Ball Flight As Your Teacher



Karl Doller

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About the Author



Karl Doller is a golf coach, teacher, and lifelong student of the game who believes that golf is challenging, but it shouldn't be confusing, intimidating, or miserable.

Originally from Durban, South Africa, Karl's relationship with golf has always been about more than the scorecard. Over the years, the game has taught him lessons about patience, perseverance, confidence, failure, and the importance of continuing to learn. Those lessons led him to make teaching golf his profession.

What motivates Karl is the moment when a student realizes, sometimes for the first time, "I can actually do this."

That might happen when a beginner hits their first solid golf shot, or when a struggling golfer finally understands why their ball behaves the way it does, or when someone who has spent years avoiding the golf course finally feels confident enough to play 18 holes.

Karl focuses on what actually matters, helping his students build skills they can actually take to the golf course.

Karl is also passionate about the role golf can play beyond the course. Golf creates opportunities to build relationships, develop professional connections, spend time with family and friends, and challenge ourselves in ways that few other games can.

Karl lives and works in Texas, where he continues to coach golfers and help people discover that they are capable of more on the golf course than they thought possible.

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Introduction

Why does my ball do what it does? I help answer this question in every lesson I teach.

This book, with the accompanying videos, gives you the information you need to cement the intent of every shot you ever hit. Because once you know how to diagnose a ball flight you then also have the information you need to fix a ball flight.

Two quick thoughts about golf, playing it and teaching it.

I once interviewed for a teaching position in an Orlando after-school junior golf program. During the interview I was asked what I thought the most important thing about playing golf was. I scrambled to formulate a response to this “guess what I’m thinking question.” Then, the interviewer answered his own question without giving me a chance to reply. He said,“It is to control the golf ball. That’s all it is.” And of course he was right. That is the most important part of golf—really, that’s the definition of golf.

The second comes to you from me via one of my teachers, PGA Professional Ed Ekis. He would take great care during our learning sessions together to explain that our brains work using pictures. According to Ed, golf is played first in your imagination, and then, and only then, can it be translated into an action. If you cannot clearly "see" the shot or the outcome you want, your body will never execute and produce the shot you're hoping for. If you are wavering or confused about how to proceed, or if you are anxious or hurried, your mind will never let your body succeed. I know that Ed is neither the first, nor the only, teacher to talk about mental images and the importance of engaging your imagination. But he was the teacher who explained it to me, and so I attribute that nugget to him.

If you put these two concepts together you have a very useful way to learn and play golf. The goal is to control the ball, and we do that by first being able to see what it takes to do that. Once you can see it, then you can learn to do it. The purpose of this book is to help you do that.

As you read this book, you will find occasional YouTube video icon embedded in the text with a description, like this:

 **Video: Welcome to *Ball Flight As Your Teacher***

These are links to videos especially created for, and only associated with, this book. These videos are stored in an unlisted playlist that can only be accessed from this book. You can watch the video explanations as you progress through the book.

If you are reading this on a computer then I recommend right-clicking the link and opening in a new tab.

Targets and Aim Lines

Archery. Darts. Shooting. Pool.

Each of these sports or activities center around one thing: the target! If you are an archer, your target is the bullseye a set distance in front of you. Ditto if you are a marksman. Those who play darts don't always aim for the bullseye, but they never release a dart without a specific part of the board in mind. In pool you don't engage your poolstick without first deciding where you want the cue ball to strike.

It is the same with golf. Golfers should never swing a club, in practice or while playing, until they have locked onto a target. You start to control your ball by first knowing where you want it to go!

Repetition of emphasis: Every time you swing a club, from the teeing area to the green, you must first have an intended target clearly in your mind.

