

Timing – Developing Muscle Memory

By Jon Mielke

My previous articles have focused on the ABCs of a good curling delivery – alignment, balance, and curl (grip, turn, & release). So, let's assume you have mastered all that and have a textbook slide and release. But, the really big question is, how hard should your throw?

The answer is a combination of three things – a stop watch, muscle memory, and some basic math. Starting with the watch, there are several different ways to time the ice to determine how heavy or keen it is. Perhaps the most widely used system is called interval timing. It is based on recording the amount of time taken during the delivery for the leading edge of the stone to go from the back line to the near hog line. It is totally dependent on a smooth delivery with no arm extension pushing, etc. by the shooter.

Interval timing is used as both a shooting and a sweeping aid. This article focuses on shooting; we'll save its sweeping aspects for a later column.

To determine the relative quickness of the ice, one of the team's sweepers times a shot and watches to see where the rock stops – ideally near the far tee line with no sweeping. Typical times will range from 3.2 to 3.6 seconds. The higher the number, the keener the ice.

Shooters can learn to make their drive out of the hack coincide with the desired interval time. With practice and resulting muscle memory, you can learn to throw different weights, thereby taking the guesswork out of wondering how hard to throw.

The real beauty of interval timing relates to the fact that $1/10^{\text{th}}$ of a second is equal to about six feet of distance. That's where basic math comes in. If the ice is running 3.4 seconds and the skip calls for top house weight, the correct interval time to throw would be 3.5 seconds (tee line weight at 3.4 seconds less .1 second for six feet from the tee to the top of the house). A guard six feet in front of the house would call for an interval time of 3.6 seconds. Going the other way, back line weight would require a 3.3 second interval time and hack weight would require a 3.2 second shot. With interval timing, once you figure out what tee line weight is, you can throw any variety of shots just by doing the math – $1/10^{\text{th}}$ of a second equals six feet. No more guessing. (And for you "old timers" who use long times (hog to tee), $1/2$ second equals about 6 feet).

Developing the required muscle memory takes lots of practice with a team mate or coach that times your deliveries and immediately lets you know how hard you just threw. With time and practice, you will learn how hard to drive out of the hack to achieve various interval times.

Ideally, teams also use interval times to zero in on consistent take-out weights. Assuming reasonably keen ice, many teams look for take-out weights with an interval time of about 2.8 seconds. Light hits might be 3.0 seconds.

It is also important to time the ice throughout the game because the ice changes, especially during the early ends. You should also time the other team's shots, especially if it is likely that

your next shot might be down the same path that they are using. But also remember, timing a shooter that has a tendency to push or pull back at the point of delivery will give you erroneous times. A smooth delivery is critical to getting an accurate interval time.

Interval timing – give it a try and start developing the muscle memory that will allow you to throw all the interval times from 2.6 to 4.0. It will allow you to throw all the shots, with confidence, from long guards to hack, board, light hit, and regular take-outs on all kinds of ice. You will make more shots, win more games, and have more fun.

Until next time – good curling!

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