

What Causes a Golf Shot to Curve?

If you can learn what causes a golf ball to behave in a particular manner then you will be better able to understand the cause of an errant shot and better able to produce a particular shot shape when you need it. There are two key factors which determine the shape of a golf shot:

- 1) The direction the club head is travelling at impact.
- 2) The direction the club face is looking at impact.

Just for a moment don't think about anything but the club and the ball. Forget the target. This will make it much easier to understand ball flight characteristics. We'll bring the target into the picture in just a minute.

Initial Line of Flight - This is always determined by the swing path the club face is on at the time of impact with the ball

If the club face happens to be looking in the same direction that the club head is moving at impact, then the ball will go straight along the path of the club head.

If the club face is looking to the left of the path the club head is on then the ball will curve left, but ONLY AFTER it first starts straight along the path of the club head. This is called a hook or draw depending on how severely the club face is looking to the left of the club head path.

Conversely, if the club face is looking to the right of the path the club head is on, then the ball will curve to the right after it first goes straight along the path the club head is on. This is called a slice or fade.

Before we go any further in this discussion on what makes a golf shot curve, we want to make sure you understand the relationships just discussed. Then we will make practical application of the information.

The ball is compressed against the club face and sent in the direction the club head is moving, not the direction the club face is looking.

If the club face was looking either left or right of the club head path then as the ball leaves the face of the club it will have two types of spin. It will have back spin and side spin. The backspin will be the dominant spin at first and the ball will go straight along the path the club head was moving on.

As the backspin starts to diminish then the side spin will take over and the ball will curve left or right depending upon the club face alignment at the time of impact.

Your target has absolutely nothing to do with what happens to the golf ball. When you see pictures or drawings of golf shots that include the target it can be confusing unless you understand the target is completely passive. The only two active elements are the direction the club head is moving and the direction the club face is looking.

For the most part, the movement of the shoulders will dictate the club head path and your hands will dictate where the club face is looking through impact. Obviously, there are other variables which

affect shoulder movement or hand position. When a shot goes astray however, these two were independently manipulated or caused to be manipulated by some other swing part.

Let's consider the two basic types of curving golf shots, the hook which curves left and the slice which curves right. Then we will look at all of the different combinations of shot possibilities.

A hook shot will go farther and tend to get into more trouble because the club face has been closed or "Shut Down" which takes loft off the club. This results in less backspin and lower trajectory. This means the ball will be more severely affected by the hook side spin because there is less backspin to dominate. Consequently, the ball lands at a higher velocity and produces more roll following impact.

The slice, on the other hand will have more backspin because more loft has been given the club face when it is "Opened Up". Consequently, the side spin will not be as dominant as with the hook. Due to the higher trajectory, the ball lands with less forward velocity and consequently has less roll than the equivalent hook.

Many pros favor the fade (small slice) because it is more controllable and the loss of distance isn't a problem for them. They will save the draw (small hook) or hook for certain holes that set up for the right to left curving shot and for special shots to avoid obstacles.

The pros who do favor the hook, generally are shorter in length and feel they need the additional distance. However, they all try to hit curving shots.....Not Straight Shots. After reading and studying the enclosed material, you too may decide to work on purposely curving your shots.

If you have a 50 yard wide fairway and know you will slice the ball, then you can aim down the left side of the fairway and have about 45 yards of fairway to work with. If it goes straight you still have five yards to work with.

If you aim down the middle you only have 25 yards to work with, no matter which way your shot curves. If you don't hit the ball straight then you're probably in trouble.

The pros are hitting to fairways about twice as wide as their amateur brothers and sisters, because they are using the entire fairway. Can you see why they hit more fairways? They follow these same principles on their approach shots to the green.

Let's look at all the basic shots and understand what takes place to produce each one. To begin we will consider the three shots that have a straight trajectory, with no curve in either direction. They are the Straight shot, the Pull and the Push.

The Straight Shot



The Straight Shot is a shot that heads directly at your target. The club head is on a path that coincides with your target line. And, the club face is looking directly down both the club head path line and your target line.

The Pull Shot



The Pull is a shot that goes straight, but is to the left of your target. It is caused by the club path being inside or left of your target line – in other words from outside to inside. This normally would produce a fade or slice if the club face was looking at your target line, but with the pull the club face is actually closed to your target line and square to your actual club head path. In other words the club face is looking in the same direction the club head is moving. And, that is to the left of your intended target line.

The Push Shot



The Push is just the opposite of the Pull. It is also straight, but to the right of your target. The club path is from the inside to outside your intended line of flight, or to the right of your target. And, the club face is open to your target line, but square to the actual club path.

