



ACNE

Acne is a skin condition that occurs when the hair follicles become plugged with oil and dead skin cells. It often causes whiteheads, blackheads or pimples, and usually appears on the face, upper chest, and back. Acne is most common among teenagers, though it affects people of all ages. Patients usually see gradual improvement in their 20's and 30's; however, acne can persist into middle age and beyond.

SYMPTOMS

Acne signs and symptoms vary depending on the severity of your condition:

- **Whiteheads** (closed plugged pores)
- **Blackheads** (open plugged pores)
- **Papules** (small red, tender bumps)
- **Pimples** (pustules, which are papules with pus at their tips)
- **Nodules** (large, solid, painful lumps beneath the surface of the skin)
- **Cysts** (painful, pus-filled lumps beneath the surface of the skin)

CAUSES

Four main processes involved in developing acne:

- Excess oil production
- Hair follicles clogged by oil and sticky dead skin cells → Whiteheads, Blackheads
- Abnormal inflammation with increased inflammatory mediators → Redness, Papules, Nodules
- A particular bacterium (C. Acnes) → Pustules and Cysts

Factors that worsen acne

- Genetics
- Hormones: puberty, pregnancy, menopause (all have excess androgens, which cause oil glands to enlarge and produce more oil)
- Diseases (polycystic ovary syndrome and congenital adrenal hyperplasia: both cause excess androgens)
- Vegetable-based cosmetic and hair products that clog pores or trigger inflammation
- Stress - triggers inflammation
- Diet - triggers inflammation
- Mechanical occlusion of pores with headbands, shoulder pads, back packs, or under-wire bras
- Medications (steroids, lithium, some antiepileptics, and iodides)

TREATMENT

Acne is a chronic condition. It is unrealistic to expect a complete cure from acne; however, acne can be controlled. Any treatment requires time and adherence to all components of the treatment plan in order to have success.

There are several lifestyle factors that can worsen acne and which can be controlled. Avoid touching your face, and resist squeezing blackheads or pimples. Choose oil-free makeups that won't clog your pores, and always wash them off before bed. Use water-based gels and sprays for your hair, and keep hair off your face so products won't clog your pores, especially at night. In addition, wash your pillow cases 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. In particular, we strongly recommend a low glycemic diet, drinking plenty of water, and switching from cow's milk to almond milk, which is higher in calcium, lower in sugar, and has no animal estrogens.

Cleanse your skin twice a day.

WHITEHEADS, BLACKHEADS & PAPULES

Salicylic acid (Glytone Acne Toner or Glytone Acne Self-foaming Cleanser): This exfoliant sheds the 'sticky cells,' prevents 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. SA can be drying.

Topical retinoids (Avène RetrinAL, Prescription Retin-A Micro): Retinoids decrease oil production, are anti-inflammatory, and break down whiteheads and blackheads. Retinoids should be applied in the evening to completely DRY skin. You should see the effects by 6 – 8 weeks of consistent use. RetrinAL is much better tolerated than most other retinoids. Retinoids can cause significant sun-sensitivity, so always use a zinc-based sunscreen.

Medicated Acne Facials: These are administered by our aesthetician to accelerate the improvement that can be seen from using the products we recommend at home.

HydraFacial: This procedure deep cleans, exfoliates, extracts, and cools and nourishes the skin. It treats congested and enlarged pores seen with acne as well as post-acne hyperpigmentation. We do not believe that HydraFacial should be used on active infected lesions.

PIMPLES & NODULES:

Anti-Androgen (Spironolactone, Aldactone) This prescription prevents the production of androgens and thus is particularly effective in the treatment of acne localized to the jaw line or 'beard distribution.' Spironolactone is a mild diuretic, and you should have your blood pressure checked one week after starting the medication. Spironolactone is most effective if taken in conjunction with birth control pills.

Azelaic acid (Finacea): This naturally occurring acid is found in wheat, barley, and rye. As a topical prescription, it has antibacterial properties and is as effective as some conventional acne treatments when used twice a day for at least four weeks. It's even more effective when used in combination with erythromycin. It is safe during pregnancy (although most acne improves during pregnancy because of the natural reduction in androgens) and while breastfeeding.

Benzoyl peroxide (Glytone Acne 3P Gel, Prescription Duac); Benzoyl peroxide reduces the bacterial count on the skin without causing bacterial resistance, helps prevent *C. acnes* from overgrowing, and dries up existing blemishes. Apply BP to blemishes as soon as you notice them forming, and 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; another challenge is that it can bleach fabrics. We recommend you buy white washcloths and hand towels to use to wash your face and even consider white sleep T's and pillowcases.

Birth Control Pills: Oral contraceptives cause an overall decrease in androgens circulating in the blood stream, thereby decreasing sebum production. Therefore, birth control pills can be very effective in treating the whole cascade of acne formation.

Medical Grade Peels: Our peels are specifically designed for blemished oily skin with whiteheads or blackheads. They also help with mild post inflammatory hyperpigmentation.

Oral Antibiotics (Prescription Doxycycline; Minocycline; Erythromycin): These prescriptions medications kill bacteria and are effective against deeper acne; however, they have more side effects than topical antibiotics and require 4 – 8 weeks to see results. They do not affect oil production or clogged pores, so they are usually prescribed

in combination with other treatments. Oral antibiotics should be a last resort because of the risk of bacterial resistance and the interference with the beneficial bacteria in the gut.

Topical Clindamycin (Cleocin-T, Prescription Duac): This topical antibiotic fights bacteria and decreases inflammation in superficial acne but does not penetrate deeply enough to help with nodular or cystic acne.

CYSTIC ACNE

Photodynamic Therapy, PDT: PDT is a medically enhanced light-based treatment that 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 feeling of having a sun burn as well as dramatic light sensitivity not only to the sun but also to indoor lights. We strongly recommend any of our zinc-based sunscreens with high SPF for use after PDT.

Accutane: This prescription medication decreases oil production; decreases the 'stickiness' of the skin cells; and decreases bacteria in the oil gland and on the skin surface. Accutane 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, and 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

Medical Grade Chemical Peels: Perfect Derma and TCA peels, both offered at Timeless Laser & Skin Care, remove a thin layer from the surface of the skin, which can help minimize the appearance of very mild acne scars.

IPL: IPL, which is offered at Timeless Laser & Skin Care, rejuvenates skin and helps smooth the appearance of mild to moderate acne scars. The specific and directed warming of the dermal-epidermal junction causes an increase in collagen production, elevating the deep portions of the scar. This treatment is not effective for 'ice pick' type scars. Patients usually need 4-8 treatments scheduled 3 – 4 weeks apart, but often see effects after just a few treatments.

Injectable fillers (Juvéderm, Belotero): 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.