

TEAM CANADA



POLAR BEARS RINGETTE

TRAINING MANUAL



UNIVERSITY OF
CALGARY
KINESIOLOGY

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Introduction

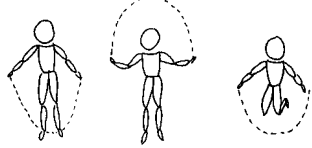
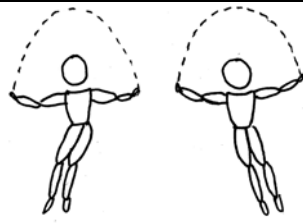
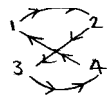
This manual has been designed to be a resource for Polar Bear athletes to assist in the completion of the training programs provided. Athletes needing further assistance or have questions regarding the training program should contact your coach Jesse Pritchard (220-2447 or jlpritch@ucalgary.ca) or Jodi Hicks (220-5192 or jhicks@ucalgary.ca).

Warm-up

Exercises and Routines










Skipping Program

Skipping is an excellent exercise for developing ankle strength and foot speed. It is also an excellent exercise to warm-up with.

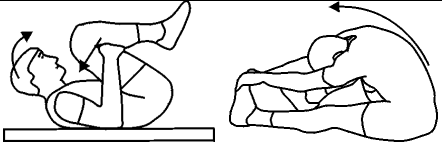


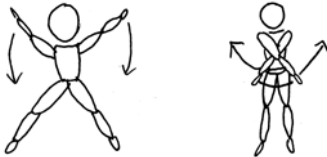
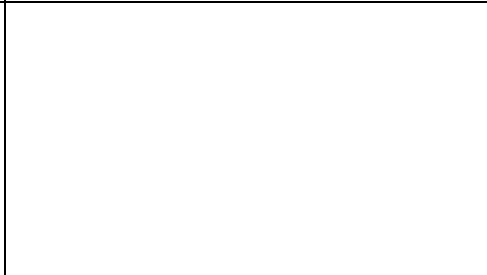
<p>Double Leg Bounce- Start with the rope on the ground behind your feet. Turn the rope upward, with lower arms making full circular motion. Continue with the rope circling overhead towards the feet. Just as the rope is about to touch the ground, jump up with both feet together. Repeat for the desired number of jumps. The speed should approximately be 1 rotation per second, unless otherwise stated.</p>	
<p>Single Leg Bounce- Same as Double Leg Bounce only staying on one leg only.</p>	
<p>Alternating Single Bounce- Same as the Single Leg Bounce, except you alternate feet making contact with the ground.</p>	
<p>Slalom Double's and Single's- When you jump, jump from one side to the other side, imagining a line between your feet.</p>	
<p>Figure 8's Double's and Single's- Imagine skipping on four quadrants. Follow the pattern skipping from quadrant 1 to quadrant 2 to quadrant 3 to quadrant 4 and back to quadrant 1, in a figure 8 pattern.</p>	
<p>Reverse Figure 8's- Same as above, only in the reverse direction.</p>	

NOTE: Skipping exercises should be performed on a flat, level surface.

Warm-up Routine

<p>5 Minute Aerobic Activity – SKIPPING PROGRAM. Prefer skipping (follow the skipping routine) but a light game or jog can also be used.</p>	
<p>Static Stretch Routine- Hold each stretch at the end point of each plane of movement of each of the following areas: the neck, shoulders, chest, back, groin, hamstrings, quads, glutes, hip flexors and calves. Hold each stretch for 6-8 seconds. One stretch per plane of movement of each joint. This routine should take no more than 3 – 4 minutes</p>	
<p>Dynamic Stretch Routine– These sets of exercises are to be performed with fluid movement. It's not ballistic movement but fluid movement, movement at a constant acceleration and deceleration past each standard end point</p>	
<p>Calfs- While the legs are straight and the hands are on the floor, walk the feet towards the hands as far as you can go and then walk the hands away from the feet. For Warm-up Purposes, athletes should complete 2 sets of 10m.</p>	<p>1 Start 2 Walk hands</p>  
<p>Leg Swings Open/Close- Face the wall, holding onto to a rail for balance. Swing the leg across the body, as high as possible, with the toes pointing straight up. Then swing the leg back down and across the body again. Keep the upper body straight. For Warm-up Purposes, athletes should complete 2 sets of 15reps ea. <u>Fluid Force</u></p>	<p>1 Swing leg out 2 Cross leg over body</p>  
<p>Leg Swings back/Forth- Stand side on to the wall and swing the inside leg up in front of the body, as high as it can go. Then allow the leg to swing back down and back up backwards, allowing the leg to bend at the knee. Keep the upper body straight. For Warm-up Purposes, athletes should complete 2 sets of 15reps ea. <u>Fluid Force</u></p>	<p>1 Swing leg in front 2 Swing leg behind</p>  
<p>Lying Leg swings- Lie on your back with your arms directly out to the sides. Lift one leg and swing it round to the opposite hand. Swing the leg back to the starting position. Pick up the other leg and do the same. Alternate the legs for the desired number of repetitions and make sure to keep the shoulders on the ground. For Warm-up Purposes, athletes should complete 2 sets of 15reps ea. <u>Fluid Force</u></p>	 
<p>Prone Leg Swing- the same as the Lying Leg Swings, but this time lie on your stomach. Arms should be directly out to the side. On the swings up, aim the heel of the foot towards the opposite hand, while keeping both shoulders on the ground. The leg should be relatively loose, with at the end part of the stretch the knee is bent. The stretch should be felt throughout entire body, but mostly in the hip flexors. . For Warm-up Purposes, athletes should complete 2 sets of 15reps ea. <u>Fluid Force</u></p>	

Warm-up Dynamic Stretch Routine (continued)

<p>Dynamic Hamstring Stretch-Lying on the back, bring the knees to chest as if in a ball. Roll Forward extending legs straight out reaching past the toes, then rol back into ball position. 2 Sets x 12-15 reps.</p>	
<p>Skipping with Arm Swing- Whilst skipping (without a rope) swing the arms back and forth. The arm swing should be done with speed and force so the shoulder is stretched. Try to get height with each skip. <u>Fluid Force</u>. For Warm-up Purposes, athletes should complete 2 sets of 15m.</p>	
<p>Skipping with Arm Circles- While skipping, perform big arm circles, with speed and force. <u>Fluid Force</u>. For Warm-up Purposes, athletes should complete 2 sets of 15m.</p>	
<p>Side Skip with Arm Throws to the Side- Side skip and on each side jump throw the arms out to the side and allow to come up above the head. Arms should return to the start position. Each arm swing should be performed with force and rhythm. <u>Fluid Force</u>. For Warm-up Purposes, athletes should complete 2 sets of 15m.</p>	<p>1 Throw arms to the side 2 Cross arms over to body</p> 
<p>Carioca with High Front Knee.- Quickly move side ways with each step alternating in front and then behind. Keep arms out to the side, rotating opposite of hips rotation.. On the front step exaggerate knee lift to be higher than hip height. 2 x 20m.</p>	

Conditioning

Aerobic & Anaerobic

Energy Systems and Adaptations

Conditioning Circuits

Energy System Development

Aerobic System

Aerobic Power

Continuous Training:

Primary Adaptation: Central

Optimal Intensity: 70-85% of Max HR (75-80% VO₂ Max)

Optimal Duration: >35 minutes

Optimal Frequency: 4x/wk

Fiber Recruitment: Type I

Alternative Energy Systems: None

As continuous training exceeds 35 minutes duration, Type II motor units begin to supplement the Type I motor unit pool.

Interval

Primary Adaptation: Peripheral during work duration Central during rest duration

Optimal Intensity: 80-95% of Max HR (90-100% VO₂ Max)

Optimal Duration: >25 - 35 minutes (1.1 – 2.1 work:rest ratio)

Exercise Phase: 60 – 180 seconds

Pause Phase: 60 - 90 seconds

Repetitions: 4-5

Sets: 2- 3

Optimal Frequency: 4x/wk

Fiber Recruitment: Type I

Alternative Energy Systems: Lactate

Lactic System

Lactic Capacity:

Traditional Intervals:

Primary Adaptation: Peripheral during work duration Central during rest duration
Optimal Intensity: 80-95% of Max Speed
Optimal Duration: >25 minutes
Work:Rest Ratio: 1.2 – 3.4
Exercise Phase: 30 - 90 seconds
Pause Phase: 60 - 120 seconds
Rest/sets: 2 minutes
Repetitions: 4-5
Sets: 2 - 4
Optimal Frequency: 2x/wk
Fiber Recruitment: Type I / Type II
Alternative Energy Systems: Lactate

Lactate Stackings:

Primary Adaptation: Peripheral during work duration Central during rest duration
Optimal Intensity: 80-95% of Max Speed
Optimal Duration: >25 minutes
Work:Rest Ratio: 4.3 – 3.2
Exercise Phase: 30 - 90 seconds
Pause Phase: 20 – 60 seconds
Rest/sets: 2 minutes
Repetitions: 4 - 10
Sets: 2 - 4
Optimal Frequency: 2x/wk
Fiber Recruitment: Type I / Type II
Alternative Energy Systems: Lactate

Lactic Power:

Intervals:

Primary Adaptation: Peripheral during work duration Central during rest duration
Optimal Intensity: 95-98% of Max Speed
Optimal Duration: >25 minutes
Work:Rest Ratio: 1.2- 1.4
Exercise Phase: 20 - 60 seconds
Pause Phase: 40 – 120 seconds
Rest/sets: 3 ½ minutes
Repetitions: 6 - 10
Sets: 3 -5
Optimal Frequency: 2x/wk
Fiber Recruitment: Type I / Type II
Alternative Energy Systems: ATP – CP Capacity

ATP – CP

ATP – Capacity

Primary Adaptation: Peripheral during work duration Central during rest duration
Optimal Intensity: 90-95% of Max Speed
Optimal Duration: >25 minutes
Work:Rest Ratio: 1.3 – 1.4
Exercise Phase: 10 - 20 seconds
Pause Phase: 40 – 90 seconds
Rest/sets: 3 ½ minutes
Repetitions: 6 - 10
Sets: 4 - 6
Optimal Frequency: 2x/wk
Fiber Recruitment: Type II - Type I
Alternative Energy Systems: ATP – CP Capacity

ATP – Power

Primary Adaptation: Peripheral during work duration Central during rest duration
Optimal Intensity: 97.5 - 100% of Max Speed
Optimal Duration: >35 minutes
Work:Rest Ratio: 1.8 – 1.10
Exercise Phase: 4 - 8 seconds
Pause Phase: 50 – 90 seconds
Rest/sets: 3 ½ minutes
Repetitions: 6 - 10
Sets: 4 - 6
Optimal Frequency: 2x/wk
Fiber Recruitment: Type II
Alternative Energy Systems:

Neurological Speed

Primary Adaptation: Neurological Speed
Optimal Intensity: 100 -1055% of Max Speed
Optimal Duration: >35 minutes
Work:Rest Ratio: 1.12 – 1.15
Exercise Phase: 4 - 10 seconds
Pause Phase: 3 ½ minutes (90% recovery)
Rest/sets: 3 ½ minutes
Repetitions: 6 - 10
Sets: 2-3
Optimal Frequency: 2x/wk
Fiber Recruitment: Type II
Alternative Energy Systems:

Aerobic/Anaerobic

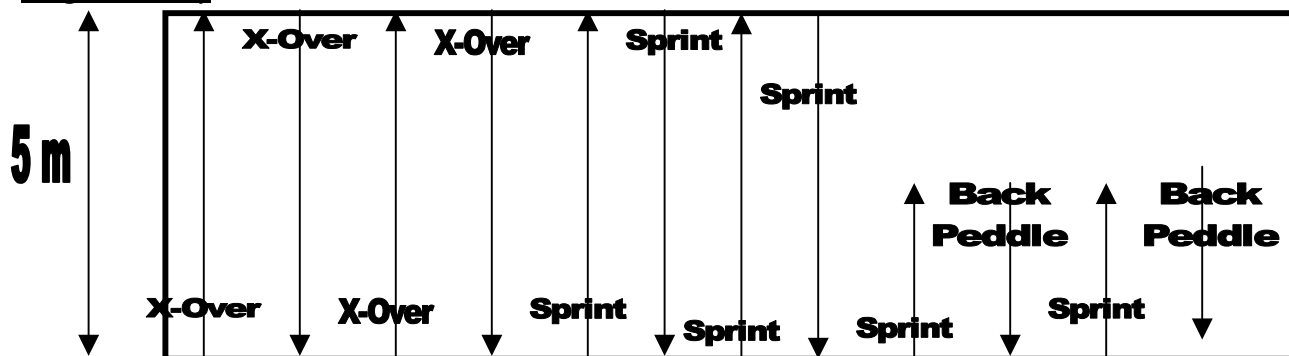
Specific Combination Intervals

Combination Intervals are specific intervals using all energy parameters of each specific sport. During the last 4 Weeks of the training program to we complete such a workout. The Dryland Program has each of these 3 sets in a specific combination which you must follow:

1.2 Set Equals	2.2 Set Equals	2.1 Set Equals
1 Circuit + 30 second rest	2 Circuits + 30 second rest	2 Circuits + 15 second Rest
1 Circuit + 30 second rest	1 Circuit + 30 second rest	1 Circuit + 30 second rest
1 Circuit + 30 second rest	2 Circuits + 30 second rest	2 Circuits + 15 second Rest
1 Circuit + 30 second rest	1 Circuit + 30 second rest	1 Circuit + 30 second rest
1 Circuit + 30 second rest	2 Circuits + 30 second rest	2 Circuits + 15 second Rest

The bottom diagram represents the circuit or one work duration. The entire circuit takes about 15 seconds to complete. One repetition equals one circuit + 1 rest duration. Rest durations is specifically outlined by program as well as the top chart.

Ringette/Hockey



Functional Strength Exercises

Lower Body

Heiden Type Exercises (Lower Body)

Upper Body Exercises

Lower Abdominal

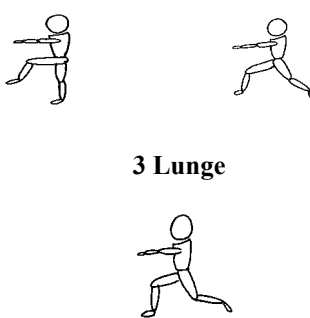

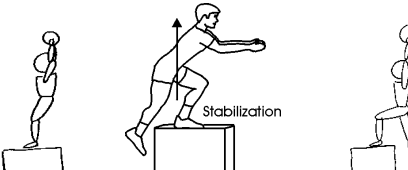

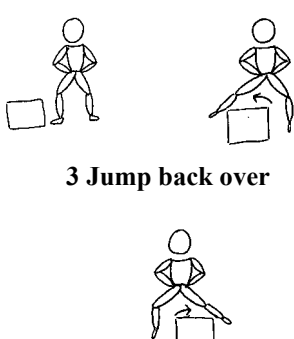
Mid/Oblique Abdominals

Upper Abdominals

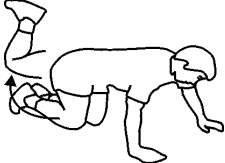

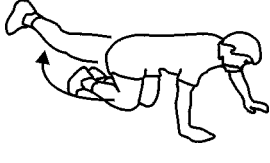

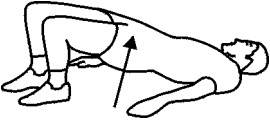
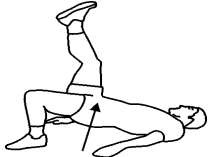
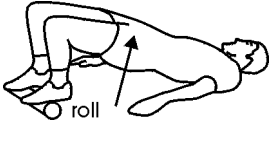
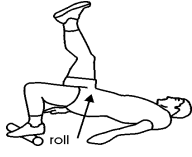
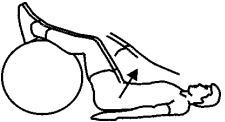
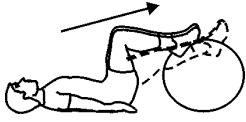
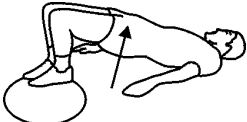
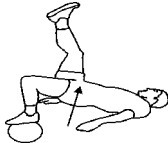
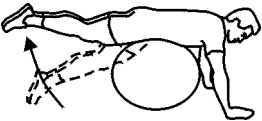


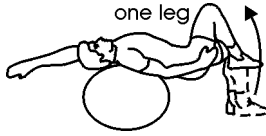

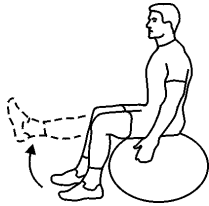
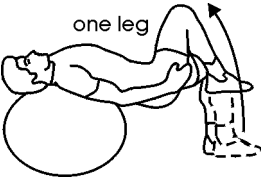
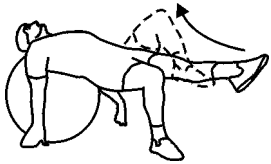
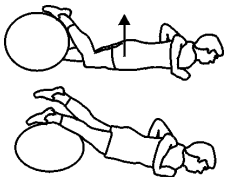
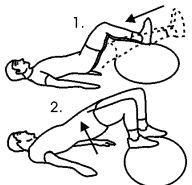

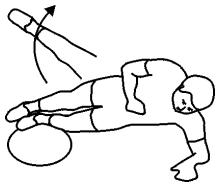
Rotator Cuff

Stabilization exercises are to help determine and strengthen weaknesses in joint mobility and stabilization as well as improve kinesthetic-proprioceptive and vestibular development. For this to occur all exercises must be performed very slowly, unless other wise stated.



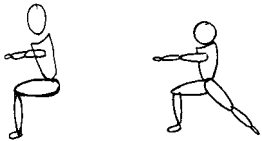

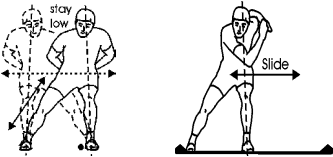


Functional Strength – Lower Body

<p>Walking Lunges (forward and backward)- Stand straight up with feet shoulder width apart, back straight, eyes fixed straight ahead. Raise the right knee, and keeping the hip angle at 90 degrees and the knee angle at 90 degrees, slowly fall forward maintaining balance and leg position keeping the knee up. Take a big stride forward hitting the heel first and then the toe (or toe first and then heel if lunging backwards). Make sure that the knee does not go over the ankle and that the hip, knee and ankle are all at 90° angles. The trailing knee should not touch the floor. Then pull the back leg forward, stepping past the lead leg (without the foot touching the floor). The back leg then becomes the lead leg. Alternate legs for the desired number of repetitions. Each lunge should be performed very slowly, being approximately 3-4 seconds.</p>	<p>1 Knee up 2 Fall forward</p>  <p>3 Lunge</p>
<p>Pulling Lunge- This is the same as a walking lunge but the back foot has the top of the foot touching the floor rather than the ball of the foot so that it is not possible to push off the floor to start the next lunge. The lunge should be performed very slowly.</p>	<p>Top of foot against floor</p> 
<p>Balance Beam Lunge (forwards and backwards)- This is the same as a walking lunge, but is performed on a beam or 2 x 4. To be done very slowly, remember to lift and hold knee of stepping leg and bring entire body forward.</p>	
<p>Single Leg Bench Step-ups (with weight over head)- Using a box or bench about the height of knee level. Stand, back straight, feet hip width apart. Hold the weight (5-10lb med. ball) above your head. Step up onto the bench. Slowly, lower the left foot to the floor, trying not to actually touch the floor, then slowly raise the body to bring the foot back onto the bench. Keep the back straight and the eyes fixed straight ahead. Stay with the same leg for the desired number of repetitions, and then change legs.</p>	<p>1 Start 2 Step off box 3 Lower leg</p> 
<p>Single Leg Side Bench Step ups (with weight above head)- The same as Single Leg Step-ups, but step down to the side of the bench. As the leg is lowered, keep the stance fairly wide.</p>	<p>1 Start 2 Lower leg</p> 
<p>Side to Side Bench Jump Overs- Stand approximately 3 feet away from the bench, standing side on to it. Bend the knees and with a lot of drive in the legs, push, sideways on, leading with the right foot, over the bench. Land on the right foot only, ensuring a lot of hip bend to absorb the force. Keep the hips facing forward and the back straight. Hold for 3 seconds and then jump back over the bench, leading with the left leg. Repeat for the desired number of times.</p>	<p>1 Start 2 Jump over box</p>  <p>3 Jump back over</p>

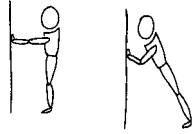
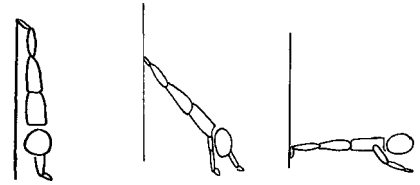




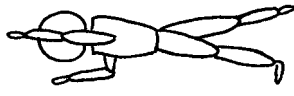

Functional Strength- Lower Body (continued)

			
Donkey Kick	Fire Hydrant	Kneeling Hip Extensions	Kneeling Kick Backs
			
Supine Back Bridge	Supine Back Bridge with Leg Raise & Extension	Supine Back Bridge on Roll	Supine Back Bridge on Roll with Leg Raise
			
Legs on Ball Back Bridge with Hip Raise	Legs on Ball Back Bridge with Leg Extensions	Feet on Ball back bridge keep hips up	Single Foot Bridge on Ball with Leg Raise
			
Ball Glute Extensions	Single Leg Back Bridge on Ball with Leg Raise	Wall Squats with Ball	Prone Bridge With Leg Raise and Alt. Arm Ext.
			
