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The Single Leg Squat (SLS) Program.

Why the Single Leg Squat (SLS) Program?

All people should be able read, write and perform simple mathematics. I don't think anyone would despite these basic skills, as they are necessary to function in our day to day lives. If you ever lost these abilities, such as after a stroke, your life would change. These abilities need to last forever. But have you ever considered that a single leg parallel squat is necessary for life?

You should!

If you love to ski and enjoy participating in activities, such as running, and team sports (hockey, basketball, soccer, baseball, etc) then you need to be able to perform a single leg parallel squat. Scientific research indicates that possessing this ability aids in injury prevention of knee injuries 1, 2, non-contact ACL injuries³⁻⁵, and low back injuries⁶.

Interestingly our research indicates that over 93% of athletes tested, from ages of 8 - 18 were unable to achieve the SLS standard – click here to learn about how we [assess the single legged squat](#). That's 93% across all sports tested – Alpine, Basketball, Hockey, Tennis, Soccer, Volleyball, Athletics, Wrestling, Swimming, Baseball and Football. The main reason is because athletes lack sufficient strength to control their body while performing a SLS^{1, 7, 8}, and as a result they display **dynamic valgus**- inward movement of the knee and a loss of neutral spine position. The significance is increased injury risk and a loss in performance.

To illustrate this point, understand that during sport an athlete will be subjected to forces that exceed 4 – 6 times their body weight on a single limb. Now using common sense, how safe will they be when they are unable to control just their body weight? Now what happens if they are fatigued and they get put into a position where their limb is at risk for an injury – perhaps an ACL rupture or worse!

The great news is that through appropriate strength and conditioning exercises we can achieve the SLS movement standard. This article is intended to provide you with exercises to help you achieve the movement standard. Remember these standards are for **EVERYONE**. Whether you are a recreational skier, a mom with kids, or you are a weekend warrior you must be able to perform a single legged squat. Give it a try – you may be very surprised.

Compare each leg to each other and notice the depth you were able to achieve.

Disclaimer:

This is a template. It is not a substitute for work with an athletic development specialist. There are many technical considerations that need to be addressed for best results. The goal of this program is provide a starting point for each athlete. It's simple to follow. If you have feedback, please email it to thomaslam@fitstoronto.com. All feedback helps to make the program better.

Each athlete will progress at their own level. Sometimes an athletes will progress faster in dimension vs. another For example, system stability and glut activation vs. single leg control or vis-versa.

Frequency: 3 – 5 x / week the more you put the more you receive

Reps only count if they are at the prescribed depth and display control = lines + neutral spine control.

Abbreviations:

- e = exercise,
- r = reps,
- s = sets
- Si = Side

Before you get started...

Equipment that will be needed:

1. A mini resistance band
2. A dowel
3. A 5-10 lb plate
4. 15-25 lb kettlebell

Some of these can be substituted for household items. For example, replace a dowel with an old broomstick or broken hockey stick.

1. The goal of the program is to complete each day in order, from Day 1a to 3b, each week. However this may not always be possible. Make sure you complete Day 1a, 1b, and 1c MINIMUM each week.
2. Each day will have exercises grouped into As, Bs, and Cs. This means that all As are done together, Bs are done together, and finally Cs are done together.
3. Some exercises are prescribed in reps and some are in seconds. Reps are to be completed one after another, where as seconds means you hold a position for a certain time.

Major Program Goals

	Major Goal
Building the Squat	Develop hip strategy and ability to squat.
Level I	Single Leg Squat Depth 2 10r x 3s
Level II	Single Leg Squat Depth 3 15r x 3s Single Leg Squat Drop Stick 12" x 5
NEXT LEVEL – CALL FOR MORE	
<i>Level III</i>	<i>Single Leg Drop Stick 24" x 5 Standing Hop x 8</i>

- Squat control and Single Leg Control is based the consistent depth achieved without compensation – no violation of the lines.
- All athletes should be able to get squat to a depth of 5 and a single leg squat to 4 with control of their “Lines”

