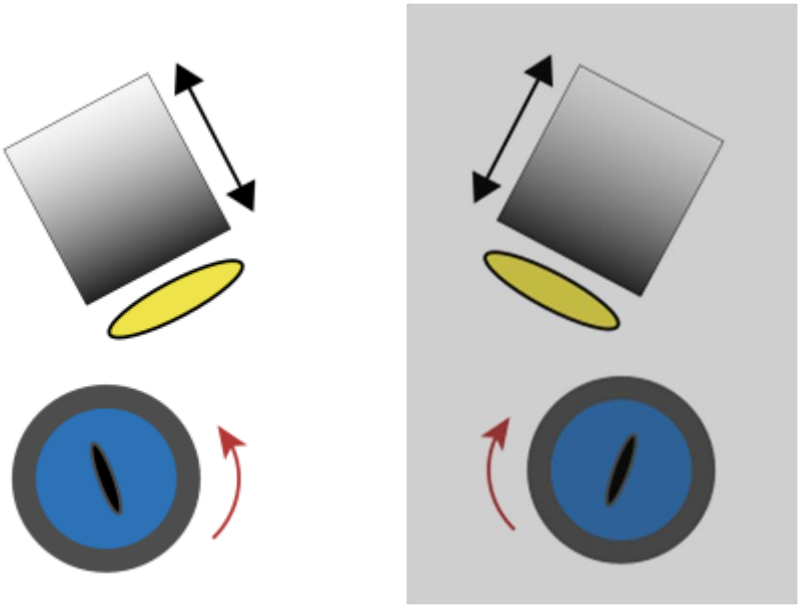
Brushing Clinic

Introduction

In the past, Curling Canada mandated that brushing had to involve strokes that took the brush head across the running path of the stone. The interpretation of this rule was that “snowplowing” and “corner sweeping” (sweeping only a partial path) were illegal. These rules have been changed (Curling Canada Rules and Curling Canada Summary of Rule Changes, 2022 - 2026).

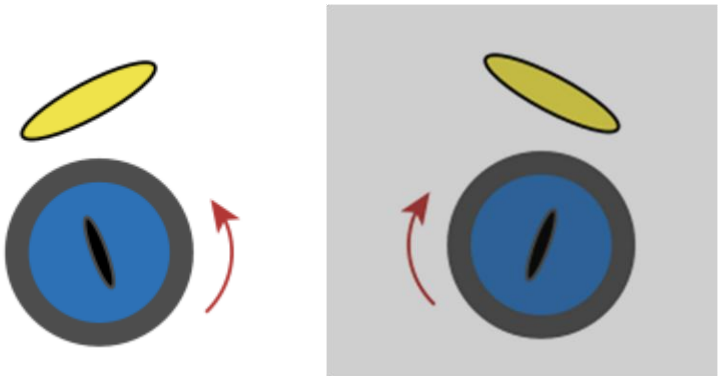
Traditionally, brushing a shot in the usual orientation of moving across the top of the stone as the sweeper progresses down the sheet is used to add curl (Curl).