Ball Balance and Leg Extension with Med. Ball	Ball Balance with leg Raise	Prone Bridge With Leg Raise	Prone Bridge with Leg Raise & Extension
			
Legs on Ball Front Bridge Raise hips up.	Feet on Ball Back Bridge extend both legs. Hips up.	Single Leg Squat on Ball	Legs on Ball Side Bridge with Hip Adductions

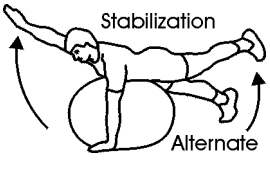
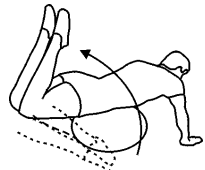
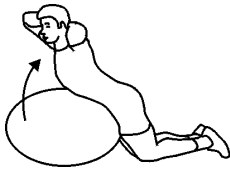
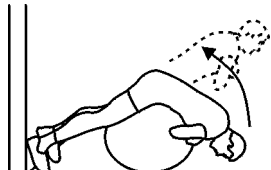
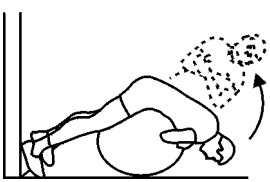
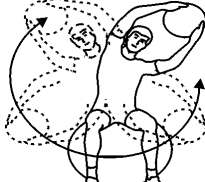
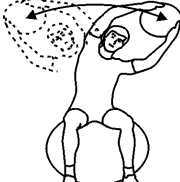
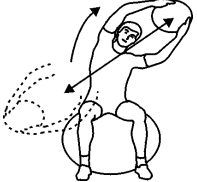
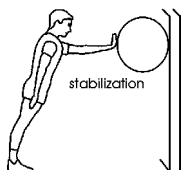
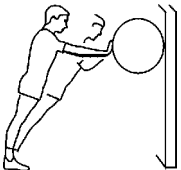
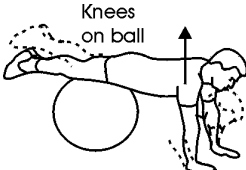
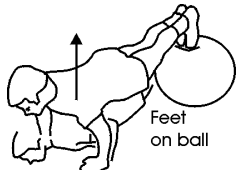
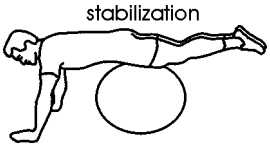
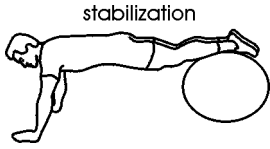
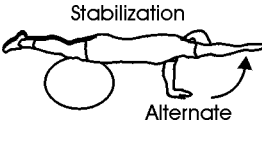
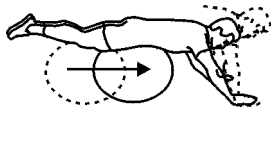
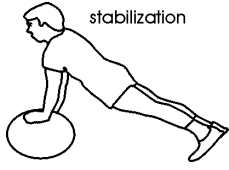
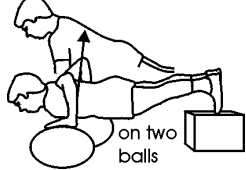
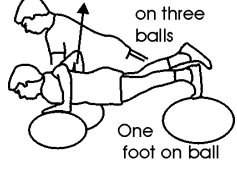

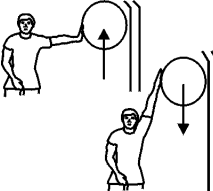
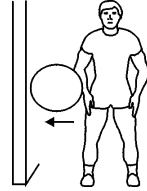
Stabilization – Lower Body – Heiden Type Exercises

<p>Wall Sit – Sit against the wall, feet shoulder width apart and toes pointing forward. The back and head should be flat against the wall and the eyes fixed straight ahead. In the sitting position, the hip, knee and ankle should be at 90 degree angles, with the thighs parallel to the floor. The arms may be held out directly in front of the body and the position should be held for the desired time.</p>	
<p>Wall Sit without Wall (Glide Position)- Feet should be pointing forward and shoulder width apart. The back should be straight, and the arms should be held out in front. The eyes should be fixed straight ahead. Slowly, bend at the hip and squat into the sitting position. The thighs should be parallel to the floor. The position should be held for the desired time.</p>	
<p>Single Leg Strides- Whilst staying in the glide position, lift the right leg off the ground and stride (extend) the right leg back and to the side (skating stride), without the foot touching the floor, in a striding motion. Bring the leg back into the glide position again while keeping hip height constant throughout the whole movement and the supporting or gliding leg should be kept parallel to the floor. Stay with the same leg for the desired number of repetitions, then change legs. To be done very slowly, each stride should be 5-6 seconds long. Looking for problems with balance and strength to hold glide.</p>	
<p>Single Stride Circles- Start in the glide position and stride out with the right leg as in the single leg stride. Then during the recovery phase, circle the leg back in behind the body and forward towards the body and until the foot stops at the glide position. Only time foot should touch is at glide, and make sure leg reaches full extension in stride. The gliding leg should be kept parallel to the floor and hip height should be constant throughout the movement. Stay with the same leg for the desired number of repetitions, then change legs. To be done very slowly, each stride should be 5-6 seconds long. Looking for problems with balance and strength to hold glide.</p>	<p>1 Start 2 Stride</p> 
<p>Alternating Circles- The same as the single stride circles, but alternate each leg for the desired number of repetitions. To be done very slowly, each stride should be 5-6 seconds long. Looking for problems with balance and strength to hold glide.</p>	
<p>Side to Side Steps- Start in the glide position and stride the right leg directly to the side. Make sure that the stride is to full extension. Maintain constant hip height and keep the back in neutral spine position (straight), don't round at the shoulders, and keep the stationary leg's thigh parallel to the floor. Transfer weight to bring the left leg in to meet the right, back in the glide position. Then alternate legs for the desired number of repetitions. Done with just enough speed to allow side step. Not too fast!!</p>	
<p>Ins and Outs- Start in the glide position. Whilst maintaining constant hip height, explosively open stance to full extension to the side while maintaining same hip height through out the movement. Then explosively bring both feet back to start position (glide position), again maintaining constant hip height. Keep the knees bent and the back straight. The eyes should be fixed straight ahead and the legs should be parallel to the floor. Repeat for the desired number of times at a fast rate, ensuring that the hips remain at a constant height.</p>	
<p>Scissors- Start from glide position, with back straight. Jump into a lunge position, with the right leg in front of the left and a wide stance. The distance the right travels forward should equal the distance the left travels backwards. As quickly as the feet touch the floor –explosively drive right leg back and left leg forward into a new lunge position. Then alternate legs quickly for the desired number of repetitions.</p>	<p>1 Start 2 Lunge</p> 
<p>Ins and Outs (on a bench)- The same as ins and outs, but starting in the glide position on a bench. Whilst maintaining constant hip height, jump off the bench, with one leg either side, and then jump back on to the bench to be back in the glide position. Repeat for the desired number of times.</p>	<p>1 On bench 2 Jump off bench</p> 

Functional Strength – Upper Body




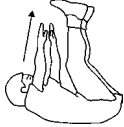

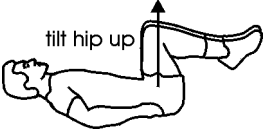
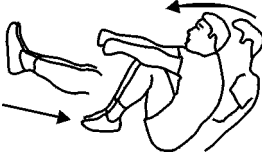
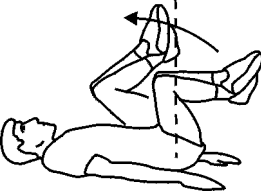
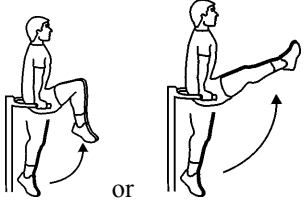
<p>Retracted Push ups- Stand approximately 3 feet away from the wall. Place your hands approximately at just above shoulder height and just wider than shoulder width apart. Pulling the shoulder blades back (retracted) pushed down and together, bend the arms and lean in towards the wall. Hold for a second and then slowly push against the wall so the arms are almost straight, but slightly bent. This should be performed very slowly with 3 seconds to bend the arms and 3 seconds to straighten them. Entire push up is done with the shoulder blades kept in the retracted position</p>	<p>1 Start 2 Bend 3 Shoulder blades together</p> 
<p>Alternating Retracted/Regular Push up- Start off with retracted push up on the wall, then perform a regular, slow push up against the wall. Alternate the retracted push up and regular push up for the desired number of times. It should take 3 seconds to bend the arms and 3 seconds to straighten them.</p>	
<p>Wall Walk Out- Start by performing an inverted handstand on the wall. Keep the body and torso stable and linear through out. Touch the wall with your hand and then slowly walk forwards on you hands dragging your feet down the wall. When you feet are approximately 6 inches off the ground perform a push up and then walk the legs slowly back up the wall six inches per step to starting position. Repeat for the desired number of times.</p>	<p>1 Start 2 Walk 3 Push up</p> 
<p>Front Bridge- Lie on your stomach, with your weight held on your forearms and elbows bent. Keeping the body and torso in a straight line, lift the body so only the forearms and the toes are touching the floor. Elbows should be at eye level. Hold the position for the desired time. To make the exercise more difficult, move the elbows further out from the body.</p>	
<p>Prone Bridge- Lie on your front with the arms stretched out in front. Make a bridge with the body by pushing into the floor with the hands and the knees to lift the torso off the floor. Only the hands and the knees should touch the floor. Hold the position for the desired amount of time. To make the exercise harder, the feet should have contact with the ground instead of the knees.</p>	
<p>Side Bridge- The same as the Front Bridge but lie on your side and hold the body weight up with your forearm and feet only. Keep the torso rigid and hold the position for the desired time. To make the exercise more difficult, move the elbows further out from the body.</p>	
<p>Kneeling Opposition Limb Raise- Start on hands and knees. Slowly raise the right arm and left leg, straightening them out and keeping balanced. Maintain proper trunk stability (straight line) then slowly bring them back down and then change to the left arm and right leg. Keep alternating for the desired number of repetitions. Very slow each rep should take 6-8 seconds.</p>	
<p>Front Bridge with Opposition Limb raise- Start in the front bridge position and then raise the arm and leg in the same way as the Kneeling Opposition Limb Raise. Repeat for the desired number of times. Maintain proper trunk stability (straight line) then slowly bring them back down and then change to the left arm and right leg. Keep alternating for the desired number of repetitions. Very slow each rep should take 6-8 seconds.</p>	
<p>Side Bridge Limb Raise- The same position as the Side Bridge, slowly raising the arm and leg and then lowering them. After the desired amount of repetitions, change sides. Each repetition should take 6-8 seconds.</p>	

Functional Strength – Upper Body (continued)

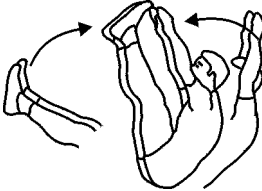
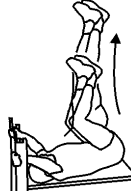
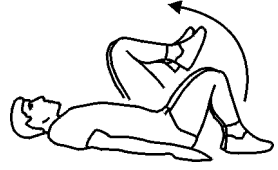
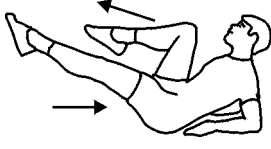
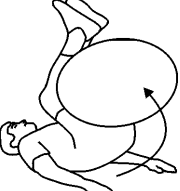
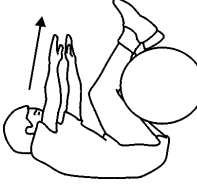

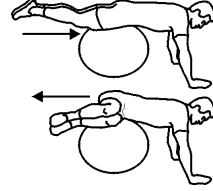
			
Opposition Limb Raise on P. Ball	Hip Rotation on P. Ball	Back Hyperextension on P. Ball	Back Hyperextension on P. Ball with Legs Extended
			
Back Hyperextensions with Trunk Rotations	Sitting Trunk Circles with Med. Ball	Seated Lateral Trunk Flexion with Med. Ball	Seated Transverse Raises with Med. Ball
			
Sgl Arm Wall Stabilization with P. Ball	Wall Push-ups with P. Ball	Knees on P. Ball Push-ups	Toes on P. Ball Push-ups
			
