



Sacred Heart University

Men's Ice Hockey

Summer 2009

Workout Manual

Player Name: _____

May 26th - August 31st

Dynamic Warm-Up

Stretch Movements:

Toes
Heels
Toe Drag
Knee's to Chest

Explosive Movements:

High Knees Run
Butt Kicks Run
"A" Skip
Backwards Hip Openers
Lateral Shuffle (Long Strides) x 2
Carioca w/ Knee Drive x 2
Lateral Jump w/ Arm Circles x 2
Tuck Jumps (5) w/ Sprint
Broad Jumps
Free Fall into Sprint

Dynamic Movements:

Lunges
Pivot Squats
Walking Soldier
Hand Walks

Agility Ladder Movements:

Side Step Hop
Quad Step
Two Foot Scissors
Alt In-In, Out-Out

Upper Body Movements:

Arm Circles Forward/Backward
Chest Openers
Triceps Stretch

This warm-up is to be done prior to the start of each workout. The athlete will work once through this warm-up (starting with Stretch movements and progressing through Upper Body Movements). Although this should be done quickly and efficiently it should not be skipped over... THIS IS THE MOST IMPORTANT PART OF THE WORKOUT!!!

Ground Based Sprint Protocols:

*These sprint programs are to be done on a regulation sized outdoor track. A regulation sized track is 400 meters in length (one lap). The program is designed to increase the athlete's anaerobic endurance by placing increasing demands on the athlete's body. Rest periods are determined by intensity of the sprint and coordinated in a **1:3 work to rest ratio**.*

Ground Based 1

Reps	Distance	Rest Period	Intensity
2	100 m	15 sec	50% of Max
2	100 m	30 sec	100% of Max
1	400 m	3 min	100% of Max
1	400 m	3 min	100% of Max
2	200 m	1 min	75% of Max
4	50 m	1 min	100% of Max

Ground Based 2

Reps	Distance	Rest Period	Intensity
2	75 m	30 sec	75% of Max
2	100 m	45 sec	100% of Max
4	200 m	2 min	100% of Max
2	100 m	45 sec	100% of Max
6	50 m	30 sec	100% of Max
10	10 m	1 min	100% of Max

Ground Based 3

Reps	Distance	Rest Period	Intensity
4	50 m	30 sec	50% of Max
10	10 m	45 sec	100% of Max
1	300 m	3 min	100% of Max
1	400 m	3 min	100% of Max
1	300 m	2 min	100% of Max
1	200 m	45 sec	100% of Max
4	50 m	15 sec	100% of Max

Ground Based 4

Reps	Distance	Rest Period	Intensity
2	100 m	15 sec	75% of Max
1	100 m	45 sec	100% of Max
1	200 m	2 min	100% of Max
1	300 m	3 min	100% of Max
2	400 m	5 min	100% of Max
1	300 m	30 sec	100% of Max
6	20 m	45 sec	100% of Max

Treadmill Based Sprint Protocols:

These sprint programs are to be done on a treadmill. The treadmill must be capable of reaching a speed of 12 mph and an incline of 15%. The goal behind this training is to have the athlete work on hip flexor strength and flexibility which in turn will improve on ice speed. This utilizes short intervals with quick bursts of power to obtain results.

Terminology:

Hold= Holding onto the bar at all time while running (Back straight and Chest up), DON'T LET GO!

HF= Hip Flexion, Holding onto the bar at all times (High Knee's to chest, long strides)

HE= Hip Extension, Holding onto the bar at all times (Butt Kicks, long strides)

Run/Hold/Run= Start out running without holding, after :08 sec run while holding the bar (back straight, chest up), let go and run without holding for the final :08 sec.