Counter Clockwise Clockwise

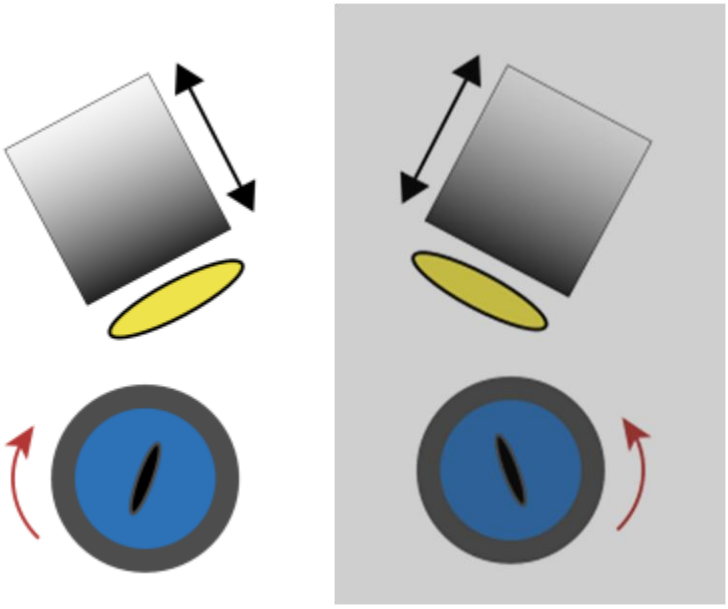
Adding Curl

Since the rule change, to add curl and distance, a common technique is to use a single brusher to brush using a “snow plow” technique. In this case, the sweeper angles the brush so it covers the running band of the rock and keeps constant downward pressure.



Counter Clockwise Clockwise

Adding Curl

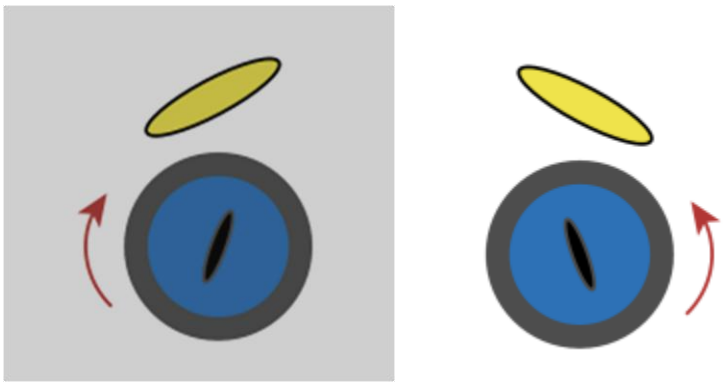


Clockwise Counter Clockwise

Reducing Curl (Straight)

Brushing a shot with the brush in the usual orientation moving across the top of the stone is used to reduce curl (straight).

Since the rule change, to reduce curl (straight) and add distance, a common technique is to use a single brusher and brush from a “snowplough” position. From this position, the athlete angles the brush so it covers the running band and keeps constant pressure down.

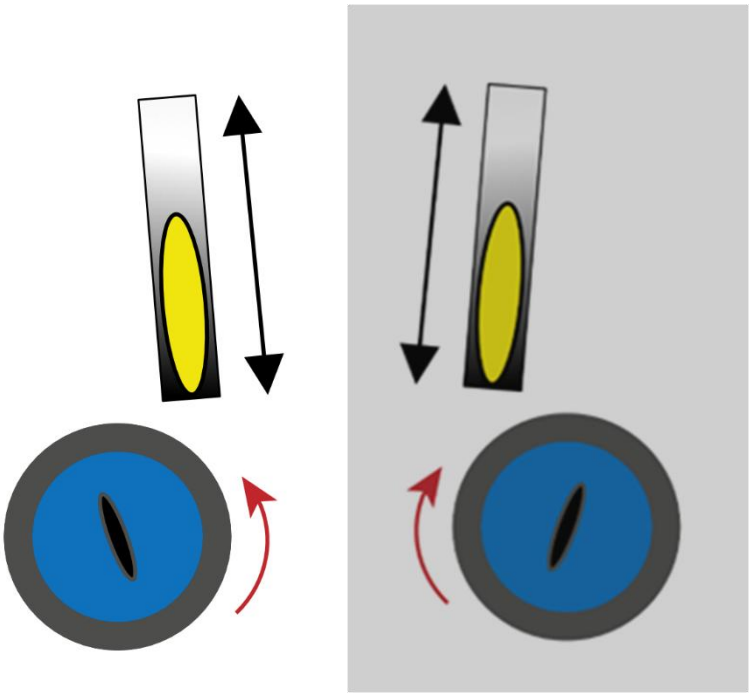


Clockwise Counter Clockwise

Reducing Curl (Straight)

