

## New, Proven Treatment for Acne Vulgaris

By Lyn Hanshew, M.D.

Acne used to be a temporary skin affliction for many during the teenage years. Acne has now become a life-long, inflammatory condition of the skin, affecting tens of millions of people. Acne is very common, affecting about 90% of teens and more than 40% of adult women in Westernized countries. Adults who suffer from chronic acne endure severe symptoms and scarring when left untreated. Acne can have mild symptoms, such as red, irritated skin to extreme symptoms of papules, pustules, inflamed nodules, fibrosis and skin ulcers. Severe acne can result in scarring, social embarrassment and psychological damage.

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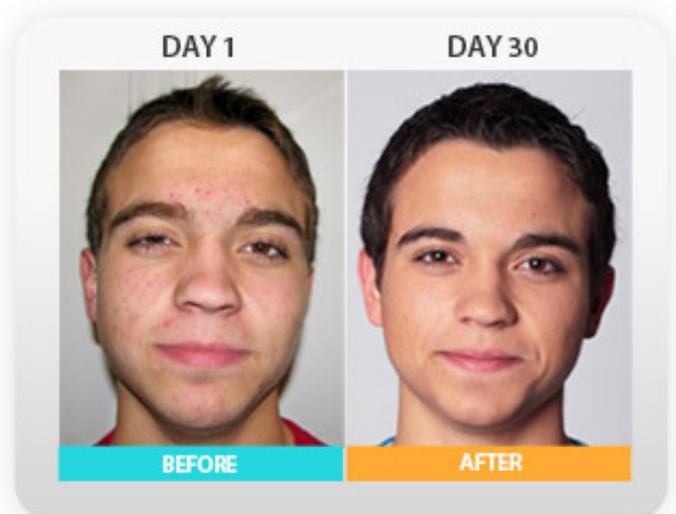
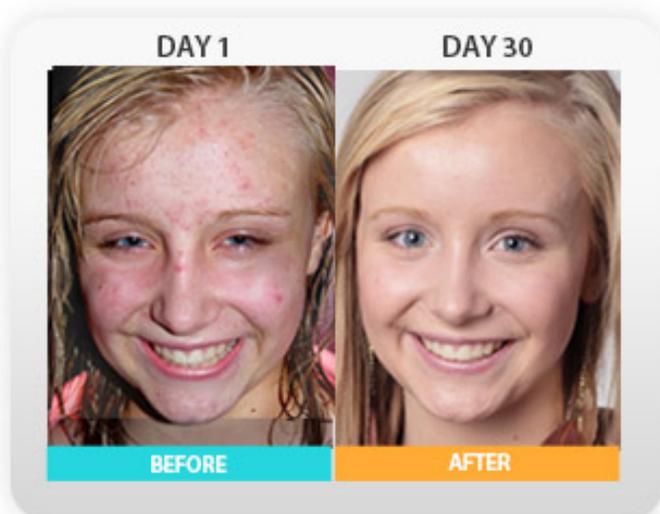
Acne is very common, affecting about 90% of teens and more than 40% of adult women in Westernized countries. Adults who suffer from chronic acne endure severe symptoms and scarring when left untreated. Acne can have mild symptoms, such as red, irritated skin to extreme symptoms of papules, pustules, inflamed nodules, fibrosis and skin ulcers. Severe acne can result in scarring, social embarrassment and psychological damage.

Acne in teenagers begins with increased oil production in the skin associated with increased androgens, especially Testosterone production, during puberty. Black heads (oxidized oil) and white heads (unoxidized oil) are plugged pores commonly seen in mild acne. These can become inflamed, red, tender papules and evolve into moderate to severe pustules, nodules and cysts with secondary bacterial infection. Acne is usually located on the face, but it can be commonly found anywhere on the skin of the upper body.

In order to effectively treat acne symptoms, we must identify the causes. The skin is the largest organ of the body. The etiology of acne begins with excess androgen production associated with puberty or hormone imbalance, due to environmental toxin exposure including heavy metals and bisphenol A.

