

# The Effect of Nd:YAG Laser Treatment of Posterior Capsule Opacification on Anterior Chamber Depth and Refraction in Pseudophakic Eyes

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**Objective:** To determine the changes of IOL position after Nd:YAG posterior capsulotomy by measuring anterior chamber depth (ACD) and refraction, including spherical equivalent (SE) and cylinder.

**Design:** Prospective descriptive study.

**Methods:** Forty-seven pseudophakic eyes with posterior capsule opacification (PCO) of 29 patients were included. Nd:YAG capsulotomy was performed. Patients' ACD and refraction were measured before the treatment, and after the treatment at 1 week and 3 months. IOLMaster (Carl Zeiss Meditec AG) and automated refractometer (TOPCON KR-8800) were used.

**Results:** There were no statistically differences in ACD and SE before, and after laser treatment at 1 week and 3 months (repeated ANOVA p value = 0.582, 0.269 respectively). Both backward IOL movement (n =29) and forward IOL movement (n=18) were found. Some changes in cylindrical refraction were found at 1 week, but decreased at 3 months after capsulotomy (baseline cylinder: -1.16, cylinder at 1 week and 3 months: -1.00, and -1.14, p value = 0.012). These changes were the same with 1-piece and 3-piece IOLs.

**Conclusions:** Nd:YAG posterior capsulotomy did not significantly change ACD and SE. It causes cylinder change at 1 week after laser but the effect decreases at 3 months. This effect was small and may not be clinically significant.