Prone Stabilization with Thighs on P. Ball	Prone Stabilization with Thighs on P. Ball	Prone Stabilization with Thighs on P. Ball & Arm Raise	Forward & Backward Roll on P. Ball
			
Stabilization in Push-up Position on P. Ball	Push-up with Hands on P. Ball	Push-up with Hands on 2 P. Balls & Feet on Box	Push-up on 3 P. Balls
			
Stabilization in Push-up Position on 2 P. Balls	Lateral Sgl Arm Wall Stabilization with P. Ball	Lateral Wall P. Ball Roll up and Downs	Lateral Wall Pushes with P. Ball

Functional Strength – Abdominals

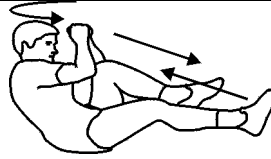



Lower Abdominals

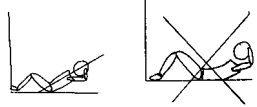


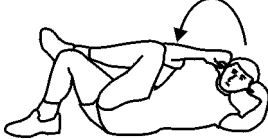
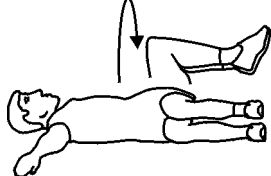

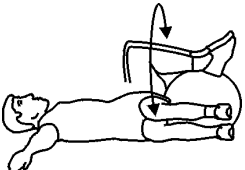
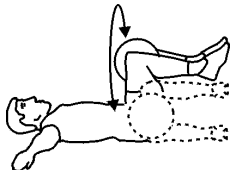
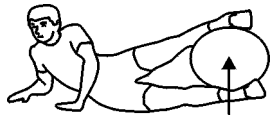
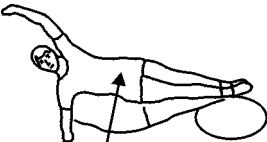


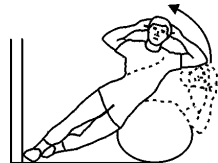
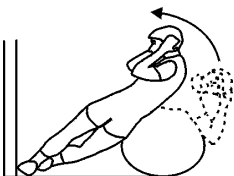
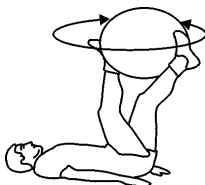
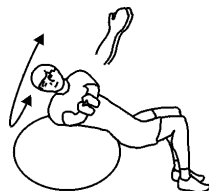
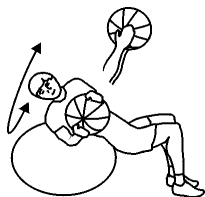
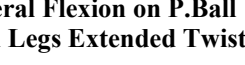



<p>Lying Leg Raise with Hip Thrust- Lie on the back with the arms and hands on the stomach. Slowly raise the legs together until the hips are off the floor. Hold the position for 2 seconds and then slowly lower the legs until they are approximately 2 inches off the floor. Without touching the floor raise the legs again. Repeat for the desired number of repetitions.</p>			
<p>Lying Leg Raise- Lie on your back with hands and arms on the stomach. Slowly raise the legs to approximately 18 inches above the ground, the lower them back to approximately 2 inches, without touching the floor and then slowly raise the legs again. Repeat for the desired number of repetitions.</p>			
<p>Hip Raised off Floor with Alternating Leg Lowering and Raising Slowly raise the legs together until the hips are off the floor. Hold the position keeping the hips off the floor slowly lower the right leg down to ground keeping hips off the ground with low abdominals, then raise to start position and change legs.</p>	<p>1 Leg raise 2 Hip off Ground Lower Leg</p> 		
<p>Arms Straight up shoulders off ground with Hip Raised off Floor with Alternating Leg Lowering and Raising Same as above except the arms are pointing straight upward and with upper abdominals lift shoulder blades off the ground as well.</p>			
<p>Lying Leg Raise with Half Circle- Lie on your back and keep the legs together at approximately 6 inches off the ground. With the arms out to the sides for balance, slowly circle the legs to the side, keeping them at a constant height from the floor. Then slowly circle them back round to the center and then circle to the other side. Repeat for the desired number of repetitions.</p>	<p>Top view</p> <p>1 Start 2 Raise legs 3 Circle legs</p> 		
<p>Lift Physio Ball off Ground with Legs. Place physio ball between the feet and slowly raise until legs are completely vertical, slowly lower back to ground repeat.</p>			
<p>Lift Physio Ball off Ground with Legs Transfer to Arms. Place physio ball between the feet and slowly raise until legs are completely vertical, raise arms up from extended over head to completely vertical, transfer ball from legs to arms. Slowly lower arms with ball back to ground extended over head. At the same time lower the legs to the ground. Repeat with the transfer from arms to legs.</p>			
 <p>tilt hip up</p>			 <p>or</p>
<p>Hip Raise with Knees Bent</p>	<p>V- Sits with Leg Extensions</p>	<p>Hip Rotations with Bent Knees</p>	<p>Bent or Straight Leg Raise</p>

Functional Strength-Lower Abdominals (continued)




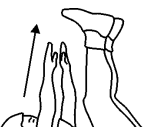
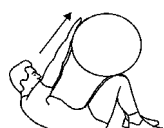

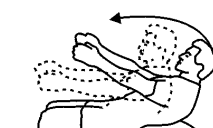


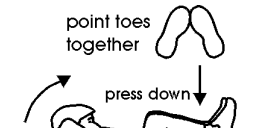
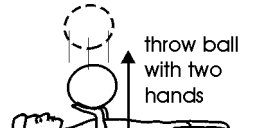
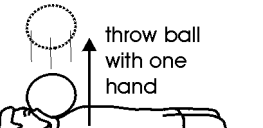
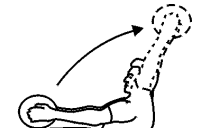
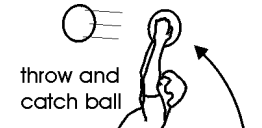
			
V-Sits	Bench Hip Thrusts	Lying Knee Raise	Alternating Leg Extensions
			
Hip Thrust by Lifting P. Ball with Legs	P. Ball Leg Lift with Shoulder Raise	Kneeling with Knees on P. Ball- Leg Extensions/Flexion	Kneeling with Knees on P. Ball- Leg Extensions/Flexion with Oblique Twists

Functional Strength – Obliques and Mid-Abdominals


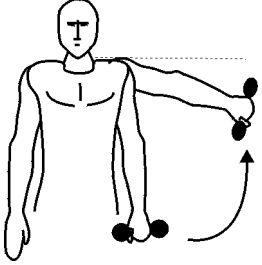
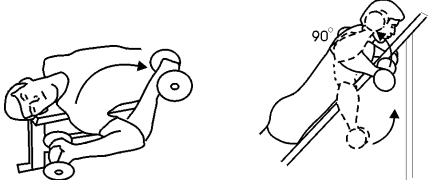
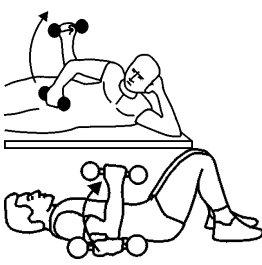
<p>Bicycle Sit Ups- Lie on the back with the hands resting behind the head with the elbows pointing out to the sides. Feet up in the air with knees and hips at 90°. Slowly raise the head and shoulders without pulling on the neck with the hands towards the opposite knee. As this occurs simultaneously, straighten the opposite leg out to full extension keeping feet approximately 2 inches off the floor. Hold for 2 seconds, then change legs very slowly, bending the straight leg to meet the opposite elbow and slowly straightening the opposite leg, making sure the straightened leg does not touch the floor. Very slow sustained movements, each rep should take about 4-5 seconds.</p>	
<p>Obliques- Lie on your back with knees bent. Roll the legs to the side so the hip and knee joints are at a 90° angle. Put the hands behind the head and point the elbows out to the sides. As you exhale, lift the head and shoulders, leading with the chest and slowly rise to top position where both shoulders are equal distance off the floor. Hold for two seconds then slowly roll back down to the floor and repeat for the desired number of times and then change sides.</p>	<p>Top view</p> 
<p>Side Bridge- The same as the Front Bridge but lie on your side and hold the body weight up with your forearm and feet only. Keep the torso rigid and hold the position for the desired time. To make the exercise more difficult, move the elbows further out from the body.</p>	
<p>Side Bridge Limb Raise- The same position as the Side Bridge, slowly raising the arm and leg and then lowering them. After the desired amount of repetitions, change sides. Each repetition should take 6-8 seconds.</p>	

<p>Russian Twist- Lie down with your toes against a wall and the knees bent. Slowly lift the torso up, leading with the stomach, not the head and shoulders. Keep the upper body approximately 8-10 inches off the floor and cross the arms across the chest. Then twist the torso to the right and then to the left for the desired number of repetitions</p>		<p>1 Straight back 2 Not curved back</p> 	
			
¼ Sit-ups -Obliques	Oblique Rotations	Oblique Rotations-One Knee Locked in Raised Position	Lying Bent Knee Lateral Rotations
			
Lateral Flexion on P. Ball	Lying Bent Knee Lateral Rotations Lifting P. Ball	Lying Bent Knee Lateral Rotations Lifting P. Ball	Lying on Side lateral Leg Lift with P. Ball
			
Side Bridge with Feet on P. Ball and Hip Raise	Oblique Rotations on P. Ball	Oblique Rotations on P. Ball with Knee Raise	Lateral Flexion on P. Ball with Legs Extended
			
Lateral Flexion on P. Ball with Legs Extended Twist	Lying Leg Vertical Raise with P. Ball Rotations	Lying on P. Ball Trunk Rotations w Arms Extended	Lying on P. Ball Trunk Rotations w Arms Extended and Weighted
			

Functional Strength – Upper Abdominals

			
Partial Curl-ups	Partial Curl-ups with Legs Raised	Sit-ups with Hands Sliding up Thigh	Legs vertical and Raise shoulders off Ground
			
Sit-ups with Hands Rolling P. Ball up Thigh	Sit-ups w One Hand Rolling P. Ball up opposite Thigh	Sit-ups on P. Ball	Partial Curl-up on P. Ball
	 point toes together press down	 throw ball with two hands	 throw ball with one hand
Full Sit-ups on P. Ball with Arms Extended Over-head	Partial Curl-ups with Feet Pusing down on P. Ball	Lying On P. Ball Vertical Med. Ball Toss	Lying On P. Ball Vertical Med. Ball Toss w One Hand
	 throw and catch ball		
Full Sit-ups on P. Ball with Med. Ball	Partner med. Ball Overhead Passes on P. Ball		

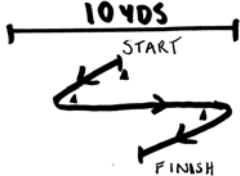
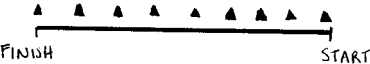
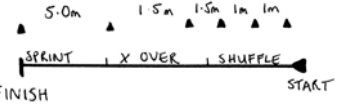
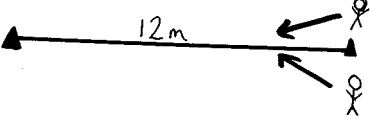
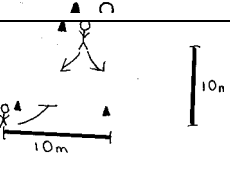
Rotator Cuff Exercises


