

LEVEL 3 – INTERMEDIATE MANUAL



Handbook 3: Preparing For Peak Performance

A Publication Of The USA Hockey Coaching Education Program



The USA Hockey Coaching
Education Program is Presented By



USA Hockey Coaching Education Program

Level 3 – Intermediate Manual

Handbook 3 Preparing for Peak Performance

Editor: Mark Tabrum

Technical Advisor: Bob O'Connor

Technical Editors: Mark Tabrum, Dick Emahiser, Bob O'Connor,
Tim Gerrish, Ed Herneisen, Matt Walsh, Bill Switaj

Production: Chuck Menke, Dana Ausec, Yariv Amir

Preparation: Sarah Ross



Copyright 2004, USA Hockey

ALL RIGHTS RESERVED.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of USA Hockey, 1775 Bob Johnson Drive, Colorado Springs, CO 80906.

Portions of this publication are adapted from material copyrighted by USA Hockey for use in this manual only by USA Hockey. No further use of this material is permitted without permission from USA Hockey.

Library of Congress Cataloging in Publication Data:

USA Hockey Coaching Education Program Level 3 – Intermediate Manual
Handbook 3: Preparing for Peak Performance

ISBN: 1-884125-14-X

109876543

USA Hockey disclaims responsibility for any adverse effects or consequences from the misapplication or injudicious use of the information contained within this text.

CONTENTS

Handbook 3 Preparing for Peak Performance

1. Dry Land Training	1
2. Dry Land Training for Goaltenders.....	29
3. Strength and Conditioning Program	45
4. Player Training Log	79
5. Game Day Preparation	83

Acknowledgements

We wish to thank the following individuals for their assistance and contributions in the preparation of this manual. All of their efforts added immeasurably to the final product, and their passion and dedication to the sport of ice hockey is deeply appreciated.

Dr. Alan Ashare

Ken Asplund

Bill Beaney

Val Belmonte

Joe Benedetto

Joe Bertagna

Kenneth W. Biedzynski

Jack Blatherwick

Dr. Joel Boyd

Steve Dagdigian

Dan Esdale

Ernie Ferrari

Tim Gerrish

Alan Godfrey

Peter Haberl

Ed Herneisen

Jim Johannson

Ken Johannson

Eric Lawson

Mike MacMillan

Joe Mallen

Dr. B. Pat Maloy

Anthony S. McCaskey

Glenn Olson

Dave Peterson

Dr. Jim Schaffhausen

Ray Scherer

Dr. Vern Seefeldt

Ron Skibin

Jim Smith

Jack Stoskopf

Kevin Sullivan

Doug Woog

Chapter 1

Dry Land Training

OBJECTIVES

- Provide an understanding of dry land training
- Provide a variety of dry land training activities
- Outline the value dry land training has on hockey skill development

INTRODUCTION

There are three basic cycles of training - off-season, pre-season, and active season. Let's look at the two basic age groups and their age characteristics.

9-12 Years of Age

- Large muscles
- Organic systemic development
- Purposeful thinking

13-15 Years of Age

- Age of sexual development
- Jumping ability increases
- Body grows larger
- Growth of major muscle groups
- Development of major muscle groups
- Joints become stronger and firmer
- Functional disharmony
- Techniques not stable
- Improvement of braking reactions
- Abstract thinking
- Ability to analyze

For these age groups, we should emphasize the development of agility, speed and cooperation. When one thinks of dry land training, the first thought which usually enters the mind is hard work, running for miles and general drudgery. This, of course should not be the case at all, especially with the younger age groups. Coaches have the responsibility of providing a program which not only enhances the physical development of a young player, but also creates a healthy environment rich in fun activities. **Most of our youngsters participate in sports other than hockey. This is healthy and should be encouraged. To be a good hockey player, one must be a good athlete.**

Not all players will want to participate in a dry land training program, especially during the off-season. This program is for those who wish to participate. The equipment you will need for a reasonably successful program is usually available in your home town.

- Basketballs
- Baseballs
- Hockey Sticks
- Jump Ropes

- Medicine Balls
- Rubber Suspenders
- Soccer Balls
- Tennis Balls

We all know what the qualities of agility and speed are. How about the quality of cooperation? Hockey is a game of cooperation and this quality can be developed through various off-ice training exercises. This is an important quality in the development of youth hockey players. We have some fine players who are agile, fast and strong, but who refuse to cooperate with their teammates. Teamwork should be developed through team games and partner drills in off-ice training. When players are exposed to this type of training at a young age, they soon become accustomed to it and if presented properly, they will enjoy it and continue in team sports. If a player dislikes it, he/she should not be forced to continue. We want the players to enjoy our programs.

Off-Season Dry Land Training

(June, July and August)

12-and-Under (Pee Wee):

1 x per week

45 minutes

14-and-Under (Bantam)

1 x per week

60 minutes

16/18-and-Under (Midget):

1 x per week

60 minutes

Pre-Season Dry Land Training

(September until start of season)

12-and-Under (Pee Wee):

2 x per week

45 minutes each

14-and-Under (Bantam)

2 x per week

60 minutes each

16/18-and-Under (Midget):

2 x per week

60 minutes each

Active Season Dry Land Training

(During Season)

12-and-Under (Pee Wee):

1 x per week

45 minutes

14-and-Under (Bantam)

1 x per week

60 minutes

16/18-and-Under (Midget):

1 x per week

60 minutes

Exercises can be done in grassy outdoor areas in the evening or in a local gym. Provide water for your players and avoid hot, humid evenings and the sun.

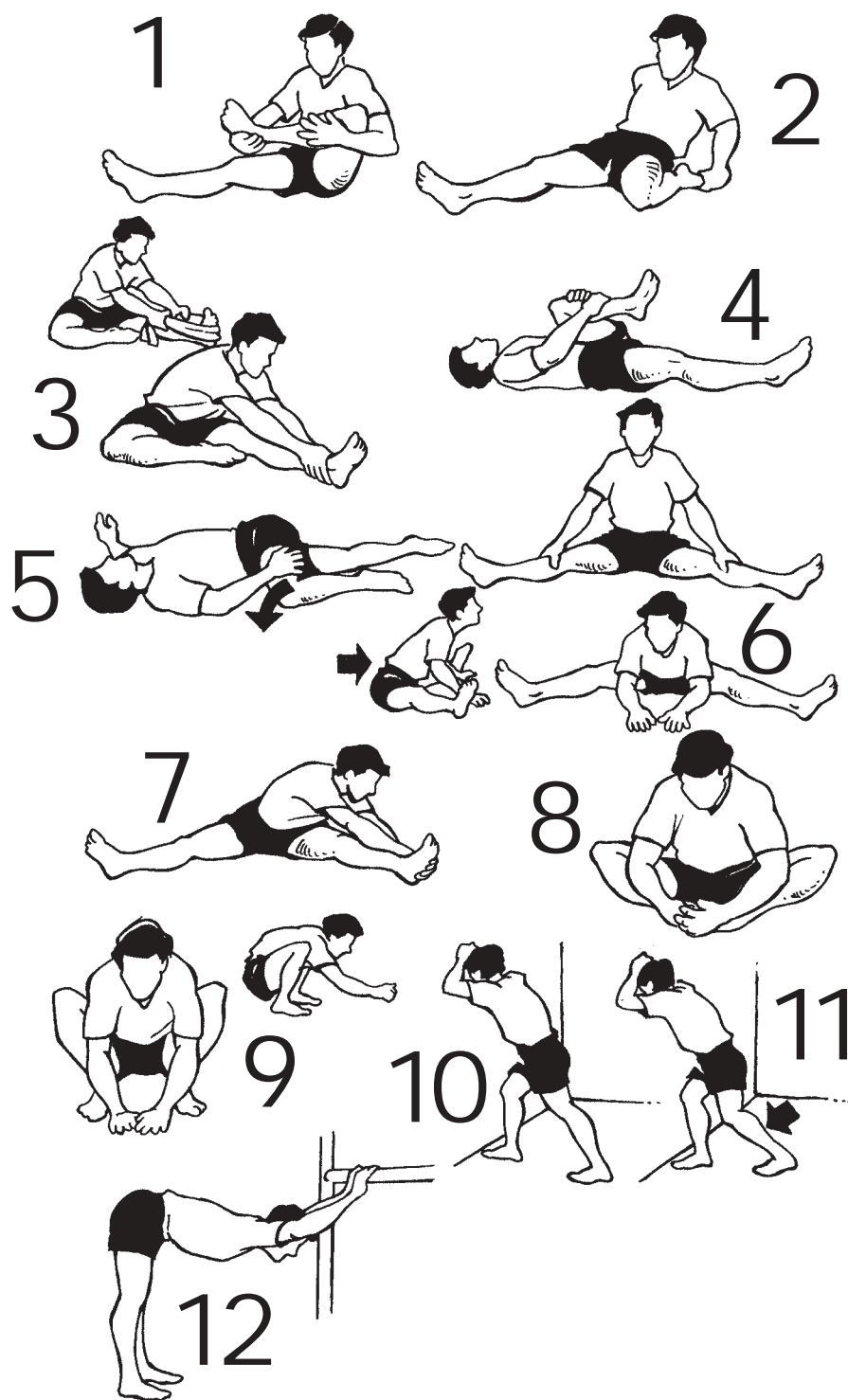
STRETCHING

How to Stretch

Stretching should be done slowly with no bouncing or jerky movements. Move to where you feel a slight, easy stretch. Hold this feeling of a slight stretch for 15-30 seconds, then slowly increase the stretch as you feel yourself relax. Hold this development stretch for another 15-30 seconds. Do not strain or hold a stretch that is drastic or painful. Stretch the muscles slowly and with control. The key is to be relaxed. Don't worry about flexibility. Stretch relaxed, and limberness will increase.

The Series of Stretches Takes Approximately 10 Minutes

1. Pull one leg to your chest with both hands. Hold as easy stretch. Stretch the legs as one unit. This stretches the upper hamstrings, gluteus maximus and gluteus minimus. If you need more stability in this stretch, lean back against something. Hold stretch for 20 seconds.
2. Sit up and place the leg that you have been stretching behind you in the hurdles stretch position. Slowly lean back to stretch your quadriceps further. Hold a relaxed stretch for 50 seconds.
3. Straighten your bent leg and bring the sole of your other foot to rest next to the inside and upper part of your



straightened leg. Lean slightly forward and stretch the hamstring of the leg that is straightened out in front of you. Find an easy stretch and relax. Hold for 30 seconds. If necessary, use a towel to help stretch. *Repeat stretches 1,2 and 3 with the other leg.

4. Next, while lying on your back, bend one knee and pull it toward your chest. For this stretch keep the back of your head on the mat, if possible, but don't strain. Hold the stretch for 30 seconds, each side.
5. From the previous stretch position, with your opposite hand pull your bent leg up

and over your other leg as shown on Page 3. Make sure that both of your shoulders are on the floor. Turn your head to look toward the hand of the arm that is straight. With your other hand on your thigh (resting just above the knee), control the stretch in your lower back and butt muscles by pulling your leg down toward the floor. Repeat the stretch to your other side. Hold the stretch for 30 seconds, each side.

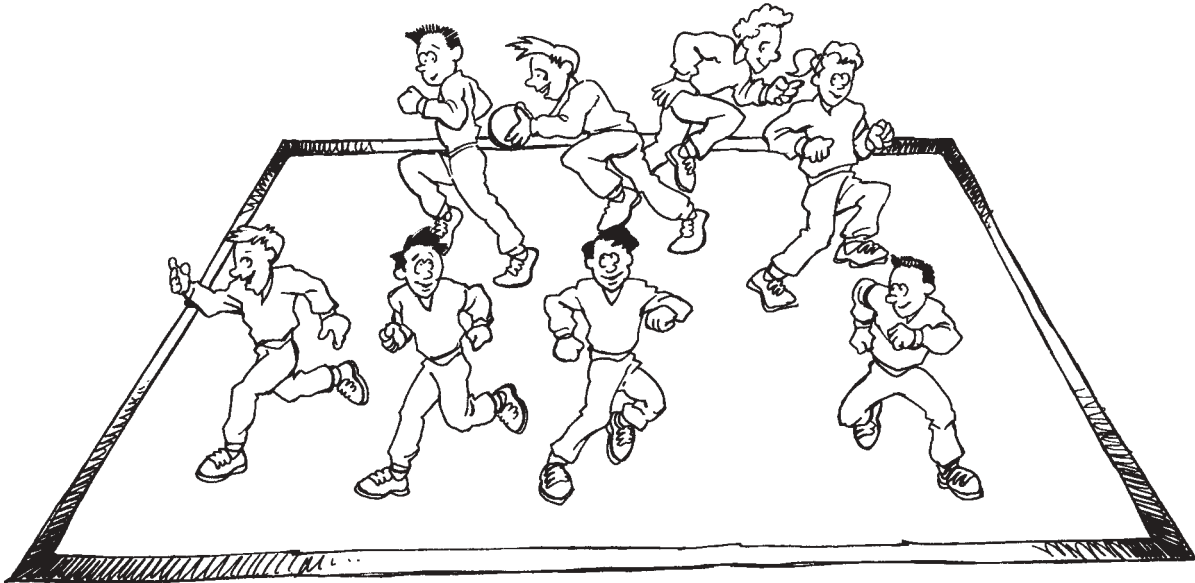
6. In a sitting position, open your legs as far as comfortably possible. With legs straight and feet upright and relaxed at the ankles, slowly lean forward at the hips until you feel a good, even stretch on the inside of the upper legs. Keep your back straight. This is a difficult way to stretch for many people. The muscles need time and regularity with stretching to loosen up, so have patience. Hold stretch for 30 seconds.
7. To stretch your left hamstring and the right side of your back, slowly bend forward from the hips toward the foot of your left leg. Keep your head forward and back straight. Hold for 30 seconds to each side.
8. Put the soles of your feet together. With your hands around your feet, pull yourself forward to stretch your groin and back. Keep your elbows on the inside of your legs to give you stability in the stretch. Do not bounce. Hold stretch for 30 seconds.
9. With your feet shoulder-width apart and pointed out to about a 15 degree angle, squat down keeping your heels on the ground. If you have trouble staying in this position, hold onto something for support. This is a great stretch for your ankles, achilles tendons, groin and low back. Hold stretch for 30 seconds.
10. To stretch your calf, stand an arms-length from a solid support and lean on it with your forearms, your head resting on your hands. Bend one leg and place your foot on the ground in front of you leaving the other leg straight, behind you. Slowly move your hips forward until you feel a stretch in the calf of your straight leg. Be sure to keep the heel of the foot of the straight leg on the ground and your toes pointed straight ahead. Hold an easy stretch for 30 seconds. Do not bounce. Stretch both legs.
11. To stretch the soleus and achilles tendon, slightly bend the back knee, keeping the foot flat. This gives you a lower stretch which is also good for maintaining or regaining ankle flexibility. Hold for 15 seconds each leg.
12. A stretch for the arms, shoulder, and back. Hold onto something that is about shoulder height. With your hands shoulder-width apart on this support, relax, keeping your arms straight, your chest moving downward and your feet under your hips. Hold this stretch for 30 seconds.

