

Determining Eye Dominance

Ronald A Howard Jr. and James V. Peter, Jr. *

Eye Dominance

Most people have a dominant eye, just as they have a dominant hand or foot. When a person looks at an object with both eyes, the dominant eye aligns directly with the object unless an obstruction interferes with a clear line of sight. Under normal conditions, when a finger is pointed at an object, or two or more objects are aligned visually, the dominant eye determines the alignment. Just as some people are truly ambidextrous, a very small number of people have indeterminate eye dominance. The majority, however, have a dominant eye. In most cases eye dominance and hand dominance are on the same side, but many people are cross-dominant. That is, their handedness and eyedness are on opposite sides.

Humans have binocular vision – they get slightly different images from each eye and blend them in the brain to yield one image and a sense of depth or distance. With both eyes open, you have a wider field of vision with more peripheral vision and better motion detection. In shot, you simply see better when both eyes are used. Experience shows that shooting skills are learned more easily and often better developed when a shooter learns from the dominant eye side. Where eyedness and handedness are on the same side, new shooters easily use the dominant side. Cross-dominant shooters have a greater challenge, but

they do better when they learn to shoot with the dominant eye.

Some shooters, particularly those with successful experience in shooting with the non-dominant eye, are reluctant to switch. The switching process usually involves a brief period of reduced success and frustration, followed by improved skill levels beyond their original level. Some experienced shooters have learned to shoot one-eyed, closing the dominant eye or obstructing it with a shield, blinder, spot of tape or a small object on the lens of the shooting glasses. Others have learned to override their dominant eye through practiced concentration or to compensate in some other fashion. Fewer than 1 percent of all shooters must shoot one-eyed because of dominance switching. In most cases, the shooter learns to use both eyes and shoot from the dominant-eye side. Learning one-eyed or with the dominant eye obstructed or closed increases stress and fatigue, and reduces concentration and quickness. Results indicate reduced performance levels, increased frustration for the shooter and slower learning.

Learning to shoot well is a challenge. You need every advantage to meet that challenge effectively. Learning from the dominant-eye side is a major advantage.

How to Determine Eye Dominance

Four basic methods for determining eye dominance are described. Those that provide a check for “cheating” are more effective in an instructional setting. Regardless of the method selected, the exercise should be repeated several times. Instructors should remain alert for eye-dominance related problems with shooting performance.

Coach-pupil Method

Shooters should get into their coach-pupil pairs, standing several arm-lengths apart and facing each other squarely. The “pupil” should place one thumb over the other, then cross the fingers of the top hand over those of the bottom one. This leaves a small, triangular opening. Raise the hands, keeping both eyes open, and center the “coach’s” nose in the triangular opening. At this point the coach should note which eye is visible in the opening. Then the “pupil” should bring his or her hands slowly back to the face, keeping the “coach’s” nose in the opening. The hands should come to the dominant eye. Coaches must watch closely for wavering between the eyes, an indication of “cheating” or forcing the hands to a predetermined eye. The exercise should be repeated several times to confirm original results with both partners checking their eye dominance.

Option: Shooters could cup their hands together, leaving small openings between the bases of the little fingers and the thumbs. A card or a sheet of notebook paper with a small hole centered in it could also be used.

Distant-object Method

Use any of the methods of making an aiming device outlined above. Center a distant object in the opening. Make sure both eyes stay open and face the object squarely.

Finger-point Method

With a pointing method, a distant object or a partner is used. The finger is pointed naturally at the object with both eyes open and the face square to the object. The eyes are covered or closed alternately. When the dominant eye is closed or covered the finger appears to jump away from the original location.

Tube Methods

Kaleidoscopes, toilet paper tubes and similar objects can be used with many young people to determine eye dominance. When the person is not aware of being tested for eye dominance, the tube will almost always be

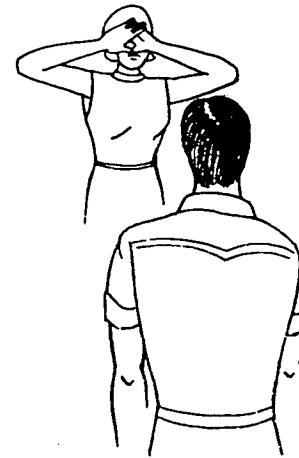
brought to the dominant eye. This also occurs with spotting scopes, telescopes and similar tools where one-eyed viewing is needed.

Troubleshooting for Coaches and Instructors

Some shooters will bring the opening back to their own noses because they are looking at the paper or their hands rather than at the target. Those who use the finger-point method will see two fingers if they focus on their hand rather than on the target. If inconclusive results are obtained, try another method. Make note of that shooter, however, and watch for evidence of switching dominance in the act of shooting. Consistently missing to one side of the target usually indicates an eye-dominance related problem.