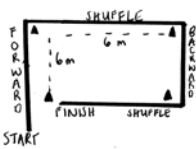
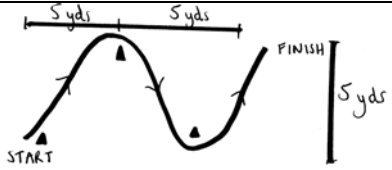

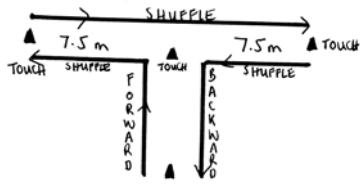
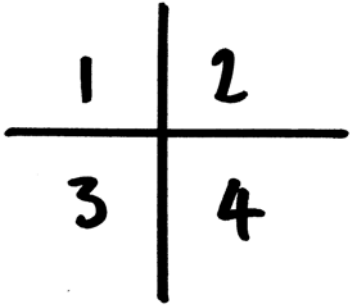
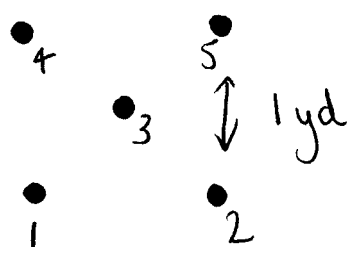
<p>Supraspinatus Fly- Stand straight with a dumbbell in the left hand. The palm is facing towards the legs and the thumb is touching the right thigh. Slowly raise the arm upwards and forwards slightly, keeping the arm straight. As the arm is raised, fully rotate it so that it finishes with the thumb pointing directly back. Repeat for the desired number of times, then change arms. The movement is performed slowly to find weaknesses in the chain of movement. When you find a weak spot, stop and work back and forth through the area.</p>	
<p>Supraspinatus Raise- Standing straight with a dumbbell in the left hand, lift the arm so that it is brought in from directly out to the side to 45 degrees forward and rotated downwards so that the thumb points down 45 degrees. From this position, lower the arm and then raise it up again very slowly for the desired number of repetitions, then change arms. The movement is performed slowly to find weaknesses in the chain of movement. When you find a weak spot, stop and work back and forth through the area.</p>	
<p>Lying Supraspinatus Fly- The same as the Supraspinatus Fly, except lying on a bench. The movement is performed slowly to find weaknesses in the chain of movement. When you find a weak spot, stop and work back and forth through the area.</p>	
<p>Lying Horizontal Internal and External Rotation- Lie flat on a bench with the arms directly out to the side with elbows bent at 90 degrees. Hold a light dumbbell and keep the upper arms locked. Rotate the wrists so the hands slowly move down to the end of its range of motion. Then slowly raise and rotate backwards and down to the end of its range of motion. Repeat for the desired number of times. The movement is performed slowly to find weaknesses in the chain of movement. When you find a weak spot, stop and work back and forth through the area.</p>	
<p>Internal and external Rotation- Using tubing or lying on a bench using dumbbells, keep elbow 5" out from side of body and bent at 90 degrees and rotate the arm slowly outwards. Return back to the start and repeat for the desired number of repetitions. Then change arms. For internals, rotate the body around so the pulling action is from behind and rotate the arm forwards and inwards. The movement is performed slowly to find weaknesses in the chain of movement. When you find a weak spot, stop and work back and forth through the area.</p>	

NOTE: Rotator Cuff Exercises are to be performed very slowly (8-10 seconds/reps), and should be searching for weaknesses in the chain of movement. These exercises can also be performed with tubing.

Agility, Speed, Plyometrics Exercises





Agility Drills

<p>Lateral Shuffle- Stay low, try to keep thighs parallel to floor, keep back in neutral spine position (chest out, head up). Shuffle 6 m one direction than shuffle back facing same direction.</p>	
<p>Sprint with Change of Direction – Sprint 6m, on the last step or stop absorb with the outside hip and leg (bend). Then explode out into a start in the opposite direction for 6 m. Repeat for 2 changes of direction each leg. Always facing the same way.</p>	
<p>Hockey Sprint with Change of Direction – Sprint 6m, on the last step or stop absorb with the inside hip and leg (bend). Then explode out into a cross-over start in the opposite direction for 6 m. Repeat for 2 changes of direction each leg. Always facing the same way.</p>	
<p>Back Peddle into Sprint into Back Peddle Change of Direction – Sprint 3m, do a two foot stop, with hips perpendicular to the direction of travel, absorb the force with the hips and legs (bend). Quickly reverse into back peddle for 3m. Again use two foot stop back wards. On the stop make sure the feet are behind the centre of gravity so the body is in a forward lean ready to explode into a forward sprint. Complete for 4 changes of direction both</p>	
<p>Cone drills 3 cone lateral shuffle- Change direction at each outside cone and find the pylons in the peripheral vision. Keep the hips as low as possible and on a constant plane. Keep the shoulders and hips square, do not turn in the direction of the movement.</p>	 <p>A diagram showing a 10m distance between a START and FINISH line. Three cones are placed along the path. The path starts at the START line, moves forward, turns left around the first cone, moves forward, turns right around the second cone, and finishes at the FINISH line.</p>
<p>10 Cones- Keep the cones squarely in front and each step should reach to in front of the cones. Keep the shoulders and hips square and keep the hips as low as possible.</p>	 <p>A diagram showing a horizontal line with 10 triangles (cones) placed along it. The line is labeled FINISH on the left and START on the right.</p>
<p>2 step shuffle/ 2 step cross over/Turn sprint- Each step should reach the target. Keep the hips as low as possible and on a constant horizontal plane.</p>	 <p>A diagram showing a horizontal line with four triangles (cones) placed along it. The line is labeled FINISH on the left and START on the right. The segments between cones are labeled 5.0m, 1.5m, 1.5m, 1m, and 1m. The segments are labeled SPRINT, X OVER, and SHUFFLE.</p>
<p>Partner defend- Do not let your partner cross the line between the cones. Try to stay in a shuffle as long as possible by keeping the hips as low as possible and on a constant horizontal plane. You should stay approximately half a step behind the attacker to eliminate the attacker cutting back behind.</p>	 <p>A diagram showing a 12m distance between two stick figures. One figure is at the START line and the other is at the FINISH line. Arrows indicate the direction of movement.</p>
<p>Triangle drill (tag)- Keeping the hips as low as possible, approach the attacker under control from the side and take an angle on attacker, forcing them to only move in one direction.</p>	 <p>A diagram showing a 10m distance between two stick figures. One figure is at the START line and the other is at the FINISH line. A vertical line is labeled 10m.</p>





<p>Angled line drill- Keep the hips and shoulders square to the direction of travel. Do not lean back on your heels. At the change of direction, drop the hips to absorb momentum and transfer powerfully into the new direction. Stay on the balls of your feet.</p>	
<p>Cone square drill- Keep the hips as low as possible and on a constant horizontal plane. Drop the hips when changing directions to absorb momentum and transfer powerfully into the new direction.</p>	
<p>Cone drill- Stay on the balls of your feet and time the turns so that the change of direction step is provided by the outside leg. Lean into the turn by lowering the hips and absorbing the momentum with the outside leg and drive powerfully in the new direction.</p>	
<p>Cone wheel drill- Stay on the balls of the feet and time the turns so that the change of direction step is provided by the outside leg. Lean into the turn by lowering the hips and absorbing the momentum with the outside leg and drive powerfully in the new direction.</p>	
<p>T-drill- Keep the shoulders and hips square and keep the hips as low as possible. Do not “bob “ up and down and do not turn in the direction of movement.</p>	
<p>Quadrant drills- Move the feet as quick as possible without compromising coordination.</p> <ol style="list-style-type: none"> 1. Sideways 1-2 2. Up and back 3&4 1&2 3. All square 1-2-4-3 then 4-2-1-3 4. Angle 1-4 & 3-2 5. Triangle 4-3-2 or 1-4-3 then 3-4-2 or 3-4-1 6. Fig 8 2-4-1-3-2 then 3-4-1-2-3 7. Use rotations (90, 180, 360 degrees) 	
<p>Dot drills- Move the feet quickly as possible without compromising coordination.</p> <p>D1 Both feet 3 to 4 to 3 to 5 to 3</p> <p>D2 Both feet 3 to 1 to 3 to 2 to 3</p> <p>D3 Both feet 3 to 4 to 3 to 5 to 3 to 1 to 3 to 2 to 3</p> <p>D4 Single leg #1 (right then left)</p> <p>D5 Single leg #2 (right then left)</p> <p>D6 Single leg #3 (right then left)</p> <p>D7 Scissors R Foot 4 to 1 to 4 with Left same time 5 to 2 to 5</p> <p>D8 Rotations</p> <p>D9 Figure 8's 3 to 4 to 5 to 3 to 1 to 2 to 3</p>	

<p>Ladder drills- If you have no access to a ladder, place strips of 16 inch sticks down as a replacement to ladder rungs. Start slow and then pick up speed. Move through the ladder as fast as possible with no compromise of coordination or technique.</p> <p>L1 Marching- left right , left right (flat to toes) (high knees)</p> <p>L2 Lateral- without crossover (both directions)</p> <p>L3 Lateral cross over- (both directions)</p> <p>L4 Skipping (flat to toes)</p> <p>L5 Hip wiggle- As above turn toes in (hips always face forward)</p> <p>L6 Both feet alternating in out (straddle)</p> <p>L7 Double Zig zag- in ladder, left of ladder, up & in ladder, right of ladder, up and in ladder</p> <p>L8 Single zig zag</p> <p>L9 Combos 2 left, 2 right</p> <p>L10 Combos 2 left, 2 right</p> <p>L11 Combos more difficult, be creative</p>	
<p>Zig Zag drill (Defensive Back Football drill)- Keep the hips low and drop them during a change of direction. Do not lean back in back peddle, keeping the weight slightly forward.</p>	
<p>Star Close out drill (Basketball drill)- Keep the hips as low as possible and stay on the balls of your feet. Keep the upper body upright and use quick, short pushes when moving from one close out to another.</p>	
<p>Block drill (volleyball)- Keep the hips as low as possible and square to the line during the lateral step and prior to the jump. Keep the arms up and in front and do not dip the upper body prior to jump. Block the jump as high as possible with each jump.</p>	
<p>Volleyball Defense drill- In the dig/pass phase keep the feet quick to get to position and back to home. On the pass aspect of the drill, the hips open up to inside i.e, the inside foot should be the back foot.</p> <p>In the block phase, keep the hips as low as possible and the arms should be up and in front. Do not dip prior to the jump and block jump as high as possible with each jump.</p>	
<p>Skating Cross-Overs Shuffle & Change of Direction-Perform a series of crossovers for 5-10 meters and then change direction, then repeat. Drive with the inside of the leg as well as keeping the hips low and the thighs parallel to the ground. On the crossover, concentrate on picking the outside leg up and lift it over the top of the inside leg.</p>	



