The Effect of Red Light Therapy on Tissue Repair in Planarian Flatworms

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This study investigated whether red light therapy increases the regeneration rate of planaria. 12 planaria were cut in half and randomly divided into two groups: a red light treatment group and a control group. The experimental group was exposed to 650 nm red light for 30 minutes per day over a one-week period, while the control group was kept under identical conditions without red light exposure. Planarian length was measured before and after the treatment period using microscope imaging software. The results showed that planaria exposed to red light had a greater average increase in length compared to the control group. Statistical analysis using an independent sample t-test revealed that this difference was statistically significant ($p = 0.02$). These findings support the hypothesis that red light therapy enhances tissue regeneration. This study contributes evidence that red light may accelerate biological healing processes, which could have potential applications in medical rehabilitation and athletic recovery.

Awards Won: