



Low Level Laser Therapy & hypertensive clinical research

Metabolic determinants of efficacy of infrared laser therapy in hypertensive patients with combined pathology *Vopr Kurortol Fizioter Lech Fiz Kult. 2005 May-Jun;(3):13-7.* [Article in Russian] Krysiuk OB, Ponomarenko GN, Obrezan AG, Kostin NA.

By a distinct pathogenetic direction of a therapeutic action of laser therapy (LT) on different regulators of blood pressure (BP) and metabolism, 109 patients with essential hypertension (EH) and atherosclerosis and/or diabetes mellitus were studied for LT efficacy depending on metabolic disorders. LT demonstrated metabolic neutrality and unefficacy in patients with multiple marked disorders of fat metabolism and hyperglycemia. Metabolic factors determining LT efficacy comprise hypercholesterinemia, hypertriglyceridemia and hyperglycemia. The factorial analysis points to essential factor restructuring in metabolic disorders. The obtained equation of multiple regression allows prognostication of the degree of a fall of mean BP in response to LT depending on the degree of metabolic disorders.

Efficiency of low-intensity laser radiation in essential hypertension {Klin Med(Mosk). 2001; 79 (1): 41-44. Velizhanina I A, Gapon L I, Shabalina M S, Kamalova N N.

In a placebo-controlled study an antihypertensive activity of low-intensity laser radiation (LILR) was evaluated in 52 males with essential hypertension stage I. The placebo group consisted of 14 matched patients. LILR was used as monotherapy of 10 daily procedures. This treatment significantly lowered systolic, diastolic and mean arterial pressure. Moreover, diastolic arterial pressure did not rise high at submaximal bicycle exercise. Total peripheral vascular resistance also decreased. A good hypotensive effect was achieved in 90.4% cases. Thus, LILR is a highly effective treatment in essential hypertension stage I.

The efficiency of low-intensity laser radiation in the treatment of arterial hypertension complicated by ischemic heart disease [Article in Russian]

Shuvalova IN, Klimenko IT, Svinina NG, Tsereteli MV, Zankina VG, Miasoed FR.

The efficiency of low-intensity laser radiation (LILR) was studied in the treatment of 291 patients with arterial hypertension and ischemic heart disease. Clinical grounds are given for use of LILR red and infrared rays in rehabilitation of hypertensive patients with ischemia. The rehabilitation regimens can be differentiated according to the

disease severity, type of hemodynamics, state of cerebral circulation. *Vopr Kurortol Fizioter Lech Fiz Kult.* 2001 Jul-Aug;(4):3-6. *Lik Sprava.* 1998 Oct-Nov;(7):141-3.

The effect of low-intensity laser radiation in the infrared and red ranges on arterial pressure regulation in patients with borderline hypertension

[Article in Russian] Shuvalova IN, Klimenko IT, Zhukova LP, Oborin IuI. Effectiveness was studied of low-intensity laser irradiation on regulation of arterial blood pressure (BP) in 185 patients (51 men, 134 women). The above patients were prescribed four therapeutic complexes: group I was exposed to infra-red irradiation by zones; group II--to scanning Helium-Neon laser across the portal zone and paravertebrally CIII-Th5; group III--to helium-neon laser in the area of right sinocarotid zone; group IV underwent hydrolaser shower (in red and infra-red range). Complaints were studied as were data from laboratory investigations, the condition of different bodily systems, BP level, the functional state of the cardiovascular system as per electrocardiography and rheography findings. A positive clinical effect was achieved in all the groups studied. Employment of low-intensity laser irradiation in the rehabilitation of patients with borderline hypertension during the sanatorium stage was noted to strikingly enhance the efficiency of the therapy administered. It can be prescribed to patients irrespective of their hemodynamic types. Irradiation of the right sinocarotid zone and hydrolaser therapy are indicated to patients presenting with hypo- and eukinetic types of hemodynamics and baseline sympatheticotonia.

Lik Sprava. 1997 May-Jun;(3):110-1.

The effect of plasmapheresis and laser irradiation of the blood on the hemorheological and hemodynamic indices in hypertension patients

[Article in Russian]
[Alizade IG, Karaeva NT.](#)

Results are submitted of investigation designed to study effects of a combined use of plasmapheresis and laser irradiation of blood on hemorheologic and hemodynamic characteristics in 36 patients with stage II hypertensive disease. The course exposure of patients to a combined use of plasmapheresis and laser irradiation of blood led to a drop of arterial pressure in different hemodynamic groups at the expense of different parameters characterising the hemodynamic status. Thus combined use of plasmapheresis and laser irradiation of blood can be considered a promising nonmedicamentous therapeutic alternative in patients with hypertensive disease being associated with a drop of arterial blood pressure, and what is more, improvement in viscous- and elastic properties of blood as well as its hemodynamic indices.

Med Tr Prom Ekol. 1996;(8):10-2. Effects of laser therapy on psychophysiological parameters and arterial blood pressure in drivers with hypertension

[Article in Russian] [Umetov MA.](#)

The study covered possibility to use laser therapy for correction of arterial hypertension in car and track drivers suffering from high blood pressure. Laser irradiation of infrared waves with wavelength of 0.89 micrometers appeared to have positive influence on the drivers facing arterial hypertension. Lik Sprava. 1994 May-Jun;(5-6):29-32.

Qlaser Wellness Solutions
Michael F. Lagana, President
708 Route 35 N., Neptune, NJ 07753
732 866-4226
Michael@Qlaserws.com