

## Experimental Tip # 6: Finger-Tip Pressure to Adjust Axis Rotation

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Here is a coaching tip to help bowlers begin the process of being able to adjust the amount of side rotation, axis of rotation, at release. For most bowlers, my 4-Point Axis Release works well to give specific manipulations. Yet, for some, this remains a challenge. So, to help these bowlers, here is an experimental tip to provide a beginning adjustment method. Once they master this, they will be rotating their hand more and the 4-Point will be the next system to implement. Adjusting the axis of rotation, side rotation, is a critical adjustment for all bowlers to master. This is why I developed the 4-Point Release System. It is a method to achieve a specific release. Yet, some bowlers need a beginning step before they can move to the 4-point. Once the bowler feels comfortable adjusting the amount of wrist turn, the 4-point can be used successfully.

### Simple Method to Adjust Axis Rotation: Finger-Tip Pressure

One easy way to manipulate your side rotation at the release is with finger-tip pressure. Literally, if you push with one finger-tip, then you will get more of a specific ball reaction. Flip your hand over so you are looking at your palm. Look at each of the finger-tips. Now, imagine your hand under a bowling ball. Notice the index finger is located more to the outside of the bowling ball. If you were to push, at release, with this finger-tip, you would likely rotate more around the side of the bowling ball. Conversely, if you pushed with your ring finger, at release, you would likely roll the ball more. It is that simple. The key is to apply pressure to a specific finger-tip at the release. Focus on pushing with that finger-tip only.

After looking at the photo, follow the chart below to help you. Experiment by throwing 10 shots with each specific finger-tip leading the way to the target. Literally push with that finger-tip as you throw the ball. This will create a different pressure point and create a slightly different ball reaction. MOST ROLLMEDIUM ROLLMEDIUM SIDE ROTATIONMOST SIDE ROTATIONLITTLE FINGER or ELBOWRING FINGERMIDDLE FINGERINDEX FINGERLead and push with the tip of the small finger (pinky) at release. If a bowler continues to turn their hand, lead with the elbow to the target. This will reduce hand rotationLead and Push with the tip of the ring finger to the target at releaseLead and push with the tip of the middle finger to the target at releaseSpread index finger wide and push with the tip of the index to the target, at release

NOTE (why adjusting the release angle of the axis of rotation is so important): In the lab, Columbia 300 learned that a bowler can obtain 5 more boards of hook just from increasing the point of release from a 30 degree to 45 degree axis rotation. With this 15 degree increase, this would also increase the entry angle from 3.1 to 4.5 degrees. On a side note, a higher entry angle into the pocket will increase your strike count. In addition, by increasing to 60 degrees of axis rotation, from 45 degrees, a bowler would hook the ball 3 more boards on the backend and increase the entry angle from 4.5 degrees to 5.6 degrees. This is assuming a ball thrown at 270 RPM and 18 MPH. See the 4-Point Release System for more information on how to accurately alter your release. So, if a bowler could increase their axis of rotation from 30 degrees to 60 degrees, they could increase their hook by 8 boards! I think I have your attention now. Yes, you can adjust the amount of ball reaction to achieve plus or minus 8 boards of hook just by the side rotation adjustment. But, how can I release the ball differently?