

**Bowls Team Canada**  
HIGH PERFORMANCE ATHLETES

*Going for Gold...*



# **BOWLS CANADA BOULINGRIN**

**HIGH PERFORMANCE TEAM**

**FITNESS PROGRAM**



**DESIGNED BY: Catherine King & Guy Forster**  
**Demonstrated by: Tim Mason**

# **ATHLETIC CONDITONING**

Athletic conditioning programs should always be individualized to the needs of the athlete. Each athlete is unique and consideration should be given to their postural and fitness requirements. An initial health screen as well as a fitness and mobility assessment is required.

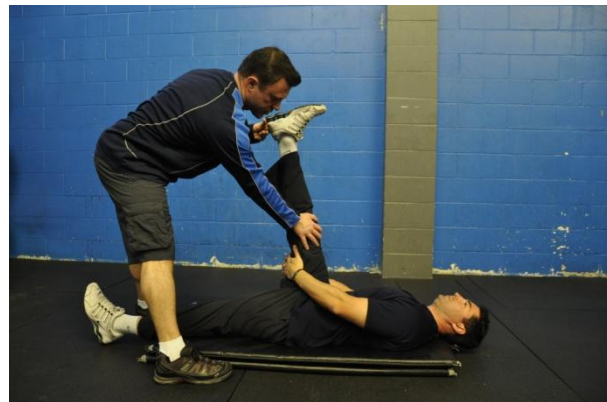
Below are example programs taking into account the demands of the sport of lawn bowls, with consideration given to the population involved and correcting the postural deviations that may be caused by the sport.

## **DYNAMIC WARM - UP**

**Dynamic Stretching:** Movements that use muscle power to move arm/leg through full ROM. Dynamic exercises stretch the muscle in a more functional way.

<b>Dynamic Warm-Up</b>	
<b>Exercise</b>	<b>Repetitions</b>
Squats	X 5 reps
Leg Swings	X 10 reps each side
Forward or Walking Lunge	X 10 reps each side
Reach for the Stars (split stance, both arms swing up, reach up and across with one arm, reach across chest with one arm)	X 5 reps each = 15 reps
Arm Circles (narrow to wide)	X 10 each direction
Arm Swings across chest	X 10 reps
I's	X 10 reps
Y's	X 10 reps

\*The Dynamic Warm-Up should be performed prior to a game as well as the strength and conditioning program.



# **STRENGTH PROGRAMS**

<b>Beginner Strength Program</b>	
8 to 15 reps, 1 to 2 sets, tempo 4-0-4, rest between sets 30 to 60 sec. Frequency: 3x/week	
Exercise	Progressions to Intermediate
Step Ups	Increase number of reps/sets., increase height of step, add weight
Split Squat	Increase number of reps/sets, change tempo, add weight
Stiff Leg Deadlift	Increase number of reps/sets, change tempo, increase weight
Standing Cable Row	Increase number of reps/sets, change tempo, increase weight
DB Bicep Curls	Increase number of reps/sets, change tempo, increase weight
Side Plank from Knees (or on BOSU)	Increase time, perform from feet, add movement
Standard Plank	Increase time, perform from feet, add movement
Clam Shell	Increase number of reps, add resistance

<b>Elite Strength Program</b>	
8 to 12 reps, 3 to 4 sets, tempo 3-0-1, rest between sets 60 to 90 sec., Frequency: 4x/week	
Exercise	Equipment
Diagonal Lunge w/Reach and Pass	One dumbbell
Suspension Lunge or Bulgarian Split Squat	TRX or bench and Dumbbells/Barbell
Single Leg Deadlift	Dumbbells
Walking Lunge	Barbell
Mountain Climbers	TRX or BOSU
Plank Variations – Up Up Down Down,	BOSU, Ball, or TRX
Thread the Needle	Done on fitness mat
½ Kneeling High Pulley Row - unilateral	Pulley Station, mat
Split Stance Low Pulley Row - unilateral	Pulley Station
Pull Aparts	Theraband

# **CARDIO CONDITIONING**

Cardiovascular exercises will keep your heart and respiratory system functioning properly and your body in working order. Oxygenated blood pumps through your system allowing lactic acid to be flushed out. Lactic acid usually builds up in muscle tissue over time due to over exertion of muscles.