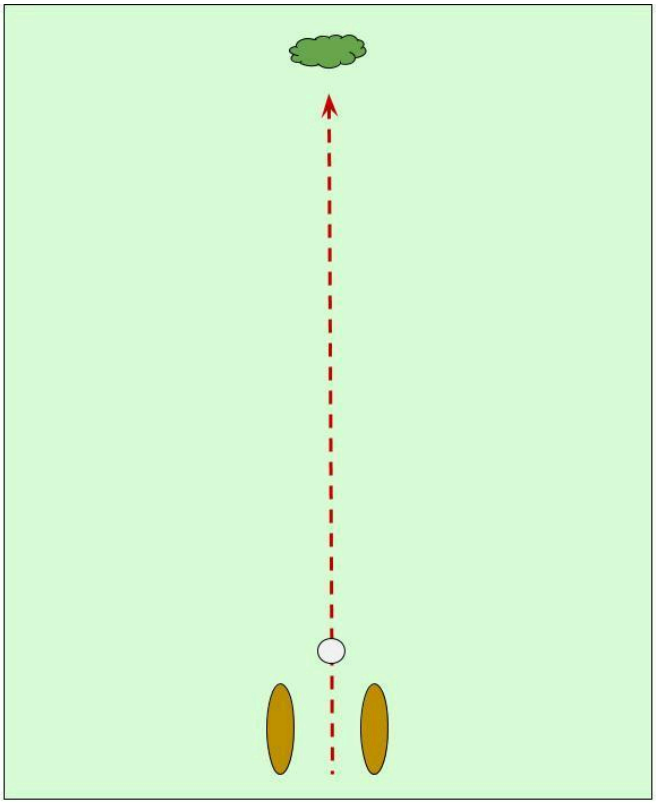
Take a moment to think about what a golf target may look like.

There aren't any bullseyes out on the course so golfers must create their own targets. Sometimes that target might be the hole itself, but standing on the teeing area the hole is usually a long way away and makes a lousy target. The player must choose other features on the course as their target. Perhaps that is a tree off in the distance, or a fairway bunker that is too far to play into but yet provides a perfect point at which to aim, or there might be an aiming marker in the fairway, and so on. As you get closer to the hole, your target might become the back half of the green, or perhaps even the flagstick itself. But *always* there is a target.

Target Line

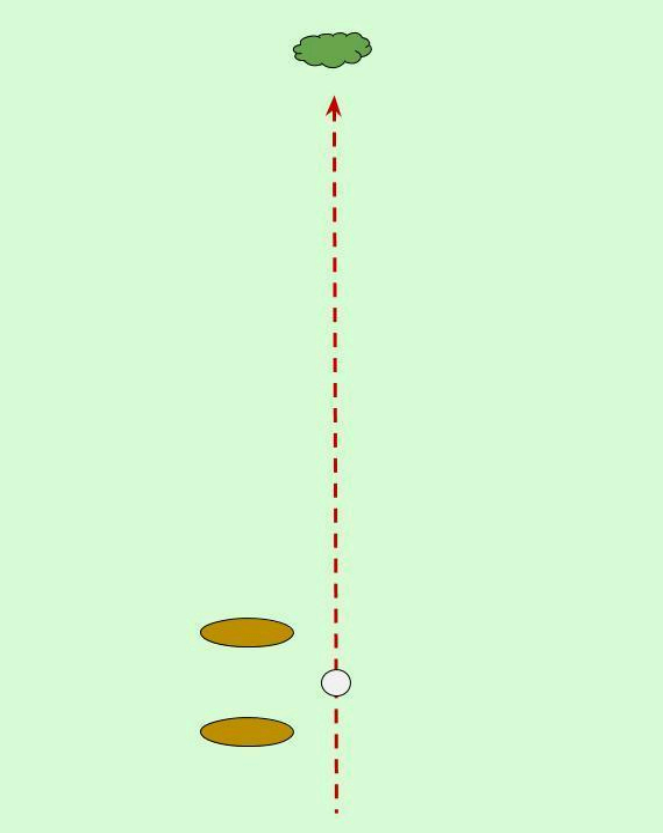
Do this quick mental exercise: Picture yourself standing about three or four feet behind your ball. Now imagine a line on the ground that starts at your target, passes through your golf ball, and through to the mid-point between your ankles (you are straddling the line). This line is called the Target Line.

