

Acne is a skin condition that affects all ethnic groups and ages. It affects at least 85% of individuals between 12 and 24 years of age. Patients usually see gradual improvement in their 20's and 30's; however acne can persist into middle age and beyond.

CAUSES

Acne is a disorder of the hair follicle, the base of which contains an oil gland that produces sebum, or skin oil.

Acne results from:

- excessive production of **sebum**
 - ○ abnormal shedding or "**stickiness**" of **superficial skin cells**
 - ○ excessive "**stickiness**" of the **skin cells lining the hair follicle**
 - and over-abundance of a particular skin bacteria: Propionibacterium acnes (**P. acnes**)
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- Excessive sebum causes overly OILY SKIN.
 - Sticky cells result in blocked pores, known as COMEDONES (whiteheads and blackheads).
 - Sebum accumulates behind the blockages. When P. acnes are trapped in the sebum, inflammation and infection results in PIMPLES or PUSTULES.
 - If the infection tracks downward, these infections can develop into deep painful NODULES or CYSTS.

TREATMENT

Acne is a chronic condition. It is unrealistic to expect a complete cure from acne; however, acne can be controlled so that you experience a significant decrease in lesions. Any treatment requires time to work. You **MUST** adhere to the treatment plan in order to have success.

There are several life-style factors that can worsen acne and which can be controlled. Acne can be exacerbated by blocking pores with cosmetics, hair products, helmets, backpacks, shoulder pads, swim caps, and cell phones. Sports equipment and electronics that come into frequent contact with the face should be cleaned with antibacterial soap or wiped frequently with rubbing alcohol. Cosmetics and skin-care products should be oil-free, noncomedogenic, and/or non-acneigenic. Hair care products should be oil-free. Hair products and hair oils can extend or transfer onto the forehead, jaw line, neck or back, worsening acne in these areas. It is important to position your hair off the face and back prior to sleep; and pillow cases should be washed several times per week.

The following are common recommendations for treatment of acne and suggestions to help you through some of the initial challenges associated with various treatments:

ALL ACNE

Follow the guidelines for an anti-inflammatory diet, i.e. foods that are low-fat, high-fiber, high in vitamins and minerals, not refined, not processed, not fried, and low in sugar. Concentrate on fruits and vegetables that have deep colors. Meats should be hormone-free. We strongly recommend switching from cow's milk to almond milk, which is higher in calcium, lower in sugar, and has no xeno-estrogens.

Supplements to consider: High quality fish oil (stored in the refrigerator at the store) and then stored in the refrigerator at home, 3 capsules each morning for its anti-inflammatory effects; Nature's Bounty Hair, Skin & Nails, 3 capsules per day (which contains Vitamins A; C; D; E; eight B vitamins including folate; Zinc; and Selenium, all of which are good anti-inflammatories which assist the immune system in fighting infection.

Cleanse with the Clarisonic Pro Brush twice a day. There is no technologically superior brush available on the market with more scientific studies showing its effectiveness in cleaning out the pores in acneic skin.

WHITEHEADS & BLACKHEADS

Glycolic acid (Glytone cleanser): This is an alpha hydroxy acid (AHA), a superficial exfoliant that helps shed the "sticky cells" on the skin's surface and allows better and faster penetration of acne medications.

Salicylic acid (Glytone toner): This is a beta hydroxy acid (BHA), an exfoliant that penetrates the follicle, helps shed the "sticky cells" lining the follicle to prevent clogging; and helps break down blackheads and whiteheads. You should see the effects of salicylic acid by 4-6 weeks of consistent use. The benefits of salicylic acid last only as long as you use the product regularly.

Topical retinoids (Avène Retrinal): Retinoids decrease sebum production; actually promote the extrusion of the plugged material in the follicle; and prevent the formation of new comedones; thus retinoids are very effective against comedones (whiteheads and blackheads). You should see the effects of retinoids by 6-8 weeks of consistent use.

(The challenge with retinoids such as Retin-A and Tretinoin is that they can cause irritation, redness, and peeling. Retrinal® is much better tolerated than most other retinoids.) Retinoids also cause significant sunsensitivity, so always use a good sunscreen with both UV-A and UV-B protection.

Medicated Acne Facials: These combine AHA's and BHA's and are administered by our esthetician under Dr. Christian's direction to accelerate the improvement that can be seen from using the above products at home.

PIMPLES & PUSTULES

Benzoyl peroxide (Glytone Acne Gel): Benzoyl peroxide reduces the bacterial count on the skin, helps prevent P. acnes from overgrowing, and dries up existing blemishes. You should see the effects of BP by 6-8 weeks of regular use. The effects stop as soon as you discontinue using the product.