INTERMEDIATE OFF-SEASON DRY LAND TRAINING ACTIVITIES

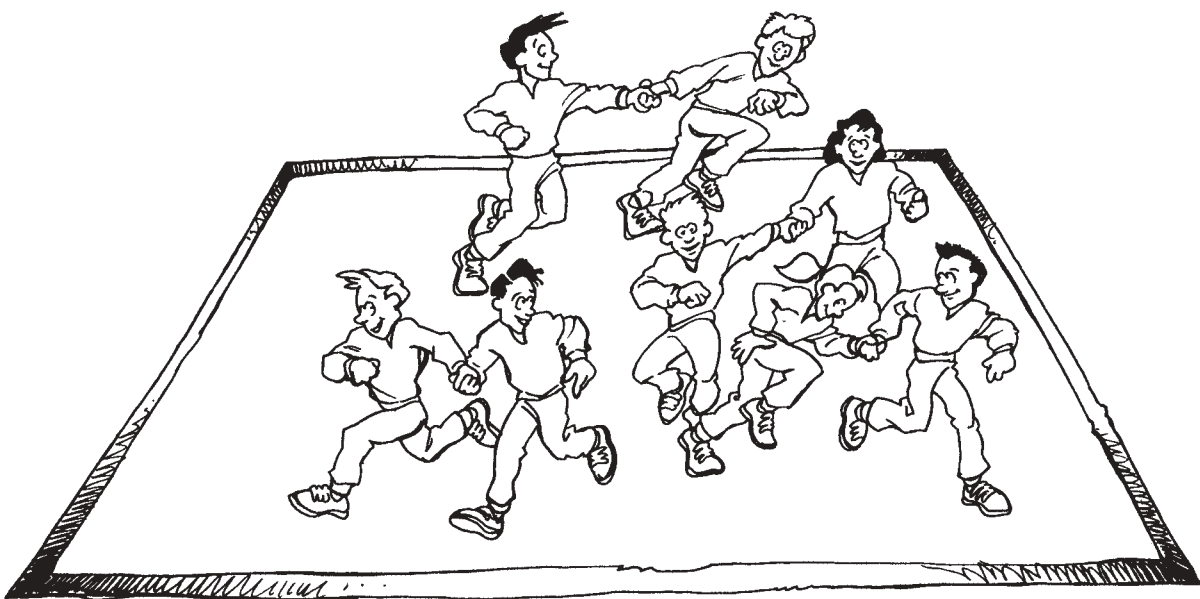
1. Tag within a specified area.

Variations:

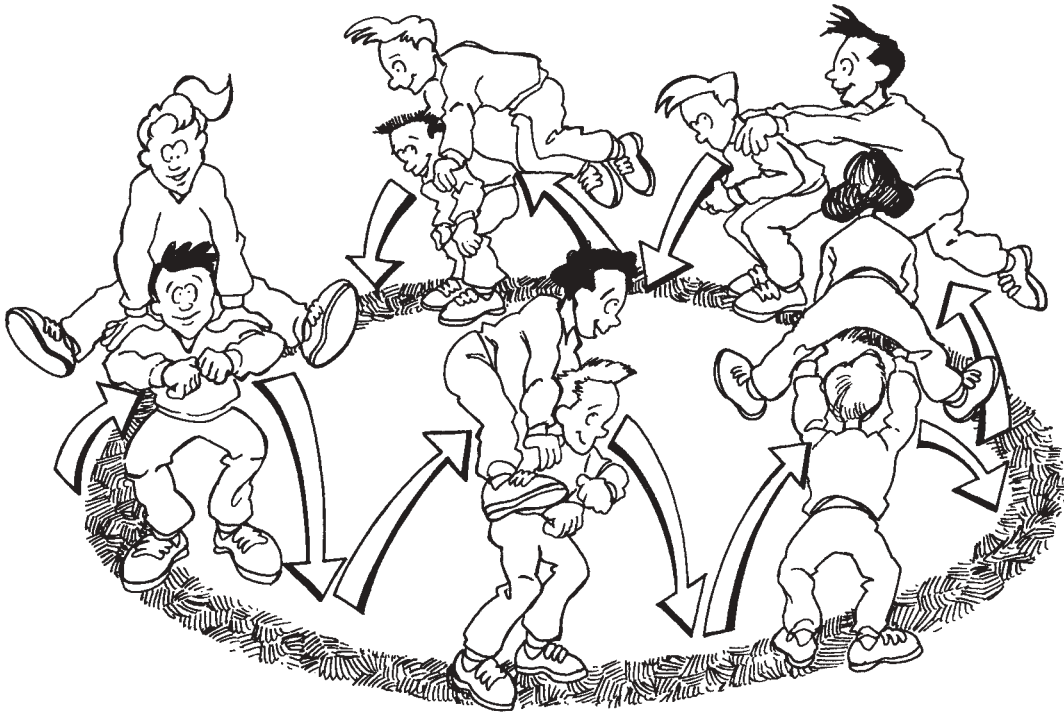
- a. Tag with a medicine ball or basketball.



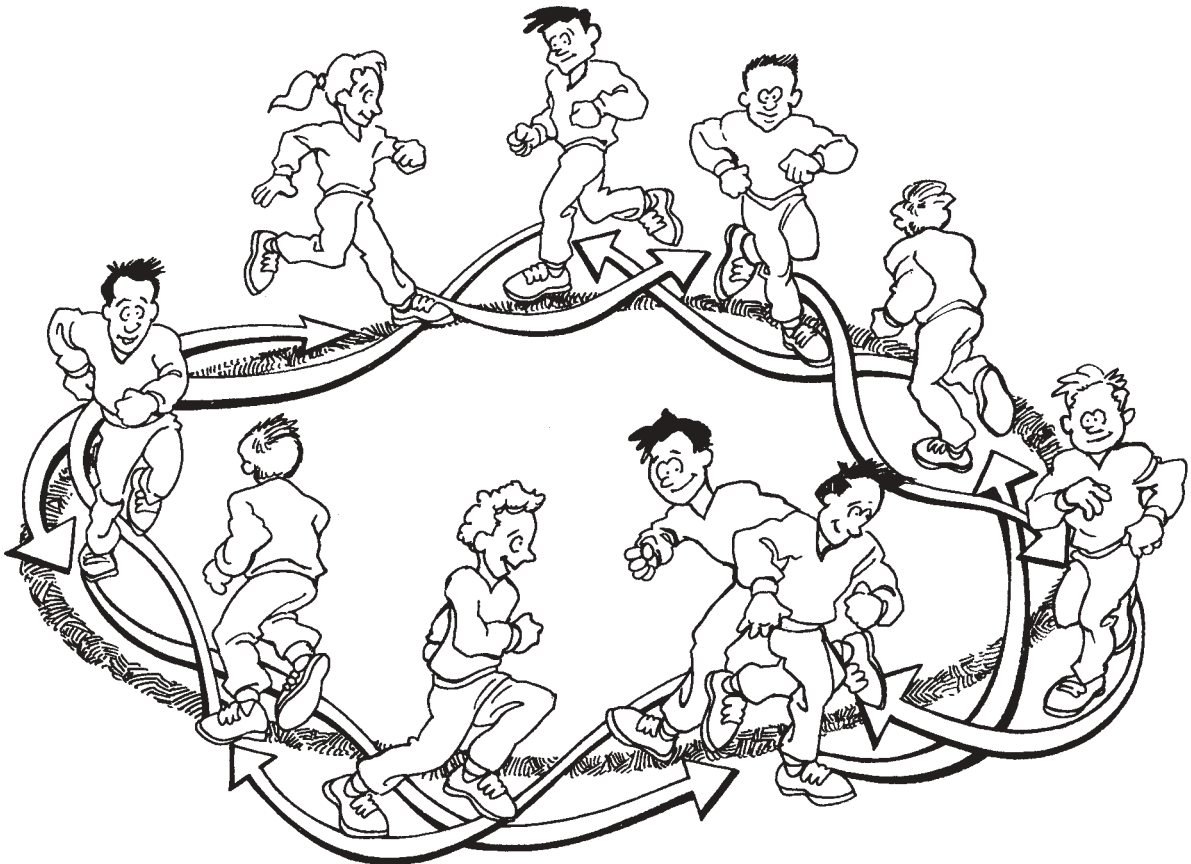
- b. Tag with partners, everyone pairs off holding hands.



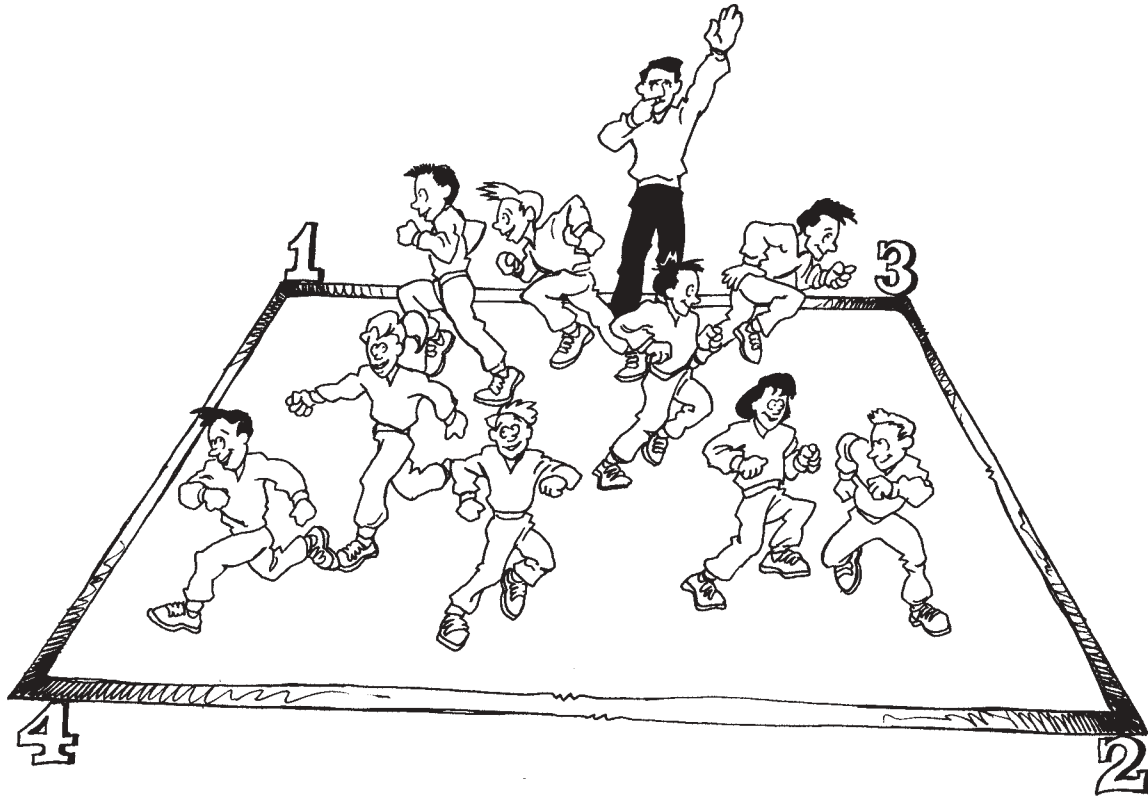
2. Leap frog in a circle.



3. Running a circle from two directions. Players should avoid each other as they run.



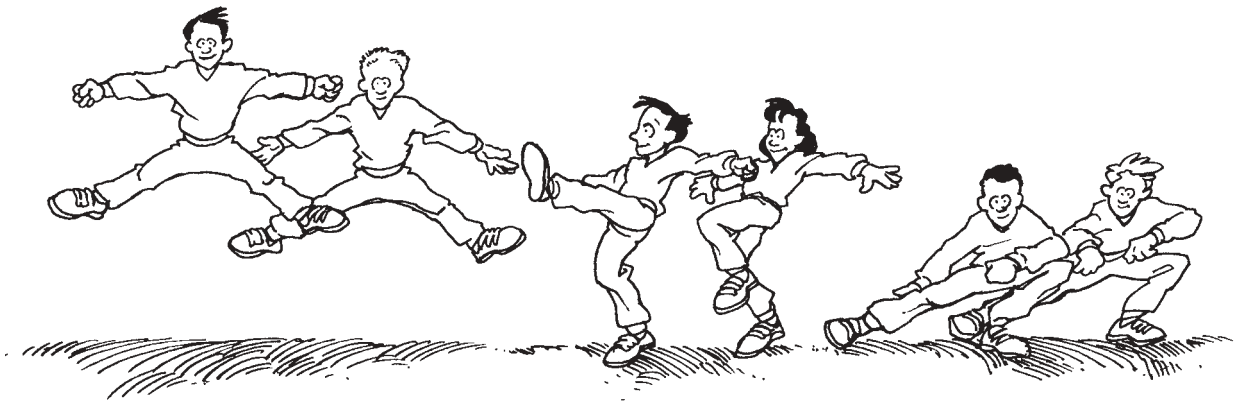
4. All players in a specified area running in different directions. The players are numbered one through four. Each corner of the specified area is numbered. When the coach gives the signal, all players race to their corner.



