or she can help you get the skin you deserve!



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