

## CENTER BALL?

So, what do we mean by hitting center ball? True center ball is that point inside the sphere at the middle of the ball. OK, we can't hit that. So, let's say we need to hit the intersection of the vertical axis and the horizontal axis of the ball.

Now that we have defined it, how do we strike that point. Take the one ball (it is closest in color to the cue ball) and set it so the 1 faces you, right side up, at the point equal distance from the

top and bottom. Take your time and make sure you are right in the middle top to bottom and left to right. Heavily chalk your cue tip and stroke the one ball hitting the intersection of the vertical and horizontal axis. OK, that is stupid, hit the middle of the ball. Now, look at the 1 on the one ball and see where the chalk mark is. Don't be surprised if you are not in the middle of the ball. There is an optical illusion that makes the cue tip seem that is lower on the ball than it really is. This is because we are looking down on the ball over the end of our cue stick. It looks like we are hitting lower than we really are.

If that wasn't bad enough there is another problem. It is a perception and setup issue that is called the **Vertical Axis Perception Error**. It is caused when your eyes are not correctly aligned above the shot line so that your brain can accurately see the center of the cue ball. We refer to the correct alignment location as your "**perception center**" and it can be different for each player. For some players, it's under an eye. For others, it's elsewhere. To correct this, you must identify your personal "**perception center**" and get it over your cue.

Let's look at the symptoms first. Among players with this issue, right-handers usually hit the left side of the vertical axis of the cue ball, and it looks to them like they are hitting center. Left-handers hit the right side. We trust our eyes that we're lined up to the shots as we see them, but maybe, just maybe, we're just not seeing them correctly. If we aren't hitting the cue ball on the vertical axis, it will be hard to trust your aim because of **squirt** and **throw effects**.

You must train yourself to know where the center of the ball is. And then you need to train yourself to hit that point. Refer to the drill above with the one ball. When the cue ball is hit on the vertical axis, it goes in the direction the cue stick is pointing. That is an important point.

When we hit the cue ball off the vertical axis, we must deal with squirt, curve and throw. Especially when we have a straight in shot. When you hit an object ball full, spin induced throw is greatest. This is why straight in shots are so hard to make, especially if you are not hitting the center of the cue ball.