How we score depth



1 2 3 4 5

- 5 = hip below knee
- 4 = hip parallel with knee
- 2 = quarter squat

PHASE 1: Building the Squat

Weeks 1–2

Day 1	Day 2	Day 3	Continue for most days of the week
A. Glut Activation Series Dead Frog x 60s Side-lying Clam Shell x 60s / s Fire-Hydrant x 60s / s Glut Bridge Single Leg Hold x 60s / s	A. Glut Activation Series Dead Frog Side-lying Clam Shell x 60s / s Fire-Hydrant x 60s / s Glut Bridge Single Leg Hold x 60s / s	A. Glut Activation Series Dead Frog Side-lying Clam Shell x 60s / s Fire-Hydrant x 60s / s Glut Bridge Single Leg Hold x 60s / s	
B. Mobility Series Airplane x 5 / side Tea-Cup x 5 / side Get Down Series x 2 / leg	B. Mobility Series Sumo Squat to Overhead x 10 Lateral Lunge x 8 / side	B. Mobility Series 3D Hamstring x30s / side 3D Hip Flexor x30s / side 3D Adductor x 30s / side Leg Swings x 30s / side	
C. Squat Development Goblet Squat Hold + Bands 30s x 4 Squat Bottom Pulses x10 x 4	C. Squat Development Perform as a complex. Bus Driver Squats x 10r x 4s Loaded Overhead Squat x 10r x 4s	C. Squat Development Goblet Squat Hold + Bands 30s x 4 Squat Bottom Pulses x10 x 4 OR Perform as a complex. Bus Driver Squats x 10r x 4s Loaded Overhead Squat x 10r x 4	



Click Exercise for Video and Instructions

PHASE 1: Building the Squat

Weeks 3 – Achieve Standards

Day 1	Day 2	Day 3	Continue for most days of the week
A. Glut Activation Series Surfer x 60s / side Squat + Trunk Activation x 60s / side Lateral Walk x 60s / side Forward Walk x 60s / side	A. Glut Activation Series Dead Frog Side-lying Clam Shell x 60s / s Fire-Hydrant x 60s / s Glut Bridge Single Leg Hold x 60s / s	A. Glut Activation Series Surfer x 60s / side Squat + Trunk Activation x 60s / side Lateral Walk x 60s / side Forward Walk x 60s / side	
B. Mobility Series Airplane x 5 / side Tea-Cup x 5 / side Get Down Series x 2 / leg	B. Mobility Series Sumo Squat to Overhead x 10 Lateral Lunge x 8 / side	B. Mobility Series 3D Hamstring x30s / side 3D Hip Flexor x30s / side 3D Adductor x 30s / side Leg Swings x 30s / side	
C. Squat Development Squat hold + Overhead Press x 10r x 4s Snatch Drop 10r x 4s	C. Squat Development Bus Driver Squats x 10r x 4s Overhead Squat x 10r x 4s	C. Squat Development Squat hold + Overhead Press x 10r x 4s Snatch Drop 10r x 4s	



Click Exercise for Video and Instructions

You should be able to:

**** DON'T PROGRESS UNLESS YOU CAN COMPLETE ALL STANDARDS *****

- Demonstrate System Stability during ALL Glut Activation Exercises. Complete SSGA level I
- Perform a Squat to Depth 4
- Perform an Overhead Squat to Depth 4



LEVEL 1: SINGLE LEG CONTROL

Weeks 5

Day 1	Day 2	Day 3	Continue for most days of the week
A. Glut Activation Series Surfer x 60s / side Squat + Trunk Activation x 60s / side Lateral Walk x 60s / side Forward Walk x 60s / side	A. Glut Activation Series Dead Frog Side-lying Clam Shell x 60s / s Fire-Hydrant x 60s / s Glut Bridge Single Leg Hold x 60s / s	A. Glut Activation Series Unilateral Wall Push x 60s / s Standing Fire-Hydrant x 60s / s Standing Drop Squat x 60s / s	
B. Mobility Series Airplane x 5 / side Tea-Cup x 5 / side Get Down Series x 2 / leg	B. Mobility Series Bus Driver Squats x 10r x 4s Overhead Squat x 10r x 4s	B. Mobility Series 3D Hamstring x30s / side 3D Hip Flexor x30s / side 3D Adductor x 30s / side Leg Swings x 30s / side	
C. Single Leg Development Airplane 8r x 3s Backwards Lunge 8r x 3s Low Box) Step-up 8r x 3s	C. Squat Development Lateral Step-Down (Depth 2) 8r x 3s Standing Single Leg Drop 8r x 3s Step-up 8r x 3s Decline SL Squat 8r x 3s	C. Squat Development Perform one 1 flight of stairs, approximately 10 stairs. Repeat the circuit 4 times per set for 5 sets. Hop and Stick (skip 1 – 2) x 2 Reactive Stairs (skip 2 – 3) x 1	



