PURPOSE: Mitomycin C after photorefractive keratectomy (PRK) is used to reduce the development of haze and regression in higher intended corrections. The aim of this study was to investigate the safety, stability, and efficacy of EpiLASIK with mitomycin C. METHODS: Fifty eyes of 29 patients underwent EpiLASIK with the Gebauer EpiLift microkeratome. The mean preoperative spherical equivalent was -6.89 D (SD +/-0.63, range -6.0 to -8.0 D). After the laser ablation, mitomycin C 0.02% was applied for 30 seconds on a sterile filter paper. Preoperatively and 1, 3, 6, and 12 months after surgery, a full ophthalmic examination was performed. RESULTS: In 42 of 50 eyes, the bandage contact lens was removed at day 3. Twelve months after surgery, 96% of all eyes were within +/-1.0 D and 82% were within +/-0.5 D of intended correction. Five percent of all patients lost 1 line of best-corrected Snellen visual acuity, 42% were stable, and 56% gained 1 or more lines. In most patients, the cornea was clear during the whole follow-up, and in 10% only trace haze was visible. The uncorrected visual acuity was at least 1.0 in 86% of all patients, and all patients reached 0.5. CONCLUSIONS: EpiLASIK with mitomycin C with higher intended corrections seems to be an effective and safe procedure. With the application of mitomycin C, only minimal haze appears.