Germany, Thailand, Bangladesh, South Korea, Vietnam, Taiwan
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Intravenous Laser Blood Irradiation Therapy

Studies show significant therapy effects of PDT laser therapy, stabilization and energizing effects and improvement of laboratory values and many other positive effects on often intractable diseases.

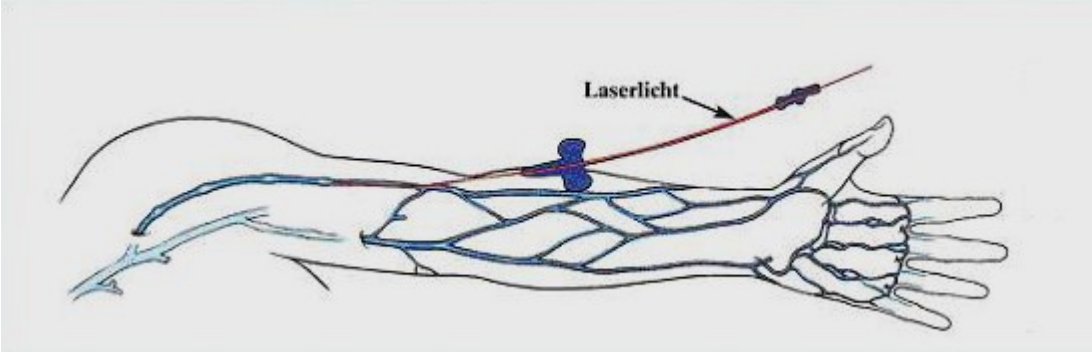
The intravenous laser blood irradiation was accomplished for the first time approximately 25 years ago in the former Soviet Union. Laser light was brought directly into the flowing blood through a one-way-catheter. By various in-vitro-tests before it could be verified that biological soft laser irradiation of white blood cells caused various positive effects, in particular expression of immunoglobulins, interferons and interleukins. After the introduction of the new method various

clinical studies were published, showing additional effects on various metabolic pathways.

The development and certification of a new intravenous laser blood irradiation device in 2005 in the research support program Biophotonik II of the government of Niedersachsen opened for the first time the possibility in Germany to check the new therapy in clinical studies.

In own researches the results of the Russian studies could be confirmed to a large extent. Nearly all treated patients described general stabilization and increased energy while positive effects on chronic liver diseases, diabetes mellitus, metabolism disorders and other various diseases could be proven.

While the studies from Russia were all done only with red laser, the additional use of green, blue and infrared lasers today increased the effects substantially.



General Effects

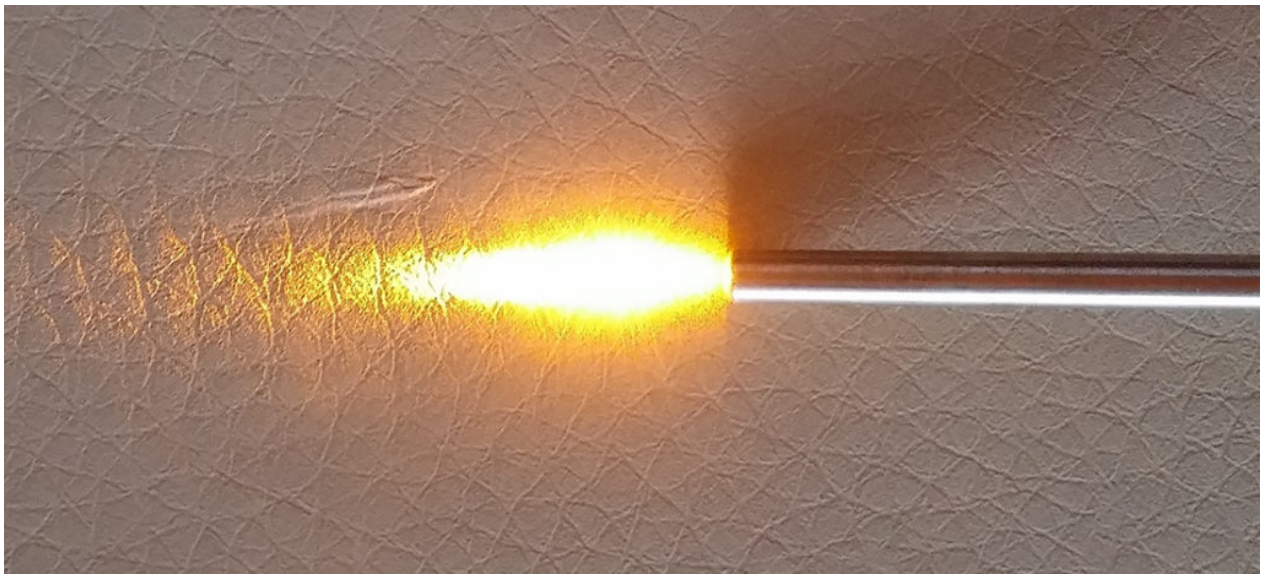
- Significant improvement in overall performance
- Improvement in sleep and vigilance
- Positive effect on the general mood
- Reduction of drug consumption