Speed Technical Drills

<p>Arm swing sitting- Sit on the ground, legs straight with one leg crossed over the other. Keep the elbows flexed at a 90 degree angle. In opposition, move the arms in a chin to pocket motion, slowly and then faster and faster. The arm motion should lift the body slightly off the ground transferring the weight from one buttock to the other.</p>	
<p>Arm swing- Standing up with the legs straight and the shoulders relaxed, flex the elbows at 90 degrees. In opposition, move the arms in a chin to pocket motion. Start moving them slowly and then faster and faster, lifting the body slightly off the floor, transferring the weight from one heel to another.</p>	
<p>A's B's C's- A's- Keep the elbows flexed in a 90 degree position. Move the arms in a chin to pocket motion. The opposite leg and arm will drive up simultaneously. The heel should not touch the ground and when the foot is in the air, it must be parallel to the ground. The trunk should be kept rigid and the hips are held in the tallest position, directly under the upper body. The lower part of the leg stays slightly in front of the other leg. Drive the leg straight down, making contact with the ground and then drive with the opposite leg.</p>	
<p>B's- As same as A's, but when the thigh is in the parallel position, extend the lower leg and pull the entire leg downwards forcefully to the ground. Contact the ground with the ball of the foot, slightly in front of the body and drag the foot directly under the body. Never let the heel of the foot contact the ground.</p>	
<p>C's- Bum Kicks- The same as A's, but the upper thighs remain straight throughout movement, hanging straight down from the hip. Pull the lower leg back and up, pulling the heel to the buttocks quickly. Let the leg return back to the ground, underneath the body and drag forward on the ground. Stand tall, do not excessively lean forward.</p>	
<p>C's- scissors/pull- The legs are kept straight throughout the movement and reach one leg as far forward as possible. Contact the ground with the ball of the foot and pull the body forward with maximum force and speed. The back leg is picked up off the ground and then reaches forward as far as possible where it will contact the ground and become the pulling force.</p>	
<p>Form runs- Run at three quarter speed for approximately 40m. Keep the head kept straight, but the shoulders relaxed and dropped with the elbows kept at 90 degrees. Arms move straight forward and back and drive the legs up with the foot being parallel to the ground. Extend the lower leg straight out and pull forcefully down contacting the ground with the ball of the foot. Stay on the balls of the feet.</p>	
<p>Acceleration runs- Start in a stationary position and gradually increase speed to three quarter full speed for the final 25% of the distance. Concentrate on proper technique. Keep the head kept straight, but the shoulders relaxed and dropped with the elbows kept at 90 degrees. Arms move straight forward and back and drive the legs up with the foot being parallel to the ground. Extend the lower leg straight out and pull forcefully down contacting the ground with the ball of the foot. Stay on the balls of the feet.</p>	

Speed Work

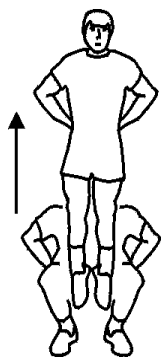
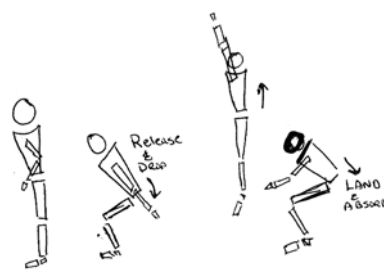
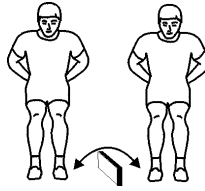
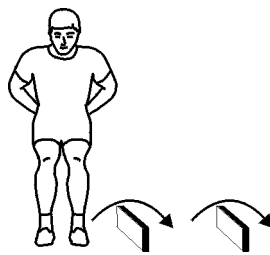
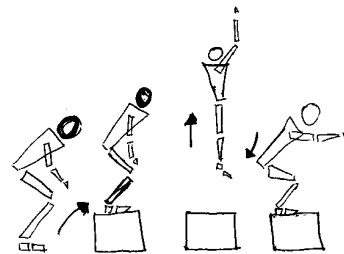
<p>Partner Stiff Leaning Starts- Get your partner to hold you arms and keep his/her body rigid. Lean forward excessively. Your partner should then let go and step quickly away. Make 3 quick, short and powerful steps and then as the steps increase, lean less and less with larger strides. 5-7 strides are generally required to accelerate to full speed. Do not slow down until full acceleration as been achieved</p>	
<p>Stiff leaning starts- Keep the body straight and rigid and lean forward as far as possible. The first 3 steps are very quick, short and powerful. As the steps increase, the lean forward becomes less and less. It generally requires 5-7 strides to accelerate to full speed. Do not slow down until full acceleration has been achieved.</p>	
<p>Power position starts- Start in the glide position with the thighs almost parallel to the ground. Keep the upper body rigid and lean on to the balls of the feet as far as possible. The first 3 steps are very quick, short and powerful. As the steps increase, the lean forward becomes less and less. It generally requires 5-7 strides to accelerate to full speed. Do not slow down until full acceleration has been achieved.</p>	
<p>V Starts (hockey)- Start in the glide position with your thighs almost parallel to the ground. Keeping the upper body rigid, place the feet into a v position, heels together and toes pointing away from each other. Lean onto the balls of the feet as far as possible. The first 3 steps are very quick, short and powerful. As the steps increase, the lean forward becomes less and less. It generally requires 5-7 strides to accelerate to full speed. Do not slow down until full acceleration has been achieved. Keep the feet turned out with all the strides to mimic the stride in skating.</p>	
<p>Over speed- Front Partner resisted speed-Your partner should put their hands on your shoulders to create a resistance. Lean excessively forward and start running. Drive the arms and legs as fast as possible. Your partner should take 3-4 steps back and then let go quickly and step out of the way. You should feel like falling forward and your legs are moving quicker than normal. Do not slow down until running under control occurs. Behind partner resisted speed is the same as above, but your partner grasps the hips instead of the shoulders.</p>	
<p>Parachute resisted speed- This is the same as behind partner resisted speed, but you are resisted by a parachute attached to the waist. At 10 m, the parachute is released by the runner. You should feel like falling forward and your legs are moving quicker than normal. Do not slow down until running under control occurs.</p>	
<p>Maintain speed, increase stride frequency- Accelerate to full speed over the first 10-15 m and maintain the speed over the next 10-15m. The final 10-15m should be marked to measure the stride length. Complete 2-3 repetitions and gradually begin to shorten the stride length and decrease the distance between the markers and maintain original speed by increasing the stride frequency.</p>	
<p>Hills- down hill 3-5 degrees- Find a grassy hill that is approximately 3-5 degree incline about 20 m long and another 10m flat at the bottom of the hill. Start up the hill and accelerate to full speed down the hill. The legs will move faster than the normal maximum. Try to run in over speed for 3-4 strides before slowing down.</p>	

Power Drills

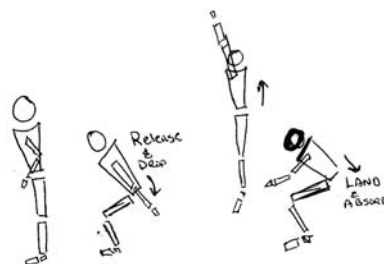
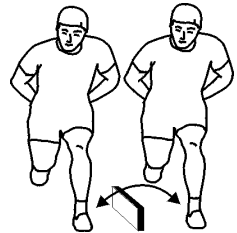
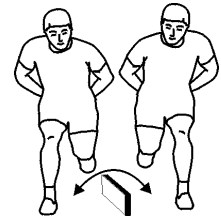
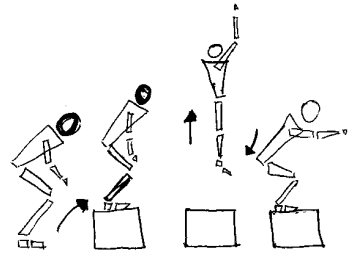
<p>Resistance runs- Your partner should reach out with both arms and hold you up. Lean forward excessively and start running. Drive the arms and legs as hard as possible. Your partner should back peddle placing moderate resistance. Your partner should not interfere with the arm movement and must not turn or twist you to one side or the other.</p>	
<p>Behind partner resisted runs- Your partner grabs you around the waist. You are in the power position. Then pump your arms and legs as hard and fast as possible. Your partner should move slowly. Your partner must not interfere with the leg movement and should be careful not to turn or twist you.</p>	
<p>Parachute resisted runs- This is the same as behind partner resisted speed, but you are resisted by a parachute attached to the waist.</p>	
<p>Up hills/stairs- With the resistance runs, the incline of the hill or stairs does not matter as long as the incline does not overly affect the running motion.</p>	
<p>Water/sand- Run the desired distance in sand or slightly less than waist deep water.</p>	

Jumping School - (hip explosion and absorption- landing softly)



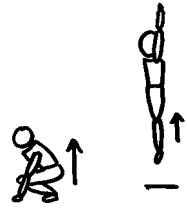
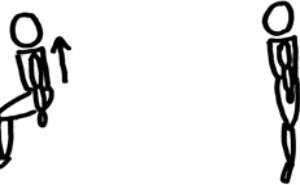



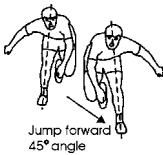
Beginner Routine (Double Legs)


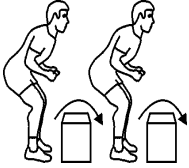
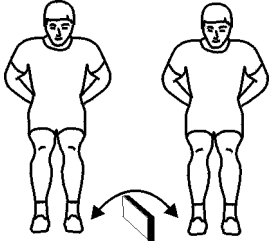
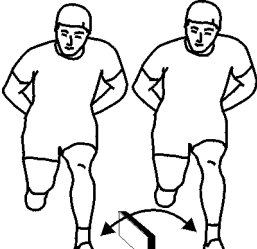
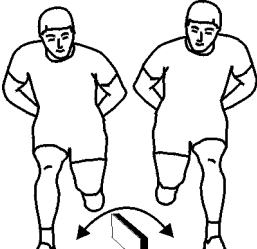

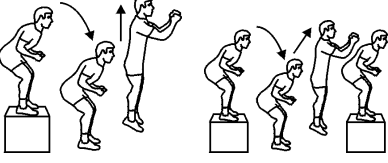

<p>Double Leg Jumps – Soft Landing- Keeping back in neutral position (straight) bend at hips and knees so that the hands are clasped together reaching towards the ground. Keeping hands on the waist, explosively extend the hips and knees to produce a powerful jump that at full height in the air arm are fully extended reaching towards the sky, and the lower body is completely extended as well. Land back into the starting position. Land softly (NO NOISE), by using the hips to absorb the landing. Hold the landing a couple of seconds then repeat the jump and landing. Always ensure maximum height is occurring with each jump and minimize amount of time on the ground...be quick. Your knees should always be behind your toes at all times. This is achieved by focusing on keeping the hip or bum back. Focus on the rotation of the hip joint for jumping and landing, keep upper torso erect. Full foot contact on ground.</p>	
<p>Double Leg Drop Squat-Jump-Soft Land- Standing erect, quickly relax muscles of the hip and knee joints so that the body DROPS with gravity. Do not drop forward (meaning the knees bend the heels lift up off the ground). Drop such that the bum goes down and back keeping the entire foot flat on the ground. Upon releasing into a drop, quickly involve an active contraction that stops the drop and becomes a jump. Jump should be maximum. Using the hips to absorb the landing, land SOFTLY. Hold landing then stand up to erect position and start all over again. Your knees should always be behind your toes at all times. This is achieved by focusing on keeping the hip or bum back. Focus on the rotation of the hip joint for jumping and landing, keep upper torso erect. Full foot contact on ground.</p>	
<p>Double Leg Bench Jump-Over/Hold Soft Landing- Keeping back in neutral position (straight) bend at hips and knees jump sideways over a bench (12-16" high and 8" wide). Land softly (NO NOISE) by using the hips to absorb the landing. Hold the landing for a second before repeating back to the other side. Your knees should always be behind your toes at all times. This is achieved by focusing on keeping the hip or bum back. Focus on the rotation of the hip joint for jumping and landing, keep upper torso erect. Full foot contact on ground.</p>	
<p>Double Leg Rabbit Jumps with Soft Landing. A series of jumps to the side over two object (stick or rope knee height) about 1 m apart. The technique is the same as the bench jump-over except you perform two lateral jumps to the left then two lateral jumps to the right. Land softly on each jump (NO NOISE), by allowing the hips to bend to absorb the shock. Repeat jumps as quickly as possible with very little wait upon landing. Be fluid like a "rabbit" Your knees should always be behind your toes at all times. This is achieved by focusing on keeping the hip or bum back. Focus on the rotation of the hip joint for jumping and landing, keep upper torso erect. Full foot contact on ground.</p>	
<p>Double Leg Box Jumps with Soft Landing. Start on the ground in front of a box. Jumps up onto the box and immediately upon landing perform another explosive jump straight up as high up as possible and <u>land back on top of the box</u>. Land softly (NO NOISE), by allowing the hips to bend to absorb the shock. Hold the landing for a second or two then step off box and start all over again. Your knees should always be behind your toes at all times. This is achieved by focusing on keeping the hip or bum back. Focus on the rotation of the hip joint for jumping and landing, keep upper torso erect. Full foot contact on ground or box. Increasing the height of the box will increase the ROM of the jump on top of the box. Box height should start at 18" and can progress over time to 30".</p>	