***Image 1. Target Line Standing Behind Your Ball*.**



Now, change your mental picture slightly so that you are taking your address position alongside your ball as if you were preparing to swing a golf club.

Image 2. Target Line Standing Next To Your Ball.



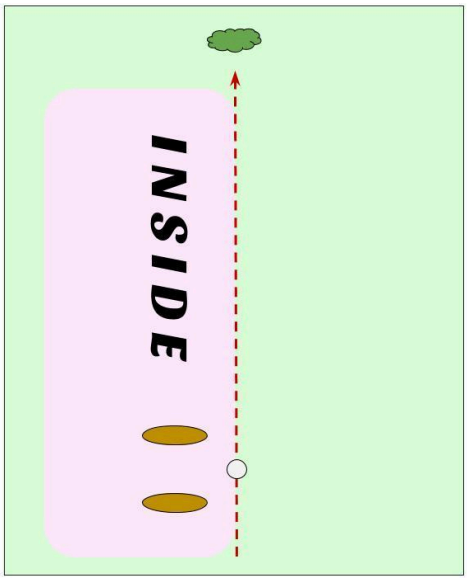
In this new picture, the only thing that has changed is your physical position: the target is still there, your ball is still there, and the aim line is still there. All that has changed is that you have moved and taken up your stance alongside the ball with your shoulders and hips roughly parallel to the aim line.

Inside and Outside

Now that you have been introduced to the Target Line it is time to learn two other important words: Inside and Outside. These terms help you and I understand, and therefore talk about, where you and your equipment are in space. And knowing this helps you to think like a golfer, and also helps you learn how to control your golf ball.

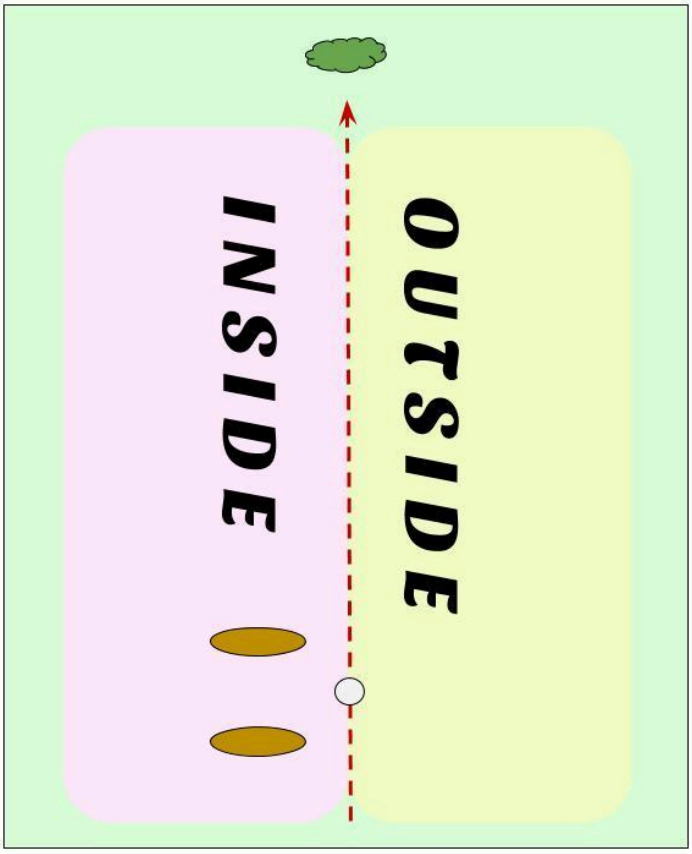
Returning to the thought exercise, can you still see yourself standing next to your golf ball in preparation to hit a shot? That space you are standing in is called Inside (meaning *inside* the target line). And that space extends from you and your ball is all the way to your target.