Special Effects

- Optimization of the diabetic metabolic state.
- State incomparable influence of hypercholesterolemia.
- Significant reduction of pathologically elevated liver values.
- Reduction in frequency of relapses in chronic inflammatory bowel disease.

- Improvement in general health status and mobility in MS disease.
- Positive influence on intractable pain syndromes.
- Positive influence of tinnitus.
- Reduction of antihypertensive medication for severe hypertension.

Effects of Different Laser Wavelengths:

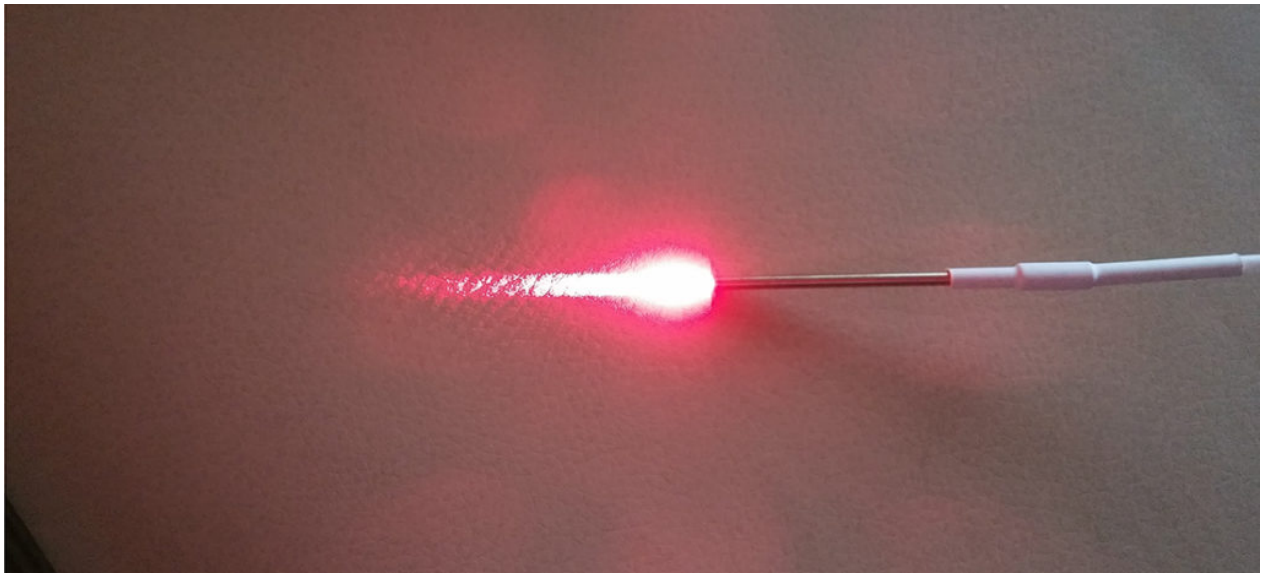


The Yellow Laser

The yellow laser is known to improve the serotonin and vitamin-D metabolism. Vitamin-D is our “sun vitamin”. Thus, the yellow laser is also called “sun laser”. Serotonin is a hormone responsible for happiness. A lack of serotonin may lead to psychological disorders. Thus, yellow laser is very effective in treatment of depression. Vitamin-D is also important for bones, connective tissue, immune defence and prevention of infection. Furthermore, it plays a central role in our hormone system and general metabolism.

