

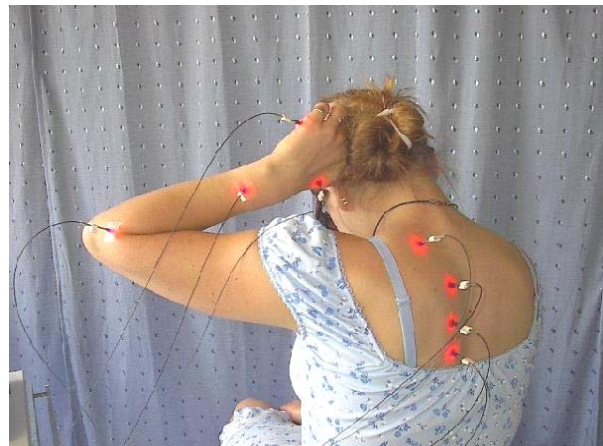
Orthopaedics	Neurology/Psychology	Internal medicine	Dermatology
Spinal column syndromes	Residual paresis after apoplexia	Gastro-intestinal diseases	Eczema
Herniated discs	Migraine and other headache syndromes	Circulatory disorders	Neurodermatitis
Knee arthrosis	Trigeminal neuralgia	Bronchial asthma	Psoriasis
Hip arthrosis	Tinnitus	Allergic diseases	Chronic wounds
Thumb arthrosis	Depressions	Hypertension	Acne
Scapulohumeral periarthritis	Psychovegetative fatigue	Diabetes mellitus	Herpes
Lateral epicondylitis	Drug addictions (Smoking, drugs)	General fatigue	Herpes zoster
Tendinitis	MS and other neurovegetative diseases		Gingivitis
Fibromyalgia and PCP	Morbus Parkinson		
Morbus Bechterew			

Typical clinical pictures for laserneedle acupuncture

Body acupuncture with laserneedles



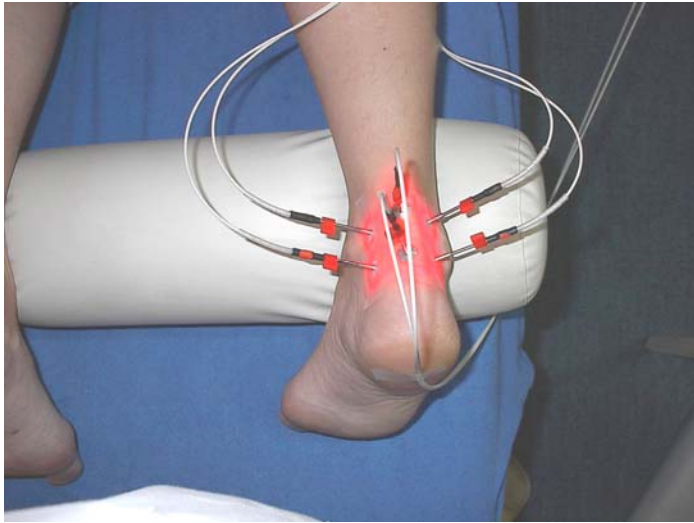
Shoulder syndrome



Tensions of the cervical spine and the scapula

Why does the effect of laser light go through the skin?

- White light mainly causes the skin to heat up through surface absorption.
- In addition to the body hair, haemoglobin and melanin are the main absorbing skin pigments.
- The penetration depth depends on the tan condition and perfusion size of the body, as they show virtually no absorption in the near infrared range.
- Laser light (especially infrared) can also cause effects in deeper layers. It leads to a chain of biochemical reactions through specific absorption (cytochromes, porphyrins).
- The pigments of the respiratory chain are particularly suited for the specific absorption of irradiation with the triggering of photochemical reactions.
- Light electrons are stimulated in the respiratory redox chain.
- The electrons are transported against the redox decline in the respiratory chain, which finally leads to a phosphorylation from ADP to ATP and to increasing the membrane potential.
- An increase of the ATP production of 150% can be evidenced through infrared exposure of yeast.
- The skin poorly resorbs irradiation in the near infrared range, in particular between 800 and 900 nm, which enables the irradiation to penetrate the tissue relatively deep.
- The longer the laser light waves are, the lesser it is absorbed and deeper it penetrates the tissue.
- Green light is f.e. significantly absorbed by haemoglobin.
- For medical treatment, red light in a visible range (630 – 680 nm) and infrared light in a range between 800 and 900 nm with a significantly higher penetration depth is used almost exclusively.
- Light with longer waves (f.e. 1300 nm) is not appropriate as it is absorbed by water to a great extent, which leads to a very low penetration depth.
- Ultimately, it mostly depends on the dose within the cell we want to treat.
- If this cell is not located at the surface, the question, which part of the light reaches it, is of vital importance.

