

## **Hair Removal with the Long-Pulsed Nd:YAG Laser: A Prospective Study with One Year Follow-up**

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**Background and Objective:** The aim was to investigate the efficacy, side effects and the long-term results of a long pulsed Nd:YAG-Laser for hair removal in different hair colors and skin types.

**Study Design/Materials and Methods:** We performed a prospective clinical study with 29 volunteers. Treatment was performed on the lower leg with a long pulsed Nd:YAG-Laser. Five test areas were treated 1-5 times in monthly intervals; one served as control. Follow-up investigations were performed at each session, and 3, 6, and 12 months after the last therapy. No depilatory treatment except shaving was allowed during the time of follow-up. Percentual hair loss, short- and long-term side effects, and pain during the treatment were evaluated.

**Results:** After one month, a hair loss of greater than 50% was found in 44.9% of the areas treated once. With up to five treatments, this percentage increased up to 71.5%. One year after therapy, a greater than 50% hair reduction was still present in 40% of the five-treatment-areas and in 0% of the areas treated only once. There were no permanent side effects despite one small scar after a folliculitis.

**Conclusions:** The long pulsed Nd:YAG is suitable to remove hair for more than 12 months effectively, although 4-5 sessions are necessary for these results. Blond hair can also be removed, although much less effective. No lasting side effects could be seen. Darker skin types or tanned skin can also be treated without side effects. A cooling may be advisable due to the pain reported by the volunteers.

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