- Has detoxifying and anti-depressive effects.
- Improves the serotonin and vitamin D metabolism (important for bones, connecting tissue and immune defence).
- Stimulates the strongest natural photosensitizer Hypericin (extract from St. Johns wart) and is thus very much suited for photodynamic cancer therapy.

- In combination with Hypericin appropriate to treat viral and chronic bacterial infections.
- Positive results in chronic infections (e.g. Lyme disease) and fatigue syndromes.
- Very positive experiences in advanced Lyme disease; significant improvement after few treatments (45 min. intravenous).
- Good effects on several virus infections (zoster, EBV, Herpes).
- Strong anti- bacterial effect.
- Very good results in patients with panic attacks, depression and anxiety disorders (yellow laser IV and hypericin orally administrated; combination with Tryptophan in patients with lack of serotonin).
- Promising development in patients with lack of ATP; yellow laser stimulates complex III of the oxidative phosphorylation and supports therapy with other laser wavelengths, NADH, coenzyme Q10, carnitine.
- Positive effects on Multiple Sclerosis.

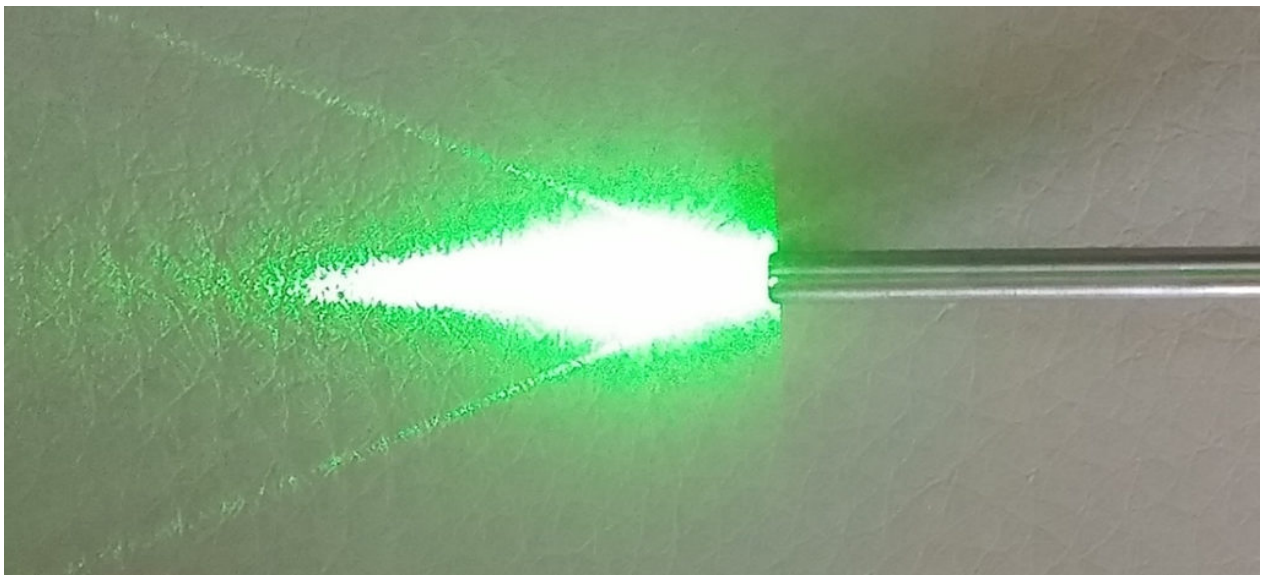


The Red Laser

The red laser activates ATP-production, leading to increased energy, better blood circulation, improvement of heart and circulation, support of neuronal functions (in CNS), improvement of immune defence (NK-, T-helper-, T-suppressor-cells).

- Stimulates the immune system.
- Activates macrophages.
- Releases cytokines and interferon.
- Opens the micro circulation.

