

# Laser Acne Removal

## ClearLight Acne Photo Clearing System

**A Few Facts About Acne:** Studies indicate that most people experience acne in some form at some time in their life. Acne usually begins during adolescence but often continues into adulthood. Hormonal changes cause the enlargement and blocking of oil-producing sebaceous glands near the hair follicle within the skin. Acne usually begins with an abnormal amount of bacteria, mainly propionibacterium acnes (P. acnes). This typically causes painful pimples - known as inflamed pustules of acne or inflammatory acne - that can appear on the face, chest, back, limbs and virtually any other part of the body. Acne can produce life-long scars, both physically and emotionally! A very common problem... acne-like conditions are very common and is not limited to teenagers. acne is the most common skin disorder in the US affecting 17 million people, and not all of them teens. from infants to the elderly, 80 % of the population experiences acne at one time or another. scrubbing with harsh soaps or cleansers and using some acne medications can irritate and dry your skin, making your acne worse.

### Limitations of Current Treatment Methods

The most common approaches to acne management include:

- Topical applications. From widely available over-the-counter ointments to prescription creams, this is the most popular way of treating acne; in many cases, however, creams often irritate the skin and have minimal long-term effect in actually reducing P.acnes.
- Oral antibiotics. Although somewhat more effective than topicals, antibiotics are limited by the fact that 40% of acne bacteria are insensitive to oral antibiotics. Additionally, patients must continue the antibiotic regimen for a lengthy period of time (usually at least 3-4 months). Since improvement in the patient's condition is often very gradual, permanent scarring may occur before the condition is appropriately managed. Moreover, there is a growing reluctance in the medical community to use antibiotics
- Accutane. Used as the treatment of last resort, Accutane is associated with potentially serious side effects. The ClearLight system, by comparison, can be used as a first line of defense with no side effects and clinical efficacy consistent with oral antibiotics and topical treatments.

### Acne PhotoClearing (APC) Technology vs. Other Treatment Modalities

#### The Clearlight Advantage

The innovative ClearLight System is powered by light-based Acne PhotoClearing (APC&trade;) technology, which penetrates the skin and destroys surface and ductal p. acnes bacteria quickly and easily. Its destruction rate surpasses the normal proliferation rate, assuring a rapid decrease in p. acnes that is unmatched by other treatments. There is no irritation, side effects or photosensitivity.

Key benefits of ClearLight include:

- New paradigm for acne treatment

- Short treatment regimen &ndash; 8 treatments over 4 weeks to achieve impressive results
- Systemic drug-free treatment
- Increased patient compliance and patient satisfaction
- No side effects. No pain. No downtime.
- Suitable for all body areas, including sensitive beard area
- Precancerous skin lesions by preventing skin cancer
- Improvement of wrinkles and pore size
- Improvement of skin texture
- Minimizing pigmentation
- Treatment of sebaceous hyperplasia

#### New Acne Cures - News on Three Effective Treatments

by Erik Verkler Too much oil and sebum--the products of overactive oil glands--start the acne spiral by clogging pores. Later, bacteria move in to munch the oil, turning clogged pores into pimples. The usual remedies for oil overproduction, lotions and gland-shrinking medications, don't always work or can have severe side effects. In 2003, the FDA approved a laser treatment that causes temporary heat damage to oil glands, which may reduce the oil supply. In a study of 27 men with acne on their backs, the Smoothbeam laser therapy cleared up 98 percent of breakouts after four 5-minute treatments. It's also being used to treat moderate acne problems on the face, says Arielle Kauvar, MD, clinical associate professor of dermatology at New York University School of Medicine. The only side effect: Skin turns pink for an hour or two.