Treadmill 1

Reps	Speed	Incline	Time	Type	Rest Periods
2	7.4 mph	5%	:45 sec	Run	45 sec
2	9.2 mph	7.5%	:20 sec	Run	1 min
2	10 mph	10%	:15 sec	Run	1 min 30 sec
4	10 mph	12%	:12 sec	Run	1 min 30 sec
4	10 mph	15%	:20 sec	:10 HF/:10 HE	1 min
2	11 mph	15%	:08 sec	Run	30 sec
1	10 mph	15%	:08/:08/:08	Run/Hold/Run	

Treadmill 2

Reps	Speed	Incline	Time	Type	Rest Periods
2	7.4 mph	5%	:45 sec	Run	45 sec
2	10 mph	10%	:20 sec	Run	1 min
2	10 mph	12%	:15 sec	Run	1 min 30 sec
4	10 mph	15%	:10 sec	Run	1 min 30 sec
4	12 mph	15%	:20 sec	:10 HF/:10 HE	1 min
2	11 mph	15%	:08 sec	Run	30 sec
2	10 mph	15%	:08/:08/:08	Run/Hold/Run	_____

Treadmill 3

Reps	Speed	Incline	Time	Type	Rest Periods
2	7.4 mph	5%	:45 sec	Run	45 sec
2	10 mph	15%	:12 sec	Run	1 min
2	11 mph	12%	:10 sec	Run	1 min 30 sec
4	12 mph	15%	:12 sec	:08 Run/:04 Hold	1 min 30 sec
4	12 mph	15%	:12 sec	Hold	1 min
1	11 mph	15%	:20 sec	:10 HF/:10 HE	30 sec
2***	10 mph	15%	:08/:08/:08	Run/Hold/Run	___/___

*** Athlete will repeat the Run/Hold/Run portion as many times as they can in a row without rest (continuous until fatigue). Once completed the athlete will record the total time in the space provided. An average score on this is 1:04; elite scores are around the 3:00 mark.

Treadmill 4

Reps	Speed	Incline	Time	Type	Rest Periods
1	7.4 mph	5%	:45 sec	Run	45 sec
2	10 mph	15%	:12 sec	Run	1 min
2	11 mph	12%	:10 sec	Run	1 min 30 sec
2	12 mph	15%	:06 sec	Run	1 min
2***	11 mph	15%	___/___	Run	Full Recovery
2***	12 mph	15%	___/___	Run	Full Recovery
2	10 mph	15%	:08/:08/:08	Run/Hold/Run	1 min 30 sec
2	10 mph	15%	:10	Hold	1 min

***Athlete will perform 4 runs to maximal capacity (endurance run for as long as possible); time is recorded in the space provided. The athlete is given as much time as needed to recover in between sets. A spotter is strongly suggested for these runs.

Bike Protocols

These protocols are to be utilized as an alternative method of anaerobic/aerobic training. Allow these workouts are difficult they are still less effective than the running programs. They can be utilized as a means of reducing lactic acid after a difficult workout as well as increasing overall endurance.

Bike Protocol 1

Duration	Intensity/RPM's
3 min	150 Watts/ 80-85 RPM
30 sec x 4 (Sprint)	200 Watts/ 100 RPM (Mod to Hard Intensity)
30 sec x 4 (Rest)	180 Watts/ 90-95 RPM
30 sec x 4	210 Watts/ 100-105 RPM (Harder Intensity)
30 sec x 4	180 Watts/ 90-95 RPM
30 sec x 4	220-240 Watts/ 105-110 RPM (Harder Intensity)
30 sec x 4	180 Watts/ 90-95 RPM
30 sec x 4	270 Watts/ 120 RPM (Hardest Intensity)
30 sec x 4	180 Watts/ 90-95 RPM
1 min	220 Watts/ 100 RPM (Mod to Hard Intensity)
5 min	180 Watts/ 90-95 RPM

***Note every bike is different. It would be best if you have a bike that can record your power output in WATTS (this is the most accurate way to keep track of intensity). The RPM's are used just as a marker for your expected cadence at that intensity.

Athletes will alternate one sprint phase with one rest phase.

