Light Therapy for Acne - Brighter Days Ahead?

By Flor Serquina

There are many ways to treat acne and acne scars, ranging from applying topical creams that can lighten dark spots or remove pimples altogether, to manual methods that involve wounding the skin and penetrating into much deeper areas of infection. One such method is phototherapy, which is a relatively new technique whose overall effects are still being studied. **Light therapy for acne** is also expensive, so if you have acne and you have been recommended a regimen involving phototherapy, you need to do research on it before opening your wallet.

In general, light therapy for acne involves the use of a specific wavelength of light to treat acne-prone, acne-riddled, or acne-scarred skin. A dermatologist who does phototherapy can choose amongst different tools to apply the specific wavelength of therapeutic light. There are lasers, light emitting diodes (or LEDs), dichroic lamps, and even fluorescent bulbs. Not only is there prescribed light therapy for acne, there is also light therapy for **skin rejuvenation**, which some patients claim can help make skin appear younger and more supple.

Not all kinds of light are good for the skin. For instance, the ultraviolet light of the sun can do damage to the skin, and can cause acne break outs. In phototherapy, dermatologists use safe wavelengths of light in order to treat acne and other skin conditions. In one kind of light therapy, dermatologists use **blue light twice a week** on patients, a treatment regimen that has been shown to reduce the severity of acne by as much as sixty percent in patients. This particular form of light therapy for acne is even more effective if it is done daily, and if accompanied by red light therapy.

How does light therapy for acne work? Most acne is caused by an anaerobic bacterium called Propionibacterium acnes. P. acnes survives in an environment without oxygen, hence its happy encapsulation under the skin, in an acne cyst, and away from the air. P. acnes also produces free radicals when exposed to certain wavelengths of light.

Light therapy can work in different ways to eradicate P. acnes. Some light therapy, in particular blue light therapy, induces the bacteria to form free radicals, effectively **killing the bacteria in their own toxins**. Other kinds of light therapy can induce the bacteria to produce oxygen, so that P. acnes is killed in an environment least conducive to its growth.

As a result of the success of light therapy to treat acne, scientists and engineers have developed light boxes **for home use**. Such light boxes are effective for those who have had acne for a long time, and they can be an inexpensive alternative to treatments in the doctor's office. However, the strength of light coming from light boxes can be much lower than those in the dermatologist's clinic, so that the light box has to be used more often, and for a long period of time, in order to duplicate the success of commercial

phototherapy.

Another novel light therapy acne treatment involves the use of high intensity blue or violet light. This technique, called **photodynamic therapy**, has not yet been approved for commercial use, and has yet to be studied and published in a scientific journal, where it can be subjected to peer reviews.

Phototherapy can also be used for other skin ailments, such as **psoriasis or eczema**. In this case, dermatologists make use of ultraviolet light in order to slow down the rapid turnover of skin which is characteristic of these two disorders. Phototherapy in the form of visible red light is also used to combat the effects of aging in the skin. This type of phototherapy increases the production of the skin protein collagen, so that any damage to the skin can heal much faster. Phototherapy can also be used for tanning skin, and even to make wounds heal. For instance, infrared light has been shown in a few clinical studies to assist in restoring sensation, while reducing pain and improving circulation, of patients with neuropathy.

Light therapy for acne can come in many forms, and **more research** is being done to ensure its safety and improve on current light therapy methods. In the future, we will certainly see more innovations that can help make light therapy more convenient, and even cheaper for those who need it the most. If you are interested in undergoing light therapy to treat your case of acne, consult with your dermatologist first and look at all possible options available for your needs and budget.