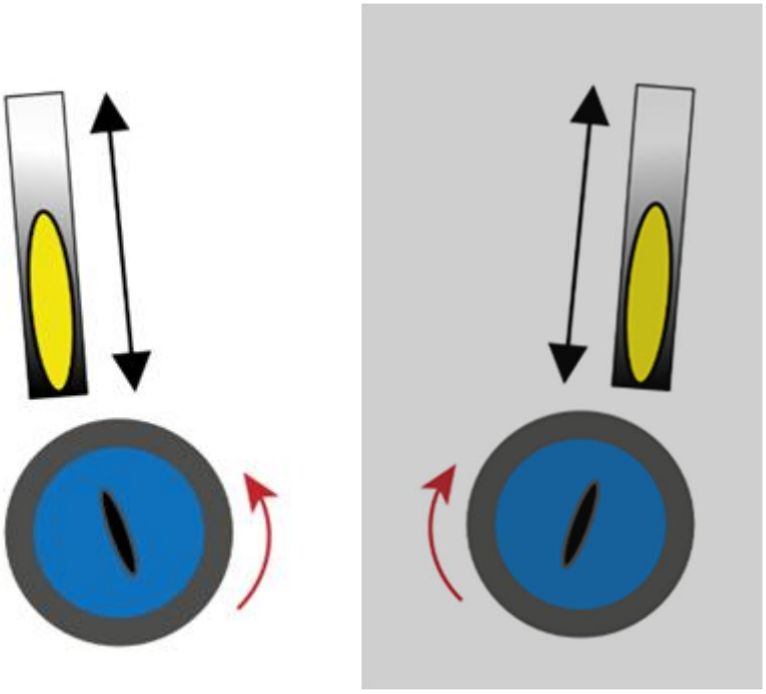
To add curl and not distance, a common technique sees a single brusher to brush using a “snow plow” technique in a “knife” position (corner sweeping). In this case, the sweeper angles the brush so it covers either the “high side” or “low side” of the rock’s running band and keeps constant downward pressure.

With “corner sweeping”, there are two orientations: “low-side” and “high-side”. The “low-side” is that part of the stone closer to the direction of curl; the “high-side” is the opposite side. The UWO study found that corner sweeping on the “low-side” of a stone tended to make the rock go straighter, but since the brushing effect was not on the entire running path of the stone, the stone would not carry down the sheet as far. Conversely, “corner sweeping” on the “high-side” would cause the stone curl **more** than when brushing across the complete running path of the stone.



Counter Clockwise Clockwise

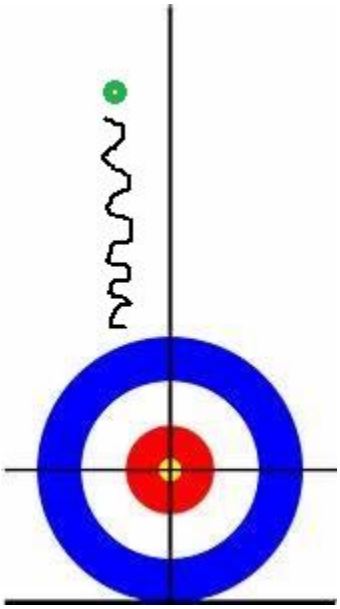
Reducing Curl (Straight)



