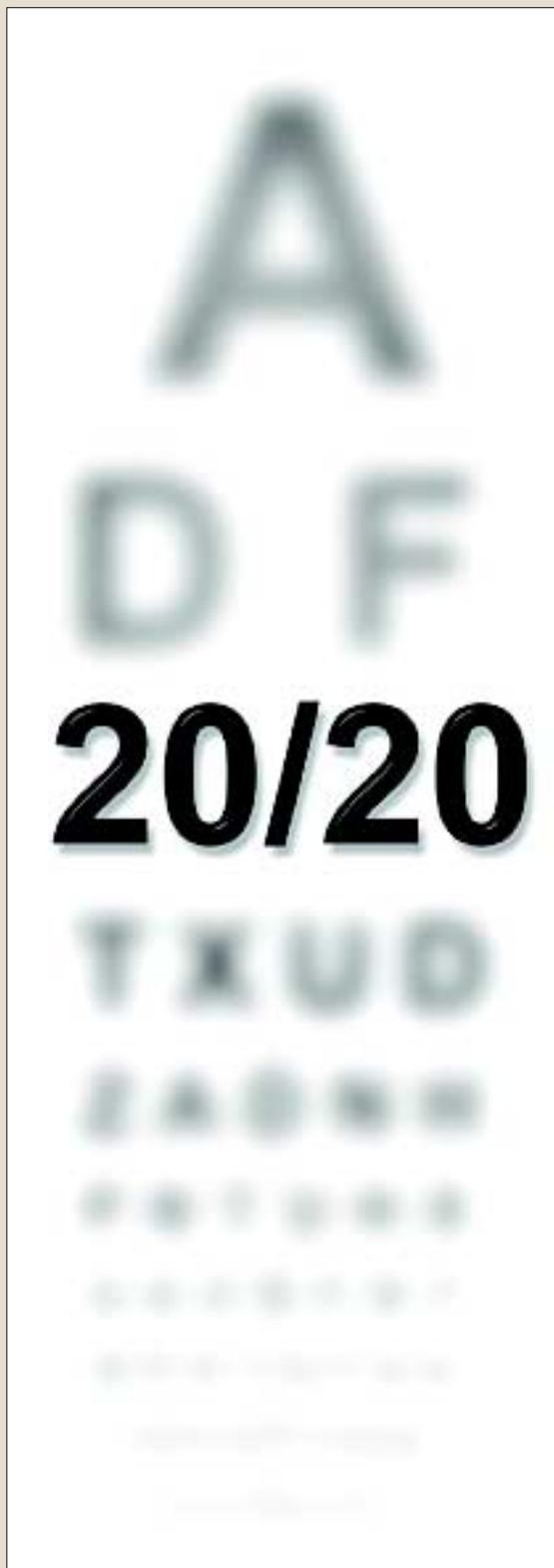


When You're No Longer



By LCdr. Anna H. Stalcup, MSC

Late one evening, a lieutenant was looking for me in the wardroom. He certainly didn't look his usual self. Of course, being an FA-18 pilot on cruise isn't a relaxing job, but he looked stressed.

"I need to talk to you," he said, "I almost had a ramp strike tonight. I'm going to the skipper to turn in my wings right now unless you think it could be my eyes causing my problems."

While we walked down to medical, he explained his vision always had been better than 20/20, and it still seemed OK, except while flying at night.

After checking his visual acuity, I found he was 20/25 in each eye. He was a bit myopic and needed a minor correction.

It is common for people only to notice a vision problem at night, when the correction is mild. Nighttime pupil dilation accentuates the problem and makes it more noticeable. Some people might have night myopia where they become more nearsighted at night, since their eyes don't know where to focus.

I told our pilot, "We can make you glasses now, so you can get an upchit and fly right away if you're on the schedule." I added, "The glasses should definitely solve your problem."

"Can I take this prescription into port so I can get contact lenses?" the lieutenant asked.

"No," I explained, "a contact-lens prescription and glasses prescription are different. The spectacle prescription includes the power of the lenses only. However, a contact-lens prescription also includes the manufacturer, type of lens, base curve, and diameter. We would need to put lenses on your eyes, then check the fit and your vision with the exact type of lens you would be flying in."

"I definitely want to try contact lenses," the

pilot responded. “I even hate wearing my non-prescription sunglasses when I fly; they seem to block some of my peripheral vision.”

“Well,” I continued, “contact lenses are a superior method of correcting refractive error, since they maximize the field of view, minimize aberrations, and, because there is no frame, you don’t have to worry about interference with a helmet, oxygen mask, night-vision goggles, or laser-eye protection.”

I told him we would try fitting him with soft contact lenses: the most common type. They are oxygen permeable and comfortable; however, they do increase the risk of infection, especially if they aren’t cleaned and disinfected properly. A poor fit or extended wear can cause corneal hypoxia, which leads to corneal swelling, a possible change in prescription, and increased risk of infection. The cornea is the clear, outer part of the eye the contact lens covers. It gets oxygen from the air so the contact lens can block some of the oxygen. Daily wear contact lenses, which you remove before sleep, are healthier and safer for the cornea. Extended-wear lenses typically are fitted for patients’ convenience. With these lenses, there is a greater incidence of ulcerative keratitis, a corneal infection that can lead to blindness. Soft extended-wear lenses are fitted on a modified flex-wear schedule, in which the lenses are removed nightly and replaced at programmed intervals. Pilots and aircrew should not be sleeping with the contact lenses unless there is an operational need—maximum seven days and nights.

After the lieutenant put the trial lenses in his eyes, I checked his vision and the fit. His vision was better than 20/20, the lenses fit well, and he said they felt comfortable.

“Are there any disadvantages to wearing contact lenses?” the pilot asked.

“More care is required,” I replied. “The risk of infection also increases, and you could have problems with the environment. For example, if you have allergies or dry eyes, contact lenses could make them feel worse. In addition, if you are flying with an oxygen mask that doesn’t fit perfectly, air might blow into your eyes and irritate them. Theoretically, the lenses could dis-

lodge in flight, although that rarely happens with soft-contact lenses.”

“I like the way I can see with these contacts, Doc. Am I authorized to wear them while flying?” asked the pilot.

“I need to have you come in for a follow-up appointment in two weeks to make sure the lenses still fit well,” I replied. “I also need to make sure you aren’t having any problems with the contacts. If everything looks good, the flight surgeon can give you an upchit, authorizing you to wear the contact lenses. Until then, wear your new glasses, and let me know how your next flight goes.”

Contact lenses are approved for aviation-designated personnel; however, aeromedical clearance is required. In other words, you must meet visual-acuity standards while wearing the contacts. The contact-lens usage must be authorized on an upchit, which your flight surgeon can issue.

Guidelines for aviators who wear contacts:

- Carry clear spectacles in an accessible case.
- Check contacts for damage or discoloration before inserting them.
- Clean and disinfect lenses as directed.
- Clean lens case weekly.
- Schedule regular progress exams, as directed by your optometrist.
- Wear protective eyewear during racket sports.
- Preflight your lenses daily:
 - ◆ Look good. Do lenses and eyes look good?
 - ◆ Feel good. Any discomfort?
 - ◆ See good. Check acuity in each eye.

Never wear lenses with red or irritated eyes, and never change lens brand, type or parameters without professional guidance. It also is safer not to change or mix solutions or use any eye drops without first talking to your optometrist. 

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