

Eye Dominance

Eye Dominance is a phenomenon that affects many people from birth or can change over time especially with the onset of middle age, tiredness, variations in light and a variety of other factors. The effect is often not identified by shooters or indeed coaches. The impact on shooting effectively, even at short range is dramatic and even more so at long range targets.

That impact is not always recognised. How many syndicate members drop out or give up shooting through frustration at not being able to hit or cleanly kill quarry despite it being 'an easy shot' and having the skills and resources to do so?

A real inhibitor to effective shooting is the fact that your friends, fellow shooters or relatives do not know they have a cross dominant eye. Even if they did not have a dominance problem before, remember it can be acquired especially as we get older. Once identified it can be easy to correct.

Let's start with some facts about vision and sport:

- 30% of sportsmen and women require a correction for good visual acuity. (The same as for drivers. D.V.L.A.research).
- Studies show that 10% of us remove our glasses to participate in sport.
- 10% of sportsmen and women have impaired binocular vision.
- 5% of sportsmen are colour blind. Almost no women are colour blind but women are much more likely to have shallow or mixed dominance

Game and clay shooting is NOT an aiming sport such as rifle shooting. This means that like with most ball sports, good visual function is absolutely critical to good performance.

What key visual function skills can be considered?

- Visual acuity and dynamic visual acuity.
- Anticipation.
- Stereopsis (depth perception).
- Peripheral awareness.
- Glare recovery.

All of these key skills will be affected and in most cases, impossible without binocular vision i.e. with one eye closed.

The phenomenon of eye dominance is well established but its exact mechanism is poorly understood.

What do we know?

- Eye dominance parallels the asymmetry of the brain that is divided into two hemispheres with complimentary functions.
- The depth of eye dominance is variable and can be overridden by the brain under certain circumstances and with changes in refractive error.
- Cross dominance is a common occurrence and does adversely affect performance in sport as does shallow dominance under certain circumstances.

What are our options in correcting eye dominance problems in game and clay shooting with a shotgun?

1. Closing one eye or occluding (covering) one eye: This is probably the method most commonly used amongst shooters but this will reduce or eliminate the shooters ability to carry out all of the key visual skills listed above, which are required to perform well.
2. Frosting: It is thought that the amount of frosting required on the dominant eye to resolve the cross dominance problem will have the same effective disruption on the binocular vision as total occlusion.
3. Using technology: This can enable the shooter to gain voluntary control over the brain's choice of cross-eye dominance. For shooters with mixed or shallow dominance (middle vision), we want to voluntarily deepen the dominance to ensure more consistent performance and for shooters with cross-eye dominance, we can override the habitual dominance without losing all of the important benefits of binocular vision.

In order to achieve this control the light contrast registered by the brain must be different for both eyes. The technology has been developed and is present and reflected in the performance of the **Easyhit!!** fibre optic bead. It provides the appropriate light contrast and hence allows the brain to overcome cross-eye dominance naturally and consistently.

So in summary, all of the following critical visual skills:

- Visual acuity
- Visual field
- Stereopsis
- Target location
- Anticipation

are reliant on maintaining our binocular vision to perform well in our sport.

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