Image 3. Inside.



Then, the space on the other side of your target line is called “Outside.” And that space likewise extends all the way to the target.

Image 4. Outside



So why is knowing Aim Line, Inside, and Outside important?

These words help us to identify where you, your clubhead, and your ball are in space. Understanding Inside and Outside is foundational to learning about ball flight and controlling your ball.

 **Video:** Target Line, Inside, Outside

Path

The next building block of your golf education is learning to “see” how your clubhead moves through space, and to see that you need to know about Path.

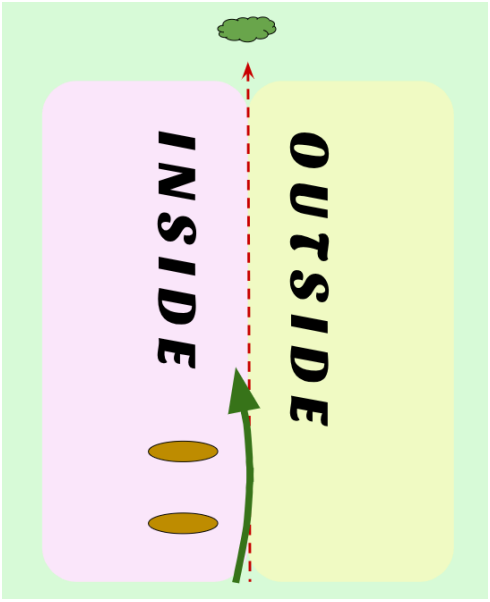
“Path” in this discussion refers to the direction in which your clubhead is moving during the couple of inches immediately prior to and after impact.

The three Path options are Neutral, Inside-to-Outside, or Outside-to-Inside.

Path option #1: Neutral

The clubhead approaches impact from the inside, runs into the ball and momentarily travels down your target line (very momentarily), and then moves back to the inside as the follow through begins. This is also sometimes called an Inside-to-Inside path.

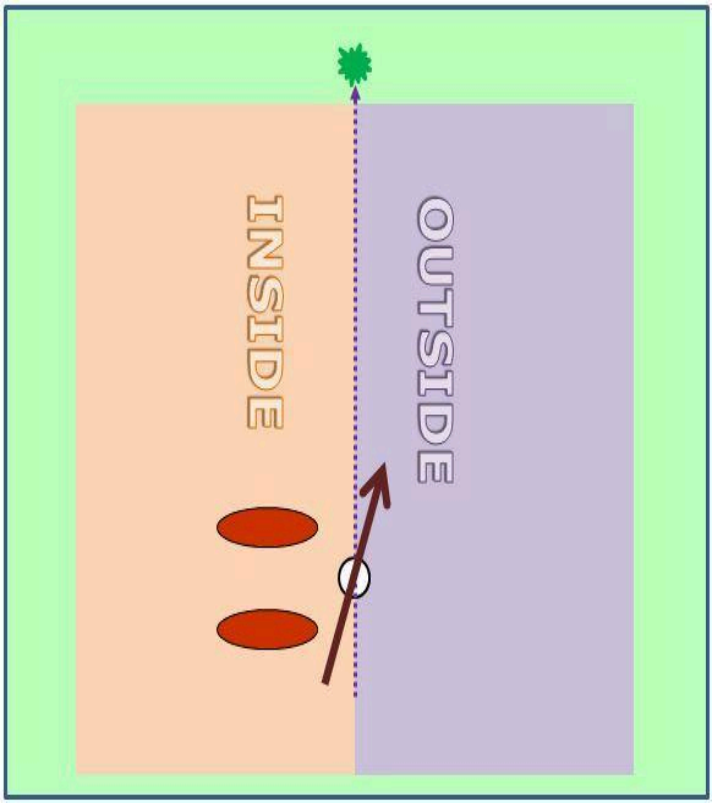
Image 5. Neutral Path.