A Note of Caution

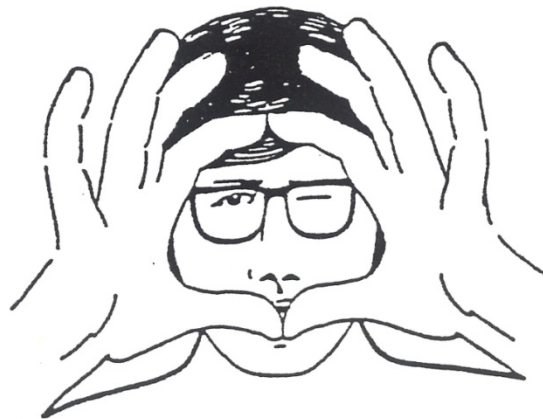
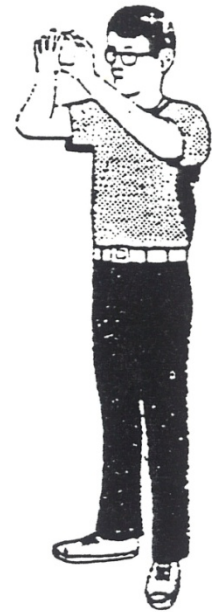
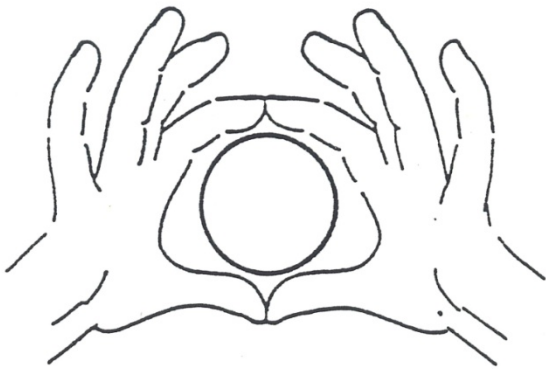
Vision problems can have a serious impact on shooting ability. Often they go undetected by the shooter or those around them. Unless you are an ophthalmologist or optometrist, avoid “diagnosing” vision problems, but be aware of the types of problems a

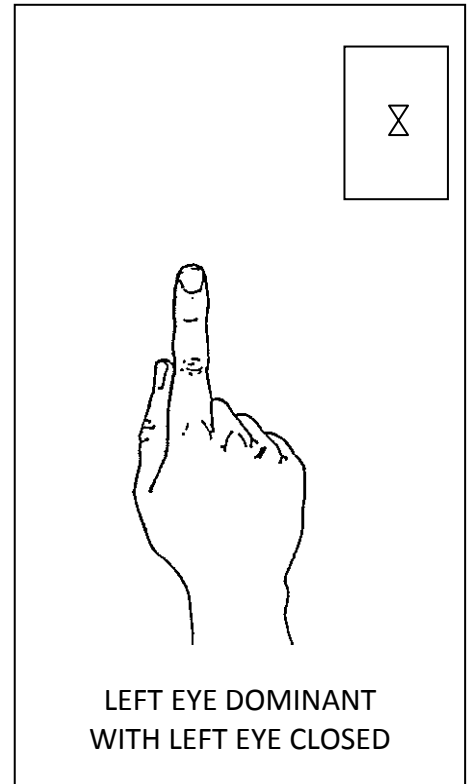
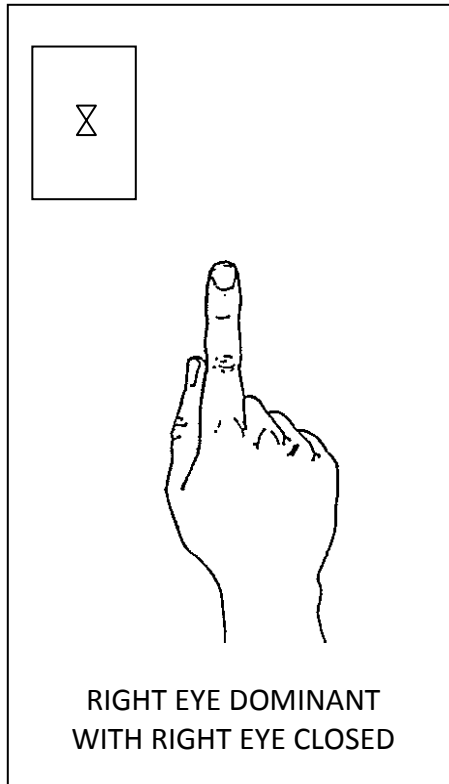
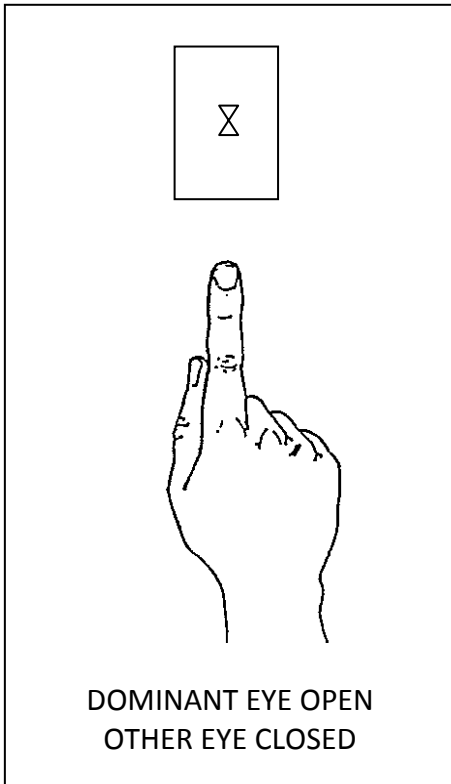


