

“You’re Probably Seeing Double”

Managing Vision for
Cowboy Action Shooters™

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Our eyes are the pilots that deliver our bullets to the targets, but having one target, one gun, and two eyes really complicates matters.

Assuming you have good eyesight, both eyes may see well, but they don't see exactly the same thing. And, for everything we do – except for shooting at stationary targets – having both eyes see differently is a good thing. Since our eyes are set several inches apart, the left eye sees everything from a slightly different angle and viewpoint than the right eye. The brain processes the differences of the two images and uses that information to provide a built-in range finder that we refer to as “depth perception.” With one eye open, we see a flat and narrow field of view; with both eyes open we see a wider field of view and recognize that some things are near and other things are far.

Eye dominance

“Eye-dominance” – what's that? Eye dominance, technically called “ocular dominance,” is a very normal condition in which the vision of one eye is more prominent than the other eye, especially on near objects. Here's what happens: because each eye sees objects from a slightly different viewpoint, the brain intercedes to eliminate confusion and discomfort, suppresses the image of the non-dominant eye, and has us perceive one image primarily from the eye that is dominant. Simply stated, both eyes see things differently, but the brain suppresses the image from the less dominant eye so our vision is not blurred.

While studies vary in the population of people with left vs right ocular dominance, most suggest that more people are right eye dominant than left eye dominant, and more people are right handed than left handed. However, eye dominance doesn't always correlate with handedness. A left-handed person can be right-eye dominant, and vice versa (referred to as “cross dominance”). Lastly, the eye with the better vision is not necessarily the dominant eye.

Determine your dominant eye

Here's an easy way to find your dominant eye. With both eyes open, fully extend your arm, hold up one finger and align it to something in the background. Now close your left eye and leave the right eye open and look at your finger. Then without moving your hand, close your right eye and open the left eye to look at your finger. The open eye that aligns the finger to the object as you initially perceived it with both eyes is your dominant eye.



Fig. 1. With both eyes open both a right-eye-dominant and left-eye-dominant person sees what appears to be the proper alignment of the pistol's sights to the target.

The results of eye dominance testing may vary with the testing methods (sighting through a hole in a card, using a straight object such as a finger or pencil, using a small dowel with a ring attached to the top to view through, etc.), but at the end of the day we know that one eye will do a better job of getting you on target than the other eye.



Fig. 2 When a right-eye-dominant person closes their right eye, the image seen by the left eye reveals a questionably sighted pistol.

Getting back to the different angle of view from each eye, Fig. 1 shows the alignment of the pistol's sights to the target as seen from both eyes of a right-eye dominant person. But when that shooter closes the right eye, the image changes dramatically (Fig. 2), and the sights are no longer aligned to the target. They are only aligned for the right eye.



Fig.3 When a right-eye-dominant person has both eyes open, the left eye clearly sees the pistol (ghosted in this photo), but the brain suppresses the image making it virtually invisible - appearing like Fig. 1. And, of course, the opposite happens for left-eye-dominant people.

Eye dominance and accuracy

Eye dominance is critical to accurate shooting. I'm right-eye dominant, and I shoot traditional cowboy style (pistols held in my right hand, cocked and supported with my left). So, I make a concerted effort to squint my left eye and concentrate diligently on what my right eye is seeing. (You may have seen some shooters wear a patch or translucent filter over their non-dominant eye to better control the dominance.)

Fig. 3 shows an example of how a right-eye dominant shooter might perceive an aimed pistol with both eyes open. Note that the hand on the right – what the left eye sees – while in focus, is less vivid than the hand on the left – what the right



Fig.4 Similar to Fig. 1, a left-eye dominant, left-handed shooter would see this alignment of the pistol to the target.



Fig.5 But when the left-handed, left-eye-dominant shooter closes the left eye, and the pistol is viewed by only the right eye, the sighting of the pistol to the target is misaligned.

eye sees. Again, this is an example using Photoshop® imaging to suggest what is happening. In reality, both eyes see equally vivid images; it is the brain that suppresses the image of the less-dominant eye making it somewhat invisible and imperceptible, while important, nonetheless.

Managing dominance

Can you shift the dominance from one eye to the other? Try it; do the previous eye dominance test again with both eyes open. If you are right eye dominant, try concentrating diligently on your finger with your left eye. After a few moments, you might see two fingers as you become more aware of the suppressed image, but it will never change to one finger as seen by the dominant eye. Studies say ocular dominance is a rather permanent condition. The real question is, “Can you control the dominance?” and the answer is “somewhat.” You can try to intensely focus on what the dominant eye is seeing, but you can't really eliminate the image of the non-dominant eye unless you block, squint, or close it.

The easiest way to manage your eye dominance when shooting is to close your non-dominant eye so that all of your sighting is done with only your dominant eye. But by closing one eye, you may feel that your vision is limited, your field of view is restricted, or that the image you see is not “bright” or vivid enough. The ideal thing to do is practice concentrating intensely on your dominant eye, and maybe squinting the non-dominant eye if you can.

Sighting arrows and rifles

Successful ocular dominance control is a bit easier in archery than in pistol shooting because

the object being sighted – the arrow – is typically drawn directly to the dominant eye. Of course, the other eye should still be squinted so as to not blur or confuse the sighting of the arrow’s tip. This also suggests that management of eye dominance for rifle shooting is easier than for pistol shooting because typically the rifle’s rear sight is brought close to the dominant eye. Folks who are right handed but left-eye dominant (“cross dominant”), may also have less trouble with sighting rifles than pistols because the rear sight is held closer to the sighting eye, even though that eye may not be the dominant eye. As with arrows, the other eye should be closed as to eliminate blur of the front sight.

Despite eye dominance, a cross-dominant shooter may feel more comfortable and safer using his/her normal hand when handling the rifle, working the action, etc.

Pistols in both hands; the gunfighters

For gunfighters, the problem is a bit more complex. I know some gunfighters who squint their right eye and sight with their left eye when shooting the left pistol, and vice versa for the right pistol, while other gunfighters move each pistol to align with their dominant eye. And, there are the gunfighters who twist both pistols to align the barrels close and parallel to each other, and aim each one with their dominant eye with very little movement of the pistols.

Eye dominance for tactical shooters

John Marrs, a California-based SASS member and certified tactical firearms instructor, says “For cowboy shooting, where pinpoint accuracy on stationary targets is important, shooting with one eye closed or squinted is ideal. However, for tactical and combat situations where depth of field, moving targets, and a wide field of view is important, we train folks to keep both eyes open. Also, we recommend that our tactical shooters don’t alternate between opening and closing their non-dominant eye as needed.” John added, “Opening the non-dominant eye causes blurred vision for a second or so – a condition that cannot be risked in tactical situations.”

Caution

If you consider the one-eye patch mentioned earlier, be aware of your limited field of view and reduced depth perception when picking up and setting down long guns, going around props, maneuvering past stage facades, and so on. (Birchwood Casey manufactures “OFFEYE” optical filters that attach to your glasses for the purpose of improving vision for cross-eye-dominant shooters. I have no information how well they work, if at all, but if you are cross-eye-dominant they may be worth investigating.)

Wrap-up

At the very least, knowing which eye is dominant is a very important component of accurate shooting that is well worth us fast-moving cowboy shooters being aware of.