

The science behind the perfectly delivered curling rock

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The centuries old game of curling is being put under the scrutiny of 21st century technology in a bid to help Canada's best curlers throw their way to gold at the Vancouver Winter Olympics.

University of Alberta researchers, Pierre Baudin and Rob Krepps, are analyzing the technical aspects of the game to determine the best way to deliver a curling stone. The research goal is to ensure optimum performance from Canada's curlers at the 2010 Olympic and Paralympic games.

Krepps, who is head coach for the Saville Centre's National Training Centre (Edmonton) at the U of A, takes this research seriously, but especially so since he was recently appointed as a member of the coaching staff for Canada's women's Olympic curling team.

Baudin and Krepps have transformed a curling sheet at the National Training Centre (Edmonton) into a state-of-the-art research lab, fully equipped with eight [motion analysis](#) cameras and 12 strategically-placed video cameras.

By having a curler wear reflective markers that capture physical performance digitally on a computer, Baudin and Krepps are able to take a highly detailed look at the biomechanics of a curling stone's delivery.

They have concluded that there are no secret movements when delivering a curling stone. What really matters is what's happening with

the line, weight and rotation of the rock. With their high-tech approach, Baudin and Krepps say they have been able to help athletes understand critical cause-and-effect principles that can be incorporated into the actual game.

Another significant finding involves the way wheelchair curlers deliver the stone; research that has never been done until now.

One of the biggest issues faced by wheelchair curlers is the friction between the stone and the ice. Baudin and Krepps say they have been able to modify the delivery so wheelchair curlers are better able to overcome the friction that a stationery rock produces.

Provided by University of Alberta

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