

Paul Hurrion

The leading Brit in his field
Tour coach who adopts a scientific approach to the putting stroke

I first got interested in putting at university, using high-speed cinematography (no fancy cameras back then!) looking at impact with drivers and ball. I also looked at wedges and putters... it amazed me how little time the golf ball is in contact with the putter – 0.000125 seconds (filmed at 20,000 frames per second). Believe it or not, this is much less than a driver, which is more like 0.001s...

For what seems to the outside world like a very simple task, it is vastly underestimated the amount of science that is involved within putting; how the club face and ball interact is amazing to see and analyse.

Putting is a game within a game, and it is scary the amount of times I hear a player's full swing coach say "that is exactly what you do in your full swing". By using Quintic Ball Roll, high-speed camera, force plates and 3D analysis on the putting stroke there is no escape in what a player is doing any more... the trick is knowing in what order do you address the issues, what is the root cause of the player's faults. Don't just paper over the cracks because it won't last, you end up fixing a fault with another fault.

It becomes much easier to be mentally tough if you can trust your own technique to start the ball on the line you have read. Tiger has confidence in his own ability. I like to work from structured practice; if you know you can repeat your own putting technique in a controlled laboratory condition, why can't you repeat it under pressure? It is when players can't repeat a stroke in a controlled lab condition, how do they then expect to repeat when the pressure is on?

My aim has always been to ensure golfers create a consistent and repeatable action that enables them to start the ball on the line they have read every time and under pressure. Correct alignment of the eyes and the putter face is vital in the process of developing and repeating the mechanics of a sound stroke.

The majority of the top amateurs and PGA pros I've worked with displayed fundamental flaws in their alignment that demand some sort of compensation during the stroke itself. It is this conflict in hand-eye co-ordination that I believe can start the "yips".

With the ball in contact with the putter face for less than half a millisecond (0.0005 seconds), the face has to be square and in line prior to and through impact. It is not feasible for the human brain to react – nor the body to make effective adjustments during that negligible contact time – so any manipulation during the putting action must lead to an imperfect strike. But the yips can be cured.

The majority of Tour pros wouldn't know their loft or lie numbers, let alone the club golfer. This is why we have developed Quintic Ball Roll (quinticballroll.com). Crucially, it gives key parameters on the putter during the impact zone. While many manufacturers have similar-looking putters, each has different characteristics, such as the type of face insert, weight placement etc. These are designed to have an effect on how the ball rolls after impact and are very important when coaching and/or fitting a putter.



MY THREE BEST TIPS...
1. Get fitted for a putter
2. Start the ball on the line you've read with the correct pace. You can't do enough pace drills!
3. Practice!

Harrington, Westwood and McIlroy have all tapped into Hurrion's brain.

Since starting to work with Orr, Rose has really improved.



MY THREE BEST TIPS...
1. Match your length of stroke to the length of the putt
2. Read greens with your feet rather than just your eyes
3. Recognise what good speed looks like

David Orr

PGA Tour putting coach
Helped Justin Rose and Hunter Mahan become multiple winners

I've been teaching golf for 23 years and about seven years ago I started doing some putting research for some putting manufacturers in order to understand different designs. I measured over 1,000 golfers in a SAM PuttLab and noticed every one was different – while on tour everyone was teaching a method. That's where I got interested; especially teaching golfers their own individual stroke, which takes into account their own tendencies as opposed to just one method.

There are four skills to making a putt. You've got to read the green; you've got to get the speed of the putt correct; you've got to aim in a certain direction; and you've got to hit your line.

I love coaching the short game because it is

where you can see guys recover and score. And it's always great to see someone who is struggling, or "searching", eventually find what they are looking for. I have people come to me who are just searching for something; left hand low, belly putter, shorter putter... so to help them find that peace is very rewarding.

Putting is a much more precise version of the whole game. If you are one degree open or one degree closed, you are burning edges instead of holing putts. The ball is not in the air so it is not curving and you have to correctly read the slopes. It looks simple – you just have to judge line and speed – but actually there is more to it.

The higher the skill level, the more impact the mental side has on whether you are holing putts. If you take Justin, he has a beautiful putting stroke so it is a case of him being in the correct frame of mind over a putt. The mental

side is more important for him because he has the physical tools. Whereas with a beginner or a higher handicapper, it is about teaching them how to read a green, how to start the ball on line and how to develop feel.

Sometimes a little refinement to the physical putting stroke can go a long way to curing mental weaknesses in putting. That just depends on the individual – some people are just better at handling fear or anxiety better than others. And the biggest enemy on the green is fear. You can have a wonderful stroke, but if you are afraid to hit the putt, you are going to miss. Fear and anxiety about what happened in the past and what will happen in the future are the biggest obstacles to good putting. I've seen people who are less afraid to get in a bar room fight than they are to knock in a three-footer!

Line and speed go hand in hand. You need the right pace for the line you choose. So you need to find your line and judge the pace of the green. You've got to have one and the other. That's what makes putting so precise. If it was simple we'd all be taking 18 putts per round.

Never be a slave to your routine. You can get too wound up if you have too many things in your routine. The ultimate state of mind to be in as you try to hole a putt is a state of "flow". You want your routine to get you into that mental state. A lot of people follow their routine for the sake of it.

I see a lot of golfers putting with putters that are too long or too short, too upright or with the heel too much off the ground. Every golfer should have the correct length, loft and lie as a basic. If you want to get a bit more in-depth, you can get into the ideal weight, head design and hosel design for their stroke.

If a golfer has a neurological disfunction, the yips cannot be cured. Other people have a fear of the putting green, which is a psychological issue. And then others have a motion issue. A lot of people think they have the yips, but what they really have is a lot of conflict and confusion about putting basics.

If the weather is poor, you should adapt your stroke. If it is windy, you've got to concentrate on being stable. We might also keep the stroke a little more compact if it is really windy. Players who are more mechanical struggle to make those little adaptations.

