

14 - Photodynamic Therapy (PDT)

Levulan (aminolevulinic acid 20%) is a naturally occurring photosensitizing compound which has been approved by the FDA to treat pre-cancerous lesions called Actinic Keratosis. It can also be used to treat and improve the appearance of many dermatologic conditions: acne rosacea, acne vulgaris, sebaceous hyperplasia (enlarged and unsightly oil glands), decrease oiliness of the skin, and improve texture and smoothness by minimizing pore size. Levulan is applied to the skin for 1/2 hour to one hour, and subsequently 'activated' by exposure to specific wavelengths of light (blue light). The exposure time to the blue light varies according to the condition that is being treated, but is usually between 5-15 minutes. The process of activating Levulan with blue light is termed PDT.

Less than one minute after exposure to light, there will be a burning, tingling, or itching that peaks within a minute and subsides to the level of a "mild sunburn" in the treated area. The sensation disappears within 24 hours, but the treated area may be tender for a few days. The treated area may be slightly swollen and red. In heavily freckled or a very fair skinned individual, a 'hive-like' reaction may occur even outside the treated area. Very occasionally, some patients may experience weeping and crusting.

Following the treatment, Levulan must be washed off the skin and strict sun avoidance must be practiced for 24-48 hours - sunscreens, hat, sunglasses, and sun avoidance. The sun avoidance must be strict and it is recommended that one should avoid direct sunlight for 24 hours following the treatment due to photosensitivity.

Side Effects

Anticipated side effects of Levulan (PDT) treatment include - discomfort, burning, swelling, (this is most noticeable around the eyes the morning following the treatment), infections, redness, activation of cold sores, skin peeling, especially in any areas of sun damaged skin and pre-cancers of the skin, as well as lightening or darkening of skin tones and spots, and possible hair removal. The peeling may last many days, and the redness for several weeks if an exuberant response to treatment. Contraindications to Levulan (PDT) treatment would include any form of porphyria, connective tissue Solar urticaria, sun-induced rashes such as polymorphous light eruption, pregnancy, and the use of photo-sensitizing medications.

Pre-Treatment Instructions:

Make sure you have consulted with our doctors so that they may evaluate your candidacy for this treatment.

It is recommended that your face be pretreated with either Retin A or Vitamin C several weeks prior to treatment. This will enhance the penetration of the Levulan into the skin, and therefore make the treatment more effective. It may also hasten the recovery time.

Discontinue all products for up to three days prior to the procedure.

Post-Treatment Instructions:

It is of paramount importance to avoid direct sunlight for 24-48 hours after PDT. Outdoor exposure should be limited and a physical sun block should be used with at least an SPF 30, a hat,

sunglasses, and a physical barrier such as a scarf. Please note that UV radiation readily penetrates through glass.

If one has a history of cold sores or HSV, it is recommended that one take an antiviral medication (Valtrex) as prescribed by our office.

During the post-treatment period, the skin may be sensitive and inflamed, and is more likely to have an allergic reaction to topically applied agents. *It is therefore recommended that topical products (including medications given by our office) not be used for at least 48 hours, or until the 'sunburn reaction' subsides.* Other products include Vitamin E, high-potency topical steroids, aloe vera, herbal agents, and most moisturizers, which may contain potentially irritating and sensitizing preservatives and perfumes. 1% hydrocortisone ointment (over the counter) may alleviate inflammation without side effects.

Other special medications (Vitamin C products or Physiaderm products) will also reduce inflammation post-op.

If the skin becomes dry and feels 'tight', hydration is important and may be achieved by applying Aquaphor or Cetaphil moisturizers, which are known to be bland and generally non-irritating. These are over-the-counter and may be obtained from your pharmacy.

If swelling is an issue, a short course of prednisone prescribed to you will be extremely helpful, as will elevating the head on two pillows when sleeping.

If there is pain and discomfort, one may take analgesics such as Tylenol and Advil.

If make-up is to be used, a mineral based formulation (such as Jane Iredale Mineral Make-Up, which is relatively inert and combines concealer and sunscreen), is recommended. Patients may apply make-up after crusting (should it have occurred) has healed.

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