Bike Protocol 2

Duration	Intensity/RPM's
3 min	120 Watts/ 75-80 RPM
45 sec x 4	220 Watts/ 100 RPM (Mod to Hard Intensity)

30 sec x 4	150 Watts/ 80-85 RPM
45 sec x 3	230 Watts/ 100-105 RPM (Harder Intensity)
30 sec x 3	150 Watts/ 80-85 RPM
45 sec x 4	250 Watts/ 105-110 RPM (Harder Intensity)
30 sec x 4	150 Watts/ 80-85 RPM
45 sec x 3	280 Watts/ 120 RPM (Hardest Intensity)
30 sec x 3	150 Watts/ 80- 85 RPM
1 min	250 Watts/ 100 RPM (Mod to Hard Intensity)
5 min	150 Watts/ 75-80 RPM

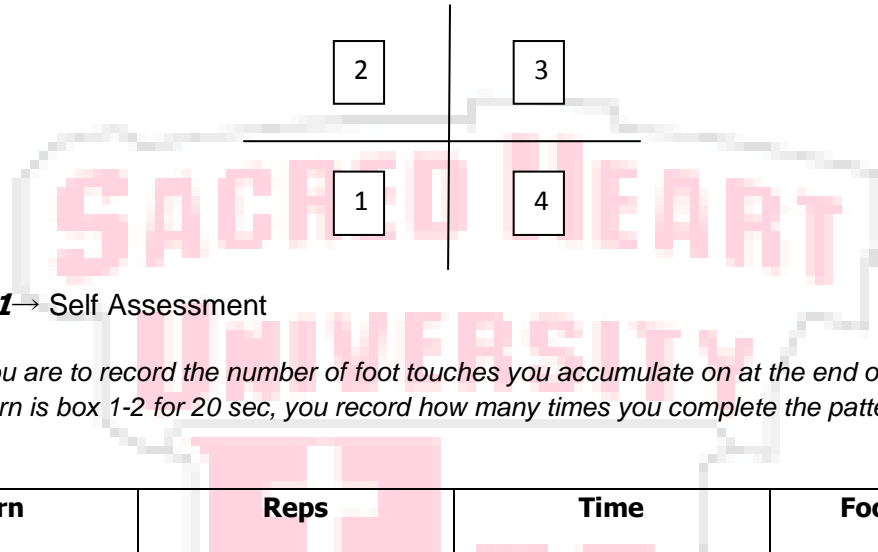
Bike Protocol 3

Duration	Intensity/RPM's
3 min	150 Watts/ 75-80 RPM
1 min x 2	220 Watts/ 100 RPM (Mod to Hard Intensity)
30 sec x 2	150 Watts/ 80-85 RPM
45 sec x 3	240 Watts/ 100-105 RPM (Harder Intensity)
45 sec x 3	150 Watts/ 80-85 RPM
45 sec x 3	250 Watts/ 105-110 RPM (Harder Intensity)
30 sec x 3	150 Watts/ 80-85 RPM
1 min x 4	270 Watts/120 RPM (Harder Intensity)
1 min x 4	150 Watts/ 80- 85 RPM
45 sec	300 Watts/150 RPM (Hardest Intensity)
5 min	150 Watts/ 75-80 RPM

Plyometric Protocols

These protocols are designed to help develop first step quickness and lower body explosiveness. It utilizes a 4-Square protocol.

4-Square Set Up:



Plyometric 1 → Self Assessment

For this day you are to record the number of foot touches you accumulate on at the end of each pattern. I.E. if the pattern is box 1-2 for 20 sec, you record how many times you complete the pattern in that time period.

Pattern	Reps	Time	Foot Touches
1-2	1	20 sec	_____
1-4	1	20 sec	_____
1-2-3	1	20 sec	_____
1-2-3-4	1	20 sec	_____
1-2 (single leg)	1	10 sec each leg	L_____ / R_____
1-4 (single leg)	1	10 sec each leg	L_____ / R_____
1-2 (6" block)	2	10 sec	_____/____
1-4 (6" block)	2	10 sec	_____/____
1-4 (12" block)	4	5 sec	____/____/____/____
1-2	1	20 sec	_____
1-4	1	20 sec	_____
1-2-3-4	1	20 sec	_____

*** All patterns are to be done with two feet at the same time unless otherwise specified. Single leg jumps are to be done by completing the desired time on one leg then immediately switching to the other for the desired time. Any jump requiring *blocks*, you must jump over an obstacle of the specified height (6",12", etc.)

