

## New 'custom' LASIK individualized vision correction study shows better quality results of wavefront-guided LASIK

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An independent researcher reporting at the annual meeting of the American Society of Cataract and Refractive Surgery (ASCRS) finds that "Custom" or Wavefront-guided LASIK produces superior vision quality compared to traditional LASIK eye surgery.

"While conventional LASIK is good, we're finding that wavefront guided LASIK yields sharper and higher quality vision, and higher patient satisfaction compared to conventional LASIK. The improvement will likely be most apparent when driving at night," said US Navy Captain Steve Schallhorn, MD, the Director of Cornea and Refractive Surgery at the Navy Medical Center, San Diego.

We are finding that custom LASIK, without the use of glasses, is giving many patients the ability to see as well or better than they could see with glasses before surgery," he said. Schallhorn is part of a Navy program providing LASIK to Navy and Marine Corps personnel. "Refractive [LASIK] surgery plays a vital role in the military," he said. "By reducing dependence on glasses and contact lenses in active duty personnel, it enhances combat readiness and improves performance. It also expands the applicant pool to talented young men and women for a variety of Navy programs."

"Most significant," said Schallhorn, "is the improved quality of vision with the wavefront-guided procedure, fewer problems with halos and glare, better night vision, and higher patient satisfaction based on a detailed patient questionnaire."

Schallhorn's early findings compared the results the Navy Medical Center obtained in patients having conventional LASIK versus custom LASIK. With conventional LASIK 88 percent of 908 patients achieved 20/20 or better as tested six months after the procedure. By comparison 97 percent of 34 patients using the wavefront-guided LASIK achieved 20/20 or better. Similarly, 85 percent of patients of wavefront-guided LASIK had 20/16 vision versus 69 percent of conventional LASIK patients six months following their procedures. Schallhorn also noted that 30 percent of conventional LASIK patients reported an increase in night driving halo symptoms compared to no patients in the wavefront guided LASIK group. After three months the majority of night halo problems abated for the conventional LASIK group.

Conventional LASIK eye surgery has been around since 1995, but wavefront-guided LASIK has been widely available for only about a year and a half. Doctors and companies are promoting it as being better than regular LASIK, but it is more expensive. Patients and some physicians have questioned whether or not it is worth the extra cost.

LASIK uses a laser to reshape the front part of a patient's eye to correct visual errors such as nearsightedness or farsightedness. Conventional LASIK guides the laser by using treatment formulas based on much of the same information gathered when a patient has examinations for eyeglasses or contact lenses.

Wavefront-guided LASIK analyzes light that is reflected from the back of the patient's eye, to see how the light is distorted by visual errors in the eye itself. Special equipment then makes a custom treatment plan for that eye and guides the laser in applying the treatment. It is that customization that produces the superior results, Schallhorn said.

"Not everyone is a candidate for LASIK, complications are a real possibility, and some patients may still need glasses," Schallhorn cautioned adding, "the most satisfied patients are those who are well informed and have realistic expectations for what their results are likely to be."