Click Exercise for Video and Instructions

LEVEL 1: SINGLE LEG CONTROL

Weeks 6

Day 1	Day 2	Day 3	Continue for most days of the week
A. Glut Activation Series Surfer x 60s / side Squat + Trunk Activation x 60s / side Lateral Walk x 60s / side Forward Walk x 60s / side	A. Glut Activation Series Dead Frog Side-lying Clam Shell x 60s / s Fire-Hydrant x 60s / s Glut Bridge Single Leg Hold x 60s / s	A. Glut Activation Series Unilateral Wall Push Standing Fire-Hydrant Standing Drop Squat	
B. Mobility Series Airplane x 5 / side Tea-Cup x 5 / side Get Down Series x 2 / leg	B. Mobility Series Bus Driver Squats x 10r x 4s Overhead Squat x 10r x 4s	B. Mobility Series 3D Hamstring x30s / side 3D Hip Flexor x30s / side 3D Adductor x 30s / side Leg Swings x 30s / side	
C. Single Leg Development Airplane 10r x 3s Backwards Lunge 10r x 3s Low Box) Step-up 10r x 3s	C. Squat Development Lateral Step-Down (Depth 2) 10r x 3s Standing Single Leg Drop 10r x 3s Step-up 10r x 3s Decline SL Squat 10r x 3s	C. Squat Development Perform one 1 flight of stairs, approximately 10 stairs. Repeat the circuit 4 times per set for 5 sets. Hop and Stick (skip 1 – 2) x 2 Reactive Stairs (skip 2 – 3) x 1	



Click Exercise for Video and Instructions

LEVEL 1: SINGLE LEG CONTROL

Weeks 7

Day 1	Day 2	Day 3	Continue for most days of the week
A. Glut Activation Series Surfer x 60s / side Squat + Trunk Activation x 60s / side Lateral Walk x 60s / side Forward Walk x 60s / side	A. Glut Activation Series Dead Frog Side-lying Clam Shell x 60s / s Fire-Hydrant x 60s / s Glut Bridge Single Leg Hold x 60s / s	A. Glut Activation Series Unilateral Wall Push Standing Fire-Hydrant Standing Drop Squat	
B. Mobility Series Airplane x 5 / side Tea-Cup x 5 / side Get Down Series x 2 / leg	B. Mobility Series Bus Driver Squats x 10r x 4s Overhead Squat x 10r x 4s	B. Mobility Series 3D Hamstring x30s / side 3D Hip Flexor x30s / side 3D Adductor x 30s / side Leg Swings x 30s / side	
C. Single Leg Development Airplane 12r x 3s Backwards Lunge 12r x 3s Low Box) Step-up 12r x 3s	C. Squat Development Lateral Step-Down (Depth 2) 12r x 3s Standing Single Leg Drop 12r x 3s Step-up 12r x 3s Decline SL Squat 12r x 3s	C. Squat Development Perform one 1 flight of stairs, approximately 10 stairs. Repeat the circuit 4 times per set for 5 sets. Hop and Stick (skip 1 – 2) x 2 Reactive Stairs (skip 2 – 3) x 1	



Click Exercise for Video and Instructions

You should be able to:

1. Perform a Single Legged Squat to Depth 2 12r x 3
2. Lateral Step Down to Depth 2



THANKS! We hope you enjoyed the program. You've been able to achieve LEVEL II Knee Control. AWESOME. Congratulations.

- For additional programming for LEVEL 3 please contact [FITS TORONTO – info@fitstoronto.com](mailto:info@fitstoronto.com), thomaslam@fitstoronto.com (Sport Science Director) or 416-628-4333. We have amazing programs that will help you drop from a 24" box and stick the landing without the scary "DYNAMIC VALGUS."