Path option #2: Inside-to-Outside

The clubhead approaches impact from the inside, runs into the ball, and then moves to the outside as the follow through begins. This is often also simply called swinging in-to-out.

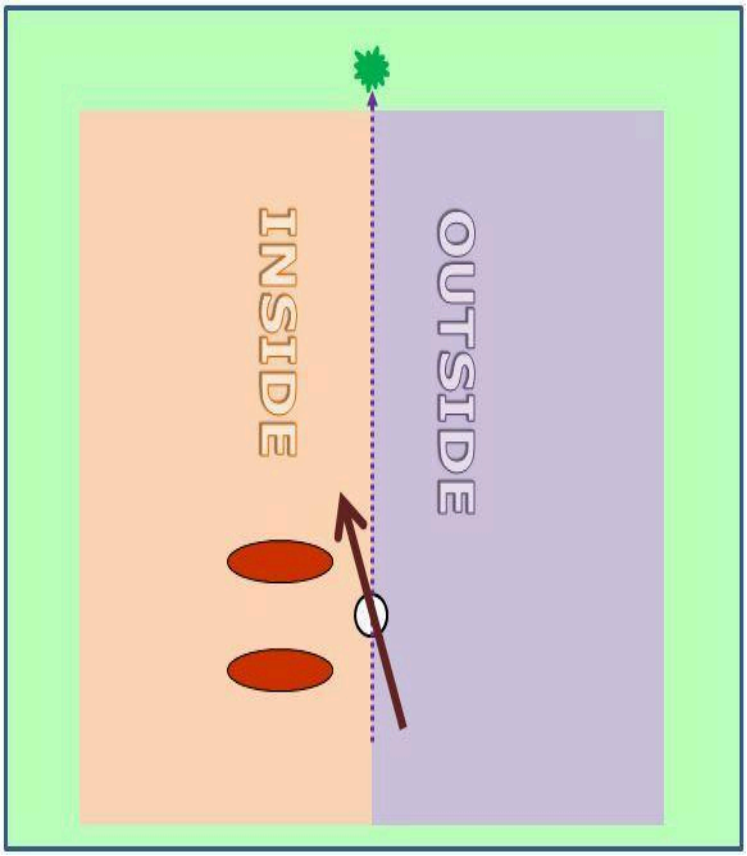
Image 6. In-to-Out Path.



Path option #3: Outside to Inside

The clubhead approaches impact from the outside, runs into the ball, and then moves to the inside as the follow through begins. This is often simply called swinging out-to-in. This path is also the most common among new and struggling golfers and is something I help to fix every day.

Image 7. Out-to-In Path



Because the Path of your clubhead influences -- in a big way -- the curve of your golf ball, learning to understand and control your Path is important if learning how to control your golf ball is your goal.

Video: [Path, Meaning Club Path Through Impact]

Face

In the previous section we discussed Path and the three possible directions for Path.

This section discusses how your clubface interacts with your golf ball and how that interaction influences your ball flight. In this next series of pictures, the grout line that intersects the clubface represents the target line.

Image 8. Face Direction at Impact.



Club face points down the target line (Square). Ball launches on your target line.



Club face points to the Outside of the target line (Open). This is called a Push and the ball launches to the Outside.



Club face points to the Inside of the target line (Closed). This is called a Pull and the ball launches to the Inside.

Your ball launches in the direction that your clubface is pointing at impact.

Face option #1: Square

When your clubface at impact points down the target line (when your clubface is perpendicular to your target line) that is called *Square*. The ball launches on your target line.

Face option #2: Open

When your clubface points to the Outside of your target line, we say that the face is *Open* to your target line. The word we use to describe a ball hit with an Open clubface is “Push.” Therefore, a pushed shot (a shot hit with a face open to the target line) starts to the outside of the target line.

Face option #3: Closed

When your clubface points to the Inside of your target line, we say that the face is *Closed* to your target line. The word we use to describe a ball hit with a closed clubface is “Pull.” Therefore, a pulled shot (a shot hit with a face closed to the target line) starts to the inside of the target line.

