

# *ADVANCED DERMATOLOGY CARE*

## *Advanced Esthetics*

### **Photodynamic Therapy (PDT), also called “Blue Light”**

**Photodynamic Therapy (PDT)** is used for the medical treatment of actinic keratoses (pre-cancerous lesions), cosmetic treatment of sun-damaged skin (solar elastosis), and/or for the treatment of oily and/or acne prone skin. This is a highly effective, FDA approved treatment for actinic keratoses and acne. With prior authorization, your medical insurance may cover the PDT treatment if precancerous actinic keratosis are present. They do not cover this treatment otherwise. The process involves the topical application of Amino Levulanic Acid (ALA). When the ALA is absorbed and activated by the specific wavelength of blue light used, the pre-cancerous, sun damaged areas and oil producing glands change it into protoporphyrin IX, a light sensitive, naturally occurring substance in the body. The light activates the protoporphyrin, therefore pre-cancerous lesions and sun damaged areas are destroyed and the overactive sebaceous glands are diminished in size.

Alternative treatments for actinic keratoses include but are not limited to: cryotherapy (freezing with liquid nitrogen), skin sanding, cautery (burning with an electric needle), chemical peels, laser resurfacing, and topical chemotherapy or immune stimulating cream. Alternative treatments for oily and/or acne prone skin include but are not limited to: prescription medications, Blue light without ALA, IPL/laser, microdermabrasion, chemical peels, over-the-counter products or no treatment at all. Alternative treatments for sun damaged skin include but are not limited to: chemical peels, IPL/ lasers, dermal fillers, skin sanding, topical chemotherapy, microdermabrasion, laser resurfacing and skin care products (prescription or over-the-counter).

PDT is done in a three-step process, so schedule an appointment both for the ALA application, and the Blue Light activation 1-3 hours later in the same day.

**Step 1 Application:** The skin is cleaned and the ALA medicine is applied topically onto actinic keratoses, sun damaged skin, oily skin, and/or acne prone skin by applying this to the entire face.

**Step 2 Absorption:** The medicine is selectively absorbed by the abnormally acting skin cells during the incubation period. This time is usually 1 -3 hours. However, your provider may recommend varying this time, depending on your needs.

Avoid UV light: Indoor or outdoor light can begin activation of the ALA. You can remain in our clinic reception area; if you choose to leave please wear a broad-brimmed hat while walking to your car and avoid the sun. Sunscreen does NOT help with the sensitivity before activation with the blue light; therefore is of no help in avoiding premature activation. Do not wash, apply lotions, skin care products, or makeup during this time.

**Step 3 Activation:** The **Blue light** activates the medicine when shone on the treated area .

You will lying down on a treatment table or positioned in a chair, wearing goggles. You may use a fan to cool the area during treatment for comfort.

The blue light activation phase will last a maximum of 16 minutes and 40 seconds. During this time, the treated areas can and most likely will begin to sting and burn. This discomfort is usually limited to stinging/burning, but can be intense with severe sun damage, or even excruciatingly uncomfortable if prolonged incubation of over 4-5 hours has been used. If the procedure is too uncomfortable, you always have the option of stopping the procedure at any time.

**SIDE EFFECTS:** It is difficult to predict the amount of side effects that an individual will experience, as there is significant variation in one’s response. Side effects range from almost negligible to quite intense.

- Discomfort usually ranges from tingling, mild stinging to burning. [If prolonged incubation of the ALA was used, severe pain may occur.] It is possible but not likely, that you may develop blisters. The discomfort during this procedure can be very intense. Tylenol or Ibuprofen is helpful. Ice packs (bag of frozen peas/corn) can be helpful for 24 to 72 hours following the treatment. The discomfort may increase during the first few days during course of the treatment, but will improve over the following few days.

- You may have swelling for several days after treatment. Elevation and ice will help.

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- You may have redness for several days to 3-4 weeks after treatment. The redness will be most intense during the first or even 2<sup>nd</sup> week after treatment, and will gradually resolve over an average of 4 weeks. It is very important to avoid sun exposure, as abnormal pigmentation (permanent darker or lighter spots) can result from UV light on the skin during the recovery period. Sunscreens may be applied as soon as the redness and irritation have resolved. Remember, sunscreens are just screen; they do not totally block UV light.
- During the first or even 2<sup>nd</sup> week, the top layer of the skin will thicken, and tighten and become darker. It can feel like you are wearing a mask. Your skin will start a peeling process and will itch as the dead skin is being sloughed off and is replaced with new, pink/red colored and rejuvenated skin. It is very important to avoid scratching or rubbing the skin, to avoid creating scars. Itching and irritation will be lessened by adding moisture to the skin by facial soaks, applying Aquaphor or other occlusive ointments, or topical Benadryl (diphenhydramine).
- PDT with ALA may flare cold sore virus (Herpes Simplex). If you note symptoms of a flare of a cold sore, please call right away to get a prescription for treatment. Routine prophylaxis (medicine used to prevent) of cold sores is not recommended, due to the occurrence of increased antiviral resistance.

**Post Care Instructions:** Apply ice and cool soaks. Sleep with your head elevated to minimize swelling around the eyes. Topical ointments are recommended to keep your skin moist, to promote healing and reduce itching. A topical antibiotic/healing ointment, (e.g., Aquaphor, Biafine, Bacitracin) may also be applied to any open areas or cracks in the skin. If your skin becomes significantly itchy, topical Benadryl or a topical antibiotic ointment with Pramoxine, (e.g., Neosporin Plus, Triple Antibiotic anti-itch) may be helpful. It is best to use a mild liquid cleanser, (e.g., Aveeno, Basis, Cetaphil, Neutrogena, Cerave) because your skin is extremely sensitive at this time. Avoid any rubbing to the skin.

If a topical steroid is prescribed, it should be applied to the treated area two to three times a day for the first few days. A topical steroid will help moisten the skin, and reduce redness and inflammation. However, since steroids can clog up pores and lead to acne, thinning of the skin, predispose to blood vessels becoming more noticeable, the use of steroids should be used only as directed.

Once your skin begins to peel, applying very light finger-tip pressure in a gentle circular method to wet skin may assist in removing some of the peeling skin, but be very cautious. If you become aggressive in peeling away the skin before it's ready, you may increase your risk of developing infections and/or scarring. You may also find areas that peel more than one time.

A follow up visit needs to be scheduled two to three days after your procedure so your healthcare provider can follow your progression and answer any questions you may have.

Individual results vary; your treatment needs may be resolved after one treatment, or can take several treatments to achieve and maintain the improvement desired. PDT can be done every two to twelve months as needed. If you have any questions or concerns regarding your treatment or the post operative instructions, please call Advanced Dermatology Care at 651-484-2724.

**WHO SHOULD NOT HAVE PDT:** This procedure is NOT recommended for individuals who: are pregnant or nursing; are allergic to light (e.g., solar urticaria) or who have light sensitive conditions (e.g., lupus); are on light sensitizing medications (e.g., St. Johns Wort, Tetracycline, etc.); with porphyria or blood clotting disorders.

**To determine if you would benefit from PDT treatment, please call 651-484-2724 to schedule a consultation at Advanced Dermatology Care.**