Plyometric 2

Pattern	Reps	Time	Foot Touches
1-2	1	15 sec	_____
1-4	1	15 sec	_____
1-2-3	1	15 sec	_____
1-3-2	1	15 sec	_____
1-2 (single leg)	4	5 sec each leg	L___/___/R___/___
1-4 (single leg)	4	5 sec each leg	L___/___/R___/___
1-3 (single leg)	4	5 sec each leg	L___/___/R___/___
4-2 (single leg)	4	5 sec each leg	L___/___/R___/___
1-2 (12" block)	2	10 sec	_____/_____
1-4 (12" block)	2	10 sec	_____/_____
1-3 (6" block)	2	10 sec	_____/_____
4-2 (6" block)	2	10 sec	_____/_____
1-4 (24" block)	4	5 sec	___/___/___/___
1-2	1	15 sec	_____
1-2-4-3/1-4-2-3	1	15 sec	_____
1-4	1	15 sec	_____
1-2-3-4/1-4-3-2	1	15 sec	_____

Plyometric 3

Pattern	Reps	Time	Foot Touches
1-2	2	15 sec	_____
1-4	2	15 sec	_____
1-2-3	2	15 sec	_____
1-3-2	2	15 sec	_____
1-2 (single leg)	2	10 sec each leg	L_____/R_____
1-4 (single leg)	2	10 sec each leg	L_____/R_____
1-3 (single leg)	2	10 sec each leg	L_____/R_____
4-2 (single leg)	2	10 sec each leg	L_____/R_____
1-2 (18" block)	2	10 sec	___/___/___/___
1-4 (18" block)	2	10 sec	___/___/___/___
1-4 (30" block)	4	5 sec	___/___/___/___
1-2	1	15 sec	_____
1-2-4-3/1-4-2-3	1	15 sec	_____
1-4	1	15 sec	_____
1-2-3-4/1-4-3-2	1	15 sec	_____

Plyometric 4 Self Assessment Re-Evaluation

Pattern	Reps	Time	Foot Touches
1-2	1	20 sec	_____
1-4	1	20 sec	_____
1-2-3	1	20 sec	_____
1-2-3-4	1	20 sec	_____
1-2 (single leg)	1	10 sec each leg	L_____/R_____
1-4 (single leg)	1	10 sec each leg	L_____/R_____
1-2 (6" block)	2	10 sec	_____/_____
1-4 (6" block)	2	10 sec	_____/_____
1-4 (12" block)	4	5 sec	___/___/___/___
1-2	1	20 sec	_____
1-4	1	20 sec	_____
1-2-3-4	1	20 sec	_____

Leg Series Workouts

These workouts are designed specifically to target the strength, endurance and power of the lower body. Exercises range from easier to harder difficulty. These will replace a one day of lower body lifting every other week.

Sacred Heart Pioneer Box Jump Series

	1st Set	2nd Set	3rd Set
Squat Jump	10 reps	10 reps	10 reps
Tuck Jump	10 reps	10 reps	10 reps
Box Jump (6" Box)	30 sec	30 sec	30 sec
Box Jump (12" Box)	20 sec	20 sec	20 sec
Box Jump (18" Box)	10 sec	10 sec	10 sec
Single Leg Box Jump (6"Box)	20 sec each leg	20 sec each leg	20 sec each leg
Single Leg Box Jump (12" Box)	10 sec each leg	10 sec each leg	10 sec each leg
Lateral Box Jump (12" Box)	20 sec	20 sec	20 sec
Single Leg Lateral Jump (12" Box)- One leg on box	10 sec each leg	10 sec each leg	10 sec each leg
Single Leg Cross Over (12" Box)	20 sec	20 sec	20 sec
Box Jump Progression (6"-12"-18"-24" Box)	30 sec	30 sec	30 sec