Before we move onto the Face:Path relationship, let's do a quick "from the top" recap:

- The terms Target Line, Inside and Outside help to identify where you and your equipment are in space.
- Path is the direction the clubhead moves on through impact, and has three options: In-to-In, In-to-Out, or Out-to-In.
- Face (meaning clubface) direction at impact is the direction your ball launches, and the three face options are Square (launches Straight), Open (this is called a Push and launches to the Outside), or Closed (this is called a Pull and launches to the Inside).
- Path and Face both influence the flight of your golf ball.

 **Video:** Face:Target Relationship

The Face:Path Relationship

The clubface at impact does not only have a relationship with your target line. It also has a relationship with your Path.

This relationship between clubface and path is called the Face-to-Path relationship (Face:Path). It is a ratio, and it determines the curve of your ball.

When describing the Face in relation to the Path, we use the same words we used to describe face in relation to the target line. Your clubface could be Square to the path, Open to the path, or Closed to the path.

The Square face is when the clubface at impact is pointing in the same direction as the path. This results in a shot with no curve.

An Open face is when the clubface at impact points to the outside of your path. This results in a fade or slice.

A Closed face is when the clubface at impact points to the inside of your path. This results in a draw or hook.

Ball Flight As Your Teacher

To create a desired ball flight all you have to do (and I understand that it's a pretty big "all") is match the Face:Target at impact with the corresponding Face:Path combination.

Here's a quick recap of the three Face:Target relationships:

- Square launches the ball straight on your target line.
- Open launches to the Outside, and is called a Push.
- Closed launches to the Inside, and is called a Pull.

The three Face:Path relationships are also Square, Open, and Closed.

- Square creates a ballflight with no curve.
- Open creates a Fade or Slice ballflight.
- Closed creates a Draw or Hook ballflight.

Good golfers have learned to employ the Face:Target and the matching Face:Path needed to hit an on-target shot.

There are three ballflights that can result in an on-target shot.

First: A Straight ball flight. (Ball starts on target and has no curve.)

Second: A Pull-Fade ball flight. (Ball starts to the inside and curves back to the target.)

Third: A Push-Draw ball flight. (Ball starts to the outside and curves back to the target.)

To hit a Straight shot, a lot of perfection has to happen in an extremely brief moment in time and is very difficult to achieve on repeat.

However, you can plan for and repeat remarkably reliably a curved shot that lands on-target.

To hit an on-target Pull-Fade, your face at impact needs to be closed to your target (that's the Pull part) and you need to have an open Face:Path (that's the Fade part).

Conversely, to hit an on-target Push-Draw, your face at impact needs to be open to your target (that's the Push part) and you need to have a closed Face:Path (that's the Draw part).

Adding a unit of measurement to Face and Path can be helpful.

Face and Path are both measured in degrees.

The Face:Path ratio you need to hit an on-target shot is 1:2. For example, if your Face is 1 degree to the Outside at impact, you need a path that is 2 degrees in-to-out for your ball to land on your target line.

Alternately, if your Face is 1 degree to the Inside at impact, you need a path that is 2 degrees in-to-out for your ball to land on your target line.

Let's use this knowledge of Face:Target and Face:Path to identify what it takes to create this flight: A ball that starts to the Outside and curves more to the Outside.

When diagnosing a ball flight you start with Face:Target at impact. You ask: "Relative to the target line, where did the ball start?" Your options are: Straight, Outside, or Inside. (Remember, initial launch direction is determined by where the face is pointing.)

In the example above the ball started to the Outside, so we know that the clubface was therefore pointing to the Outside.

Going back to our Face:Target pictures from earlier, this face at impact looked something like this:



Then you ask: “What direction did it curve?”

This ball curved more to the Outside.

What Face:Path causes a curve to the Outside (fade/slice pattern)? A face that is Open to the path.