#### Drug-Free Pimple Control

A FDA-approved light treatment for mild to moderate acne is available in dermatology offices, as of April 2003. ClearLight uses high-intensity light to kill *Propionibacterium acnes*, the "bug" responsible for acne pimples, bumps, cysts, and redness. In a study at the State University of New York, 60 percent of acne breakouts cleared up after volunteers got two 10- to 15-minute treatments per week for 4 weeks. Their skin continued to improve for 3 months after the last treatment. Light therapy may help teens and adults whose acne has become antibiotic-resistant and those who don't want to take antibiotics. If you have severe acne, however, you may still need topical or oral medication to control oil production and pore clogging. ClearLight has no known side effects.

#### Stop Wrinkles and Acne with One Treatment

Radio frequencies aren't just for radio stations. In one study, 28 people with moderate to severe acne underwent a 30-minute radio-frequency skin procedure using a device called ThermaCool TC. Most had significantly clearer skin, and acne scars became less visible. ThermaCool TC is FDA-approved for treating wrinkles but, as of 2003, has yet to be cleared for acne. Doctors are not sure how the treatment clears up pimples. They do know that it shrinks the skin to eliminate wrinkles. In the process, it may be shrinking oil glands as well. That would decrease their output of pore-clogging oil and sebum. Like lasers, ThermaCool TC generates heat under the skin and should be effective. "Radio frequency is a reliable, intense, and sustained form of energy," says Javier Ruiz-Esparza, MD, researcher and president of the International Society of Cosmetic Laser Surgeons in San Diego.

#### PhotoDynamic Therapy and Amino-Levulinic Acid

PhotoDynamic Therapy has become the most effective way for treating acne conditions. Lasers help shrink the Sebaceous glands (oil-producing glands) and reduce sebum production in a few treatments. This new therapy is becoming the latest in combination techniques working to kill bacteria and shrink sebaceous glands. These lasers are known to also improve collagen formation and the appearance of acne scars. The ELOS acne laser therapy is a non-ablative laser, using a broad spectrum of Light and Radio Frequency energies to target the sebaceous glands. The light frequency heats up the P.Acnes (acne bacteria in the pores) and helps shrink the sebaceous glands. Radio frequency helps to improve the texture of skin, which most acne patients suffer from rough, oily and blotchy skin. This treatment has no down time, low risk and offers a safe improvement for those with active acne.

#### What is Amino-Levulinic Acid (ALA)?

Amino-Levulinic Acid or ALA is a naturally occurring substance in the body. This product is applied topically and the body selectively absorbs the substance into the sebaceous glands, hair follicles and photo-damaged skin cells. The ALA is converted into a photosensitizer and activated by light treatment, which then destroys the targeted cells in the skin. ALA is left on the skin for 30 to 60 minutes before activated with the PhotoDynamic Therapy. This product is activated by light sources. Patients must remain out of the sun or bright indoor light for a minimum of 48 hours post treatment. Sunscreens do not protect against photosensitivity in the skin.

#### How is the Amino-Levulinic Acid (ALA) Activated?

This treatment is a two-step process which the product is applied and then the ALA is activated. First, the ALA will be applied to the skin. The ALA becomes a photosensitizer and the acne lesions are attracted to the solution. The ALA will remain on the skin for 30 to 60 minutes. After the product has settled into the skin we will perform the Acne Laser treatment on the skin, which activates the photosensitizer. The purpose of this treatment is to stimulate a photochemical reaction in the skin. A significant improvement in moderate to severe acne can be achieved in as little as one to three treatments.

#### What are the risks involved?

ALA is a safe alternative to antibiotics and chemical acne treatments. Most patients feel no discomfort, but some experience mild discomfort, such as stinging, burning, and tingling of the acne lesions. Change in skin color may occur and skin may turn red and have mild swelling the following week. Slight scabbing may occur on the acne lesions. Skin becomes very sensitive to any light source, such as sun and bright indoor lighting. The skin slowly heals and begins to show gradual improvement throughout the series of treatments.

#### What else does Amino-Levulinic Acid (ALA) treat?

Besides treatment of acne lesions, ALA can help with other skin conditions as well: