

**THE HOCKEY SKATING PUSHES – DEFINITIONS, FUNCTIONS, AND EXECUTION**

Hockey is comprised of many intricate and complicated skating maneuvers and every maneuver is comprised of multiple strides (steps or glides). Each of the strides (steps or glides) is accompanied by a push. The pushes used are specific to the stride (step or glide) being performed; *they are not optional*.

The function of a glide is to establish direction. The function of a push is to generate power (on that specific stride/glide).

While some hockey skating maneuvers require just one type of push (i.e., the forward stride and the backward stride), other maneuvers (i.e., crossovers, transitional moves, tight-turns) require two (or more) types of pushes. The totality of all the pushes in a skating maneuver, when performed ***correctly, powerfully, and quickly***, produces speed.

During my long teaching career I created names for each of the skating pushes. I found that naming them helped players to visualize, understand, remember, and then apply them properly.

There are four major pushes in hockey skating. In this article we will define and explain how to use the pushes for some important hockey skating maneuvers.

Note: One or two pushes that are not used very often will not be addressed here.

The four major pushes in hockey skating:

**1. Forward Stride-Push.**

The “forward stride-push” is **the** sole push of the forward stride. The function of this push is to generate power (speed) when skating straight forward.



**The forward stride-push showing full extension**

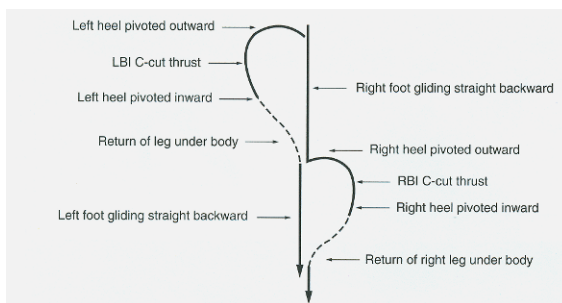
*Note: The forward stride-push is also the first push of forward crossovers (a two-stride/two push sequence). It provides the first half of the power (speed) on each forward crossover (see explanation of forward crossovers, below).*

## 2. Backward Stride-Push.

The “backward C-cut push” is the ONLY push of the backward stride. The function of this push is to generate power (speed) when skating straight backward.



**The backward C-cut push & full extension on the backward stride**



**Backward Stride Pattern showing the push/glide sequence**

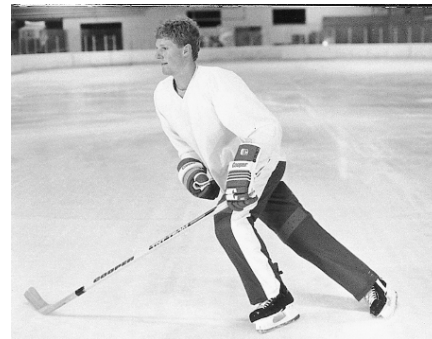
*Note: The backward C-cut push is also the first push of backward crossovers (a two-stride/two push sequence). It provides the first half of the power (speed) on each backward crossover (see explanation of backward crossovers, below).*

## 3. X-Push.

The “X-push” is the second push of forward and backward crossovers. It is identical for forward *and* backward crossovers and it provides the second half of the power (speed) on crossovers. The X-push is often neglected or performed incorrectly, which results in poorly executed (slow) crossovers. (See explanation of crossover pushes, below).



**The X-push of forward crossovers**



**The X-push of backward crossovers**

## 4. Forward C-Cut Push.

The forward C-Cut push is the first push (entry phase) of a tight turn (pivot). It is also used in maneuvers that require agility and stability, such as warding off an opponent (bulling), or protecting the puck.



Forward C-Cut push used to enter a tight turn (pivot)



Forward C-Cut push used to protect the puck

### **Explanation of the crossover pushes:**

Every crossover is a two-stride maneuver. Therefore 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. It follows that the first push of a forward crossover is the forward stride-push.

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

#### **Backward Crossovers:**

The first push of a backward crossover is identical to the push of the backward stride. It follows that the first push of a backward crossover is the backward C-Cut push.

The second push of a backward crossover is the X-push.

### **Principles of Power Generation in Hockey Skating:**

Whether skating straight forward, straight backward, crossing over (forward or backward), weaving, starting, or turning, all skating pushes must adhere to established principles of power generation.

There are four major elements involved in power generation for hockey skating.

I call these elements the *Windup, Release, Follow-through and Return.*

The **Windup** is a coiling action 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** are the actual work done by the pushing skate/leg during each push.

The **Return (Recovery)** of the pushing skate/leg prepares the skater for power generation (speed) on the upcoming push.

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

## **Windup:**

### ***Edges:***

Every push in skating 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 (X-push) of forward and backward crossovers) are executed against the outside edge. An effective pushing edge requires that the pushing skate grip the ice at a strong (45 degree) angle.

*Note: It is impossible to generate power by pushing against a shallow (weakly angled) edge. It is even more impossible to generate power by pushing against the flat of the blade.*

### ***Knee Bend:***

The knee of both the pushing leg and the gliding leg must be strongly bent. I teach players to bend their knees (on both the pushing leg and the gliding leg) so that the angle between the thigh and the shin is 90 degrees. In hockey it is important to maintain a strong knee bend (first on the pushing leg and then on the gliding leg) at all times. STAYING LOW is key!

### ***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 about the midpoint of the push, the body weight then shifts completely from the pushing skate onto the gliding skate.

### ***Center of Gravity:***

When skaters push, they are really pushing their body weight. While the pushing skate and leg do the work, skaters are actually pushing themselves (forward or backward). In order to push "themselves", every 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 3 inches in diameter, located in the midsection of the body (belly button area). To push effectively, the skates must therefore be no further than three inches apart at the initiation of each push.

When skating straight forward (forward stride) each push starts from and then returns to what I call the "V-Diamond" position; skates are close together, knees are deeply bent).



### **Laura teaching the “V-Diamond” position of the Forward Stride**

**Note: Skates are close together, directly beneath the “power pack” and knees are deeply bent.**

#### **Release:**

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

#### **Follow-Through:**

A skating push is completed only when the pushing skate/leg are fully extended. Full extension is that instant in a push where the entire leg (hip, the quad, knee, calf, ankle, and toes) is locked. A well executed follow-through provides the final push against the ice with the front of the edge (“toe-flick”).

*Note: Full extension is based upon maintaining a 90 degree knee bend of the gliding leg at the instant 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 to prepare 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” - in other words, 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”. The goal is efficient speed - to accomplish this, ***every push must go through its full range of motion.***

#### **The One-Third Principle:**

When skating forward (forward stride and forward crossovers), 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\*.

It follows that 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, so 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 because they are churning their legs furiously. Correct, complete and powerful pushes, performed rapidly, are the goal.

Remember this too: Walking and running are natural motions of the body. Skating motions and skating pushes are **not** natural. They must be learned/taught properly and then practiced (correctly and repeatedly) over a period of many years.

- **The one-third principle does not apply to backward skating because skaters do not use the heel of the blade to push when skating backward. It also does not apply to “explosive starts” because when starting skaters should only use the front few inches of the inside edge (“toes”) to push.**

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

**LAURA STAMM'S POWER SKATING, fourth edition.** Also check for an upcoming Laura Stamm Power Skating Clinic in your area.

***SKATE GREAT HOCKEY!***

***LAURA STAMM***

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