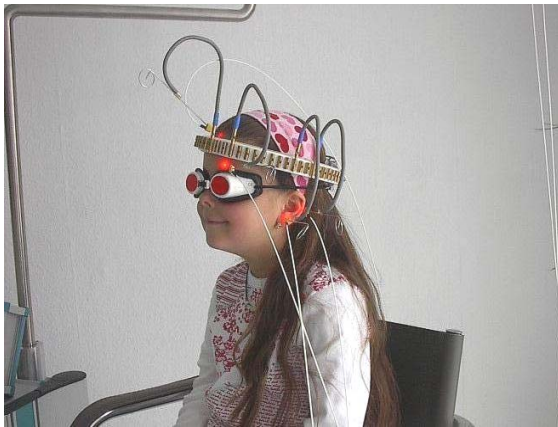


Achillodynia

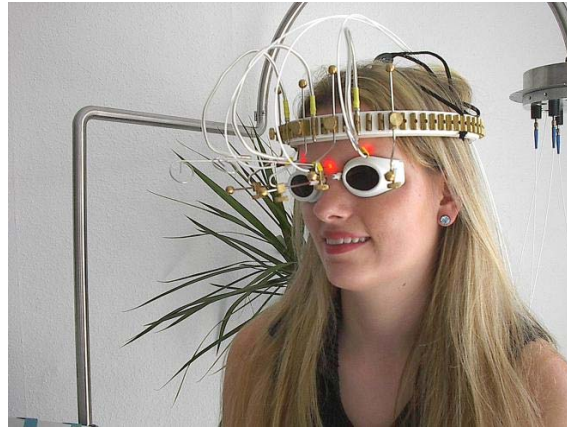


Shoulder-arm syndrome

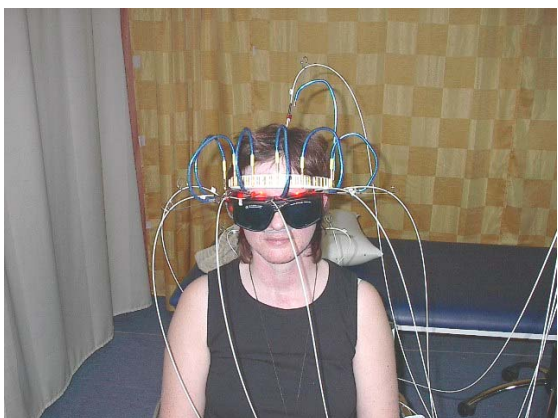
Head acupuncture with laserneedles



A child with migraine



Tension headaches



An adult with migraine

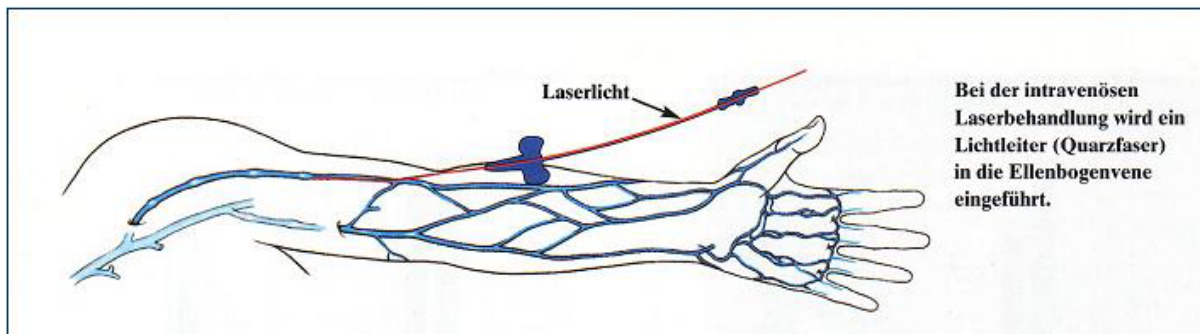


Cerebral insufficiency

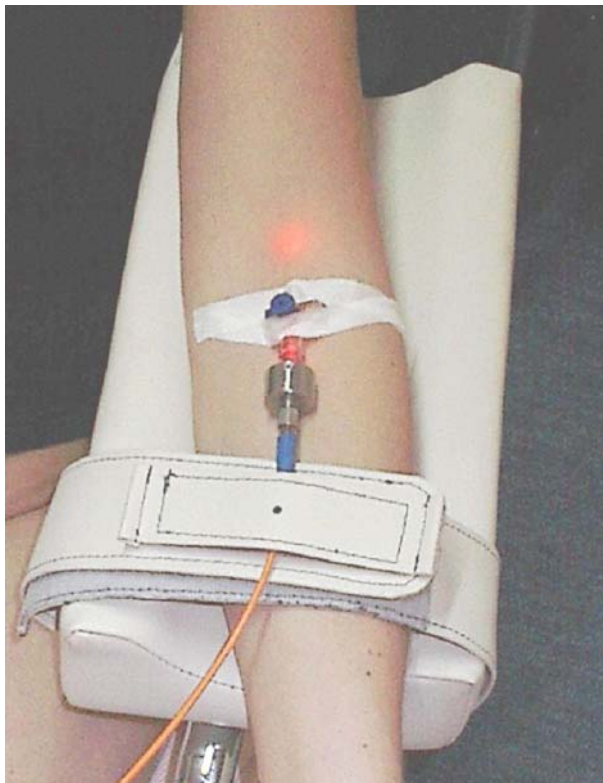
c. Practical application of the IV LBI

IV LBI (intravenous Laser blood Irradiation)

- is performed with extremely low power (1-3 mw),
 - is performed with an exposure time of 20-60 minutes,
- is performed daily with up to 10 treatments, eventually with a break on the weekend, if applicable.



For the intravenous laser treatment, an optical fibre (quartz fibre) is introduced into the elbow vein.



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