One challenge with BP is skin dryness. Only apply BP to blemishes, but apply it as soon as you notice one forming. Another challenge with BP is that it can bleach fabrics. We recommend you buy white washcloths and hand towels and use these for washing and drying your face. You might also want to invest in a couple of white sleep T's.

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Topical antibiotics (Cleocin-T): This topical prescription solution fight bacteria and decreases inflammation in superficial acne but does not penetrate deeply enough to help with cystic acne.

Birth Control Pills: Oral contraceptives cause an overall decrease in androgens circulating in the blood stream thus decreasing sebum production. Therefore, combination birth control pills can be very effective in treating pimples.

Spirolactone is particularly effective in the treatment of acne localized to the jaw line or "beard distribution." Spirolactone is prescription only and is a mild diuretic that has the side-effect of preventing the production of androgens and thus decreasing the production of sebum. It is also effective in reducing unwanted hair growth in the beard distribution. Spirolactone is best taken in the morning.

Oral antibiotics (Doxycycline; Minocycline; Erythromycin): These prescription medications kill bacteria and are effective against deeper acne, however they have more side effects than topical antibiotics and require 48 weeks to see results. They do not affect oil production or clogged pores, so they are usually prescribed in combination with other treatments.

CYSTIC ACNE

Photodynamic Therapy, PDT: PDT kills bacteria, shrinks the oil glands, normalizes the shedding of dead cells within the follicle, improves the skin's overall texture, holds promise in the repair of acne scarring and is an excellent option for patients who do not tolerate the side effects of Accutane or are unwilling to try Accutane because of the side effects. In PDT, Levulan, a substance that occurs naturally in the body in small amounts and is concentrated into the oil glands of the skin, is applied to the affected area. One hour later, the skin is treated with IPL, a light-based treatment offered at Timeless Laser & Skin Care.

The challenges with PDT are an appearance and a feeling of having a sun burn which typically lasts from 2-4 hours. Patients are also usually very sensitive to the sun for 3 days after treatment and we recommend Glytone 40 sunscreen with both UV-A and UV-B protection.

Accutane: This prescription medication decreases sebum production; decreases the "stickiness" of the skin cells; and decreases the bacteria in the sebaceous gland and on the skin surface. Isotretinoin can often clear even severe cystic acne; however, this powerful medication can cause severe drying of the skin, headaches, depression, dry eyes, decreased night vision, impaired liver function. More importantly, Accutane can cause severe birth defects if taken by a woman who is pregnant or becomes pregnant while taking it.

ACNE SCARS

Glytone and Avène products: Specific Glytone and Avène products, available at Timeless Laser & Skin Care, help speed up the skin's remodeling process and heal the post-inflammatory redness that occurs following an acne lesion and protect against additional inflammation.

Medical Grade Chemical Peels: Glycolic, salicylic, and TCA peels remove a thin layer from the surface of the skin, which can help minimize the appearance of very mild acne scars.

Laser Genesis and IPL: Laser Genesis and IPL, which are both offered at Timeless Laser & Skin Care, rejuvenate skin and helps smooth the appearance of mild to moderate acne scars. The specific and directed warming of the superficial dermis, the layer of skin immediately under the epidermis, cause an increase in collagen production, elevating the deep portions of the scar. These treatments are not effective for "ice pick" type scars. Patients usually need 5-10 treatments scheduled 2-4 weeks apart, but often see effects after just a few treatments.

Injectable fillers (Juvederm): Injectable forms of hyaluronic acid, a substance that occurs naturally in the skin and joints, are available at Timeless Laser & Skin Care and can help smooth out box scars and linear scars. They plump the skin under the base of the scar, raising it to be more even with the surrounding skin. The effects of fillers last for 9-12 months.

DR. STEFANIE CHRISTIAN and TIMELESS LASER & SKIN CARE OFFER THE FOLLOWING SERVICES FOR THE TREATMENT OF ACNE:

1. **Physician Grade skin care products**, such as cleansers, retinoids, AHA's, BHA's, non-comedogenic sunscreens.
2. **Prescriptions** for antibiotics and Spironolactone.
3. **Medicated Acne Facials**
4. **Medical Grade Chemical Peels**
5. **PDT**
6. **Laser Genesis and IPL**
7. **Injectable Fillers**

DR. JEFFREY CHRISTIAN OFFERS THE FOLLOWING SERVICES FOR THE TREATMENT OF ACNE:

Prescriptions for Birth Control Pills and Accutane