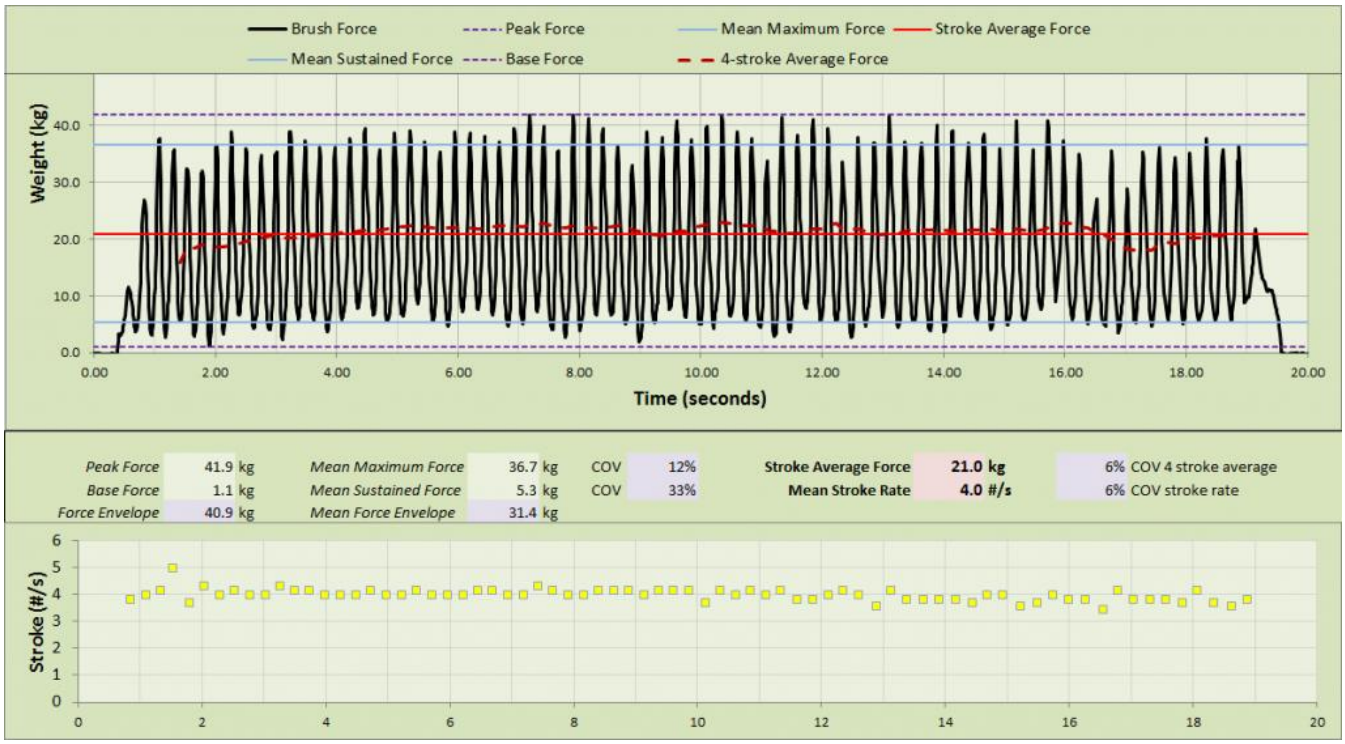
Counter Clockwise Clockwise

Adding Curl (Curl)

Traditional across the face (push/pull) brushing Technique

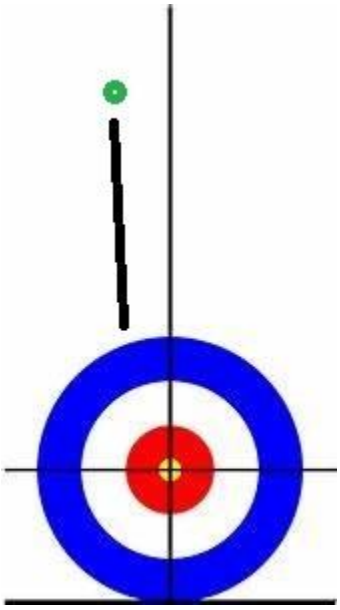


In terms of pressure applied to the ice surface, a brush stroke is not a constant thing, as there is more pressure on the brush head closer to the core of the body and decreasing rapidly as the arms extend away from the body, so the brushing effect rises and falls as you move the brush head back and forth in front of the rock (push/pull). The pressure profile of usual across the face brushing looks like the following:

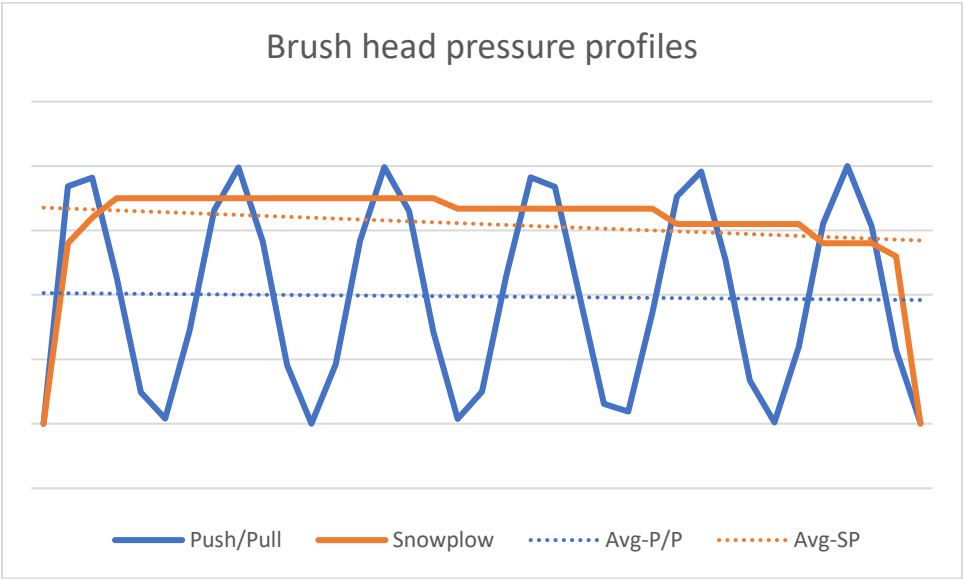


Source: *How far can one carry a stone via brushing? Glenn Paulley, February 6, 2020*

Snow plow brushing Technique



In terms of pressure applied to the ice surface when snowplowing, the pressure on the brush head is more constant as there is no effect of from pushing then pulling the brush head across the face of the rock, so the brushing pressure/effect does not rise and fall.



Data/Videos from CRT Research Project (Canadian Rock Thrower Research Project (2024)) – December 28, 2024

Points confirmed:

a) Pressure, over movement improves distance;
b) Focus on maintaining pressure on the path of the rock's running band;


off-path.mp4


conventional-short.mp4


conventional.mp4

Running band is generally slightly smaller than the outside edge of the rock handle, suggesting brushing should focus on the inside edge of the rock handle.