Sacred Heart Pioneer Explosive Lower Body Series

	<i>1st Set</i>	<i>2nd Set</i>	<i>3rd Set</i>
	WALL SIT- 60 sec	WALL SIT- 60 sec	WALL SIT- 60 sec
Squat Jump	12 reps	8 reps	6 reps
Tuck Jump	12 reps	8 reps	6 reps
Cycle Split Squat Jump	12 reps	8 reps	6 reps
Single Leg Squat Jump	6 reps each leg	4 reps each leg	4 reps each leg
Single Leg Tuck Jump	6 reps each leg	4 reps each leg	4 reps each leg
Box Jump	12 reps	8 reps	6 reps
Lateral Box Jump	12 reps	8 reps	6 reps
Heiden Jumps Over 6" Hurdle	12 reps each leg	8 reps each leg	6 reps each leg
Depth Jump From Box	12 reps	8 reps	6 reps
	WALL SIT- 60 sec	WALL SIT- 60 sec	WALL SIT- 60 sec


- Each Set is prefaced by a 1-minute long wall sit and is to be concluded by a 1-minute long wall sit
- 20 second rest between each exercises
- 2 minute rest between each set

Sacred Heart Pioneer Leg Series

	<i>1st Set</i>	<i>2nd Set</i>	<i>3rd Set</i>
One Legged Squat Hold	10 sec each leg	15 sec each leg	5 sec each leg
Single Leg BW Squat	10 reps each leg	6 reps each leg	12 reps each leg
One Legged Squat Hold	8 sec each leg	15 sec each leg	5 sec each leg
Single Leg Squat Jump	10 reps each leg	6 reps each leg	8 reps each leg
One Legged Squat Hold	6 sec each leg	15 sec each leg	5 sec each leg
Resisted Clams	10 reps each leg	6 reps each leg	12 reps each leg
One Legged Squat Hold	8 sec each leg	15 sec each leg	5 sec each leg
Manual Glute Hams	10 reps	12 reps	10 reps
One Legged Squat Hold	10 sec each leg	15 sec each leg	5 sec each leg
Walking One Leg Box Jump	10 reps each leg	8 reps each leg	12 reps each leg

- 20 second rest between each exercise
- 2 minute rest between each set

Sacred Heart Pioneer Lactic Threshold Series

	<i>1st Period</i> <i>Power Phase</i>	<i>2nd Period</i> <i>Endurance Phase</i>	<i>3rd Period</i> <i>Burn Phase</i>
Squat Hold	20 seconds	45 sec	30 sec
BW Squat	20 reps	8 reps	12 reps
Squat Hold	15 sec	35 sec	15 sec
Squat Jump	20 reps	8 reps	12 reps
Squat Hold	10 sec	25 sec	30 sec
Split Squat jump	20 reps	8 reps	12 reps
Squat Hold	15 sec	35 sec	15 sec
Single Leg Squat Jump	10 each leg	4 each leg	6 each leg
Squat Hold	20 sec	45 sec	30 sec
Tuck Jump	20 reps	8 reps	12 reps

- 20 second rest between each exercise
 - 2 minute rest between each set

Complex Lifting Workouts

*These workouts are a combination of a Strengthen Exercise **IMMEDIATELY** followed by a plyometric exercise. The goal here is to strengthen the muscle and then add in a power component to increase that specific muscle group's force production.*

Lower Body Complex

Lift/Plyometric	Reps	Sets
Front Squat/Squat Jump	8-10/10	2
Forward Lunge/Split Squat Jump	8-10/10	2
Single Leg Squat/Single Leg Squat Jump	8-10/10 each leg	2 each leg
Side Lunges/Heiden (Skating) Jumps	8-10/10 each leg	2 each leg
Step-Ups/Box Jumps	8-10/ 10	2
Calf Raises/Ankle Hops	8-10/10	2

Upper Body Complex (Use 3-5 kg Med Ball for Plyometric Exercises)

Lift/Plyometric	Reps	Sets
Bench Press/Supine Ball Toss with 4-5 kg Med Ball	8-10/10	2
Incline Bench/Clap Push Up	8-10/10	2
Shoulder Press/OH Press Throw	8-10/10	2
OH Tricep Extension/OH Soccer Throw	8-10/10	2
Axe Chops/Med Ball Rotation Toss	8-10/10	2

Agility Protocols:

These protocols are designed to help develop the athlete's movement throughout various planes. They will utilize certain training methods including Speed Ladder, Reactionary Ball Drop, and Box Pattern movements.