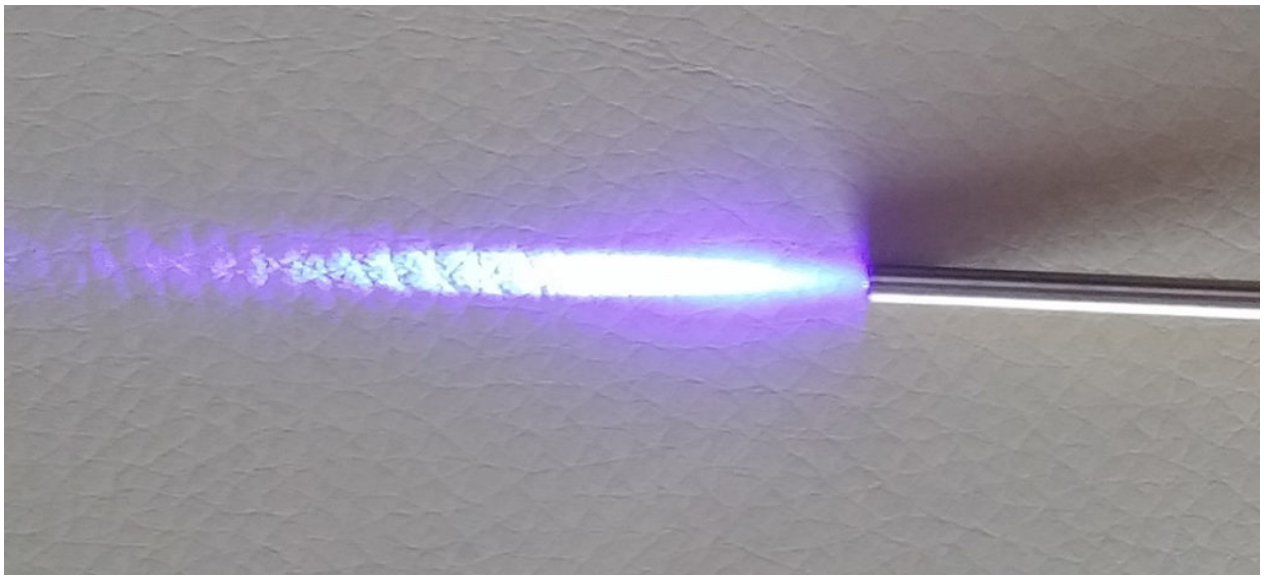
- Has a coagulation-inhibiting effect and inhibits platelet aggregation.
- Improves the deformability of erythrocytes.
- Stimulates complex IV on cellular level (Cytochrome C-Oxidase in mitochondrial respiratory chain) thus increasing energy production by cells.
- Can be used for photodynamic tumor therapy in combination with Chlorin E6 as photosensitizer.



The Green Laser

The green laser has a strong anti-inflammatory effect. Thus, green light is used therapeutically for prevention of infection, against inflammatory swellings (edema) or pain related to inflammations and swellings and against ulcers or infectious tumors.

- Leads to a steric conformation change of hemoglobin molecules with 20%-increased uptake of oxygen.
- Is absorbed by complex III of the mitochondrial respiratory chain and increase the ATP-production by approx. 30%.
- Stimulates dosage depend the sodium-potassium ATP-ase on erythrocyte membranes.



The Blue Laser

The blue laser has very positive effects on our immune system. Furthermore, wound healing is improved significantly. There is also a strong anti-inflammatory and anti-bacterial effect as well as positive influence on hormone harmonization and pain reduction. It improves cell perfusion and oxygen uptake. The biochemical mechanisms are quite complex. However, there is an improvement of ATP metabolism (leading to more cell energy) and positive influence on hemoglobin nitric oxide (HbNO) release after blue laser blood irradiation.

- Stimulates complex I of the mitochondrial respiratory chain (NADH-dehydrogenase complex).
- It has very strong anti-bacterial effects by destroying micro-organisms of all kinds in the blood (by absorption of bacterial porphyrins and by production of reactive oxygen species).
- Releases NO from the NO-Hb of micro circulation (Nitric Oxide).
- Can be used for photodynamic tumor therapy in combination with Curcumin as photosensitizer.
- Can be used for anti-microbial photodynamic therapy (for bacterial, viral and parasitic diseases) in combination with Riboflavin as photosensitizer.

