

## **Histological effects of 820 nm laser irradiation on the healthy growth plate of the rat**

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Low level laser therapy (LLLT) has been in clinical use in the United Kingdom for over 15 years. Recently, clinicians have expressed concern that if LLLT is used to treat a lesion adjacent to an active growth plate in a child, they may compromise the normal growth and development of that bone. The aim of this study was to examine the effect of 820 nm wavelength low level laser light on the healthy growth plate of the rat. Twenty-four female Wistar rats (aged 32 to 60 days) were used in the study. One knee joint of each animal in the experimental group was irradiated three times a week at an energy density of 5 J cm<sup>super(-2)</sup>. Animals were examined histologically after six and 12 treatments. The irradiated growth plates were compared histomorphometrically with the untreated contralateral growth plates and also with the sham-irradiated growth plates of control animals. The results show that irradiation with low level laser light of wavelength 820 nm and energy density 5 J cm<sup>super(-2)</sup> had no significant effect on the healthy growth plates of the rat knee joint.

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