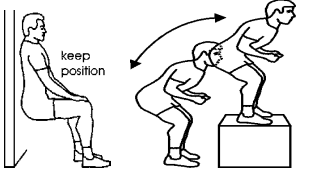
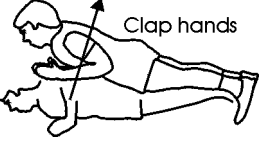

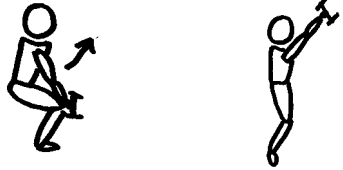
- Intermediate Routine (Single legs)

<p>Single Leg Drop Squat-Jump-Soft Land- Standing erect, quickly relax muscles of the hip and knee joints so that the body DROPS with gravity. Do not drop forward (meaning the knees bend the heels lift up off the ground). Drop such that the bum goes down and back keeping the entire foot flat on the ground. Upon releasing into a drop, quickly involve an active contraction that stops the drop and becomes a jump. Jump should be maximum. Using the hips to absorb the landing, land SOFTLY. Hold landing then stand up to erect position and start all over again. Your knees should always be behind your toes at all times. This is achieved by focusing on keeping the hip or bum back. Focus on the rotation of the hip joint for jumping and landing, keep upper torso erect. Full foot contact on ground. Perform desired sets on each single leg by alternating one jump with the right than one jump with the left.</p>	 <p style="text-align: center;">Single Leg Only</p>
<p>Same Single Leg Bench Jump-Over/Hold Soft Landing- Keeping back in neutral position (straight) bend at hips and knees jump sideways over a bench (12-16" high and 8" wide). Land softly (NO NOISE) by using the hips to absorb the landing. Hold the landing for a second before repeating back to the other side. Your knees should always be behind your toes at all times. This is achieved by focusing on keeping the hip or bum back. Focus on the rotation of the hip joint for jumping and landing, keep upper torso erect. Full foot contact on ground. Land and take-off on the same leg for desired reps than perform with opposite leg.</p>	
<p>Inside Leg Bench Jump-Over/Hold Soft Landing- Keeping back in neutral position (straight) bend at hips and knees jump sideways over a bench (12-16" high and 8" wide). Take off with inside leg (leg closest to bench) over top of the bench and land with the opposite leg (now the closest leg to the bench). Land softly (NO NOISE) by using the hips to absorb the landing. Hold the landing for a second before repeating back to the other side. Your knees should always be behind your toes at all times. This is achieved by focusing on keeping the hip or bum back. Focus on the rotation of the hip joint for jumping and landing, keep upper torso erect. Full foot contact on ground. Repeat going back to the other side.</p>	
<p>Outside Leg Bench Jump-Over/Hold Soft Landing- Keeping back in neutral position (straight) bend at hips and knees jump sideways over a bench (12-16" high and 8" wide). Take off with the outside leg (leg furthest from) over top of the bench and land with the opposite leg (now the furthest from the bench). Land softly (NO NOISE) by using the hips to absorb the landing. Hold the landing for a second before repeating back to the other side. Your knees should always be behind your toes at all times. This is achieved by focusing on keeping the hip or bum back. Focus on the rotation of the hip joint for jumping and landing, keep upper torso erect. Full foot contact on ground. Repeat going back to the other side.</p>	
<p>Single Leg Box Jumps with Soft Landing. Start on the ground in front of a box. Jump up onto the box and immediately upon landing perform another explosive jump straight up as high up as possible and land back on top of the box. Land softly (NO NOISE), by allowing the hips to bend to absorb the shock. Hold the landing for a second or two then step off box and start all over again. Your knees should always be behind your toes at all times. This is achieved by focusing on keeping the hip or bum back. Focus on the rotation of the hip joint for jumping and landing, keep upper torso erect. Full foot contact on ground or box. Perform desired sets on each single leg by alternating one jump with the right than one jump with the left. Increasing the height of the box will increase the ROM of the jump on top of the box. Box height should start at 18" and can progress over time to 30".</p>	 <p style="text-align: center;">Single Leg Only</p>

Plyometrics (explosive shock)

<p>Ankle jumps and hops- Stand with your feet slightly apart and up on the balls of the feet. Keeping all the joints but the ankle rigid, drop back down onto the heels and explode upwards using the calf muscles. Land on the balls of the feet and then repeat the sequence. Ankle jumps are done on the spot and ankle hops are moving slightly forward or backwards.</p>	
<p>Knee tuck jump- Stand with the palms at chest height. Dip down to quarter squat level and explode upward. Drive at the knees attempting to touch the chest with the knees. When you land, immediately repeat. Perform the exercises at a rapid rate.</p>	
<p>Hip Thrust Jumps (Rocket) Jumps- Keeping back in neutral position (straight) bend at hips and knees so that the hands are touching the ground. Explosively swing arms up and at the same time explosively extend the hips and knees to produce a powerful jump that at full height in the air arms are fully extended reaching towards the sky, and the lower body is completely extended as well. Land back into the starting position and explosively repeat exercise for desired reps. Always ensure maximum height is occurring with each jump and minimize amount of time on the ground...be quick. Full foot contact on ground.</p>	
<p>Squat jump- Starting in a squat position, keep your arms by your sides. Keep the back straight and your head up. Jump upward and thrust the arms forward. Fully straighten the body and then bring the legs up to be parallel with the ground. Keep the legs up throughout the decent. When you land, repeat the sequence. Perform with maximal explosion upwards and minimal contact with the ground. Full foot contact on ground.</p>	
<p>Double leg hops and speed hops- Start in a half squat position. Keeping the back straight and head up, jump outward and upward. Attain maximum height by straightening the body. Land and then do the next hop. For speed hops, repetitions must be rapid. Full foot contact on ground. Full foot contact on ground.</p>	<p>1 Squat 2 Jump</p> 
<p>Single leg hops- Start in the half squat position with one foot held off the ground. Keeping the back straight and the head held up, jump explosively outward and upward. Attain maximum height by straightening the body. Land on the same foot you jumped off and then jump again. Full foot contact on ground.</p>	 <p>Jump lift knees same leg</p>
<p>Alternating single leg takeoffs (bounding)- Assume a comfortable stance with one foot slightly in front of the other. Push off with the back leg gaining as much height as possible. Quickly extend outward with the driving foot. Repeat the sequence upon landing. Full foot contact on ground.</p>	 <p>Jump lift knees change leg</p>
<p>Alternating Side to Side Power Strides. Similar to Alternating single leg takeoffs (bounding), except pushing more directly to the side than back. Excellent for skating.</p>	 <p>Jump forward 45° angle</p>

<p>Single leg stride jumps- Stand by the side of a bench. Place the inside foot on top of the bench. With an upward movement of the arms, use the inside leg to jump upward as high as possible. Repeat the action as soon as the outside leg touches the ground. Keep ground and bench contact with the balls of the feet.</p>	<p>1 Step up 2 Jump 3 Land</p> 					
<p>Stride jump cross overs (Side to Side Box Jumps)- Stand at the side of the bench with the inside foot on top of it. Swing the arms upward and drive off the bench with the elevated leg, jumping as high as possible. The body is carried over the bench so that the driving leg touches the ground on the opposite side of the bench. Repeat the motion as soon as the original driving leg touches the ground. Work to achieve maximum height, using the arms to assist lifting the body.</p>						
<p>Hurdle or Objects- double leg jumps over objects- Assume a half squat position in front of the first hurdle. Keeping the back straight and the head up, jump outward and upward. Pull the knees up to ensure clearance of the object. Upon landing, resume the starting position and initiate the next jump. Full foot contact on ground.</p>						
						
<p>Side to Side Hurdles-DBL 6" – 18"</p>	<p>Side to Side Hurdles- SGL 6"-18"</p>	<p>Side to Side Hurdles- Alternating 6"-18"</p>				
<p>Octagon Hurdles- Place hurdle in circle such that it makes an octagon. And jump in and out of octagon as you jump over all hurdles. Hurdles 6" – 18"</p>						
<p>Alternating step ups- Stand, facing the bench with one foot on it. Use the leg on the bench as the power source and jump upward. Use the arms in an upward swinging motion to gain lift. Upon landing the legs should swap over so the next jump is performed by the other leg. Keep alternating legs.</p>						
<p>Depth jumps- Stand on the box and then step off the box . Do not jump. When you hit the ground, bend the knees and hips and then explode upwards, using the arms to gain lift. Jump onto the next box and then repeat. Height of box has desirable and undesirable effects. A box too high will prolong the amortization phase (down-muscle stretch) so that the resulting contraction is minimized and maximum jump does not occur. However, this is an excellent way of breaking down and regenerating new muscle tissue.</p>						
<p>Box jumps- Start on the ground in front of a box. Bend the hips and knees and swing the arms back. Using drive in the legs and arms, jump onto the box and then immediately explode off the top of the box, bending the hips and knees absorb the impact back on top of the box. Box height can vary, the larger the box the further the ROM power is being exerted. Full foot contact on ground.</p>						