Let's go into more detail as to the sources of increased androgen and oil production and the effect upon the skin. A strong correlation has been found between serum levels of bisphenol A and androgen concentrations. The stimulatory effects of toxins, androgens, excess dietary glucose and obesity, stimulate mononuclear cells to release tumor necrosis factor, a potent inflammatory cytokine which causes even more inflammation in the skin. In addition, because of the high levels of tumor necrosis factor and inflammation, people with acne experience high levels of oxidative stress and low levels of glutathione which prevents healing.

Insulin resistance associated with obesity, not only increases ovarian androgen production and inflammation but also leads to low levels of sex hormone-binding globulin (SHBG) and high levels of gonadotropin-releasing hormone (GnRH), which



results in increased aromatization. This hormonal dysregulation exacerbates acne symptoms due to low levels of SHBG, resulting in increased Free Testosterone and high levels of GnRH resulting in increased Luteinizing Hormone (LH), which increases ovarian theca cell androgen production which increases oil production in the skin. In addition to the growth hormone effect, dairy product consumption and puberty increase IGF-1 levels. Increased IGF-1 is associated with higher 5-reductase levels, which convert testosterone to dihydrotestosterone, a hormone that stimulates sebum production in patients with acne. Insulin-like growth factor 1 increases the number of oil-producing cells in the skin.

Acne patients have a heightened stress response and increased substance P activity, which leads to increased sebaceous gland activity. Given that high cortisol levels can affect insulin levels and contribute to insulin resistance, stress is a major contributor to androgen production and the development of acne.

It is also important to realize that acne patients have a heightened stress response and increased substance P activity, which lead to increased sebaceous gland oil production. Because high cortisol levels can affect insulin levels and contribute to insulin resistance, stress is a major contributor to androgen production, and the development of acne. Normalizing cortisol levels by decreasing the adrenal stress response by eliminating toxins and practicing stress management techniques is also helpful.

Nutritional and lifestyle changes are also helpful in the successful treatment of acne. A nutrition plan of organic foods including, lean protein, healthy fats, veg-

etables, fruits, and whole grains, along with the elimination of refined grains, sugar and dairy products will contribute the goal of achieving optimal weight and improving insulin and glucose levels in order to decrease inflammation.

Is acne caused by a bacterial infection? No, but there is a connection. The bacteria *Propionibacterium acnes* and *Staphylococcus epidermidis* occur naturally in healthy hair follicles. When excess oil and overgrowth of bacteria occur in the hair follicles, enzymes are secreted that break down the excess oil and cause inflammation. This continuous inflammatory cycle of excess oil due to excess androgen production, bacteria and enzymes results in acne.

Toxins from inside the body, as well as from the outside environment, such as toxic heavy metals, pesticides, and free radicals are deposited into the skin, increasing inflammation. The skin has limited means of detoxification. These include exfoliation of the top layer dead cells, lymphatic drainage, blood flow and sweat.

Finally, a clinically-proven, topical treatment system is available to address the causes of acne: excess oil, bacterial overgrowth and inflammation.

### **Clinically Proven Acne Treatment**

As with most conditions, acne is multifactorial in cause. However, the effective treatment and clearing of acne can be achieved in three simple steps:

- Remove toxins from the pores and cells of the dermal layers
- Reduce inflammation of the dermis
- Kill acne associated bacteria within in the pores of the skin

The Complexion Clear™ acne treatment system is an effective, “one-two punch” topical intervention to kill acne associated bacteria, reduce inflammation and heal the skin. It is the most powerful and effective FDA listed over-the-counter protocol with spectacular results for those suffering from acne. This acne treatment system combines powerful antioxidant skincare and antibacterial science to quickly reduce skin inflammation, heal and prevent acne.

### **The Complexion Clear™ Treatment system consists of:**

- 1) 60 medicated Acne Treatment Pads – These exceptional acne treatment pads effectively kill acne-related bacteria on contact, reduce excess oil and inflammation, heal skin tissue and increase natural collagen production.
- 2) 2 oz Activator
- 3) 2 oz Complexion Clear Breakout Prevention
- 4) 2 oz Clarifying Cream
- 5) 2 oz Rejuvenating Cream

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