Now let's consider the two curving shots: The Slice or Fade & The Hook or Draw.

The Slice or Fade



The Slice or Fade is a shot that starts straight for your target then curves to the right. The club head was moving down your target line, but the club face was looking to the right of your target. If the ball only curved a little to the right it would be a Fade. It would tell you the club face was slightly opened in relation to your club head path. Perhaps you have already thought about it, but the slice or fade is simply the Straight shot from the previous section with an open club face.

The Hook or Draw



The Hook is just the reverse of the Slice. The club head is moving down your target line, but the club face is closed in relation to the club head path.

The ball will start straight toward your target then curve to the left. If it only curves a little then it is called a draw. It is the straight shot from the previous section, but with the club face closed, or looking to the left of the club head path.

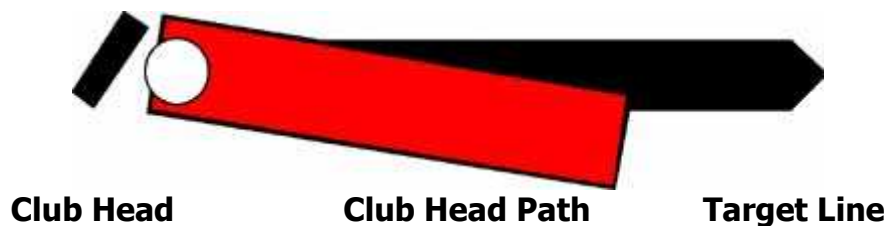
The remaining curving shots are just combinations of either pulls or pushes with either slices or hooks.

The Pull Slice



The Pull Slice The ball initially flies straight, but left of your target, then it curves to the right. This is simply a combination of the Pull & the Slice. The club head is moving left of your target line and the club face is looking to the right of the club head path.

The Push Slice



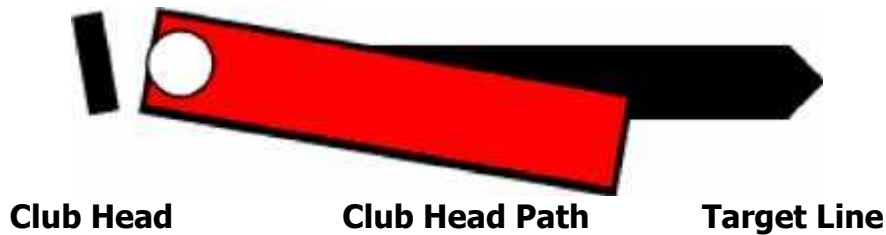
The Push Slice The ball initially goes straight but to the right of your intended target line and then curves further to the right. As the name implies, this is a combination of the Push & Slice. The club head path is to the right of your target line and the club face is looking to the right of the club head path.

The Pull Hook



The Pull Hook This shot will start straight, but to the left of the target, then curve to the left. The club head is moving to the left of the target line and the club face is looking to the left of the club head path.

The Push Hook



The Push Hook This shot will start straight, but to the right of the target, then curve to the left. The club head is moving to the right of the target line and the club face is looking to the left of the club head path.

In summary, the Pull Hook and the Push Slice are the two most dramatic shot shapes. The Pull Hook starts left then curves left. The Push Slice starts right then curves right. In contrast, the Pull Slice and the Push Hook both start by going away from your target, but then curve back toward your target. Many amateur golfers slice the ball, because they aim the clubface at their target but cut across the target line. This generates a Pull Slice. To compensate, many will try to close the club head to offset the slice only to find that they either have hit the ball way off line to the left, or they hit it dead straight, but left of the target.

If your divots aren't pointing straight down your intended target line, then the only way the ball can end up back on line is through a compensating change in club face alignment. If your divots are going left of your target line, the necessary compensating change normally will cost you distance because it uses some of your club head speed to create side spin to bring the ball back on line while also increasing backspin due to added loft.

We have explained the basic shot shapes possible and how to use them. The best shot shape for you will depend on a number of variables such as age, flexibility, strength, physical characteristics, the amount of time you have available and are willing to spend practicing and others.

You may conclude that it is hard enough just hitting the ball generally in the direction of your target and decide not to try and shape your shots. You may try to work with a more controlled fade or draw or you may be among the few individuals who can work effectively with both the fade and draw. In any case, the above explanations of what determines what direction a golf shot takes should help you to better understand some of your wayward shots.

<http://www.bestnewgolfputters.com/why-shots-curve>