Cardio Conditioning will help increase your energy and stamina enhancing your performance over long periods of time. When your body gets fatigued, your sports movements are no longer fluid and efficient. With this you are more likely to make mistakes or get injured.

<b>Beginner Cardio Program</b>	
<b>Time:</b> 15 to 30 minutes, <b>Intensity:</b> Borg scale – 5 to 7 RPE, <b>Frequency:</b> 3x/week. Perform cardio after your weight training session. If time is an issue, perform it on another day.	
Exercise	Notes
Walking, Cycling or Swimming	
<b>Intermediate Cardio Program</b>	
<b>Time:</b> 20 to 30 minutes, <b>Intensity:</b> Borg scale – 5 to 7 RPE, <b>Frequency:</b> 4x/week. Perform cardio following your weight training session. If time is an issue, perform it on another day.	
Exercise	Notes
Walking, Running, or Cycling	
<b>Elite Cardio Program</b>	
<b>Time:</b> 30 to 45 minutes or 15 to 20 minutes high intensity, <b>Intensity:</b> Borg scale – 6 to 9 RPE, <b>Frequency:</b> 4 to 6 x/week. If lower intensity cardio is selected, it is best to do it following the strength-training session. If the high-intensity option is used, perform it on a day separate from your weight training session.	
Exercise	Notes
Running, or Cycling	*may perform high intensity intervals

## **KEY FACTORS:**

- Help control the wear and tear on your body: feet, knees and hips. It's a good idea to do some low impact cardio like cycling or swimming.
- It's very important to pick something that you enjoy, as it will help you reduce the feeling of it becoming work.
- You should try and mix high-impact activities like jogging or step aerobics with weight-supported activities like rowing and cycling.
- Take the time to let your body adjust to the cardio programs, nothing is built over night so it does take time.

# **STATIC STRETCHING**

Your muscles and connective tissues will shorten over time and that results in less flexibility. If your muscles have gone some time without being used, they tend to become weaker and quite stiff. The risk of injury is greatly increased when you start to use those muscles suddenly. If you are doing regular stretching exercises to lengthen and strengthen your muscles, injury can be easily avoided.

**Static Stretching:** Placing a muscle in its most lengthened position and holding for at least 20 seconds. The stretch is taken to the point where resistance is felt but no pain.

<b>Stretching Program</b>	
<b>Time:</b> 10 to 15 minutes overall, 60 seconds per stretch, <b>Intensity:</b> 50 to 60%, <b>Frequency:</b> following strength and/or cardio programs (cool down).	
<b>Muscle</b>	<b>Notes</b>
1. Hamstrings	Supinated position using a strap or resistance band to hold one leg in elevated position
2. Glutes	Cross ankle at opposite knee
3. Pectoral	On ½ foam roll or doorway stretch
4. Quads	Standing or on side
5. Lats	Child pose
6. Hip Flexors	In lunge position, reach overhead away from the side you have the knee down on
7. Gastrocnemius	Standing on wedge board, or wall stretch
8. Deltoids and Trapezius	Lying on side
9. Seated Hip Flexor	Sitting on a bench cross leg and slowly press down on the knee of the crossed leg

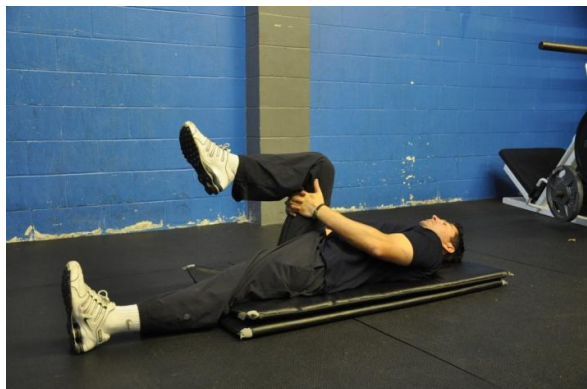
\* See Photos Below...