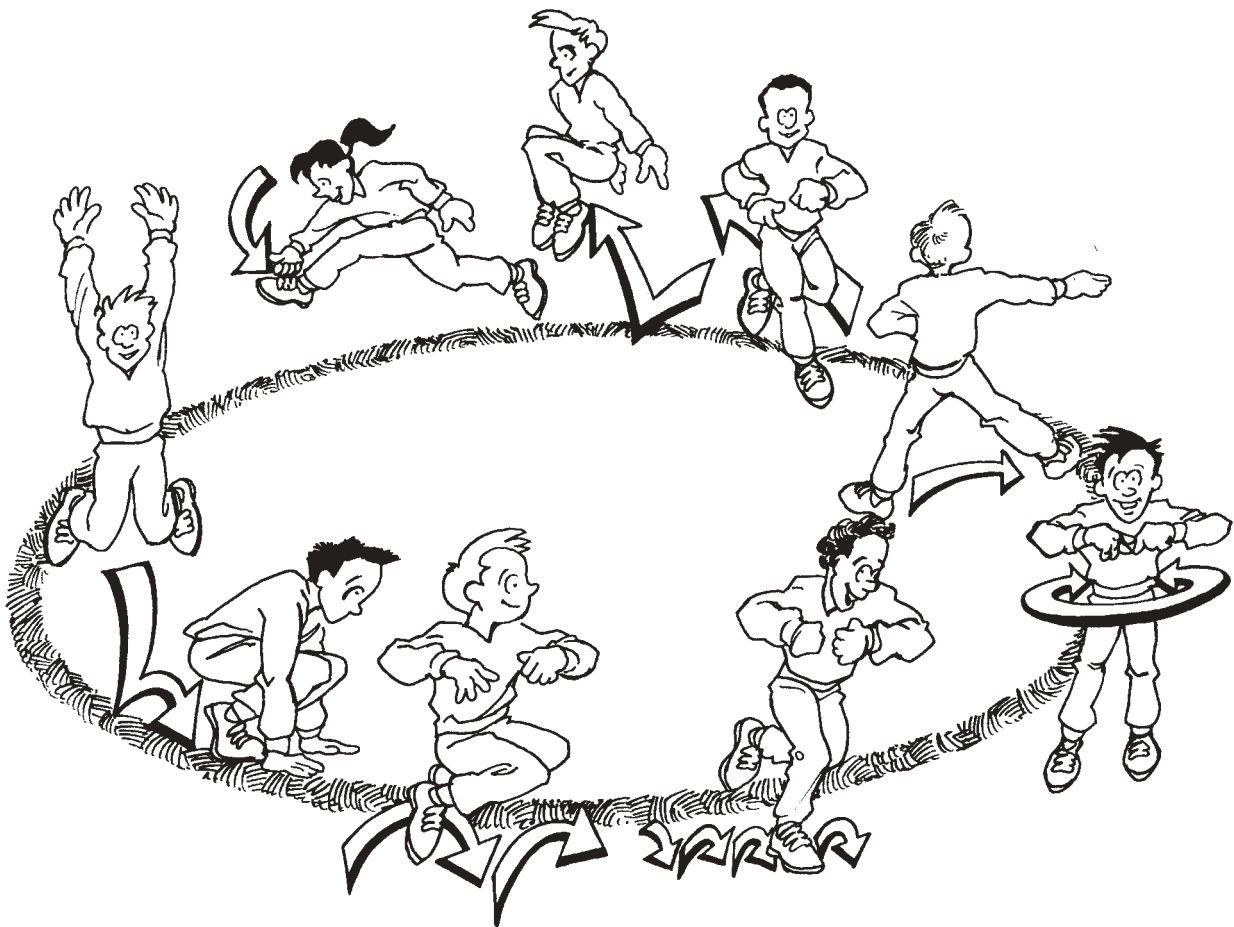
5. Players form a line of approximately five players. The first player in line uses his arms to block the player who attempts to tag the last player in line. All players in the line place their hand on the hips of the player in front of them and they must hold on.



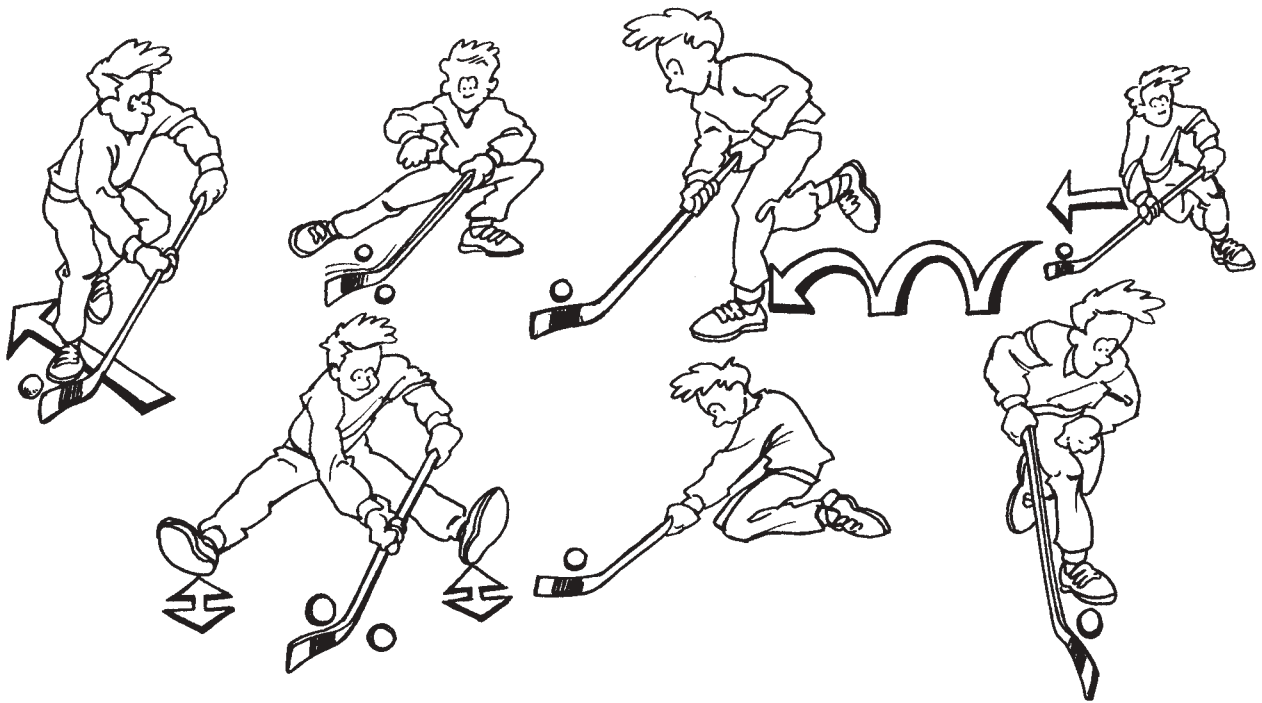
6. Follow the leader - pair off. One player follows the other, imitating his/her partner's moves. Stress agility and acrobatics.



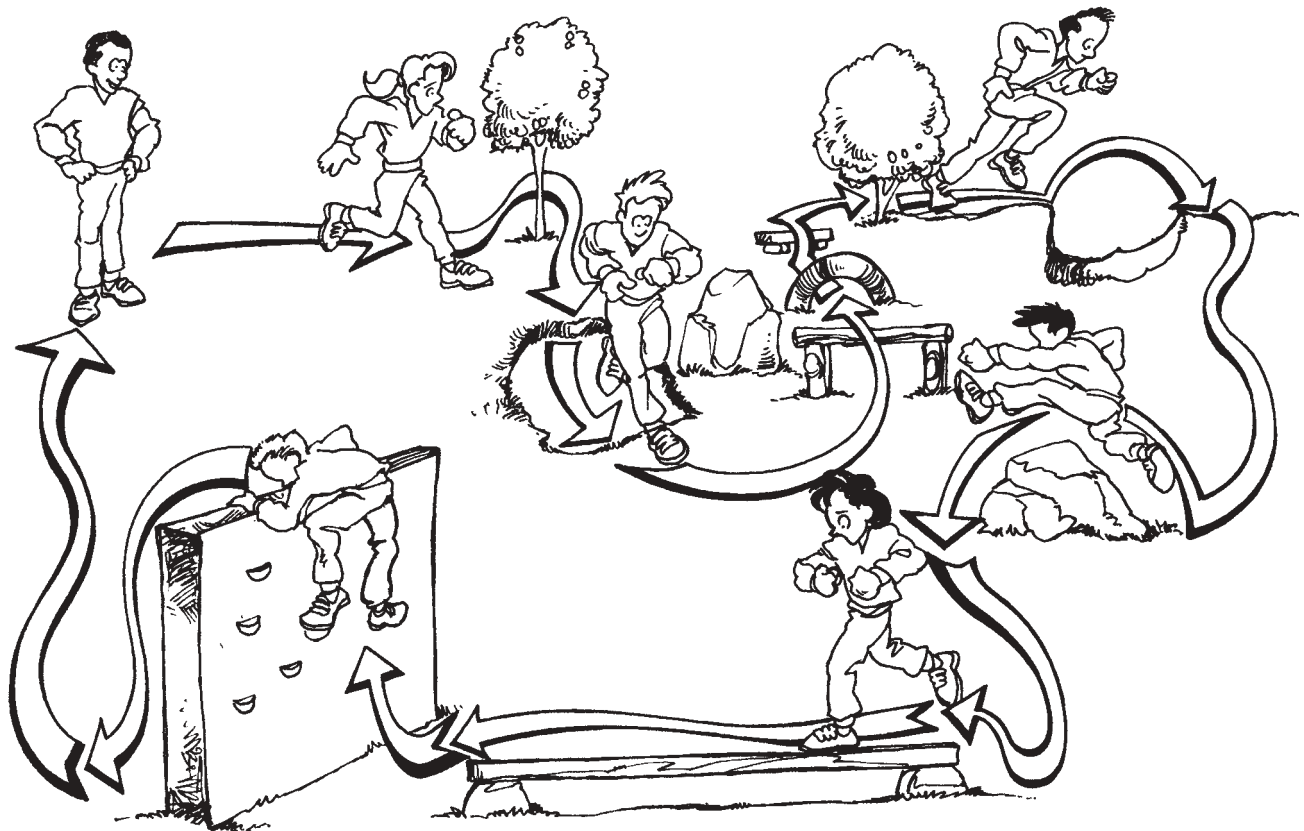
7. Running the perimeter of the circle, players execute the following moves: hopping on one leg, hopping on two legs, turning different ways, exaggerated cross-overs, backward running, side hops, high knees, high heels, touching the opposite foot with their hand. Use your imagination.



8. Stickhandling with a ball (i.e. baseball, tennis ball, golf ball), from all positions, on the knees, on one or both legs while hopping, sitting with feet raised off the ground. Forward, backward and lateral moves. Use one or more balls.

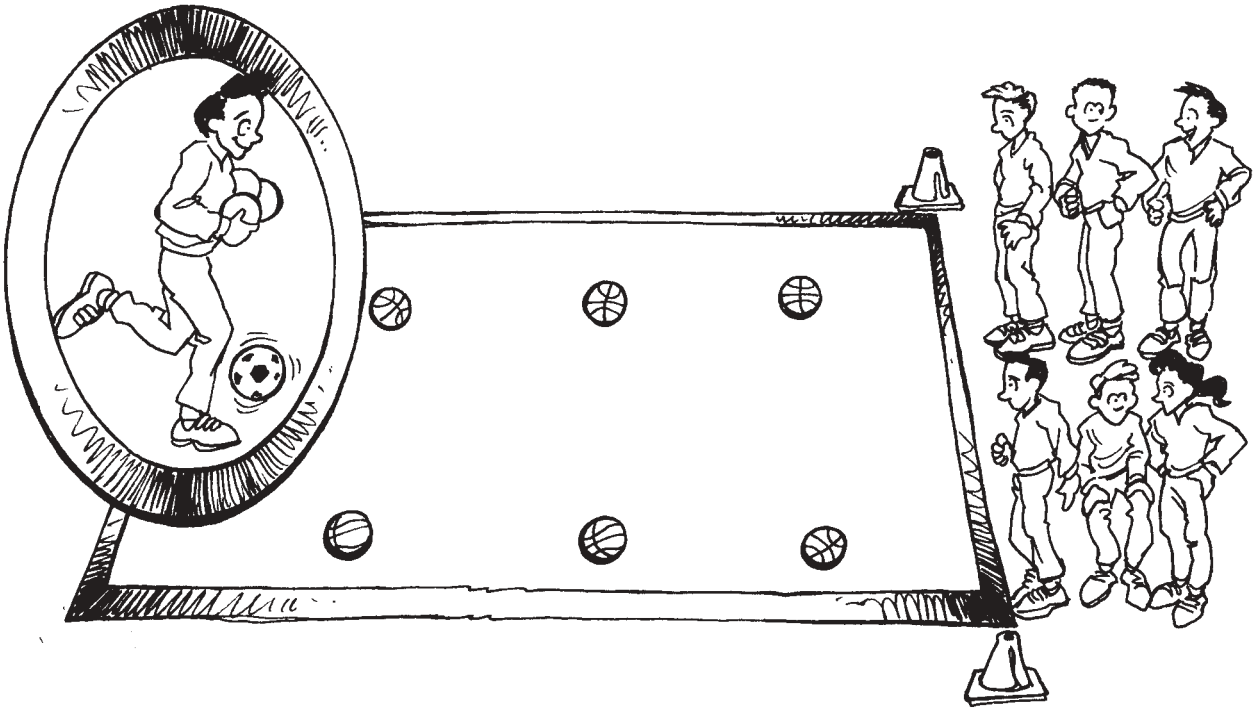


9. Running through obstacle course.

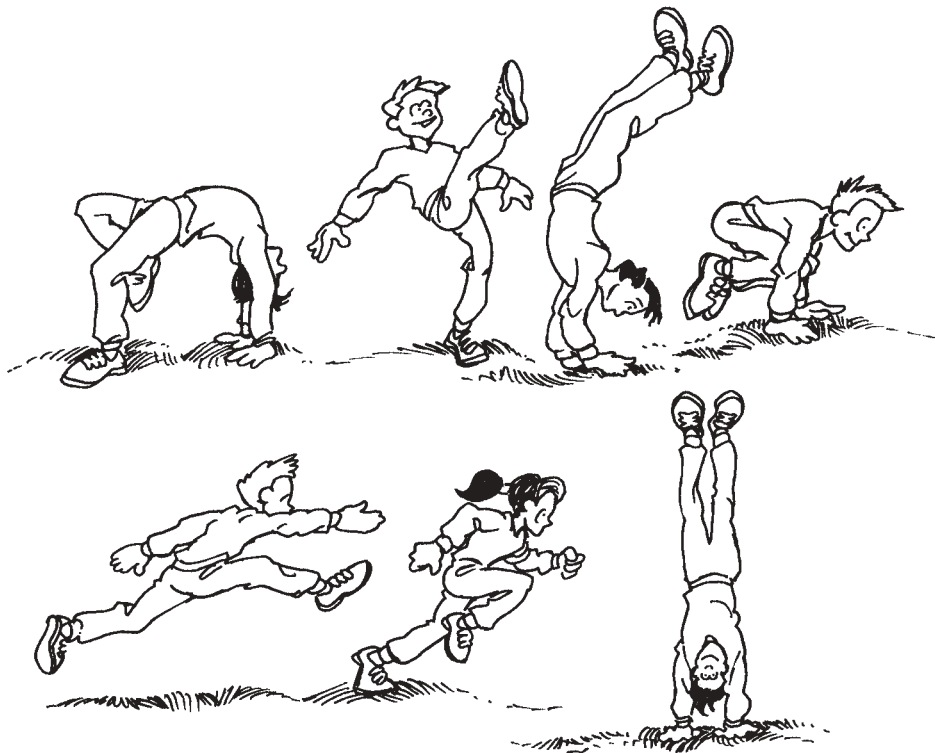


10. First player in each line takes off on the signal. He/she must retrieve all balls, returning to the starting line after picking up each ball, or retrieve all the balls at once. When accomplished, the next player goes and has to put all the balls back in the same manner in which they were picked up.