good-line.mp4

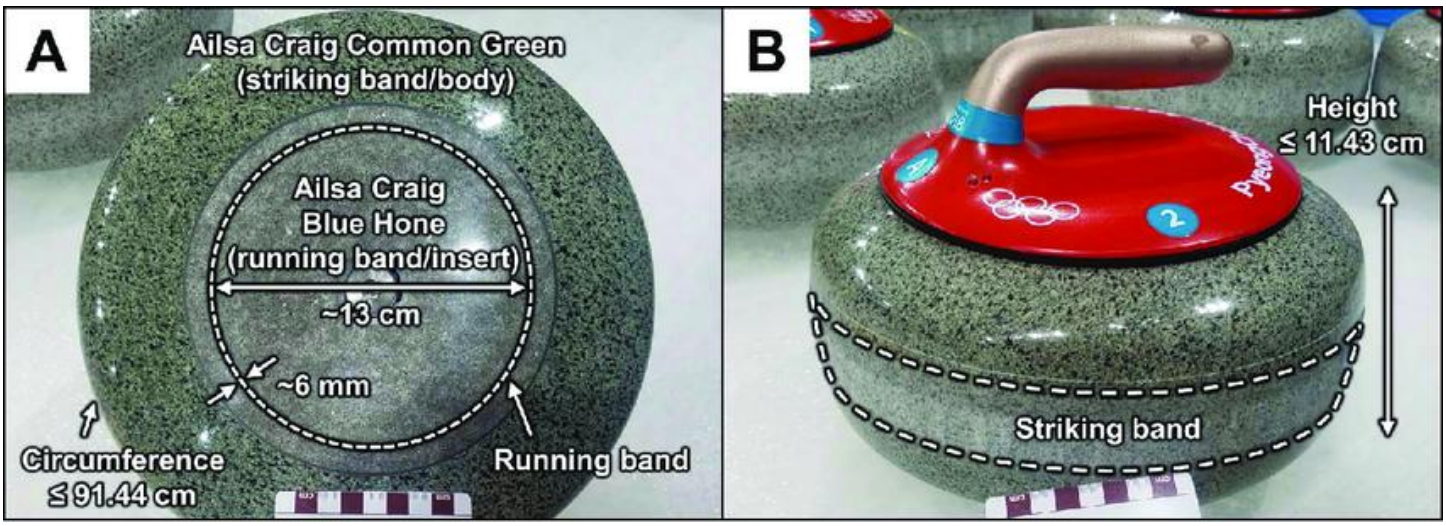
c) Knifing/directional sweeping has impact on amount of curl;