## **KEY FACTORS:**

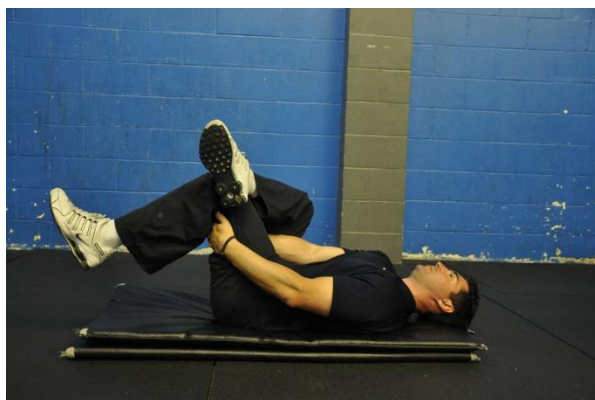
- Always perform a warm up before stretching.
- Stretch to the point of resistance and not pain. You should not feel any pain during stretching.
- Hold static stretches for 60 seconds as bouncing does not make the stretch better.
- Keep breathing during stretches as it will relax the body and enable it to perform to its maximum potential.
- Target the main muscle groups that will be used during training/game as these are the areas that will be shouldering the load.

# THE STRETCHING MOVEMENTS

## 1. HAMSTRINGS



## 2. GLUTES

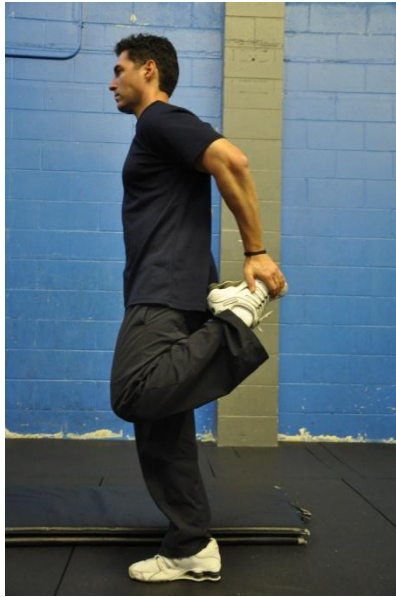


## 3. PECTORAL

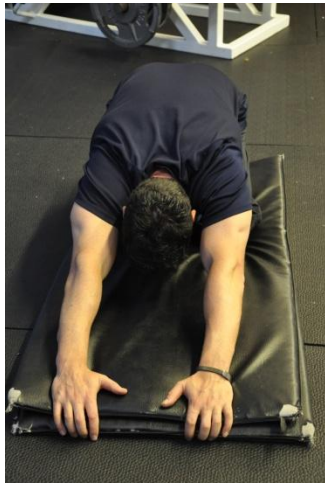




#### 4. QUADS



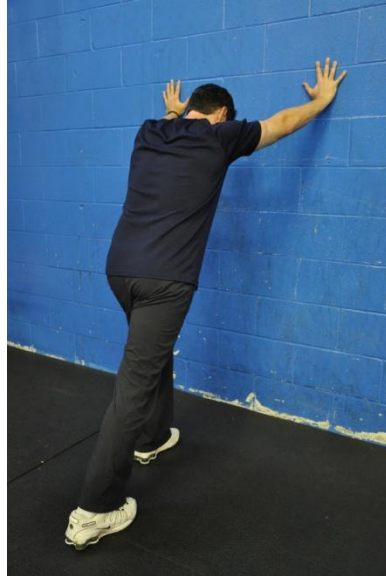
#### 5. LATS



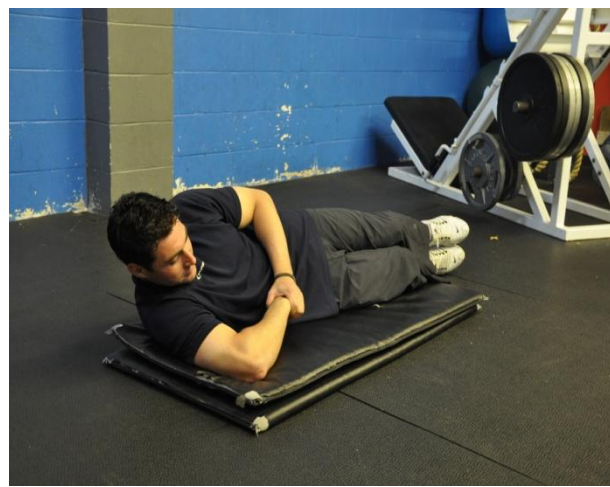
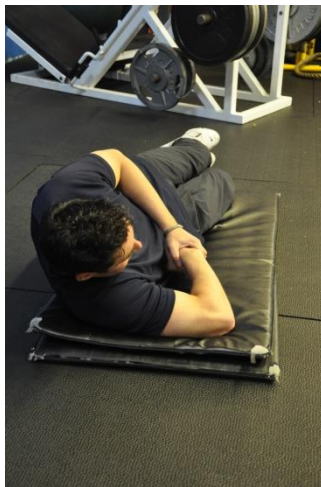
#### 6. HIP FLEXORS



## 7. Gastrocnemius



## 8. Deltoids and Trapezius



## 9. SEATED – HIP FLEXOR





## PERIODIZED SCHEDULES

A training program for athletes should be periodized based on the seasons of the sport allowing athletes to peak for their major competition. Lawn Bowls in-season is May to September, off-season is October to April. The macrocycle would include the entire year, which would be divided up into meso and micro cycles covering the components of foundation training, base strength and hypertrophy training, skill related fitness and peak. Again the program needs to take into account the individual athletes requirements and reassessments and adjustments should occur throughout the program. Below is an example of a periodized training plan.