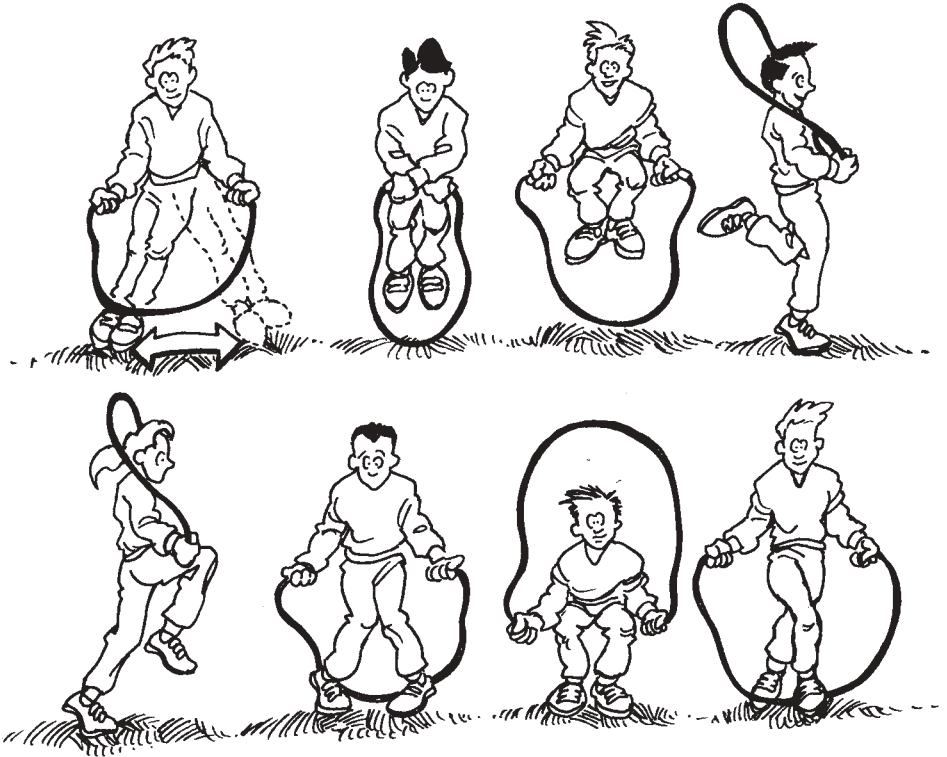
Variations: include handling a soccer ball with feet at the same time. Use your imagination.



11. Acrobatics - tumbling, hand stands, walking on hands and broken field running using all types of quick and explosive movements.



12. Jump rope - all types of jumping rope, forward, backward, etc.



13. Soccer and basketball together. Dribble and play soccer at the same time.



14. Stickhandle with a ball (i.e. baseball, tennis ball, golf ball) and play soccer at the same time.



15. All kinds of games - soccer, basketball, dry land hockey, etc. There are numerous examples, use your imagination and make sure your players enjoy these activities. Utilize different exercises in each practice session. Make it fun. Remember, for 12-and-Under (Pee Wee), no weights, other than a light medicine ball. Agility and dexterity are to be developed.

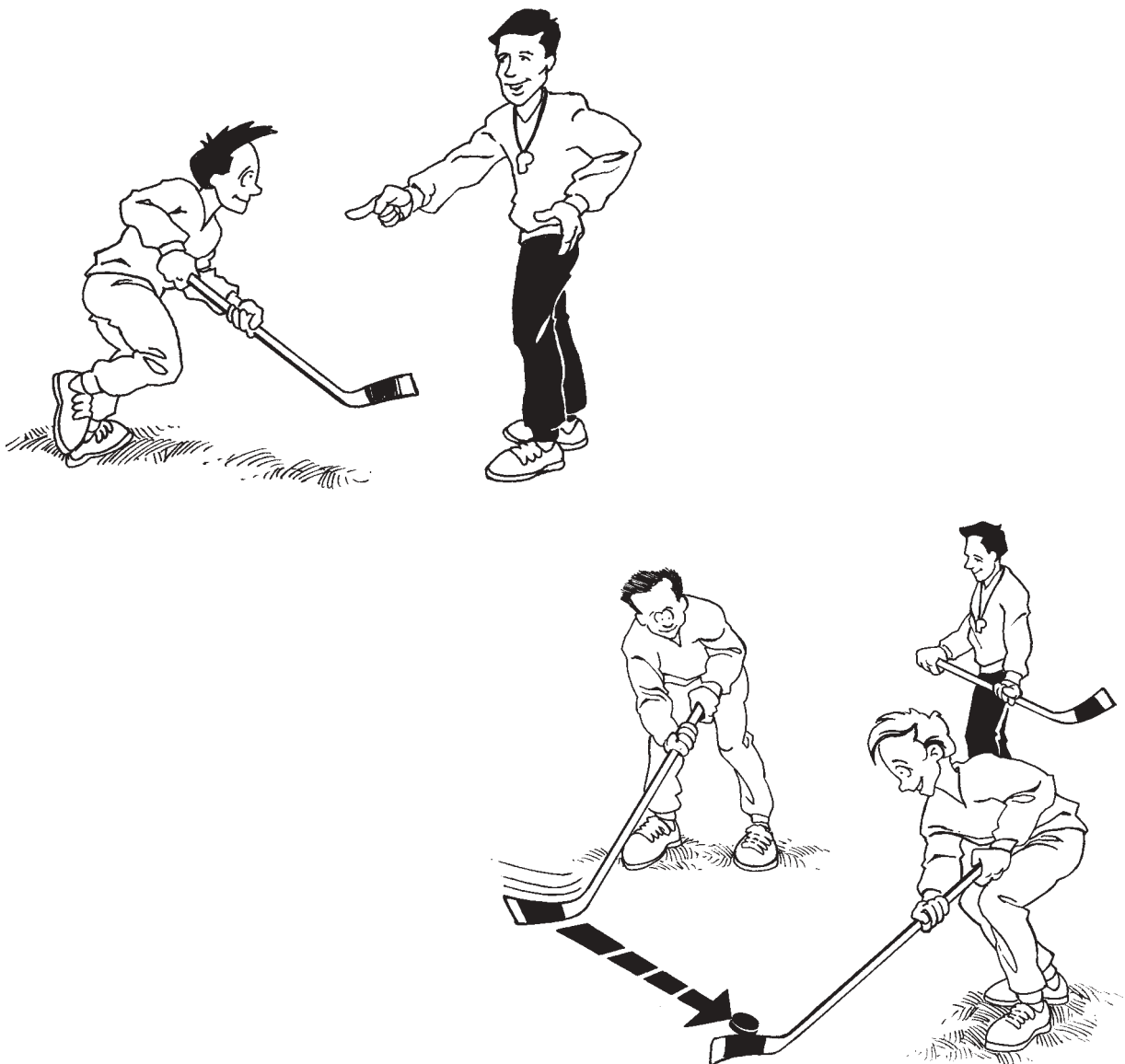


INTERMEDIATE PRE-SEASON DRY LAND TRAINING ACTIVITIES

The imitation of on-ice hockey skills.

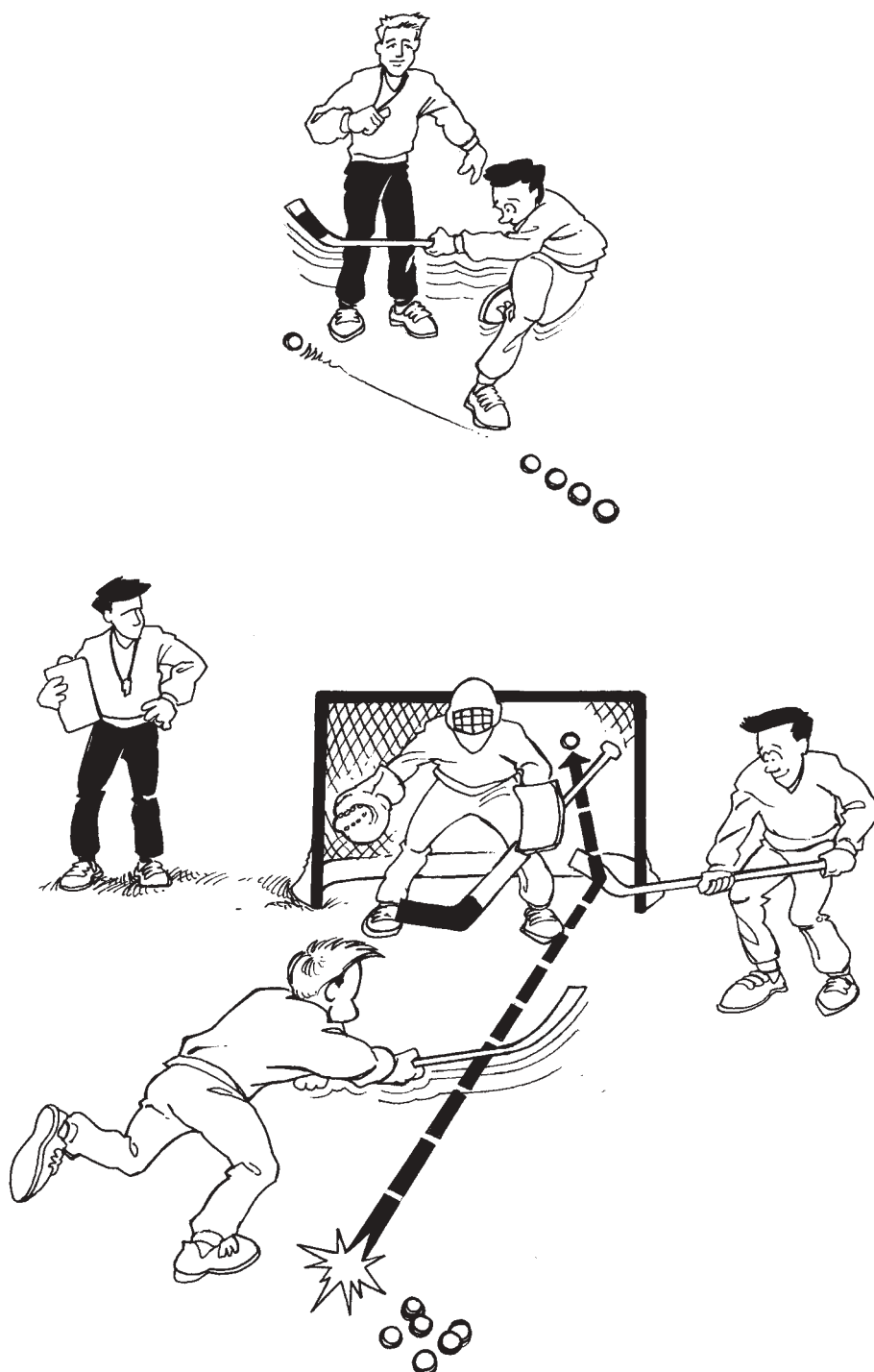
- skating
- puckhandling
- shooting
- passing

The coach should review the basic skills necessary to be a good hockey player. As an example: for skating, use your associate level manual and go over each aspect of skating. You can do this on dry land. The players will learn the basic stance, and the principles involved. When you do go on the ice, your players will already understand the basic principles. Explain and demonstrate puckhandling, passing, receiving and shooting. You can work on all of these aspects and more. Your goaltenders should receive separate instruction.



INTERMEDIATE ACTIVE SEASON DRY LAND TRAINING ACTIVITIES

The improvement of skills can be accomplished using off-ice areas such as gyms, or any outdoor playing field (i.e. tennis courts, basketball courts, football field, etc.). This also allows for work on team skills, emphasizing cooperation among players. Basketball, soccer, and floor hockey, emphasize cooperative team play. Create challenges for your players. Play basketball on one leg, always hopping. Play in a semi-squatting position. Play hockey emphasizing passing. Again, use your imagination and encourage your players to use theirs.



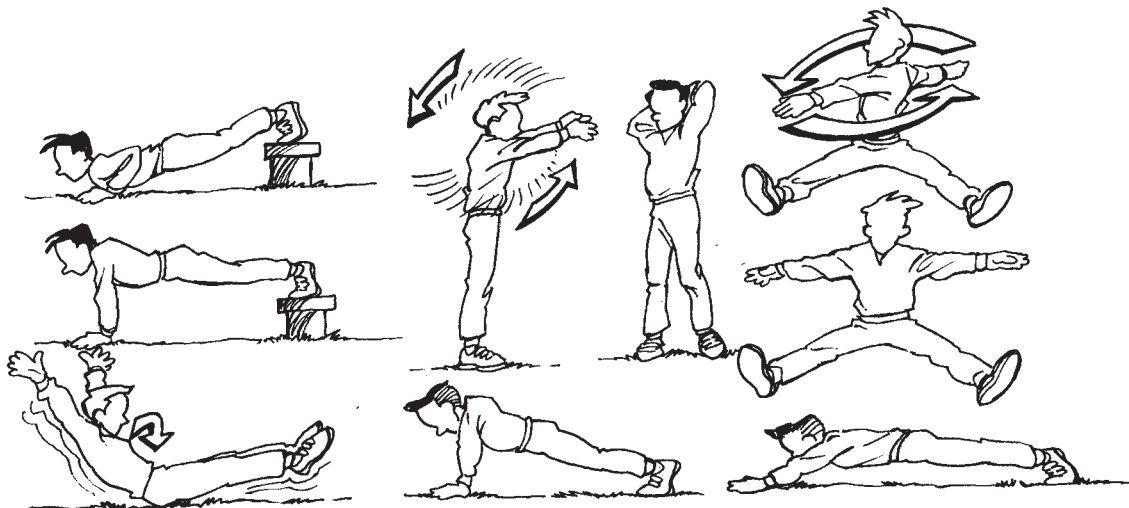


ADVANCED OFF-SEASON DRY LAND TRAINING PROGRAM

For players 13-15 years of age, the emphasis should be on developing speed. When you plan your program, use exercises which enhance speed, but also incorporate agility and player cooperation.

Begin and end each session with stretching exercises.

1. Basic calisthenics - pushups, sit-ups, toe touches, etc.

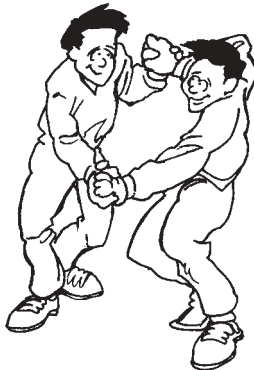


2. Partner exercises

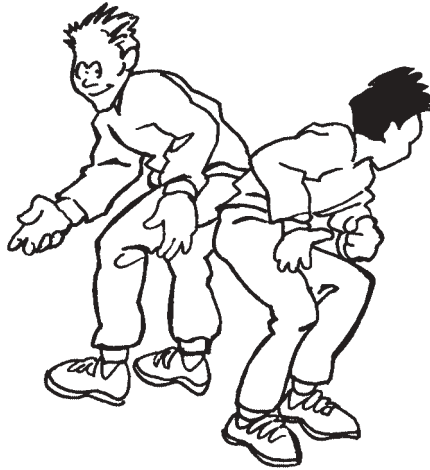
- a. Players face each other with a stick on the floor between them. On the whistle each player attempts to pull the other over the stick. Play best of five.