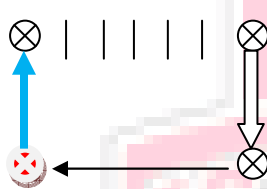
Agility 1- Box Series

- Each Movement is to be done 4 times each at maximize speed
- 1 minute rest between each rep

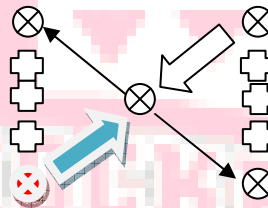
KEY:

↑ = Sprint	= Lateral Shuffle	↓ = Backpedal	↑ = Starting Movement
⊗ = Cones	⊕ = Carioca Shuffle	▭ = Obstacles	⊗ = Starting Cone

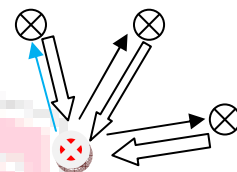
1.) Basic Movements



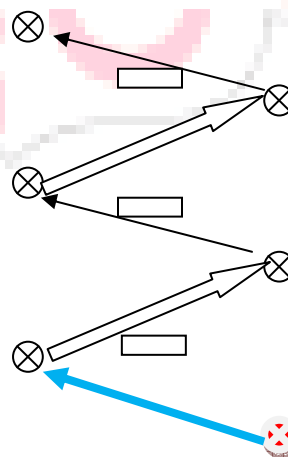
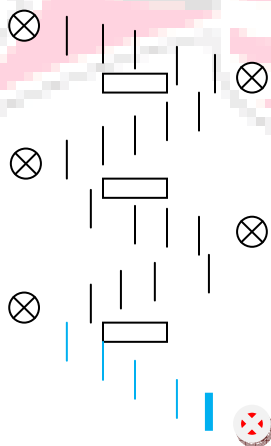
3.) 5 Star Movement



5.) Boomerang



2.) Lateral Shuffle Through Obstacles 4.) Forward to Backward Obstacles



Agility 2- Ladder Drills

These movements range from simple to complex and are geared at developing foot quickness which is imperative for quick changes of directions on the ice.

- **Side Step Hop** x 2
- **Triple Step** x 2
- **Quad Step** x 2
- **Quad Step w/ Heiden Jump** x 2
- **Forward Cross Over** x 2
- **Backward Cross Over** x 2
- **Alt In-In Out-Out** x 2
- **2 Foot Scissors** x 2
- **Lateral In-In Out-Out** x 2
- **4 In 4 Out** x 2
- **Swizzle Step** x 2
- **Hip Twisters** x 2

Agility 3- Reactionary Ball Drop Drills

These drills are designed to work on the athlete's first step quickness and reaction time. The athlete will need a partner for these drills. The athlete will start at a distance of 5 yards away from the ball dropper to begin. The dropper can increase or decrease the distance as seen fit. The objective is for the athlete to catch the ball before the ball bounces twice (from standing positions) and before it bounces a third time (from all ground positions).

Starting Positions	Reps
3 Point Stance	4
4 Point Stance	4
40 Yard Dash Starting Position	4
5 Yard Back Pedal (Ball drops after 5 yard position is reached)	4
Lateral Cross-Over Start	4
Backward Start (Turn on Command)	4
Kneeling Start	4
Lying on Stomach Start	4
Lying on Back Start	4
Lying on Side Start	4

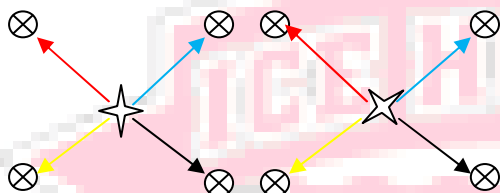
*****Goaltenders:** To add position specific training to these drills:

- 1.) Rather than a forward sprint to the ball use a LATERAL SHUFFLE, focus on quick feet but LONG stride length

Goalie Specific Reactionary

- 1.) *Goaltender stands 5 yards away from the wall. Thrower will stand behind the goaltender and throw tennis balls off the wall. Work on having the balls go high and low as well as to both sides.*
- 2.) *Goaltender will need his blocker and a tennis or reaction ball. Stand close to the wall and use the blocker as a paddle to bat the ball back and forth off the wall. Make the excursions greater as you go along to make it harder.*
- 3.) **Mirror Drill-** Goaltender will set up a two 4 cone boxes. The goalie is then set to mimic the movements of the "Leader" in a mirrored pattern. If the Leader moves to the far cone the goaltender will follow to his front cone. (Goalie must remain square at all times)

Progression- Leader has tennis balls and can throw them back and forth with the goalie or to specific spots to make the goalie react.