I encourage you to start doing this with your shots. After every shot ask: “Where did it start?” and then identify if it was Straight, Outside or Inside. Then ask: “Where did it curve?” When you have those answers

you can describe the impact conditions with Face:Target and Face:Path that caused that ball flight.

This diagnostic approach is how your ball flight becomes your teacher.

In the example above we now know that this golfer had an Open Face:Target and an Open Face:Path. This ball flight would be called a Push Slice. This is a pretty common problem that I fix daily.

 **Video:** **Face:Path Relationship needed for a Push Slice**

How do/would I fix this ball flight? The Open Face:Target is not necessarily a problem because a Push, as long as it's combined with a Draw, can result in an on-target ball flight.

If the Face:Target is okay, then the problem has to be with Face:Path. Currently they have an Open Face:Path and they need to learn how to have a Closed Face:Path.

Here’s a complication: This player’s path (before any changes are made) could either be in-to-out or out-to-in. How can we tell which direction the path is? The easiest way is with video and to simply watch their downswing. It’s quite easy to recognize path from video. You can do this yourself using your phone. Take a slow motion (120 fps if you can) video from this angle.



Play the video and stop it when the club is parallel to the ground in the downswing, like this:



When you look at where the clubhead is in relation to a straight vertical line through the player's hands you can make a strong estimate of what the path is. This player's clubhead is to the outside of that yellow line, indicating an out-to-in path. If our player in the example we've been looking at has this path, then their fix is to learn how to swing in-to-out.

Compare that clubhead position to that of this player:



This player’s clubhead is to the inside of that yellow line, indicating an in-to-out path. If our player has this path, then they need to learn how to close the face to the path.

Another way to help you understand how the ball flight can be your teacher is to compare what you see the golf ball doing to other sports experience. Like playing tennis, or ping-pong, for example. When you try to hit a tennis ball (or ping-pong ball) with a LOT of topspin, what do you do? You swing your racket/paddle from in-to-out with a face closed

to the arc you are swinging on. Conversely, if you're trying to hit a ball with a LOT of slice spin, you do the opposite: You swing from out-to-in with a face that is open to the arc you are swinging on.

Or think of a kicker in football. Gone are the days when they kick with flat-toed boots and they try to swing their kicking foot directly at the target. Modern kickers approach the football from the inside, swing their foot from in-to-out, and catch the ball with the inside of their foot.

It's the same with golf. To fix a ball that pushes and slices, you need to have a path that's in-to-out with a club face closed to that path.

Pro Tip!

Since an out-to-in swing is such a common issue, here are two coaching prompts to help a player learn to swing in-to-out:

- Turn their shoulders and hips at address so that they now point at the target. A good "feel" would be to turn their shoulders so that they feel like their lead elbow is pointing at the target, with the trail elbow lower than the lead elbow. Setting up like this will encourage a less out-to-in path.

- Next I would rehearse downswings where they feel like they keep their back to the target longer. This will slow down their turn movements in the downswing, which will also encourage a less out-to-in path.

I don't usually like to change more than two things or give more than two thoughts at one time, so I'd stop there and monitor their ability to set up to fix their path while they learn to make a downswing that is less out-to-in.

Pro Tip! Continued…

Fixing (or changing) the face direction at impact has everything to do with how the golfer holds the club and how they use their wrists during their swing. Remember this: The face does what the hands do. To fix a face issue we need to identify if you have a grip problem, a wrist-bending problem, or both.

Here are the guidelines for making changes to how you grip the club:

- A stronger grip closes the face
- A weaker grip opens the face

- Most of the time when I change a grip I make it stronger -- if you slice, you might need to do go stronger

Wrist flexion (commonly called “bowing” the lead wrist”) during the swing will close the face, while wrist extension (commonly called “cupping” the lead wrist”) will open the face. Most often I am helping to increase lead-wrist flexion in the downswing.

 **Video: Fixing a Push Slice**

Testing Your Knowledge

What Face:Target and Face:Path causes a Push?

