

# Physical therapy in dermatology

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It is an external treatment, complementing the effect of local and systemic drugs.

## Actinotherapy and phototherapy

Nowadays, ionizing radiation is used as little as possible, mainly **Buck's rays** (boundary rays) - soft radiation with short wavelengths at the interface between UV and X-ray, absorbed in 1-2 mm of skin.

- For chronic lichenified eczema, neurodermatitis, psoriasis, lichen ruber...

Contact **x-ray lamp according to Chaoul** - short focus, destructive effect.

- Used mainly for tumors.

Surface x-ray therapy - little used today.

### Solux lamp

A source of infrared radiation to induce rapid hyperemia and warm up the given part (resorption of inflammation, stimulation of repairation...).

### Mercury discharge lamp ("the mountain sun")

- UV source.
- Treatment of psoriasis, acne vulgaris, atopic eczema, etc.
- It does not fully replace the sun, it has a lot of UVC.
- Kromayer's lamp - concentrates the rays on a small area of the skin.
- PUVA - photochemotherapy - psoriasis, parapsoriasis, mycosis fungoides, psoralen sensitization, irradiated in special cabins, UVA with a maximum of 365 nm.

### Electrocautery

- A platinum loop red-hot with an electric current.
- Diathermocoagulation.
- Destruction or coagulation of warts, small tumors, telangiectasias, for epilation, opening of folliculitis, nematodes, abscesses, etc.

## Laser

Laser is a quantum amplifier of light radiation. The quality of the coherent beam depends mainly on the laser medium - solid, liquid or gas.

In dermatology:

- argon laser (514nm) for capillary hemangiomas.
- CO2 laser (10000nm) to remove small skin lesions by vaporization (warts, condylomata acuminata, m. Recklinghausen...).
- Helium-neon laser - biostimulating and analgesic effects.

## Cryotherapy

Ways of cryotherapy:

- Freezing, either carbon dioxide "dry snow" gags (-60 to -70°C).
- More often with liquid nitrogen (-193 °C), it lasts one to two days in a thermos.
- Freezing causes inflammation, or even necrosis.

## Ultrasound

Ultrasound is used to treat diseases with an increased tendency to new tissue formation (keloid, scleroderma, induratio penis plastica).



Psoriasis



Acne vulgaris



Lichen ruber



Dermatologic laser

## **Dermabrasion and minor surgery**

It is used, for example, scar abrasion, tattoo artists - rotary grinders.

## **Sources**

- BENEŠ, Jiří. *Studijní materiály* [online]. ©2007. [cit. 4. 2. 2011]. <<http://jirben2.chytrak.cz/>>.