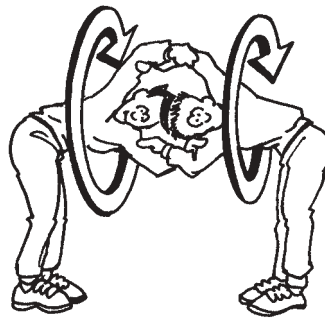
- b. Same thing, except now the players lock hands and attempt to push the other player off his footing. Play best of five.



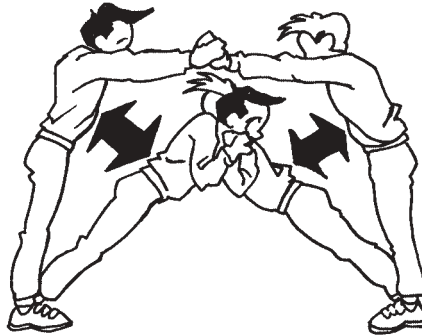
- c. Players line up back-to-back. On the whistle, try to bump the other player off his footing using their buttocks.



- d. Face-to-face resistance.



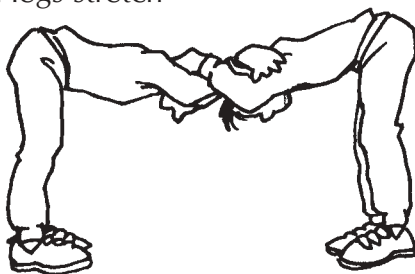
- e. Face-to-face - up and down resistance.



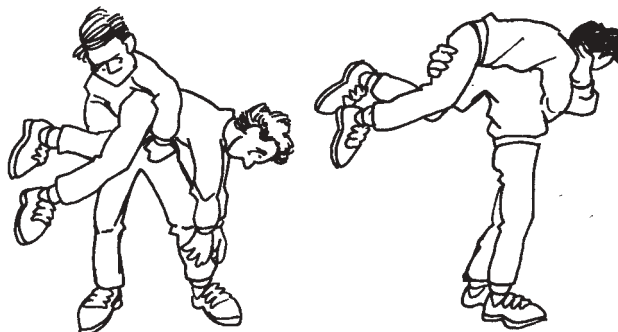
- f. Back-to-back - lift partner and hold.



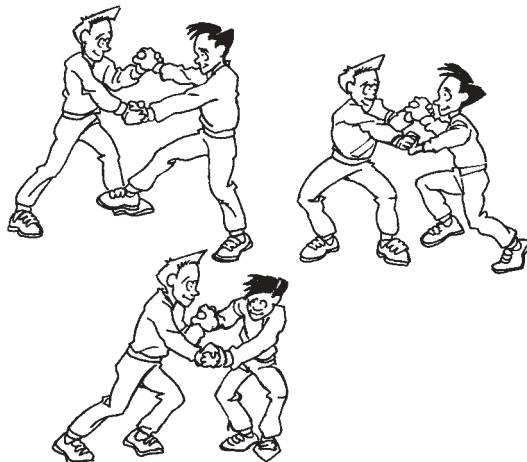
g. Face-to-face - heads down legs stretch



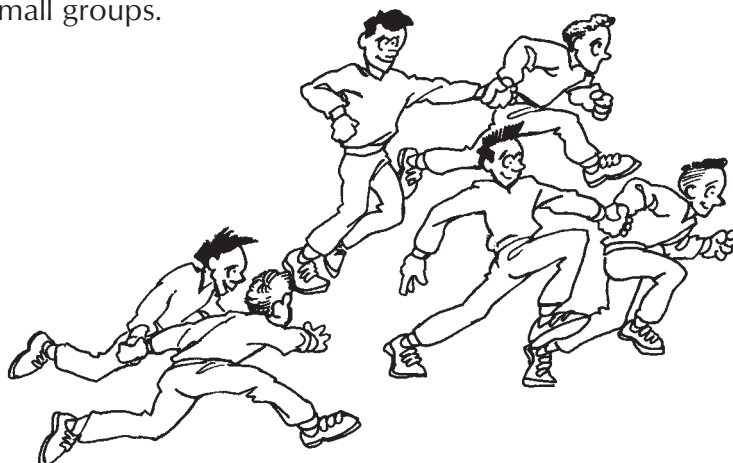
h. Carry partner.



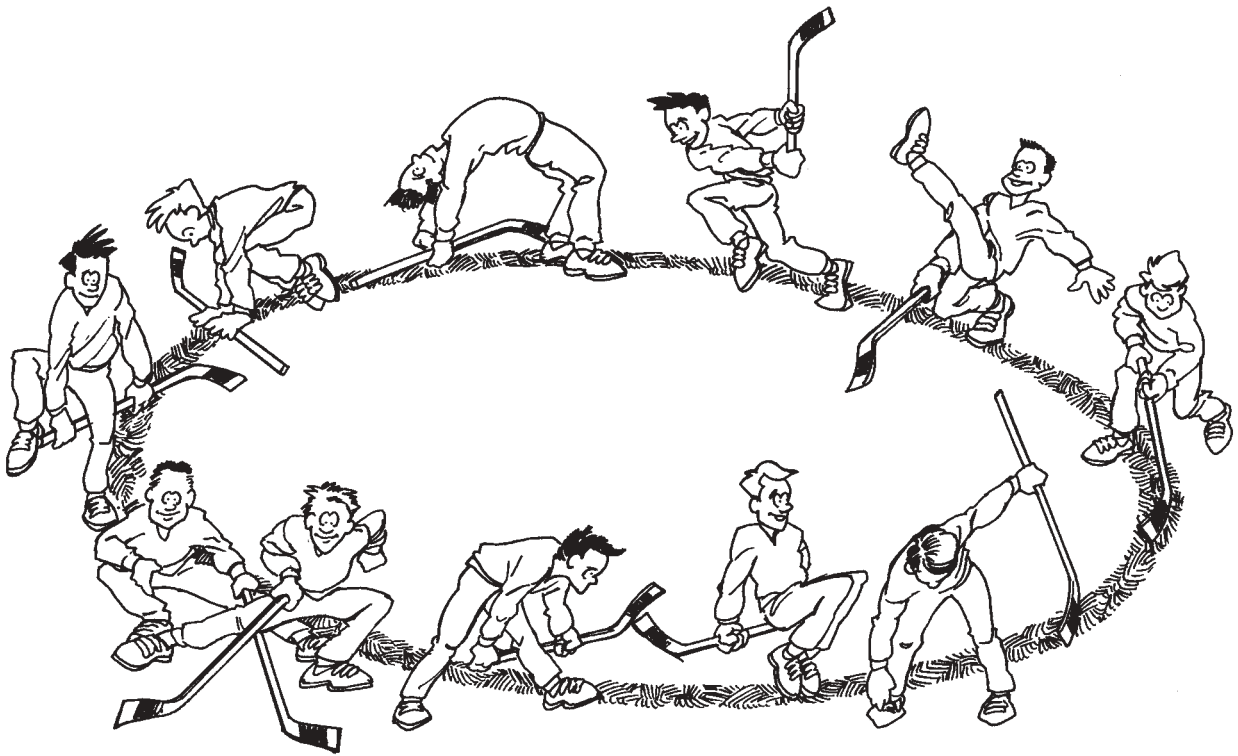
i. Step on partners feet - hold hands.



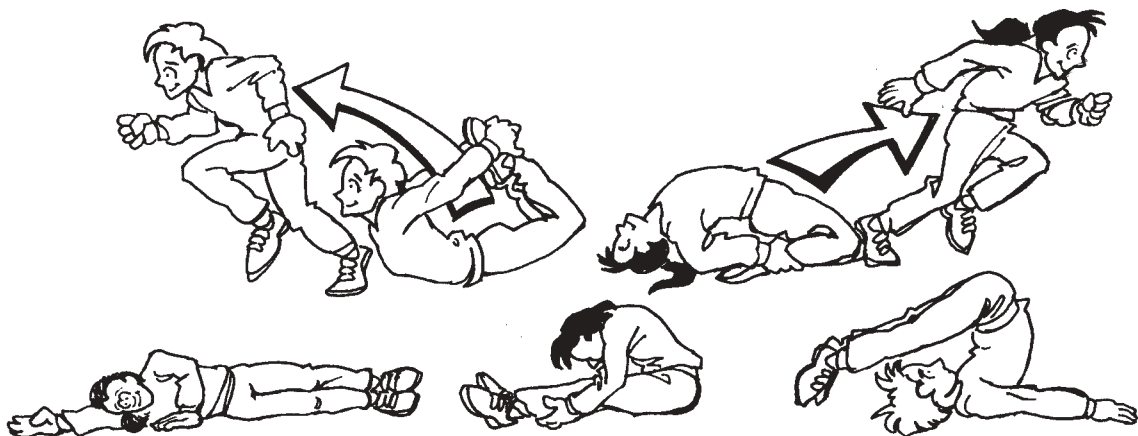
j. Agility running in small groups.



3. With sticks, jog in a large circle. Players imitate all types of moves with their sticks: two-handed stickhandling; stretching out low and one-handed sweep wide; hopping over their sticks, moving their sticks in and out of their bodies, between their legs, behind their back, etc.



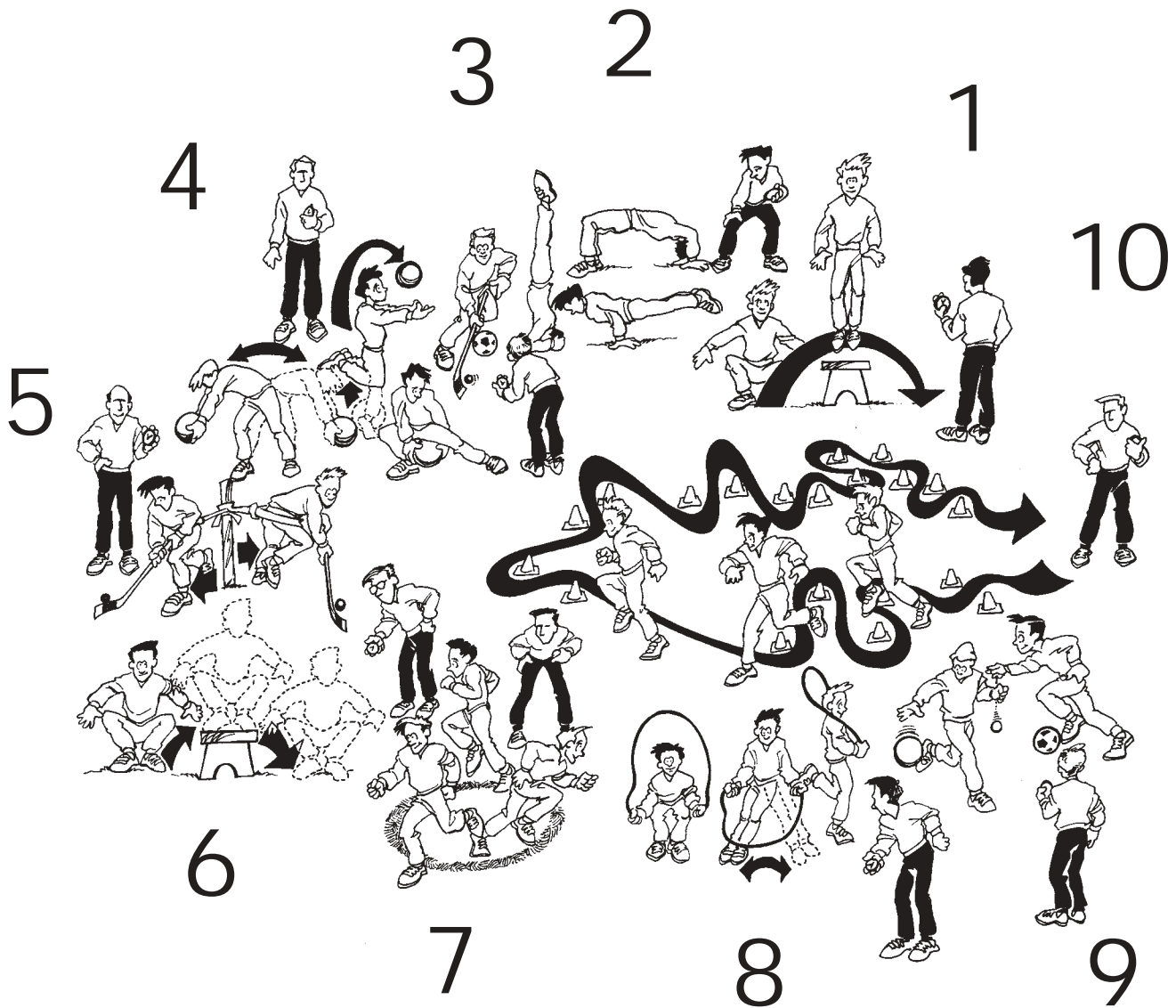
4. Games that emphasize explosive speed. Sprints (relays) starting from different positions. Sitting, lying on their belly, lying on their backs, etc.



5. Diversified team games.



6. Circuit training - Set up a large circle with various stations. Place players at each station. After each station is completed move counter-clockwise to the next station. Players work at full intensity for 15 seconds and rest for 30 seconds before they begin at the next station.

