## 555 GOLF EDITORIALS

## 'PERFORMANCE EXCELLENCE'

## **EYE HAND COORDINATION**

In **`EYE-HAND Coordination and Golf'** you learned that this instinctive human ability is unnecessary to be a great ball striker in golf. In fact, if you do not possess the appropriate conscious skills and your mind is not properly focused, your hand-eye coordination instinctively takes over without your awareness and interferes with your performance. The skill that must be developed is **'Visual Fixation' or 'Attentional Focus Separation' ('AFS')** and the proper focus is a Target Orientation. Before I go into more detail about this ability and deliberate focus it is important to understand a little bit about human vision, how the eyes work, and what causes eye movement.

**Vision** is defined as the act or power of sensing with the eyes and is composed of both central or focusing vision and peripheral vision.

**Peripheral Vision** is part of the autonomic nervous system (it is not open to human awareness and cannot be deliberately activated) and that part of the visual field using our side vision. Peripheral vision is one of two mechanisms involved in the process of visual attention. It comprises about 98%-99% of the visual field. Peripheral vision is designed to respond to any stimulus and causes transient attention.

**Transient Attention** is an involuntary "attentional" response to any sudden change or novel stimulus in the visual field and does not involve conscious thought or cognition. As its name suggests, transient attention is an extremely rapid engagement of attention to a new stimulus, such as the sudden appearance of brake lights in the car ahead. Transient attention causes an involuntary reaction to the sudden change in the visual field. For example, a swiftly moving object coming at you from your blind side causes you to flinch to avoid being hit by the object. No thought is given to flinching. You flinch without thinking. Stimulus-induced or transient attention is drawn to that spot regardless of the position of the eyes. Fear produces the same transient attention. If you fear hitting the ball in the water, your eyes move in response to your fear so you can see whether your fears are realized. If you fear not hitting the ball well, your fear causes your eyes to try to find and control the club head to help it hit the ball.

**Central (Focusing) Vision** is that part of the visual field (about 1%–2%) located in the very center of the visual field. Different from peripheral vision processing, Central Vision is a conscious or cognitive mechanism that focuses visual attention on a particular location in the visual field. In other words, it is what is commonly referred to as "paying attention." It is sometimes referred to in scientific literature as "selective attention", as the individual selects the object to be attended to. When we are told to "Keep Your Eyes On The Ball" it is really our Central Vision that is being referred to.

Your '555 Team' much prefers that you think about 'Seeing The Ball Come Off The Aimed Clubface' than 'Keeping Your Eyes On The Ball'.

**Eye Movement** is a natural part of the human experience. The eyes move in distinct patterns and for various reasons. Different neurological pathways control each of these specific eye movements. In other words, different parts of the brain control each type of movement as practically required. (see 'Tasking') Visual attention is dominated by peripheral vision processing. That is, the eyes move or follow movements of objects within our peripheral field involuntarily unless the eyes are '**Fixated and Attentional Focus**' is set on a specific target. (see 'General Ocular Data Gathering vs. Specific Ocular Data Gathering') For example, if your eyes are fixated on the ball, but you are thinking about your mechanics, your eyes ('Central Vision') move in saccadic jumps to follow the movement of the club. If you are concerned about the outcome of the shot, your eyes ('Central Vision') dart forward to try and find the ball as it leaves the club face or before. If you are concerned about your mechanics and the outcome of the shot while you attempt to fixate on the ball your eyes ('Central Vision') dart from the ball to the club in your backswing, back to the ball, and then to the fairway or green ahead of you. Inappropriate eye movement is not conducive to good golf performance as it results in unstable swing mechanics and less than solid club head contact with the ball.

As you learned in **<u>`EYE HAND Coordination and Golf'</u>**, keeping your eyes and mind fixed on the ball leads to negative outcomes or what we might view as disaster.

Keeping your eyes fixated on the ball but thinking about your mechanics, ball flight, the outcome of the shot, fear of failure or making mistakes, and/or the consequences of making mistakes causes inappropriate, even random eye movement. This counterproductive circumstance interferes with your ability to hit the ball where you want.

Only when your eyes are fixated on the ball and your mind focused on a distant target (see 'Mental Image' – 'Pre Shot Routine'), will your eyes remain on the ball during your golf swing until slightly past impact when the natural forward movement of your body ('Pivoting Hips and Spine which Rotates The Shoulders') causes your head to come along for the ride and turn forward, facing the 'Target'. Thus, your eyes move naturally from the ball to the target at the appropriate time. There is no need to try and control eye movement. (see 'Automatic Reflex & Autonomic Movement')

"Welcome Aboard!"
"Enjoy The Ride!"

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