<p>Box-Box jumps- Start on the box. Bend the hips and knees and using the drive from both the arms and legs, explode onto the next, higher box. Immediately repeat the procedure and jump onto the next even higher box. Repeat. Full foot contact on ground.</p>	<p>1 Jump 2 Land 3 Jump</p> 
<p>Pre fatigue jumps- Box jump ups- Perform a wall sit for the desired amount of time and then stand next to a high box. Bend the hips and knees and using drive in the arms jump onto the box. Then bend the hips and knees again and immediately jump backwards onto the ground. Repeat for the desired number of repetitions. Full foot contact on ground.</p>	
<p>Back & Forth Box Jumps-Using a 12" – 16" box, facing the box jump onto box and off box and then backwards back onto box and then back of the box. Be quick, very little time on the ground and box. Repeat for desired reps.</p>	
<p>Combination jumps/ sport specific jumps- Use a combination of hops, jumps, swings etc and sport specific jumps. Full foot contact on ground.</p>	
<p>Clap push ups- Lie on your front with the chest, hips and toes touching the ground. Place the hands with the palms facing the ground. Initiate the push up rapid force to lift the body off the ground. In the air, bring the hands together to make a clap then return the hands back out to meet the ground. Allow the arms to flex to a position just before the chest touches the ground.</p>	
<p>Horizontal swing- Extend the arms with a dumbbell at chest level with both hands at arms length in front of the body. Pull the arms to one side with the shoulder and the arm. Use minimal hip and leg movement. Once you have swung fully in one direction, swing in the other direction.</p>	
<p>Vertical swing- Grasp the dumbbell with both hands, allow it to hang at arms length between outstretched legs. Keeping the arms extended swing the dumbbell upwards and then in a downward direction. Minimize the movement of the back and hips.</p>	<p>1 Start 2 Extend</p> 

COOL-DOWN FLEXIBILITY ROUTINE &










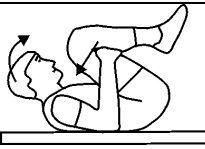



EXERCISES

Dynamic Flexibility




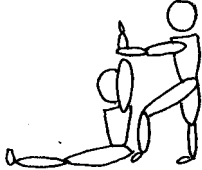



Active Flexibility

PNF & Partner






Static Sport Specific Flexibility

<p>Dynamic Routine- Follow same dynamic routine as for warm-up. Each dynamic exercise should be performed 3 x 15-20 repetitions or 45 seconds ea.</p>	<p>See Warm-up Dynamic Routine.</p>
<p>Calfs- While the legs are straight and the hands are on the floor, walk the feet towards the hands as far as you can go and then walk the hands away from the feet. For Warm-up Purposes, athletes should complete 2 sets of 10m.</p>	<p>1 Start 2 Walk hands</p>  
<p>Leg Swings Open/Close- Face the wall, holding onto to a rail for balance. Swing the leg across the body, as high as possible, with the toes pointing straight up. Then swing the leg back down and across the body again. Keep the upper body straight. For Warm-up Purposes, athletes should complete 2 sets of 15reps ea. <u>Fluid Force</u></p>	<p>1 Swing leg out 2 Cross leg over body</p>  
<p>Leg Swings back/Forth- Stand side on to the wall and swing the inside leg up in front of the body, as high as it can go. Then allow the leg to swing back down and back up backwards, allowing the leg to bend at the knee. Keep the upper body straight. For Warm-up Purposes, athletes should complete 2 sets of 15reps ea. <u>Fluid Force</u></p>	<p>1 Swing leg in front 2 Swing leg behind</p>  
<p>Lying Leg swings- Lie on your back with your arms directly out to the sides. Lift one leg and swing it round to the opposite hand. Swing the leg back to the starting position. Pick up the other leg and do the same. Alternate the legs for the desired number of repetitions and make sure to keep the shoulders on the ground. For Warm-up Purposes, athletes should complete 2 sets of 15reps ea. <u>Fluid Force</u></p>	 
<p>Prone Leg Swing- the same as the Lying Leg Swings, but this time lie on your stomach. Arms should be directly out to the side. On the swings up, aim the heel of the foot towards the opposite hand, while keeping both shoulders on the ground. The leg should be relatively loose, with at the end part of the stretch the knee is bent. The stretch should be felt throughout entire body, but mostly in the hip flexors. For Warm-up Purposes, athletes should complete 2 sets of 15reps ea. <u>Fluid Force</u></p>	
<p>Dynamic Hamstring Stretch-Lying on the back, bring the knees to chest as if in a ball. Roll Forward extending legs straight out reaching past the toes, then rol back into ball position. 2 Sets x 12-15 reps.</p>	   

<p>Active Flexibility-</p>	
<p>#1 Walking Over Hurdles High Knees – Fwd 8 Hurdles-4 feet apart. Face Hurdles, Arms extended over-head keeping upper torso erect, Raise lead leg straight vertical until foot can over top of hurdle. Make sure leg goes straight up and not to the side. Step Over Hurdle, bring trail leg over the hurdle keeping the foot over top of the hurdle not outside. Repeat for 8 Hurdles then have other leg become lead leg. 2 Sets.</p>	
<p>#2 Walking Over Hurdles High Knees – BKWD 8 Hurdles-4 feet apart. Back to the Hurdles, Arms extended over-head keeping upper torso erect, Rotate lead leg up and out to the side of body, yet keeping foot ove top of the hurdleg. Step Over Hurdle, bring trail leg straight up vertical over the hurdle. Repeat for 8 Hurdles then have other leg become lead leg. 2 Sets.</p>	
<p>#3 Walking Over Hurdles Side Step 8 Hurdles-3 feet apart. , Arms extended over-head keeping upper torso erect. Facing perpendicular to the hurdles. Raise lead knee straight vertical laterally stepping over the hurdle bring trail leg over the same way by raising knee straight up vertical until foot can pass over hurdle. Repeat all 8 Hurdles facing the same way then change directions. 2 Sets.</p>	
<p>#4 Skipping Hurdles Side Ways Knee Bent- 8 hurdles 2 feet apart. Arms extended over-head keeping upper torso erect. Facing perpendicular to the hurdles on the outside of the hurdles facing in. Stay up on toes, bouncing bring each knee up vertically over the hurdle while the hip remains off to the side of the hurdle. Complete all 8 Hurdles then go to the other side 2 Sets.</p>	
<p>#5 Skipping Hurdles Side Ways Stiiff Leggeed Swings- 8 hurdles 2 feet apart. Arms extended over-head keeping upper torso erect. Facing perpendicular to the hurdles on the outside of the hurdles facing in. Stay up on toes, bouncing Swing each leg up over the hurdle while the hip remains off to the side of the hurdle. Complete all 8 Hurdles then go to the other side. 2 Sets.</p>	
<p>#6 Over/Under Hurdles 8 hurdles 2 feet apart. Over the top of the first hurdle, underneath the second hurdle without touching the ground with the hands. Repeat alternating over / under. Ensure both directions are being used to go over and under hurdles. 2 Sets.</p>	
<p>#7 Hip Mobility Series – Hip Flexion-Hip Rotation-Knee Extension-Recovery- From Kneeling position, keeping torso completely parallel to ground, bring one knee into chest (Hold 2 seconds), Externally rotate same leg to the outside (Fire Hydrant) (Hold 2 seconds), Keeping knee at same location in space extend leg straight (hold 2 seconds), Kick leg straight back and back underneath to beginning kneeling position, Repeat with other leg. Six on each leg.</p>	

PNF & Partner Stretch	
<p>PNF Stretches- Are partner stretches that involve taking a muscle to its end stretch point, where the partner gets it to relax by holding the limb in place and having the stretchee contract the muscle against the held position for 5-6 seconds. The stretchee then completely relaxes and the muscle is moved further to a new end stretch point. This is repeated for the desired number of times. This should be repeated 5 times for each body part being stretched.</p>	
<p>Hamstrings- Stretchee lies on the back. The partner kneels at the stretchee's knees and picks up the leg and places it on the shoulder. The partner lifts the leg to the first end stretch point and follows the PNF procedure stated above.</p>	
<p>Quads- Stretchee lies on the stomach. The partner places one hand on the ankle and the other hand underneath the cup of the knee. The partner pushes the heel towards the buttocks, stopping at the first end point and then follows the PNF procedure.</p>	
<p>Chest- Stretchee sits on the floor with back straight. The partner stands behind the stretchee and grabs the arms at the elbows and lifts the arms so they are straight out to the sides. The arms are pulled straight back to the first end stretch point. PNF procedure should now be followed. To keep the stretchee from leaning back, the partner should push one side of their leg and hip into the stretchee.</p>	
<p>Shoulder- Stretchee sits on the ground with back straight. Partner stands behind the stretchee and lifts the arms upwards. Partner pulls the arms straight back to the first end stretch point. Then the PNF procedure is followed. To keep the stretchee from leaning back, partner should block out the leaning back by pushing one side of their leg and hip into the stretchee.</p>	
<p>Static Stretch Routine- Static routine involves 4 mandatory exercises plus the sport specific stretches listed after the general stretches. Each stretch should be performed with 2 set of 30 second hold. Take each stretch to end point, control breathing (relax), and take stretch further.</p>	
<p>Hip Flexors- Lunge forward so that the hip, knee and ankle are all at 90 degrees. Drive the hip of the back leg downward and forward. Then raise the back leg off the ground as far as it will go.</p>	
<p>Glute Stretch- Lie on your back and cross the right leg over the left, just in front of the knee. Grab the left leg just below the knee and pull it towards the chest. Use the elbow of the right arm to drive the knee of the right leg out to the side as you pull.</p>	
<p>Back Shoulder Stretch- Wrap the arms around each other so that the outside of the elbows is touching. The palms of each hand should face each other. With bent elbows, lift the arms until they are parallel to the ground. Keeping the arms parallel, extend the arms straight out.</p>	
<p>Adductors- Sit on the floor with knees bent, and the heels of both feet together. Pull the feet towards the buttocks. While holding the ankles, use the elbows to push the knees down towards the ground.</p>	

Flexibility Hockey

<p>Ankles/Anterior lower leg- Sit with one leg crossed over the opposite knee. Grasp hold of the ankle and heel with one hand. With the other hand, hold the top portion of the foot. Exhale and slowly pull the bottom of your foot to your body. Hold, relax, then change legs.</p>	
<p>Achilles tendon- Stand with both hands on the knees. Keep the heels down flat and parallel. Exhale and slowly flex your knees, bringing them as close to the floor as possible. Hold, relax and repeat.</p>	
<p>Adductors- Kneel on all fours, bend your arms and rest your elbows on the floor. Exhale and slowly straddle your knees and lower the chest to the floor. Hold, relax and repeat.</p>	
<p>Hip Rotator Stretch – Lie on the floor and flex one leg and slide the heel towards the buttocks. Grasp the ankle with one hand and the knee with the opposite hand. Exhale and slowly pull your foot to the opposite shoulder while keeping your head, shoulders and back flat on the floor. Hold the stretch and relax.</p>	
<p>Hip Rotator Stretch- Sit upright on the floor resting your left leg in front of you with your knee flexed and your foot pointing to the right. Cross your right leg over your left and place the foot flat on the floor. Exhale and round your upper torso and bend forward. Hold the stretch and relax.</p>	
<p>Quads/Hip flexors- Kneel upright with the knees together, buttocks on the floor, heels by the side of your thighs and toes pointing backwards. Exhale and slowly lean back without letting your feet flare out to the sides. Hold, relax and repeat. Those with knee problems should avoid.</p>	
<p>Anterior shoulder- Sit on the floor with your hands approximately a foot behind your hips. Point your fingers away from your body, palms down and legs extended forward. Exhale and slide your buttocks forward as far as possible. Hold, relax and repeat.</p>	
<p>Poke Neck- Pull the chin in while keeping the head straight. Flex the head and neck upwards, until the chin touches the chest.</p>	
<p>Neck- Lock your hands behind your head. Exhale and pull down on your head and allow your head to rest on your chest. Hold, relax, then repeat.</p>	