



LAURA STAMM POWER SKATING

THE IMPORTANCE OF PUSHING CORRECTLY

In my fifty years of teaching experience, I have too often watched (in amazement) coaches stressing quick feet while overlooking power generation. **Of course, quickness is vital - but so is power!**

In order to achieve power, players need to push correctly!

My Power Skating System uses a teaching progression that has been very successful. The teaching progression is to execute **each** skating maneuver **1. Correctly. 2. Correctly & Powerfully. 3. Correctly, Powerfully, & Quickly. 4. Correctly, Powerfully, & Quickly with the puck. 5. Correctly, Powerfully, & Quickly with the puck in game situations (not an easy task!).**

Hockey is comprised of numerous intricate and complicated skating maneuvers. Some of these maneuvers are the forward stride, backward stride, crossovers, starts, stops, turns, transitional moves, pivots, angling, etc. All of these maneuvers are comprised of numerous strides (or steps).

Because there is no such thing in hockey skating as taking a stride (step) without using an accompanying push, players need to know which push to use and how to execute that push correctly. Each hockey skating push is specific to that stride or maneuver and its purpose is to generate power on that specific stride (or step). The totality of all the pushes in any skating maneuver, performed *correctly, powerfully, and quickly*, results in *speed*.

Elements of Power Generation in Hockey Skating:

Whether skating straight forward, straight backward, crossing over (forward or backward), weaving, starting, or turning, etc, all pushes must adhere to the four elements of power generation. I call these elements the ***Windup, Release, Follow-through and Return***.

The Windup: The windup is a coiling action. It is necessary to prepare the skater for power generation on the upcoming push. Its function can be compared to the backswing of a baseball bat, tennis racquet or golf club.

The Release and Follow-through: The release and follow-through are the actual work done by the pushing skate and leg during each push.

The Return (Recovery) of the pushing skate and leg. The return prepares the skater for power generation (speed) on the next push.

Following is a brief description of the Windup, Release, Follow-through, and Return.

Windup:

Edges:

Every push must be executed against an edge. Some pushes (as in the forward and backward stride) are executed against the inside edge. Others (as in the second push of forward and backward crossovers) are executed against the outside edge. An effective pushing edge requires that the edge of the pushing skate grips the ice at a 45-degree angle. *It is impossible to push against the flat of the blade or against a shallow (weakly angled) edge.*

Knee Bend:

The knee of both the pushing leg and the gliding leg must be strongly bent. I teach players to bend far enough so that their knees are bent 90 degrees (a 90-degree angle between the thigh and the shin). In hockey it is important to always have a strong knee bend of both the pushing leg and the gliding leg. Popping up, or jumping up, destroys the push, as well as forward (or backward) motion.

Body Weight and Balance:

The skater's total body weight (100%) must be directly above and balanced over the edge of the pushing skate. At approximately the midpoint of the push, the body weight shifts from the pushing skate to the gliding skate.

Center of Gravity:

When players push, they are actually pushing their body weight. While the pushing leg does the work, skaters really push themselves (forward or backward). In order to push "ones-self", each push must be initiated from directly under the center of gravity (I call this the "battery pack" or "power source"). The center of gravity is an imaginary circle, approximately three inches in diameter, located in the midsection of the body (belly button area). To push effectively, the pushing skate must be directly under the center of gravity. To achieve this, the skates must be fairly close together at the initiation of each push (no further than three inches apart).

Release:

The pushing skate and leg drive directly and fully against the pushing edge. All skating pushes are outward/inward, not backward/forward. Too many players allow the pushing skate and leg to “slip back” in a walking/running motion. This is a huge mistake.

Follow-Through:

A push is complete only when the pushing skate and leg are fully extended. Full extension is the instant in a push where the entire leg (hip, quads, knee, calf, ankle, and toes) is locked. A well executed follow-through allows for the all-important “toe-flick” (the final push against the ice with the front of the edge).

Note: Full extension is based upon maintaining a 90-degree knee bend of the gliding leg at the point of full extension. A lesser knee bend produces a lesser range of motion and subsequently an inadequate push.

Return:

The importance of the return is that it prepares the skater for the next push. As previously mentioned, each push must begin directly beneath the center of gravity. An incomplete return means that the skates and legs will be outside the “battery pack” at the beginning of the next push. The subsequent push will be “empty” - inefficient and ineffective. Players who push from a wide base feel as though they’re going fast because they can move their legs rapidly. Of course, they can move their legs rapidly – their range of motion is very short. In actuality they end up working hard and accomplishing little. These players also tend to tire quickly because they waste a lot of energy “going nowhere fast”. *Our goal is efficient speed. To accomplish this, each push must go through its full range of motion.*

The Hockey Skating Pushes:

There are four major pushes in hockey skating*. Over the years I have created names for each of the skating pushes in order to help players visualize, understand, remember, and then execute them correctly. The pushes for some of the most important hockey skating maneuvers are explained below.

