The mechanisms of laser therapy Dana York, President of the European Medical Laser Association Introduction Laser Therapy as an adjunct to conventional therapy can be used effectively and have the potential advantages of bactericidal effect, detoxification anti-inflammatory effect. Objectives Our objective is to explain the mechanisms of photobiomodulation, with the desire of improving the local and general status of the patient Method We using a diode laser type BF, class 3B, safety class 1, with 2 laser beams one infrared with a wavelength of 830nm, and another beam with a wavelength of 630 nm convergent beam. This is our choice because is the wavelength lasers we had. The energy used was between 0.5 and 3 J, applied continuously or in pulsed mode with a frequency of 4.68 Hz or 9.12Hz (Nogier). The parameters were adjusted depending upon the depth of penetration needed (2.5 – 12 mm). Results We used a diode laser type BF class 3B, safety class 1, with 2 laser beams one infrared with a wavelength of 830nm, and another beam with a wavelength of 630nm convergent beam energy used was between 0.5 and 3J, applied continuously or in pulsed mode with a frequency of 4.68Hz or 9.12Hz. The parameters were adjusted automatically, depending on the necessary penetration deeps (2,5 – 12 mm). Low-level laser therapy shortens the healing time immediate effects: short bleeding and pain duration; no post-surgery complications (edema, inflammation, infection, and pain); forming and maintaining the clot; maintaining function., permitting the patient an un-interrupted social life Long-term effect: rapid and esthetic scar; healing of the soft tissue; rapid recovery of more compact bone tissue and fixation of the teeth; complete restoring and maintenance of the masticator and esthetic functions. The results depend on the age, general health, and metabolic problems of the patient. The recurrence rate is low. Conclusions

Low-level laser therapy shortens the healing time immediate effects: short bleeding and pain duration. No post-surgery complications (edema, inflammation, infection, and pain); forming and maintaining the clot; There was no post-surgery alteration, permitting the patient an uninterrupted social life. Long-term effect: rapid and esthetic scar; healing of the soft tissue; rapid recovery of more compact bone tissue results depend on the age, general health, and metabolic problems of the patient very good results were obtained in patients with diabetes. The recurrence rate is lower were no adverse effects in LLLT treated patients. We conclude that laser therapy with detox was effective on bone repair and bone regeneration when compared to results in the control group ...GENERAL IMPROVEMENT OF THE PATIENT'S HEALTH STATUS, IMMUNITY, OLD CHRONIC PROBLEMS WERE AS WELL RESOLVED AFTER THE TREATMENT.
Keywords: #photobiomodulation, #lllt, #healing, #lasertherapy, #mechanisms