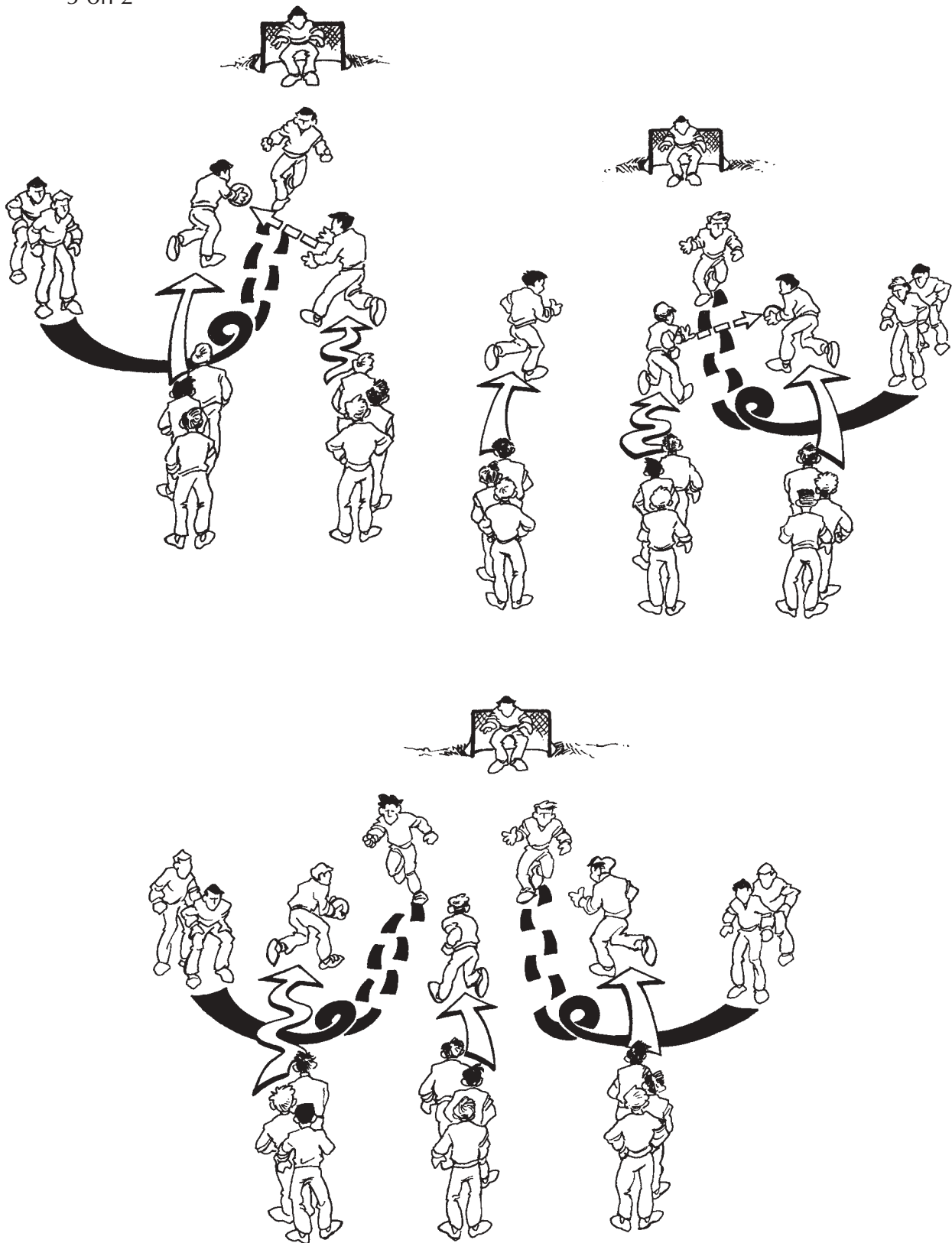


1. Jumping over a bench sideways
2. Acrobatics - tumbling
3. Hockey and soccer
4. Medicine ball - all types of moves
5. Suspenders - stickhandling
6. Hop off a chair - hop three times
7. Sprints - different directions
8. Jump rope
9. Basketball dribbling/soccer with a tennis ball at the same time
10. Broken field running - sprint

7. Hockey Team Skills

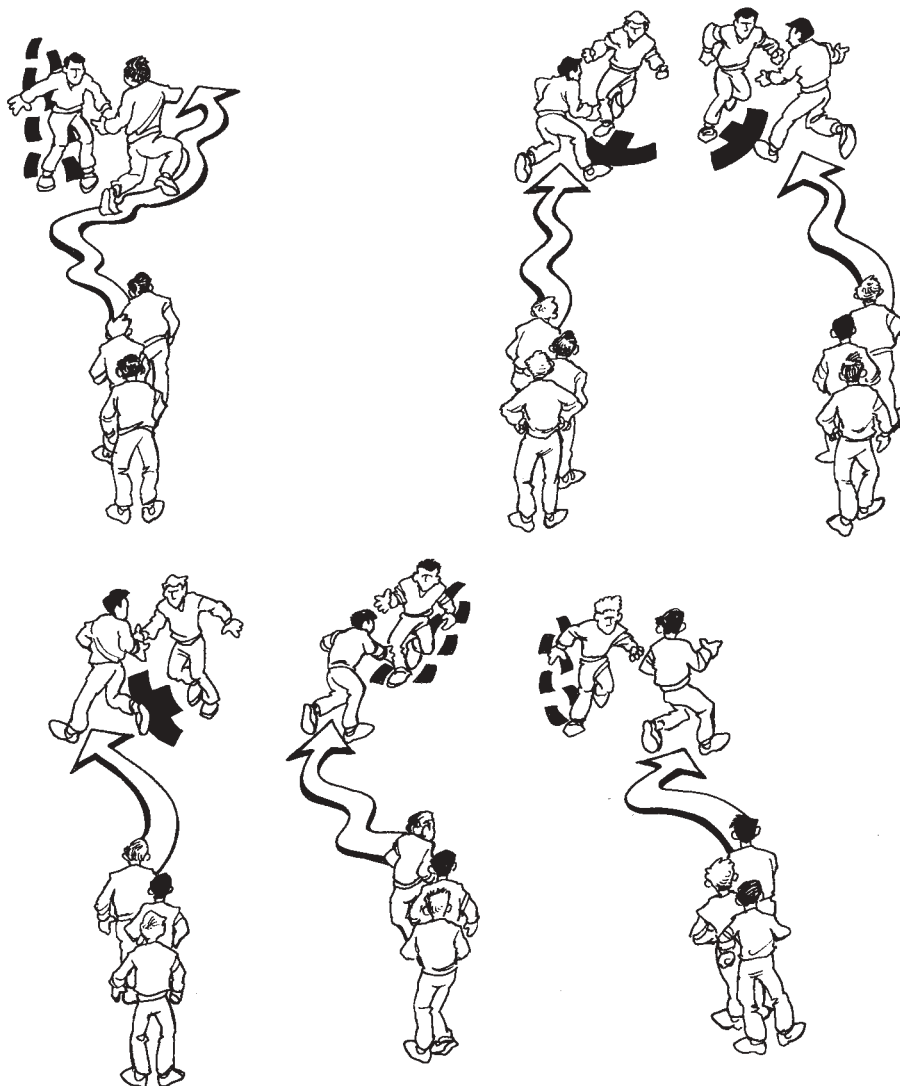
a. With basketball

- 2 on 1
- 3 on 1
- 3 on 2



b. Checking drills

- 1 on 1
- 2 on 2
- 3 on 3

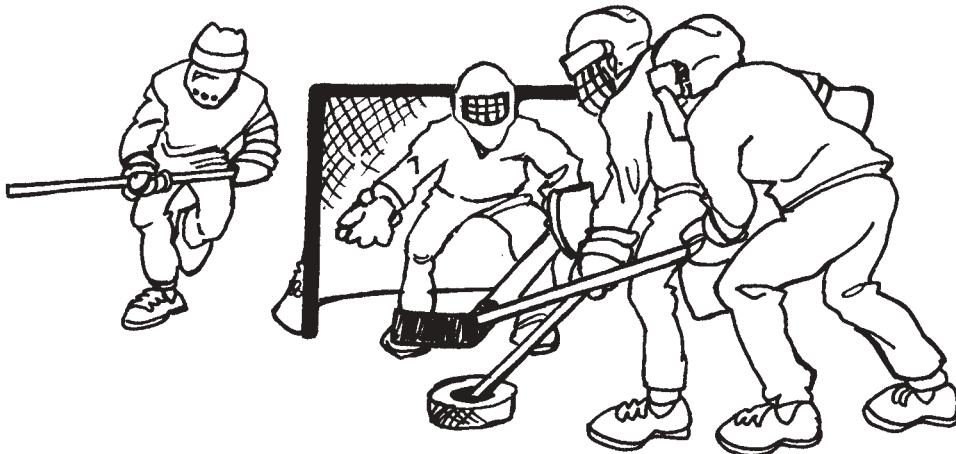


8. Imitation of hockey skills (all done at high speed)

- a. skating
- b. puckhandling
- c. shooting
- d. passing and receiving

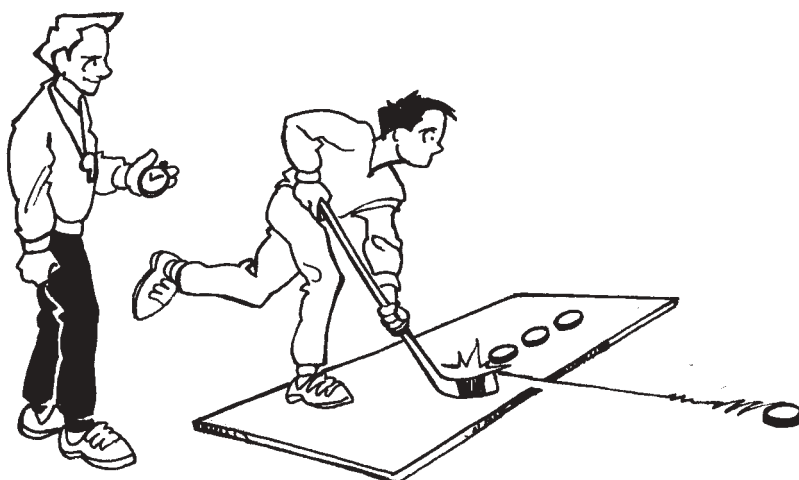
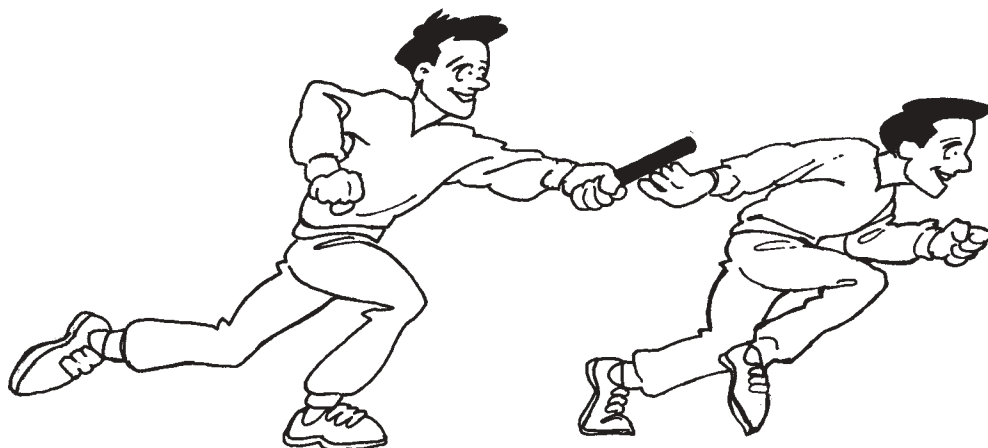
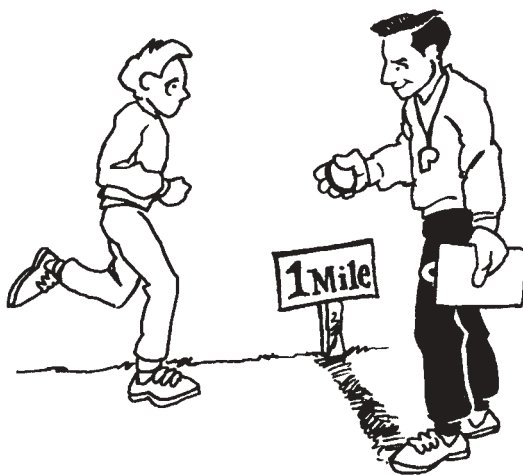


9. Play team games at high speed such as basketball, soccer or floor hockey. These games can be played with hockey rules and hockey formations.



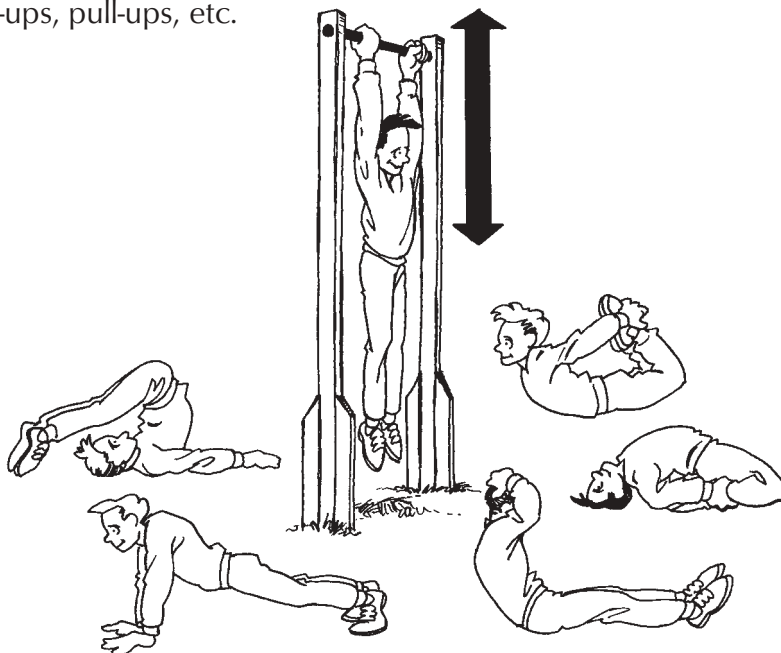
ADVANCED PRE-SEASON DRY LAND TRAINING ACTIVITIES

1. Short runs - one mile
2. Sprints - relay races, etc.
3. Individual skills - shooting, etc. After players have mastered the skill correctly, create difficulties for them (i.e., shoot quickly, shoot with another player interfering with them, shoot off balance).

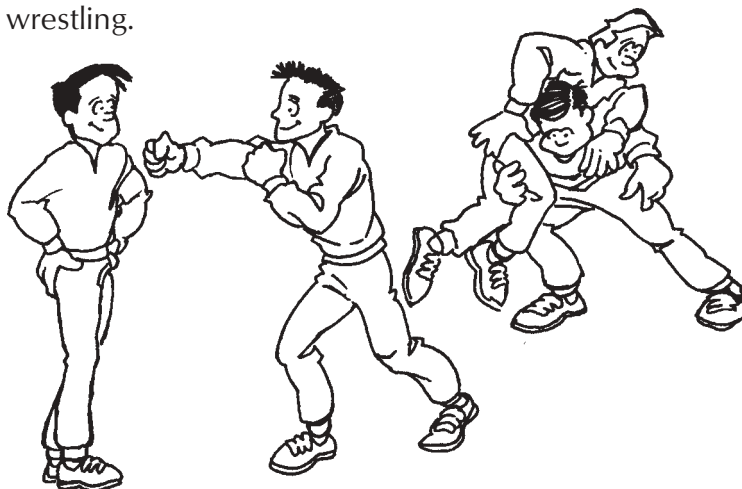


ADVANCED ACTIVE SEASON DRY LAND TRAINING ACTIVITIES

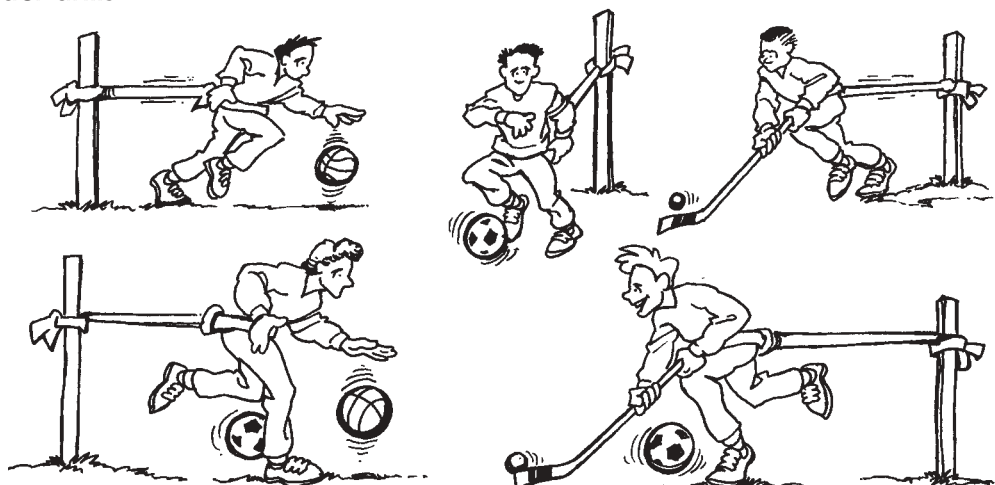
1. Calisthenics - push-ups, sit-ups, pull-ups, etc.