Infrared Laser

Infrared Stimulates complex IV of the mitochondrial respiratory chain by specific absorption with a significant increase of ATP-production.

The UV Laser

Ultraviolet blood irradiation (UBI or UVB) is an intravenous therapy that represents a safe, non-toxic, low cost and drug-free method of treatment for most blood-borne viruses and offers hope to those who suffer from viral infections and related conditions. UVB / UBI is a procedure that exposes the blood to specific ultraviolet light to enhance the body's immune response and to fight infections, and can be used clinically as an immune modulating therapy in cases such as psoriasis, lymph cancer, chronic infections, chronic fatigue, auto-immune diseases, and much more.

Pathogen deactivation by the UV laser:

- Pathogens have a higher susceptibility to UV light irradiation
- The antimicrobial effects of UV light results from increased production of toxic reactive oxygen species (ROS) and delayed pathogen replication
- UV light exposure primarily promotes sub-lethal effect, which stops re;cicaiton and increases the pathogens susceptibility to immune degradation
- Pathogen damage also permits the release of antigens in which the immune system can build highly specific antibodies to the pathogen strain
- Cell DNA sequence is interrupted and pathogen ability to bind is interrupted

Also known as photoluminescence, hemo-irradiation, photodynamic therapy, and oxidative phototherapy, it was first introduced in the 1930's to combat the polio virus. The therapy was then extensively used in the 1940's and 1950's with medical conditions including pneumonia, tuberculosis, and even cancer. The advent of antibiotics lead to a decline in the use of UVB as a treatment option. Now, with the increasing incidence of antibiotic resistant infections and a desire for more natural therapies, ultraviolet blood irradiation therapy is enjoying a type of rebirth and a very useful oxidative therapy.

Benefits of UVB

Experience has shown that ultraviolet blood irradiation can strengthen the immune system and improve overall health. Ultraviolet blood irradiation has been shown to have the following therapeutic benefits:

- Increases oxygen absorption into body tissues

- Destroys fungal, viral, and bacterial growth
- Improves circulation and decreases platelet aggregation
- Improves circulation by dilating blood vessels
- Improves the body's ability to detoxify and inactivate or remove toxins
- Activates cortisone-like molecules, sterols, into vitamin D
- Restores normal size and movement of fat elements

Conditions to be Treated with Intravenous Laser Irradiation:

Areas of Application

- Diabetes mellitus
- Chronic liver and kidney diseases
- Dyslipidemia
- Heart disease
- Chronic pain syndromes
- Allergies and eczema
- Performance enhancement in sport
- Polyneuropathies
- Fibromyalgia
- CFS (chronic fatigue syndrome)
- Hypertension
- Lyme disease
- Macular Degeneration
- Multiple Sclerosis
- Depression
- Burn-out syndrome

Furthermore all wavelengths stimulate the different complexes of the respiratory chain in the mitochondria leading to an increase of ATP-production and thus are well suited for all fields of regenerative medicine in mitochondrial degeneration. Especially blue laser dissociates nitric oxide from hemoglobin and complex IV in the mitochondria and so leads to improved microcirculation, biogenesis of mitochondria and prevents cell senescence. Nitric oxide also activates telomerase and so protects against degradation of telomeres with possibly extended life expectation. We also know today that intravenous laser therapy can activate endogenous stem cells with improvement of organ function.

Main therapeutic fields are angiopathies, neuropathies, fibromyalgia and chronic fatigue syndrome, autoimmune and metabolic diseases, depression, all diseases on basis of mitochondrial degeneration and aging in general.

Research Papers

- The Intravenous Laser Blood Irradiation in Chronic Pain and Fibromyalgia
- The use of Intravenous Laser Blood Irradiation (ILBI) at 630–640 nm to prevent vascular diseases and to increase life expectancy
- Curcumin and Diabetes: A Systematic Review
- Multi – Laser Needle Acupuncture and Laser Blood Irradiation Therapy
- Turning On Lights to Stop Neurodegeneration: The Potential of Near Infrared Light Therapy in Alzheimer's and Parkinson's Disease
- The potential of light therapy in Parkinson's disease