Fill in the blanks.

For a Push:

- The Face:Target needs to be _____ (your options are Square, Open, Closed).
- The Face:Path needs to be _____ (your options are Square, Open, Closed).

Here's the answer. How did you do? For a Push:

- The Face:Target needs to be __OPEN__
- The Face:Path needs to be __Square__
- Result: A ball that starts to the Outside and keeps flying on a straight line to the outside (no curve).
- Bonus points if you identified that the path needs to be in-to-out the same amount as the face is open to the target. If the face was 3 degrees Open then the path had to be 3 degrees in-to-out.

How about a Pull? Fill in the blanks.

- The Face:Target needs to be _____ (your options are Square, Open, Closed).
- The Face:Path needs to be _____ (your options are Square, Open, Closed).

Here's the answer. How did you do? For a Pull:

- The Face:Target needs to be __Closed__
- The Face:Path needs to be __Square__
- Result: A ball that starts to the Inside and keeps flying on a straight line to the outside (no curve).
- Bonus points if you identified that the path needs to be out-to-in the same amount as the face is closed to the target. If the face was 3 degrees Closed then the path had to be 3 degrees out-to-in.

 **Video:** [Face:Path Relationship for Pushes and Pulls]

Let’s keep going. Fill in the blanks for a Push Draw:

- The Face:Target needs to be _____ (your options are Square, Open, Closed).
- The Face:Path needs to be _____ (your options are Square, Open, Closed).

Here’s the answer. How did you do? For a Push Draw:

- The Face:Target needs to be __OPEN__
- The Face:Path needs to be __Closed__
- Bonus points if you identified that the path needs to be in-to-out and that, for the ball to land on the target line, the path must be twice the amount as the face is open to the target. If the face was 4 degrees Open, then an on-target shot would require an 8 degree in-to-out path. Any path greater than 4 degrees would get the ball curving back towards the target. If the face was 4 degrees Open and the path was 5 degrees in-to-out then that ball would move back towards the target line but would not land on the target line. What would happen if the path was 9 or more degrees in-to-out? The ball would over-draw relative to the target line.

 **Video: Face:Path Relationship for a Push Draw**

Now fill in the blanks for a Pull Slice:

- The Face:Target needs to be _____ (your options are Square, Open, Closed).
- The Face:Path needs to be _____ (your options are Square, Open, Closed).

Here's the answer. How did you do? For a Pull Slice:

- The Face:Target needs to be __Closed__
- The Face:Path needs to be __Open__
- Bonus points if you identified that the path needs to be out-to-in and that, for the ball to land on the target line, the path must be twice the amount as the face is open to the target. If the face was 4 degrees Closed, then an on-target shot would require an 8 degree out-to-in path. Any path greater than 4 degrees would get the ball curving back towards the target. If the face was 4 degrees Closed and the path was 5 degrees out-to-in then that ball would move back towards the target line but would not land on the

target line. What would happen if the path was 9 or more degrees out-to-in? The ball would over-slice relative to the target line.

 **Video:** [Face:Path Relationship for a Pull Slice]

Conclusion And Next Steps

You now have the information you need to watch your ball flight and describe why the ball did what it just did. The next time you're watching golf on TV and you see a tracer line you will know what that player did at impact with Face:Target and Face:Path to create that shot.

The ball flight tells you everything you need. It tells you what's happening. And it tells you what you need to keep or what you need to change.

My email address is karl@getgolfhelp.com -- I'd love to hear from you. And if you are interested in becoming a student, either in-person or virtually, please reach out and we can work out those details.

If you have any feedback about the content of this book and the accompanying videos please send me your thoughts! The beauty of living in a digital age is that editing for errors or clarity is just a quick keystroke or two away.

Thank you for using this information. My greatest satisfaction comes from knowing that I've shared something that has grown your skills, lowered your scores, and helped you love the game.

 **Video: Thank you!**