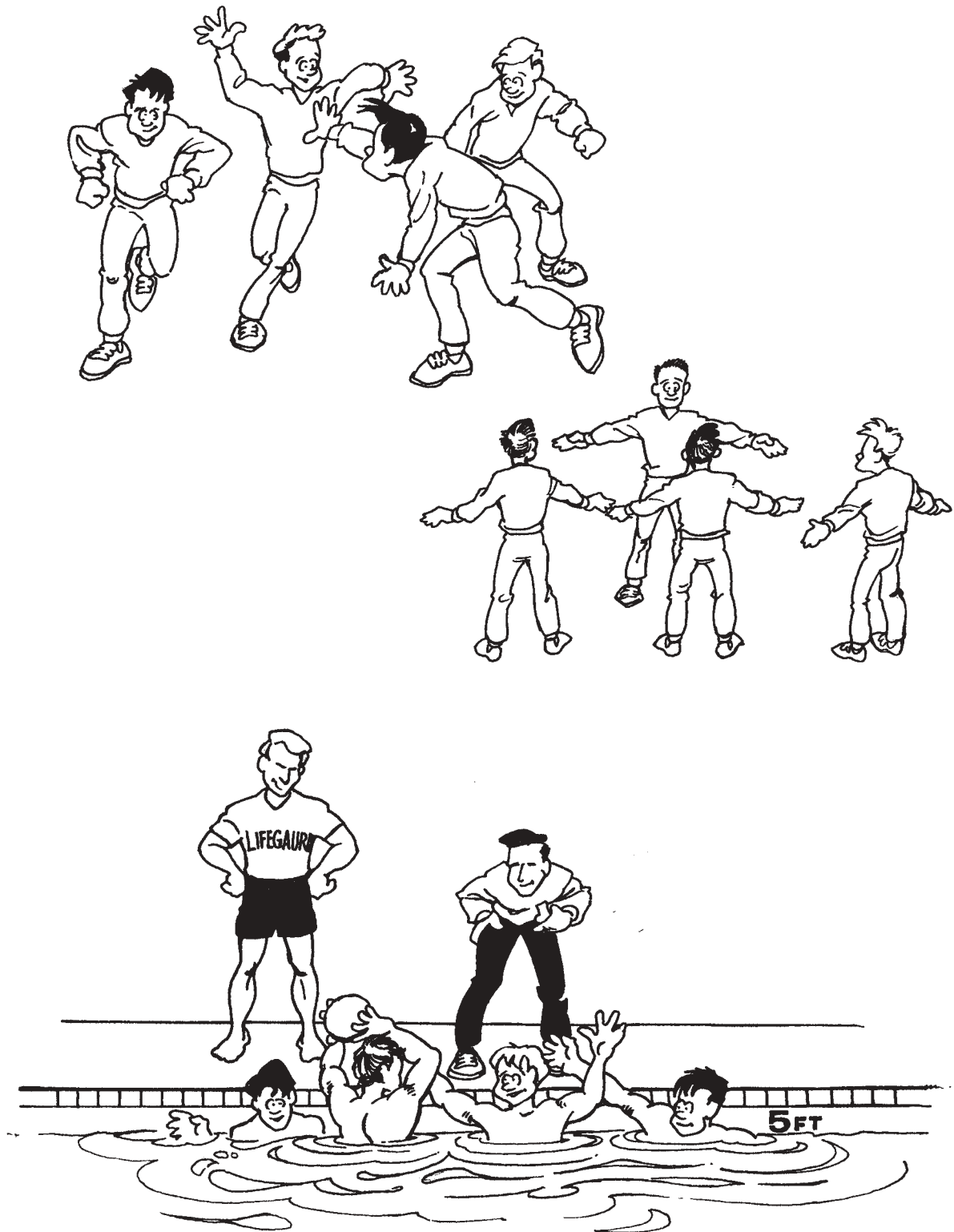
2. Shadow boxing, wrestling.



3. Suspender drills



4. Fun games like tag, “Simon Says” and if available, water hockey. Use a local pool and have a lifeguard there. The coach supervises and you play hockey in the water. It’s fun, a change of pace, and good for endurance and team cooperation.



These are just a few ideas. Use your imagination and always create a fun atmosphere and an interesting schedule of exercises. Use different means each week to accomplish the same goals.

Chapter 2

Dry Land Training for Goaltenders

OBJECTIVES

- **Provide dry land activities for goaltenders**
- **Provide off-ice games for goaltenders**
- **Give a variety of activities for all levels of goaltenders**

INTRODUCTION

Goalkeepers can improve their game tremendously with off-ice training. Almost every move can be imitated off the ice that is utilized on the ice. Equipment for a successful off-ice training program for goalkeepers is inexpensive and almost always available.

The most important qualities needed for a goalkeeper are courage and dedication. Given the natural physical makeup necessary to be a goalkeeper, one can learn to play the position well.

Goalkeepers can work alone, with a friend, teammate or family member. It is preferable to work with another goalkeeper, especially a teammate. The goalkeeper can work in a basement, gym, schoolyard, backyard, and/or play area.

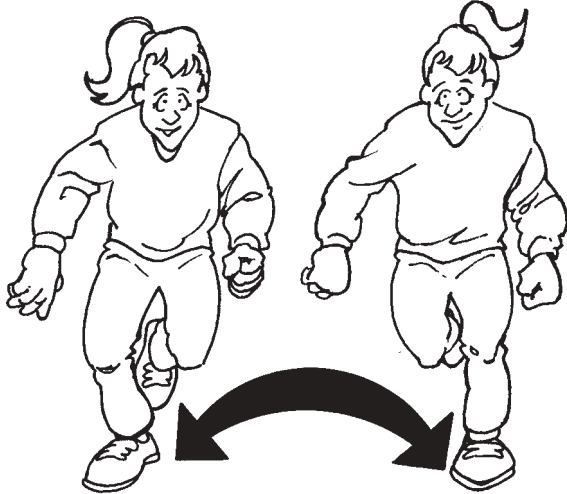
Equipment needed for a complex program are: jump rope, tennis balls, medicine balls, soccer ball, volleyball, goal (hand-made), goalie equipment and tennis racquet. Again, use your imagination. Be creative and devise your own program based on the principles of

goalkeeping. Here are some of the exercises a goalkeeper can utilize to improve his/her game. It is important that all exercises be done in the basic stance of the goalkeeper. The following exercises should be done without goalkeeper equipment.

1. Stretching
2. Light jog in a small area



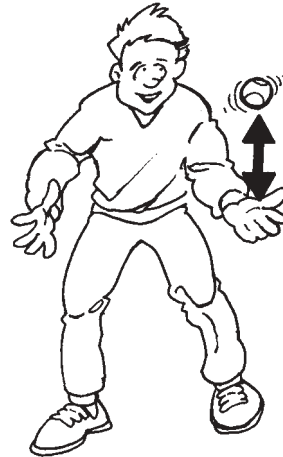
3. Alternating hops, right and left leg.



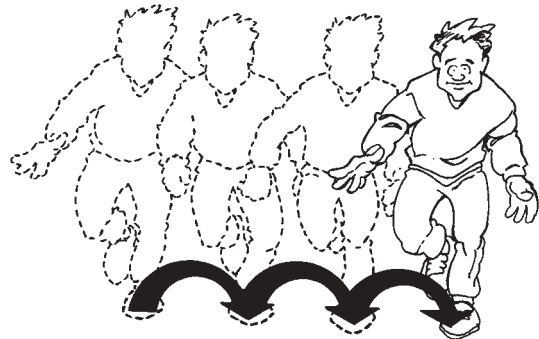
4. Lateral jog both left and right



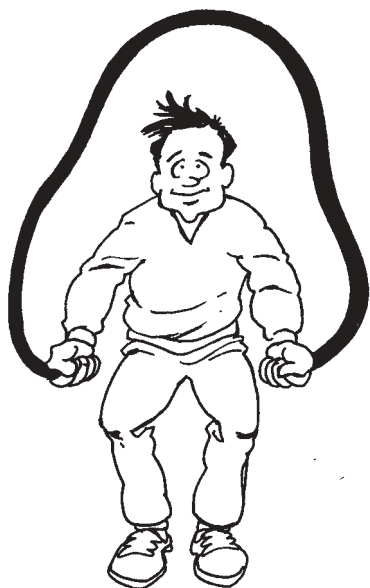
5. From the basic stance - walk with feet wide apart, bouncing a tennis ball in the catching hand. Variations: bounce two tennis balls or juggle three tennis balls.



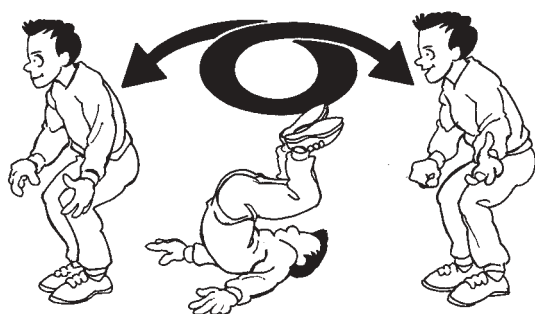
6. Lateral hopping from basic stance - three hops on the left foot and three on the right foot.



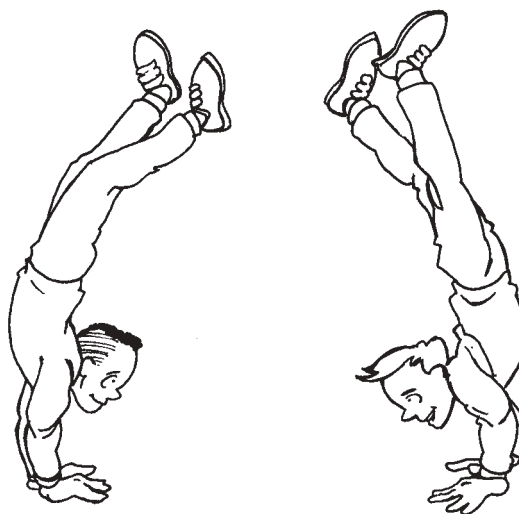
7. Jump rope - on both feet, then on one foot. Good for hand-eye coordination.



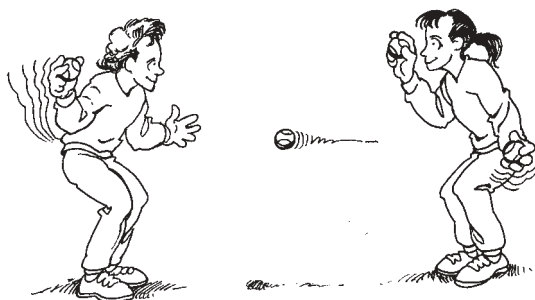
8. Tumbling - forward and backward, always beginning and ending in the basic stance.



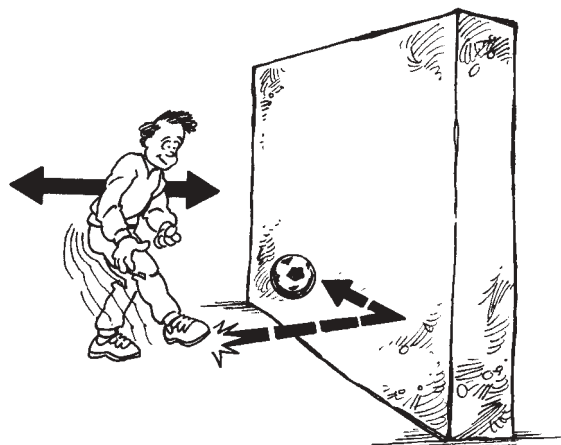
9. Mirror drill - with a partner, take turns. One partner (always in basic stance) makes a move and the other imitates as quickly as possible. Use all types of moves, tumbles, etc.



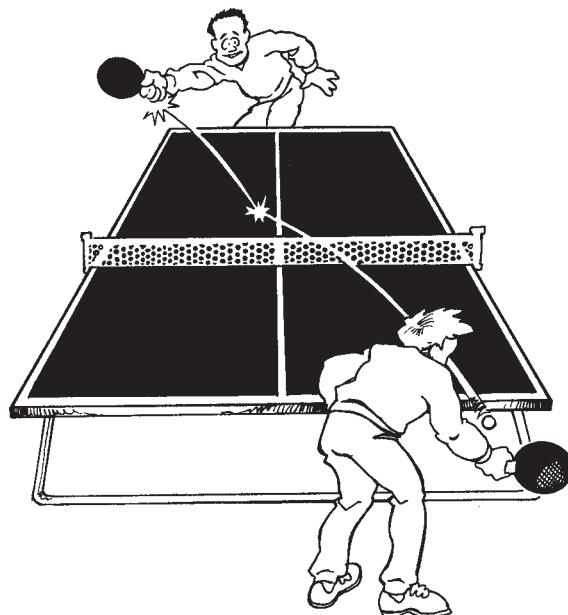
10. Face partner and toss tennis balls back and forth to each other. Use the catching hand. Add balls to increase difficulty.



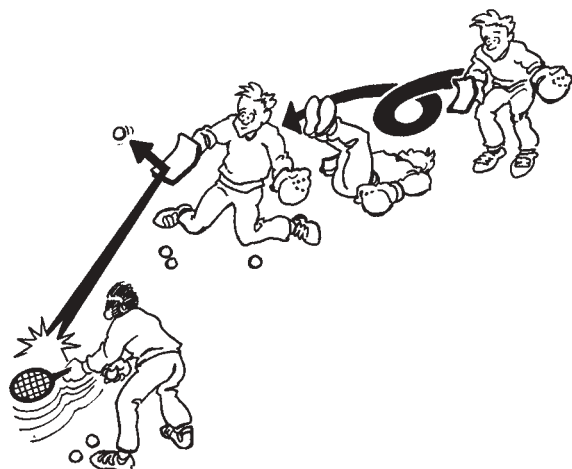
11. Play soccer against a wall, using a soccer ball or tennis ball. Practice foot-eye coordination, moving forward and backward in the basic stance.