Forward Stride-Push and Backward Stride-Push:**1. Forward Stride-Push.**

The “forward stride-push” is the push of each forward stride. When executed correctly this push generates power (speed) when skating straight forward.

The “forward stride-push” is also the first push of each forward crossover sequence (a two-step sequence). When executed correctly this push provides the first half of the power (speed) generated on each forward crossover (see explanation of crossovers, below).

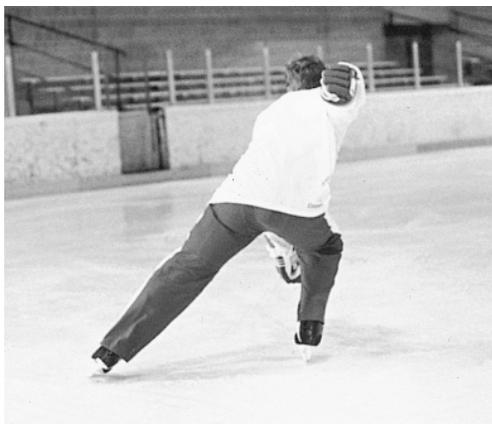


Laura teaching young players the windup of the forward stride

2. Backward Stride-Push.

The “backward stride-push” is the “backward C-cut push”. The “backward C-cut push” is the push of each backward stride. When executed correctly this push generates power (speed) when skating straight backward.

The “backward C-cut push” is also the first push of each backward crossover sequence (a two-step sequence). When executed correctly this push provides the first half of the power (speed) generated on each backward crossover.



Backward Stride (“C-Cut” push) showing full extension

The One-Third Principle of the Forward Stride:

When skating straight forward (forward stride) there are three parts of each push.

The first third of each push is done with the back third of the blade.

The second third of each push is done with the middle third of the blade.

The final third of each push is done with the front third of the blade**.

Thus: Each third of a push is equivalent to one third of the power generated during that push. What this really means is that if technique is faulty during any portion of the push the player loses a percentage of the thrusting power (potential speed) of that push.

If technique is incorrect at the beginning of the push (Wind-up), the player loses the first third of that push.

The second third, or middle of the push (Release), is easier than either the first or third parts - most players get this second third. *Unfortunately, many players ONLY get this third of the push.*

If technique is faulty at the finish of the push (Follow-through and toe-flick), the player loses the final third of that push.

Loss of one third of one’s potential power in a sprint sport such as hockey results in a damaging loss of speed. Loss of two thirds guarantees slowness. Remember - fast-legged skaters *look* fast, but this is often an illusion – in reality they are just churning their legs furiously. Correct, complete and powerful pushes, performed rapidly, are the goal.



Forward stride showing full extension

3. X-Push.

The “X-push” is the second push of each forward **and** backward crossover. When executed correctly his push provides the second half of the power (speed) generated on each forward **and** backward crossover sequence. Note: The “X-push” is often neglected or performed *incorrectly*, which results in poorly executed crossovers. (See explanation of crossover pushes, below).



Forward crossovers showing the “X-push”

4. Forward C-cut Push.

The “forward C-cut push” is the first push (entry phase) of each pivot or tight turn. This push is also used in hockey maneuvers that require agility and/or stability, such as warding off an opponent (bulling), or protecting the puck.



Player using forward C-cut push while bulling (protecting the puck)

Explanation of forward and backward crossover pushes:

Every crossover is a two-step maneuver. Thus, every crossover is also a two-push maneuver.

Forward Crossovers:

The first push of a forward crossover is identical to the push of the forward stride. Therefore, the first push of each forward crossover is the stride-push.

The second push of each forward crossover is the X-push.

Backward Crossovers:

The first push of a backward crossover is identical to the push of the backward stride. Therefore, the first push of each backward crossover is the backward C-cut push. The second push of each backward crossover is the X-push. Point to Remember: Walking and running are natural motions of the body. But skating motions and skating pushes are **not** natural. They must be taught/learned properly and then practiced (correctly and repeatedly) over a period of many years.



Wind-up of the Forward Stride



Toe-flick of the Forward Stride

For a detailed explanation of how to execute each hockey skating push correctly and powerfully, refer to my book,

LAURA STAMM'S POWER SKATING. Also, check for a Laura Stamm Power Skating Clinic near you.

* One or two other pushes that are rarely used in hockey skating are not discussed here.

** The one-third principle does not apply to backward skating or “toe starts”.

SKATE GREAT HOCKEY!

