Abstract originally published in Laser and Surgery Medicine -- Article retyped by permission.

STIMULATION AND INHIBITION EFFECT OF LASERS FOR WOUND HEALING ON RATS

Farouk AH Al-Watban, Msc PHD. And Xing Y Zhang, M.D.

Laser Research, KFSH&RC, Kingdom of Saudi Arabia

The comparison of wound healing stimulation effects on rats using HeCd, Argon, He Ne, and GaAlAs lasers (for 0.39 cm^2 wound size and 3 times per week treatment schedule) were carried out. The inhibition effect of low power Argon laser of wound healing was also investigated. The results showed that the % of acceleration in healing days were of 15.09, 22.93, 23.21 and 20.37 in 442 nm, 514 nm, 632 nm, 786 nm and 830 nm at the incident dose of 20 J/cm^2, respectively. The results also suggested that He Ne laser with 632 nm was the most effective in promoting wound healing in all wavelength used in this study. The inhibitory effect of low power Argon laser showed the zero bioactivation at the incident dose of 80 J/cm^2 and the deceleration in healing days was –8.65% at the incident dose of 130 J/cm^2.

Information Application:

- **Supports 632 nm as the most effective frequency**