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[SPORTS](#)  
[POLITICS](#)  
[LAW](#)

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[SPACE](#)  
[HEALTH](#)  
[ENTERTAINMENT](#)  
[TRAVEL](#)  
[EDUCATION](#)  
[IN-DEPTH](#)

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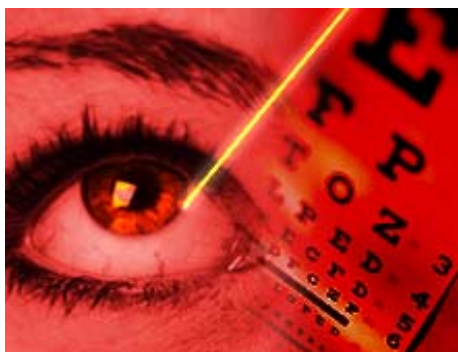
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## Military sets sights on laser tech

### 'Building a better warrior with technology'

February 11, 2002 Posted: 10:58 AM EST (1558 GMT)



**DAYTON, Ohio (AP) -- Air Force Tech. Sgt. Ronald Neldon wore his eyeglasses to bed for five years after he survived a terrorist attack in Saudi Arabia.**

"Do I wear the glasses or do I not sleep?" Neldon said. "I was afraid of something happening without being able to see."

Neldon no longer sleeps while wearing his glasses because he is among thousands of United States airmen, soldiers and sailors to receive laser eye surgery under a program authorized by Congress two years ago. The program is designed to free troops from eyeglasses, which can get broken or lost in combat, or interfere with gas masks.

The military previously had prohibited laser eye surgery, in part because of a fear it could structurally weaken the eye. However, it changed its stance following research by the Navy.

About 17,000 soldiers, sailors and airmen have received the surgery, some of it dating back to 1993, when the Navy research began, according to spokesmen for all three branches.

The surgery is performed at Wright-Patterson Air Force Base in Dayton; the Air Force Academy in Colorado Springs, Colorado; and at Lackland Air Force Base in San Antonio, Texas. It's also provided at Army and Navy centers in San Diego, California; Bethesda, Maryland; Fort Bragg, North Carolina; Fort Hood, Texas; and Honolulu, Hawaii.

**QUICKVOTE**

If you were in the military and wore glasses or contacts, would you volunteer for laser eye surgery?

Yes, whatever my assignment.

Under no circumstances.

Only if I were assigned to combat duty.

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The surgery is strictly voluntary. In the Air Force, aviators and special forces troops -- those most likely to see combat or wear respirators or gas masks -- receive top priority, said Air Force Col. Leo Hurley who performs the surgery at Wright-Patterson. Those not eligible could include people with medical conditions such as arthritis or diabetes, which could impair healing.

## **Khobar Towers attack**

Neldon, a security policeman, was in bed when a truck bomb exploded outside Khobar Towers in 1996 in Dharan, killing 19 American servicemen and injuring 372 other people.

The blast sent his eyeglasses flying from a nightstand to the floor, coming to rest under a locker. Neldon crawled around the dark room on his hands and knees until he found his glasses.

"Without my glasses, I can't see," Neldon said. "You're scared."

The 39-year-old Neldon has broken five pairs of glasses while sleeping with them, including two pairs of more durable military glasses. In December, an Air Force doctor at Wright-Patterson performed the laser eye surgery that made his eyeglasses unnecessary.

The smell of burning tissue during the surgery triggered flashbacks of the bombing.

"I just froze," Neldon recalled. "It literally scared the hell out of me." A technician took his hand, bringing him back to reality.

More than 3 million Americans have undergone laser eye surgery since the U.S. Food and Drug Administration (FDA) approved its use in 1995. The American Academy of Ophthalmology says the surgery has caused vision problems for less than 1 percent of those receiving it.

Congress approved \$15 million for the military program. Of that, Wright-Patterson received about \$2 million in July 2000 and transformed a hospital ward into an outpatient laser surgery clinic. Treatments there began in May.

## **Applying the technology**

Hurley, who performs the surgery at Wright-Patterson, estimates that 40 percent of the Air Force's 350,000 troops require corrective lenses.

Hurley performed the surgery on one navigator who said he'd be virtually blind without his glasses and feared he'd be defenseless if he had to eject behind enemy lines.

When navigators and other airmen are forced to eject from airplanes, glasses and contacts are ripped off by the high wind.

"If we can make them less dependent upon their glasses, we have, in effect, made a better soldier," Hurley said. "We're building a better warrior with technology."

## **Take a number**

At Wright-Patterson, there's a months-long waiting list.

Patients lie on their backs in a reclining chair positioned next to a console with a video and computer monitor. The surgeon peers through a microscope and controls the laser with a joystick device. The procedure takes about 15 minutes, and the patients can go home afterward.

The procedure used by the Air Force is photorefractive keratectomy, or PRK. Surface cells of the eye are scraped away, and an ultraviolet laser is used to flatten the surface of the cornea, improving the way the eye focuses light.

The surface cells regenerate themselves within seven days, then it takes up to four weeks for any blurred vision to clear.

The Air Force does not offer LASIK (laser in-situ keratomileusis) surgery, even though it's usually less painful and recovery time is shorter.

With LASIK, the surgeon cuts a tiny flap in the cornea and folds it back, uses a laser to flatten the surface of the cornea, and reattaches the flap. Hurley said the flap can be displaced during combat, impairing vision.

Although the risk of problems with laser eye surgery is low -- less than 1 percent -- in some cases there can be infection that can prevent perfect vision, Hurley said.

"The military is willing to accept that," he said. "You've got a procedure that's pretty good, but it's not perfect."

Pete Sepp, spokesman for the National Taxpayers Union, a watchdog group based in Alexandria, Virginia, said the procedure should be restricted to those who would need it in combat.

"It could be a worthy procedure, providing it were limited to personnel where it would make a critical difference in their performance," Sepp

said.

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