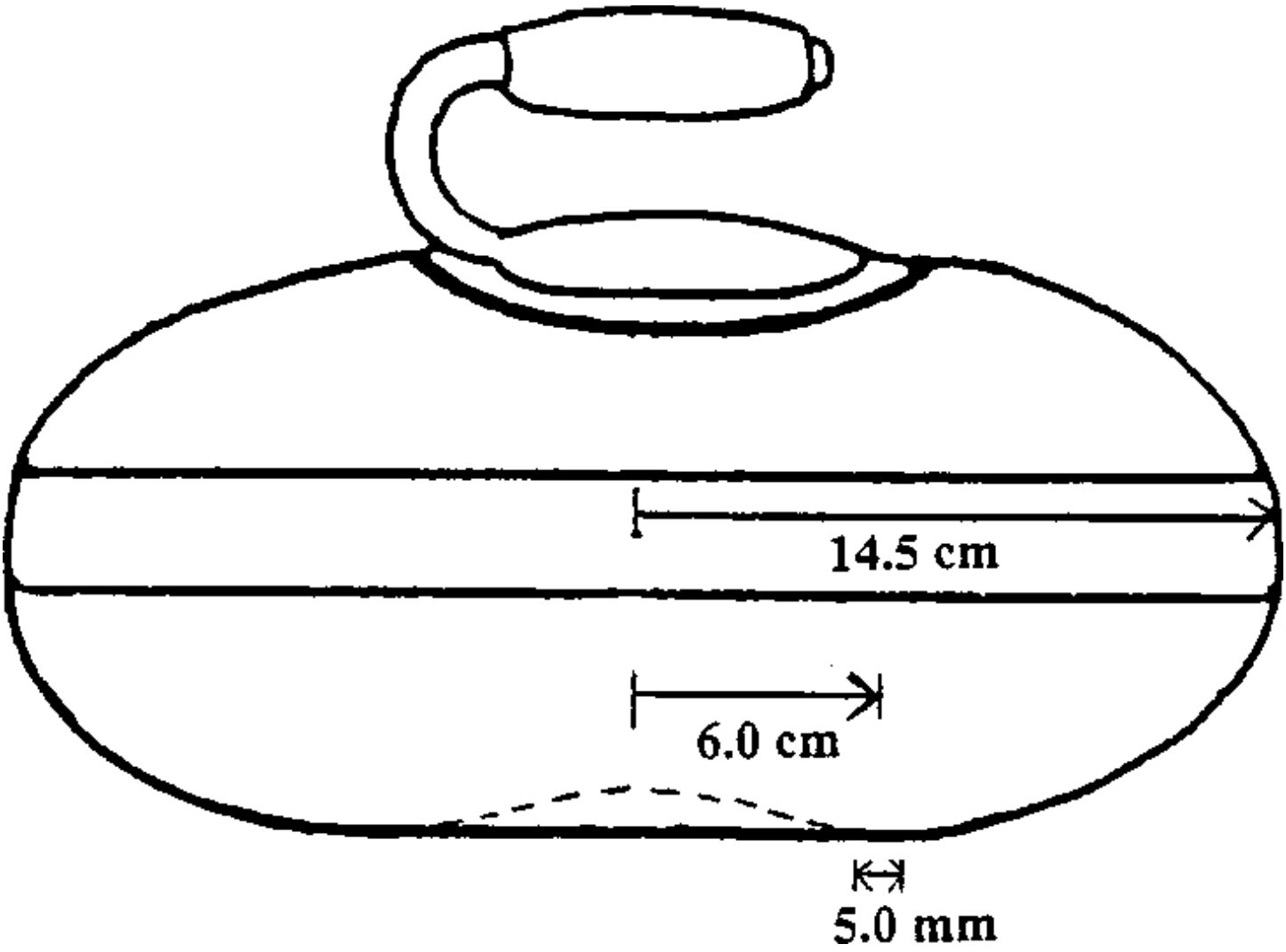

knifing-hit.mp4

d)

Points yet to be confirmed:

a) Sweeping more effective if initiated after the "break point";
b) Effect and best techniques for sweeping from the hog line in;





References

Created/Revised: Dec. 24, 2023/Dec. 29, 2025

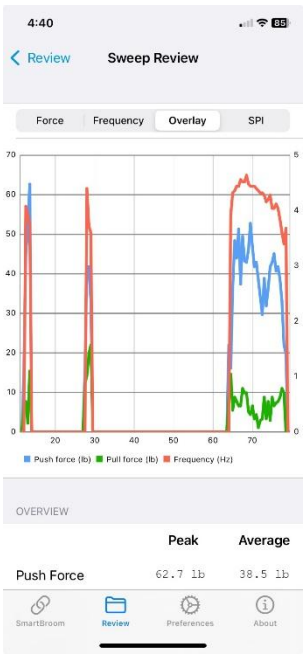
Author: Fred Spiring, Ph.D., P. Stats.

Curling Canada Rules (2022 - 2026). www.curling.ca/files/2022/08/Rule-Book-2022_General-Play_ENG_CC.pdf

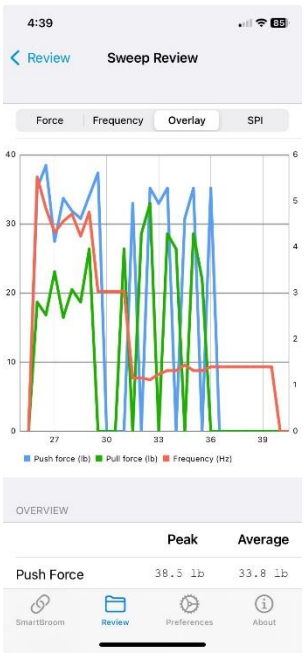
Curling Canada Summary of Rule Changes (2022 – 2026). www.curling.ca/files/2022/08/rules-summary.pdf

Canadian Rock Thrower Research Project (2024). Private correspondence, Lorne Hamblin.