Foundation Training - Level 1, stage 1 Mesocycle			
Generally 4 to 6 weeks			
Week 1	Week 2	Week 3	Week 4
15 to 20 reps	15 to 20 reps	15 to 20 reps	15 to 20 reps
2 - 3 sets	2 - 3 sets	2 - 3 sets	2 - 3 sets
Tempo 4-0-4	Tempo 4-0-4	Tempo 4-0-4	Tempo 4-0-4
Rest 60 sec	Rest 60 sec	Rest 60 sec	Rest 60 sec

Foundation Training - Level 1, stage 2 Mesocycle			
Generally 4 to 6 weeks			
Week 5	Week 6	Week 7	Week 8
15 to 25 reps	15 to 25 reps	15 to 25 reps	15 to 20 reps
3 - 4 sets	3 - 4 sets	3 - 4 sets	2 - 3 sets
Tempo 4-0-3	Tempo 4-0-3	Tempo 4-0-3	Tempo 4-0-4
Rest 30 - 90 sec	Rest 30 - 90 sec	Rest 30 - 90 sec	Rest 30 - 90 sec

Strength Endurance and Hypertrophy- Level 2, stage 1 Mesocycle			
4 weeks - 3 weeks increasing intensity, 1 week of recovery			
Week 9	Week 10	Week 11	Week 12
8 - 12 reps	8 - 12 reps	8 - 12 reps	15 to 20 reps
3 - 5 sets	3 - 5 sets	3 - 5 sets	3 sets
Tempo 4-0-2	Tempo 4-0-2	Tempo 4-0-2	Tempo 4-0-3
Rest 60 sec	Rest 60 sec	Rest 60 sec	Rest 30 - 45 sec

Hypertrophy and Basic Strength- Level 2, stage 2 Mesocycle			
4 weeks - 3 weeks increasing intensity, 1 week of recovery			
Week 13	Week 14	Week 15	Week 16
6 - 12 reps	6 - 12 reps	6 - 12 reps	8 to 12reps
3 - 5 sets	3 - 5 sets	3 - 5 sets	3 - 5 sets
Tempo 2-0-1	Tempo 2-0-1	Tempo 2-0-1	Tempo 4-0-2
Rest 3 min	Rest 3 min	Rest 3 min	Rest 60 - 90 sec