



## Instructor's Corner

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### What's all this business about one sweeper on TV?

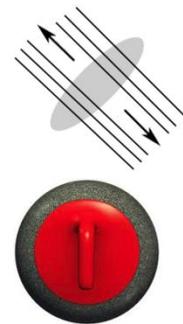
—B. Rush Moore

Those watching elite teams compete this year on the Grand Slam circuit may have noticed a sea change in sweeping strategy. That is, teams are often employing only one sweeper to manipulate stones to make shots or make shots better. What is going on here?

We can probably blame Team Gushue for discovering and successfully employing the single-sweeper strategy. The discovery of the single-sweeper strategy was probably enabled by the enhanced effects of artificially texture brush heads (*e.g.*, IcePad) compared to conventional fabric brush heads or hair brushes. It has been known for a long time that sweeping from the “low” side of the stone (the side toward which the stone is curling) reduces curl, while sweeping from the “high” side enhances curl. The artificially textured brushes made the strategy painfully obvious. Previously, teams employed two sweepers but employed “switches” to have the sweeper closest to the rock on the desired “high” or “low” side. Team Gushue discovered that the “high-side, low-side” effect is enhanced when there is only one sweeper sweeping instead of two. This seems paradoxical, but empirically, it was observed to be highly effective.

#### How does it work?

We now know with near certainty that the reason sweeping can control curl is by depositing microscratches on the ice. In the accompanying figure, a sweeper on the right of the stone is sweeping at a 45 degree angle in front of the stone. This will deposit microscratches in the ice ahead of the stone that angle to the left. According to the microscratch theory of curl, the stone will attempt to follow those scratches and be nudged ever so slightly but persistently to the left. For a stone thrown with a clockwise turn, this “low-side” sweeping motion will hold the stone straighter. For a counterclockwise turn, sweeping on the “high-side” this way will enhance curl. (Sweeping directly across the stone will not help curl one way or the other. It is necessary to sweep at an angle to get the maximum effect.) It should be noted that this technique works with any kind of brushing material. The artificially textured brushes are the most effective at depositing microscratches, and this is why these are now prohibited at the elite level. But traditional fabric synthetic brushes and hair brushes are quite effective, too, just to a lesser degree.



#### Why only one sweeper?

It now becomes clearer why two sweepers are not better than one for controlling curl. If you add a second sweeper, sweeping from the opposite side, that sweeper will deposit microscratches that oppose and cancel out the scratches from the first sweeper! So for controlling curl, you want one sweeper only to get the maximum effect, and that sweeper needs to sweep at an angle, not directly across the stone.

## **When do you use two sweepers?**

Two sweepers are still better than one for carrying a rock for distance. Of course, when using two sweepers, you give up control of curl in return for extra distance. On any given shot, distance may be more important than curl, or *vice versa*.

## **Employing the one-sweeper strategy in games**

The discovery of the one-sweeper strategy will probably change curling forever. The “genie is out of the bottle” on this one and teams will have to learn to add one-sweeper decision making to sweep calls. This has the potential to make the game even more intellectually challenging and interesting.

*Takeouts.* For takeouts, you should station and use a sweeper on the low side of the stone to hold stones straighter or back them up as needed. A strong single sweeper should be able to hold a stone dead straight or even back it up slightly as needed on level ice. For lighter weight shots, the high-side sweeper may be brought into play by “switching” after navigating guards to get to the nose or inside of target stones.

*Draws.* Draw shots are more complex. Two sweepers are used for maximum control of distance, but one sweeper may be called into play depending on how the shot develops. If a stone looks like it might crash a guard, a single low-side sweeper can be used to try to hold it straight enough to get around. Likewise, a stone that is “hanging” might be encouraged to turn or break earlier by the judicious application of some high-side single sweeping prior to the normal break point. Once the stone is going in the right direction, two sweepers can be used as needed for distance and/or “bury.”

*Communication.* Using the one-sweeper strategy will require more complex sweeping communication than “Yes!” and “Whoa!” or “Sweep!” and “Up.” For takeouts “Yes!” can normally mean low-side sweeping only, and “Whoa!” means stop (for now). The high-side sweeper would not normally be used on heavy hits, but might be used for enhancing curl of lower weight shots. In this case “Switch!” or calling the name of the other sweeper can indicate the need to sweep from the high side. On draws, it is probably most efficient to call the name of a sweeper to initiate single-sweeper sweeping. “Yes” or “Sweep” would normally mean two sweepers, but calling “John” or “Dave” would specifically call for a single sweeper on the “high” or “low” side as necessary.

## **Is it worth it?**

You should try single-sweeper sweeping in your games. It works. You won't save shots that are 2 feet off the broom, but you might discover you save one or two close shaves per game on takeouts or draws. One or two made shots in lieu of misses in a game may well be a winning margin.

*Good curling! Have a question for Instructor's Corner?  
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