Putting with a Quiet Eye

A new approach to improving your game

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Putting can be one of the most difficult and frustrating parts of the game of golf, yet when mastered, it can have a major impact on your scoring and handicap. Research suggests that putts account for around 45% of the shots taken in a round [1], supporting the old adage that “you drive for show; but putt for dough”! Not only are putts relatively more important than other shots, but the degree of precision required is also greater. Putting is therefore particularly susceptible to the influence of pressure, nerves and tension; or what is sometimes termed ‘choking’. One slip, jerk or miss can have a huge impact on what your score card looks like at the end of a round.

So what makes a good putter a good putter? How does our mental state influence our stroke? Research is starting to take a new approach to answering these questions. This approach doesn’t involve looking at your stance or your swing, nor does it adopt relaxation or imagery training. Instead it focuses on where you look when putting, something that we call visual control.

Using state of the art eye tracking technology we are able to see where a golfer is looking whilst putting (See image 1). This has given real insights into the differences between good and bad putters and may help you to improve your putting, and sink more putts under the pressure of competition.

Putting with a Quiet Eye.

Research in the early 90’s discovered that expert golfers controlled their vision in a different way to less experienced novice golfers [2]. During the alignment phase, when taking a stance over the ball, experts tended to make quick fixation shifts between the hole and the ball. These fixations were focused in the centre of the hole and on the back of the ball. In contrast, novices had less structured fixations and looked in a variety of locations around the hole or on the green, and either behind the ball or on the club head (see image 2).

Experts also had differing visual control during the actual swing. Experts kept their eyes steady on the back of the ball for about 2 seconds prior to initiating the back swing and maintain this fixation throughout the swing until contact with the ball. Once the ball had been struck the eyes remained steady in the same location for about 300-500ms. This strategy is known as the Quiet Eye [3]!
So why does the Quiet Eye strategy work?

So how do your eyes affect the outcome of your putt? Well to understand this we have to consider the limitations of the human body. Your putter is controlled by your arms, your arms are controlled by your brain and your brain receives information about the location of the ball and the position of the hole from your eyes. So as you putt your brain has to organize and control the millions of neurons that convert all of the information received through your eyes into movements of the putter.

![Expert Visual Control](image1.png) ![Novice Visual Control](image2.png)

(Image 2: Expert and novice visual control during the alignment and swing of a putt.)

The visual control used by experts i.e. focusing between the hole and the ball, gives the brain all of the relevant information about distance to the hole and the force required to make the putt. It is then the job of the brain to organize this information into a movement.

A long fixation on the ball, prior to and during the swing, protects this information by blocking out any unwanted stimuli or visual information. Novices who do not maintain this lengthy fixation on the ball and focus on the putter head and the green are effectively distracting the brain by taking in more ‘irrelevant’ and unnecessary information.

This fixation on the ball is also important as it is giving the brain the necessary information to ensure that there is a good contact between the putter head and the ball. Golfers are taught to keep their head still during and after the putting swing, however keeping your eyes steady is actually more important. A movement of the eyes that follows the ball immediately after contact with the putter would have had to be pre-planned by the brain around half a second prior to it occurring. This pre-planning is enough to interfere with the cognitive pre-programming of the shot and may cause a bad contact and a missed putt.

Pressure, nerves and anxiety can also have an impact on a golfer’s visual control. Research has shown that the effects of competition pressure can result in a golfer’s normal visual control patterns being disrupted and becoming more like those of a novice. This makes golfers more likely to miss pressure putts and may help to explain why simple 3 ft straight putts are often missed in big tournaments with important outcomes.
What can the Quiet Eye do for you?

So we know that experts adopt a Quiet Eye strategy and this may explain why they are capable of making more putts more often. But how can you adopt a Quiet Eye strategy and what might it do for your game? Collaboration between the University of Exeter and Hele Park Golf Centre has led to funding to assess the benefits of adopting the Quiet Eye strategy. Quiet Eye training can help novices who are learning to putt for the first time, can help top level golfers to reduce their handicap and can help improve performance under the pressure and nerves of competition. A recent study at the University of Exeter has shown that novices, who have never previously played golf or putted, can improve significantly when taught to use the Quiet Eye strategy [4]. A group of 8 novices who received Quiet Eye training were compared, across 5 days of intensive coaching, to another 8 novices who were taught basic coaching points such as stance, head position and swing. In a test at the end of the week of training the Quiet Eye trained novices holed significantly more putts from 10ft. The Quiet Eye trained group also managed to control their misses, keeping the ball 17% closer to the hole.

A second study attempted to understand how teaching the Quiet Eye strategy may help to protect top level golfers from the impact of competition pressure, nerves and anxiety [5]. A group of golfers (average handicap 2.5) recorded their putting performance on 10 rounds at various courses before and after a one day Quiet Eye training session on an artificial putting green at the University of Exeter. They then took part in a putting competition where they were asked to take 20 putts from 10ft and try and sink as many as possible. To try and increase pressure they were offered a £100 prize if they sank the most putts and also agreed to have their results shared with all of their fellow golfers. A second group of experienced golfers (average handicap 2.6) went through the same procedure but were not taught the Quiet Eye strategy. The two groups were then compared and the results were astonishing!

The group that had adopted the Quiet Eye strategy recorded a significant improvement in putting performance after the Quiet Eye training, sinking 6% more putts from 6-10ft and reducing their average number of putts by 2 per round. The Quiet Eye trained group also performed significantly better in our laboratory pressure competition; sinking 17% more putts than their competitors. Not only were they more effective at sinking putts, but they also missed by a smaller margin. Their missed putts landed an average of 4.5cm from the hole, compared to 13.08cm for the group who had not received Quiet Eye training. These results suggest that the Quiet Eye training had led to an improvement in putting performance, and an improved ability to putt under pressure.
Putting coaches and Sport Psychologists have an important role to play to help golfers to focus on aspects such as stance, the mechanics of the swing, the lineup of the putt, relaxation, concentration and imagery; however the Quiet Eye strategy offers a new and innovative approach to improve putting and is a technique that really works! So is it as simple as keeping your eye on the ball and you’ll soon be Tiger Woods? Well not quite. Using this strategy in your game takes time and practice and involves changing small but important elements of your pre shot routine. A growing body of evidence is emerging from both the scientific and applied worlds to show the benefits of adopting the Quiet Eye strategy and research continues in its attempt to better understand these effects.

Funding provided by the Economic and Social Research Council via the University of Exeter is allowing us to offer free taster sessions at Hele Park Golf Centre, for you to access our expertise and see what the Quiet Eye can do for your game. If you are interested in attending a session, please e-mail s.vine@ex.ac.uk.

Acknowledgements:

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References.