Agility 4 Sprint Striders

These exercises are to be done to increase Hip Flexor strength and flexibility. It also keys upon quick feet movements and other dynamic movements. Different sized boxes will be needed for these activities.

Movement	Duration	Reps
Box Jumps (12" Box)- Warm Up	30 sec	1
Single Leg Jump (6" Box)	15 sec each leg	1
6" Sprint Striders	30 sec	4
12" Sprint Striders	30 sec	3
18" Sprint Striders	20 sec	3
24" Sprint Striders	20 sec	2
12" Side-Step Hop	20 sec	2
18" Side-Step Hop	20 sec	2
18" Hip Extensors	20 sec	2
24" Hip Extensors	20 sec	2

Agility 5- Combination Movements

These drills combine drills using the Plyometric, Agility ladder followed by moving agility drills. The goal here is to integrate power, quickness and lateral mobility components in one entity.

Drill 1: Perform drill 3 times

Set the course in the following LINEAR order (Plyometric-> Ladder Drill-> Moving Agility)

- 1.) Lateral Jumps over 12 inch hurdle x 10
- 2.) Side Step Hop in ladders
- 3.) Forward to Backward Obstacles (see Agility 1)

Drill 2: Perform drill 3 times

- 1.) Front to Back Jumps over 12 inch hurdle x 10
- 2.) Forward Cross Over in ladders
- 3.) Lateral shuffle in obstacles (see Agility 1)

Drill 3: Perform drill 3 times

- 1.) Heiden Jumps over 12 inch hurdle x 10
- 2.) 2 foot Slalom thru ladders (2 foot side to side hops)
- 3.) Backpedal 15 yards-> Sprint forward back to start

Drill 4: Perform Drill 4 times

- 1.) 12" Box Jump-> 18" Box Jump-> 24" Box Jump-> 30" Box Jump Progression
- 2.) Single Leg Slalom thru ladders (2 times on R leg, 2 times on L leg)
- 3.)

Abdominal Circuits:

These circuits are designed to enhance the athlete's core strength and stability. This is the most important part of the athlete's body, a solid core will allow for optimal strength gains throughout the entire body.

Abs Circuit 1 (Med Ball)	Set 1	Set 2
Med Ball Toss	12	12
Toe Touches	20	20
Roman Twist	30	30
Alternate V-Ups	20	20
Pop Ups (Ball btwn Knees)	20	20

Abs Circuit 2 (Partnered)	Set 1	Set 2
Med Ball Sit-up w/ Toss	20	20
Front Bridge w/ Hand Slaps	10	10
Roman Twist w/ Med Ball Toss	10	10
Med Ball Axe Chop Bounce Pass	20	20
Med Ball Sit Up w/ Exchange	20	20

Abs Circuit 3 (Physio Ball)	Set 1	Set 2
PB Knee's to Chest	20-30	20-30
PB Hand Taps	Max in 20 sec	Max in 20 sec
PB Front Bridge	20 sec	20 sec
PB Side Crunches	20	20
PB Crunches (Feet on Wall)	20	20

Abs Circuit 4 (Rotational)	Set 1	Set 2
Cable Chopping (8-12 reps)		
Cable Lifting (8-12 reps)		
PB Side Swippers	20	20
PB Jack Knife w/ Rotation	20	20
PB Plate Twist	20	20

Abs Circuit 5	Set 1	Set 2
PB Knees to Chest w/ Push Up	20	20
Olympic Swimmer (Med Ball)	20	20
PB Hand Taps	20 sec	20 sec
PB Leg Raises	20	20
Med Ball Loop Around w/ V-Up	20	20