



## PHOTOTHERAPY

The ancient Egyptians discovered the effectiveness of sunlight combined with the ingestion of a weed extract for the treatment of vitiligo. Only 2000 years later did modern medicine begin to utilize ultraviolet irradiation as a practical therapeutic option for various dermatologic diseases.

The first phototherapy to be introduced in the mid-1970s was PUVA. PUVA is an acronym for a treatment consisting of Psoralens (P), a plant compound that makes the skin temporarily sensitive to light and long wave ultraviolet radiation (UVA 320-400 nm). It has been used for the treatment of several diseases, including psoriasis, vitiligo, mycosis fungoides, acute atopic dermatitis, and polymorphic light eruption.

With the development of irradiation devices with new emission spectra new indications have emerged for the treatment of lichen planus, pruritus, graft vs. host disease, urticaria pigmentosa, scleroderma, and alopecia areata.

Photo(chemo)therapy includes several options of irradiation spectra:

- PUVA (bath, oral)
- Broad band UVB (290-320 nm)
- Narrow band UVB (311-312 nm)
- UVA-1 (340-400 nm)
- Excimer laser (308 nm)
- Photodynamic therapy (PDT)

The mechanism of action is not completely understood. For example, the therapeutic effectiveness of UVB phototherapy in psoriasis was initially attributed to its antiproliferative effects; however, there is now compelling evidence that UVB and also UVA radiation exert profound effects on the skin's immune system, making the modalities immunomodulators. Thus, it is not surprising that number of T-cell-mediated skin diseases showing a favorable response to phototherapy has grown substantially.

Side effects include sunburn-like erythema and dry skin with pruritus. Accelerated photoaging and increased risk to skin cancer are the potential long-term effects.

Contraindications for light therapy would be a history of skin tumors, photodermatoses and diseases provoked by the sun (porphyria cutanea tarda, discoid lupus erythematosus, etc.), taking photosensitizing drugs, and pregnancy (PUVA).

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