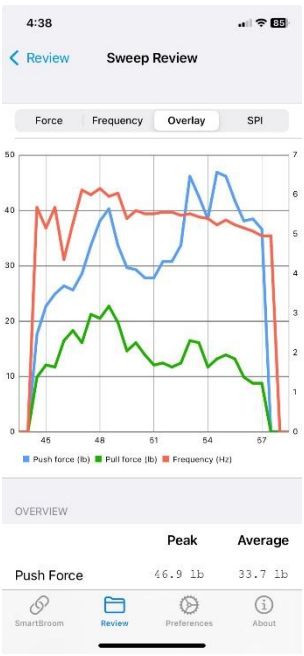
Resby



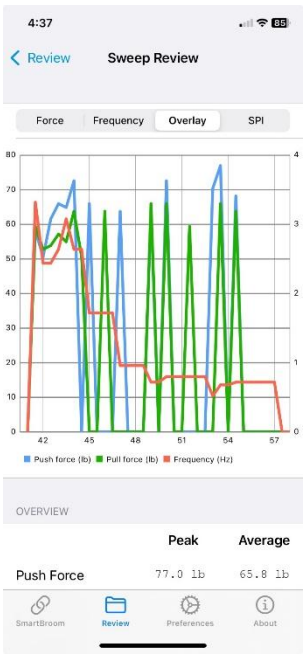
Britta-#1



Norm



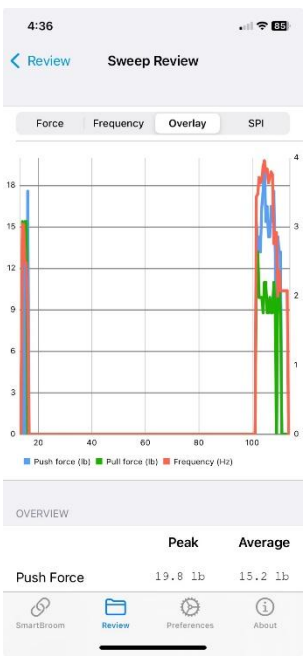
Fred

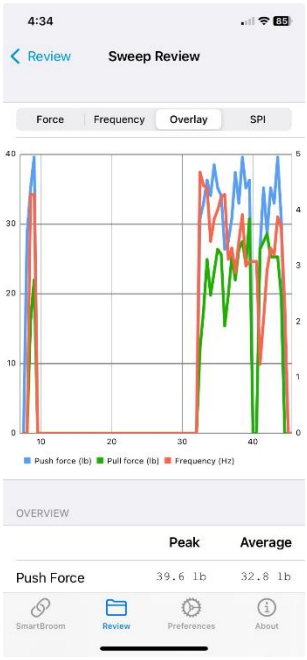


Pull (lb)	22.0	8.2	33.0	23.9	22.7	10.4	66.0	59.8
Freq (hz)	4.64	4.24	5.5	2.4	6.2	5.5	3.3	1.3
SPI	930	636	938	410	1188	834	1232	571

Shelley

Britta-#2





Pull (lb)	15.4	11.0	30.8	23.2
Freq (hz)	4.0	3.0	4.7	3.5
SPI	386	248	852	613

Push/Pull force measured in lbs. 1st measure is peak, 2nd measure in average.

Freq meaured in hertz. 1st measure is peak, 2nd measure is average.

SPI combines all the sweeping variables (push-force, pull-force, frequency) into one ultimate result, the SPI (Sweeping Performance Index). The SPI is the only standard for sweeping performance, and the only way to truly gauge overall sweeping effectiveness.

The SPI gives you a single point of comparison over one sweep, between multiple sweeps, or between multiple people. As you vary your force or frequency, you can see the impact they have on your overall effectiveness. The SPI is an incredibly powerful tool for concepts that have, in the past, been difficult to visualize, and it's only available with a SmartBroom.

References

Curling Canada Rules (2022 - 2026). www.curling.ca/files/2022/08/Rule-Book-2022_General-Play_ENG_CC.pdf

Curling Canada Summary of Rule Changes (2022 – 2026). www.curling.ca/files/2022/08/rules-summary.pdf

Canadian Rock Thrower Research Project (2024). Private correspondence, Lorne Hamblin.


SmartBrooth
CURLING:TOOLS