shooter with vision problems may face. Discuss any potential problems you observe with the shooter and his or her parents. Like teachers who notice reading problems or other vision related difficulties, the shooting instructor may notice things that even the shooter misses.

Finally, be sure that all shooters are wearing adequate eye protection while they are on or near the firing line. Some people recommend the use of shooting glasses even for archers. Eyes are precious and vision is vital to shooting. Let's do our part in protecting them.

DOMINANT EYE





Check for Eye Dominance

With both eyes open, point your finger at a small object 10 - 20 feet from you.

Right Eye Dominance

Close your left eye and the object will not move.

Close your right eye and the object will appear to jump to the left of your finger.

Left Eye Dominance

Close your right eye and the object will not move.

Close your left eye and the object will appear to jump to the right of your finger.



Figure A-1: Two fingers of left hand simulate rear sight. Index finger of right hand simulates front sight. Represents perfect sight alignment.

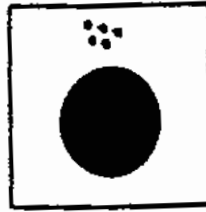


Figure A-2: Keeping tight hand stationary, move left hand down to simulate moving rear sight down.

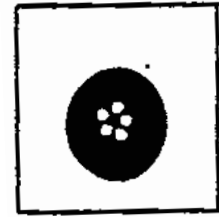


Figure A-3: After the rear sight (left hand) is moved down, realign sights. Thus, right hand moves down to simulate moving muzzle down.

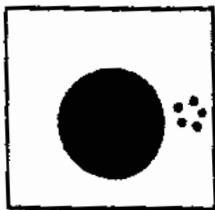
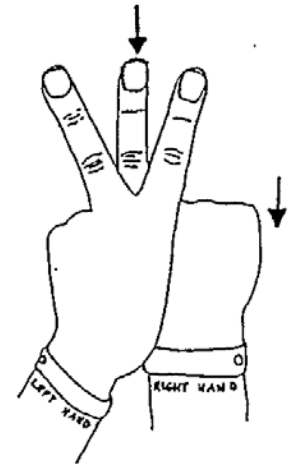
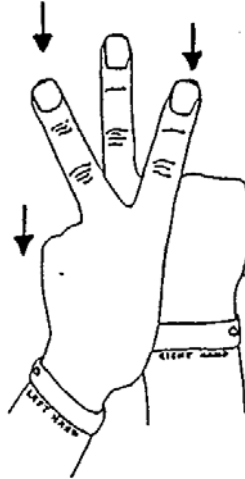


Figure B-1: Two fingers of left hand simulate rear sight. Index finger of right hand simulates front sight. Represents perfect sight alignment.

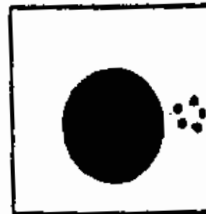


Figure B-2: Keeping right hand stationary, move left hand to the left to simulate moving rear sight to the left.

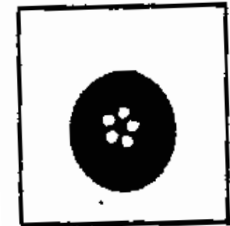


Figure B-3: After the rear sight (left hand) is moved left, realign sights. Thus, right hand moves left 10 simulate moving muzzle left.