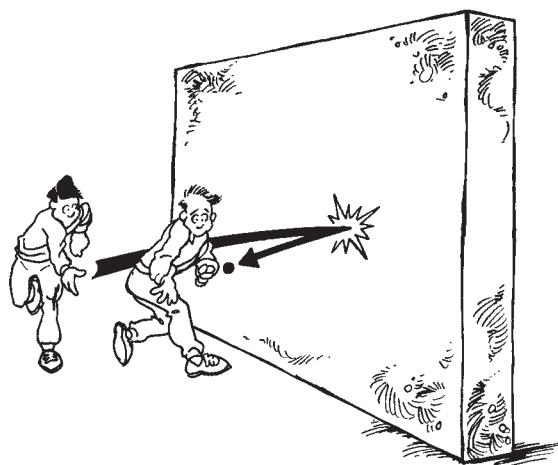
13. Table tennis.



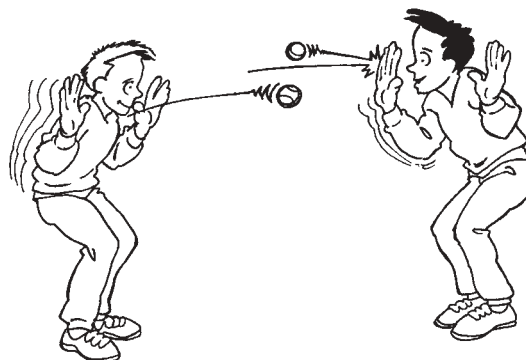
12. From the basic stance using the blocking glove and catching glove, jog forward and roll over (somersault), come up in butterfly position and partner should rapidly hit tennis balls at goalkeeper. Use tennis racquet.



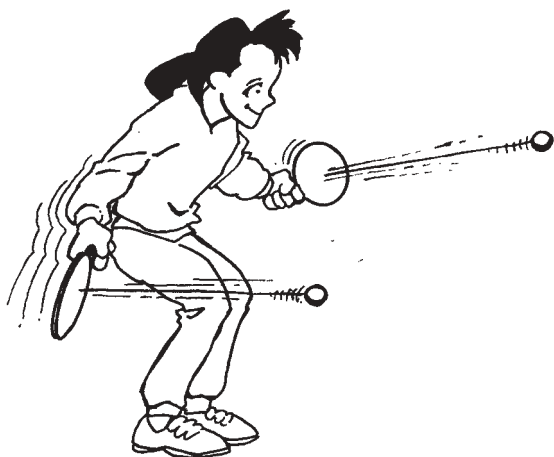
14. Handball.



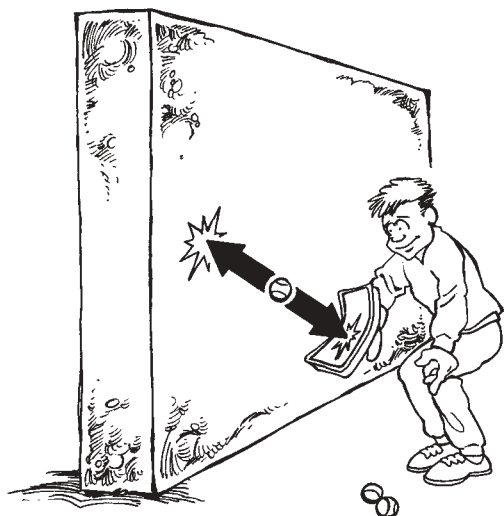
15. Face partner - keep one or two tennis balls in play by slapping them back and forth to each other.



16. Use a wooden paddle with a rubber ball attached to paddle by rubberband. Keep ball in play. Use two paddles using both hands.



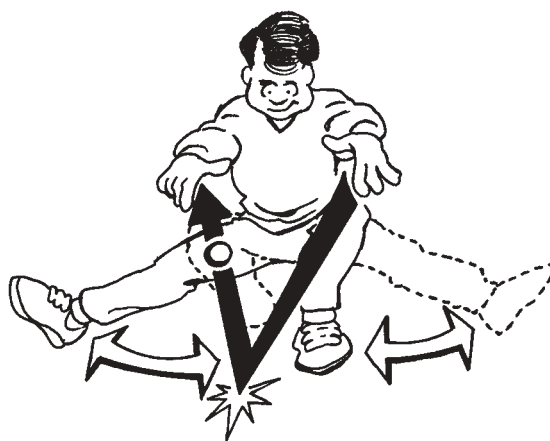
17. Using the back of your blocker glove, keep the tennis ball in play against a wall.



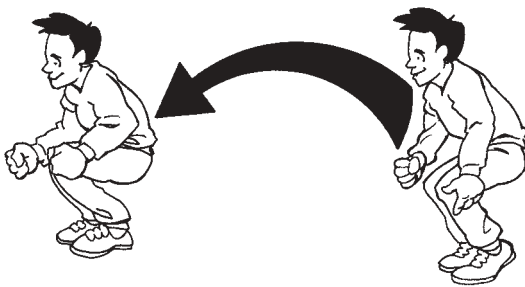
18. With a group of players on their knees and facing the middle, drop a tennis ball in the middle and everyone tries to grab it. Similar to a face-off.



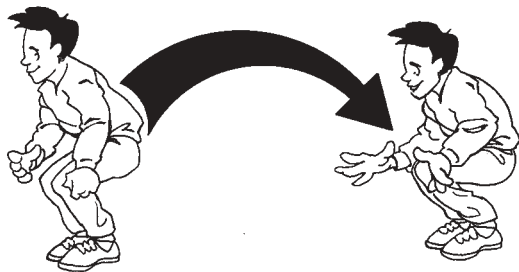
19. Goalie bouncing tennis ball from a crouched position, throws one leg straight out to the side and then the other leg straight out to the side. (Head should be forward and ball should be bounced as quickly as possible from one hand to the other).



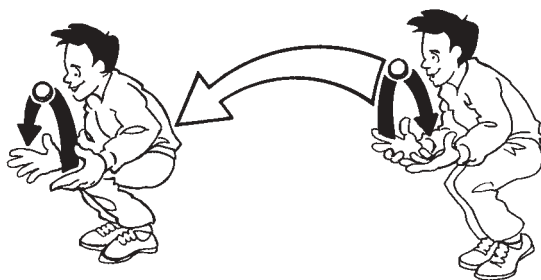
20. Kangaroo jumps from squat position forward (remain in the squat position throughout the exercise).



21. Same exercise backward.



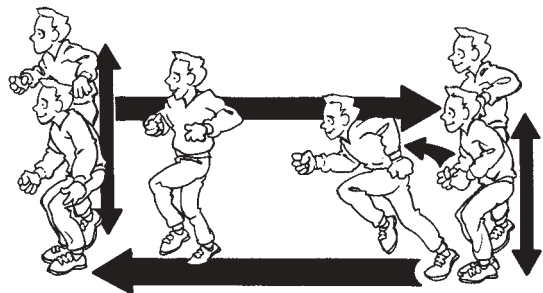
22. Same exercise forward while tossing a tennis ball from one hand to the other.



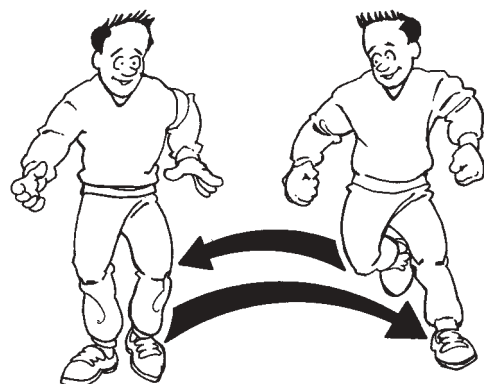
23. From a crouch position throw one leg to the side, then the other while a partner, standing in front, throws a tennis ball. Try to catch each thrown ball.



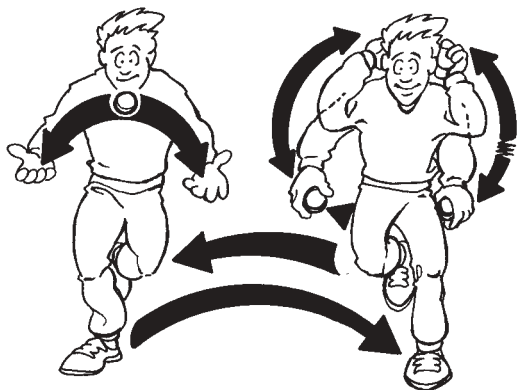
24. From a standing position, jump straight up as high as you can. As soon as you land, take off on a short sprint. Then jump and run backward as fast as you can for a short sprint.



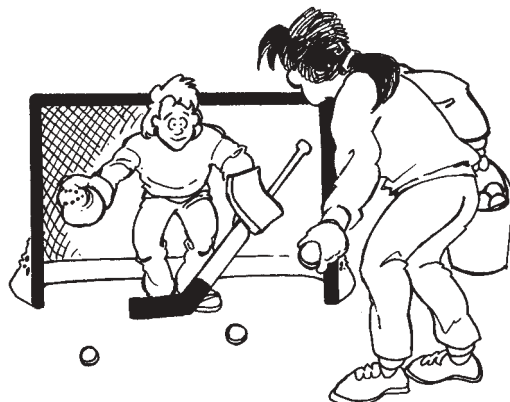
25. From an upright position, jump as far to the right as possible, landing on one leg. From that leg jump to the left as far as possible and repeat.



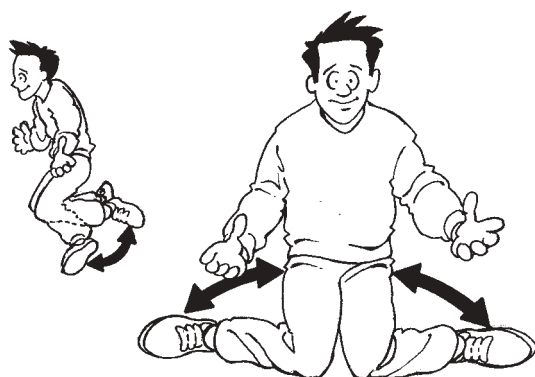
26. Same exercise as #25, add moving tennis ball around the body and over the shoulders. In general, handle it in all positions as well as tossing it back and forth from hand-to-hand.



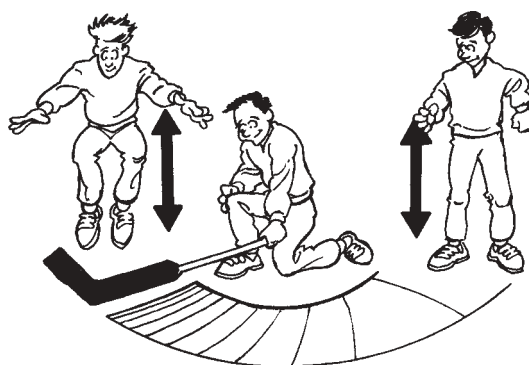
28. Partner with tennis balls moves in close to the net and places ball in front of goalkeeper at various positions on floor as quickly as possible. Goalie must react and clear balls with his stick.



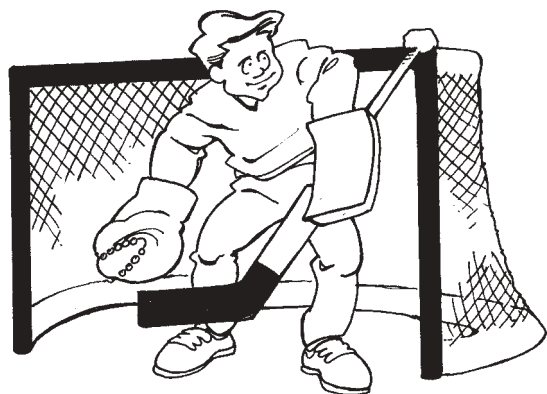
27. Get in the butterfly position, knees together and on the ground with legs flat on the floor and extended as far as possible to the side. From this position you should move around from a semi-squat position, legs out and in but always return to the butterfly position. This stretches the muscles so that this becomes a natural and easy move for the goalkeeper. NOTE: inside of feet should be flat to the floor.



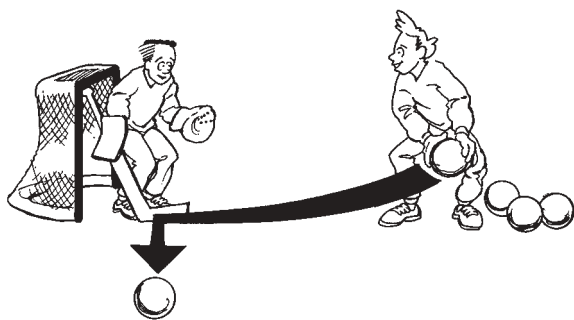
29. Partner stands between two goalkeepers and keeping the goalie stick on the ground, swings it in a circle that the goalkeepers have to react by jumping over the stick. You can swing faster and faster so they are forced to jump quicker.



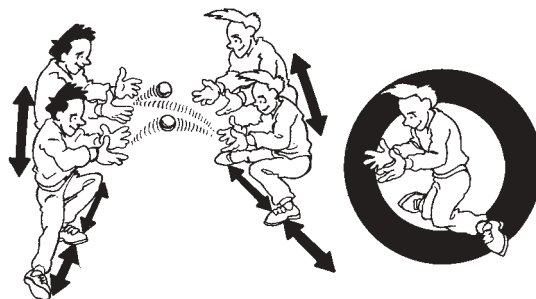
30. Goalkeeper with stick in his hand exercises by clearing shots with his stick on the left hand side starting with an imaginary shot on the ice and moving up to head level. This is moving the stick from the front of the pads out and then going higher and higher back and forth as quickly as possible. The same thing should be done on the opposite side.



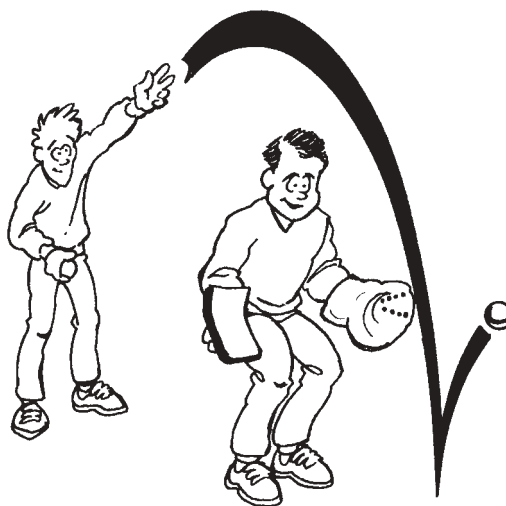
31. Using a team handball or volleyball, the partner rolls the ball at the goalkeeper who has to stop the ball with the stick and then clear it to the side. You can increase the speed of the rolls as goalie becomes more proficient.



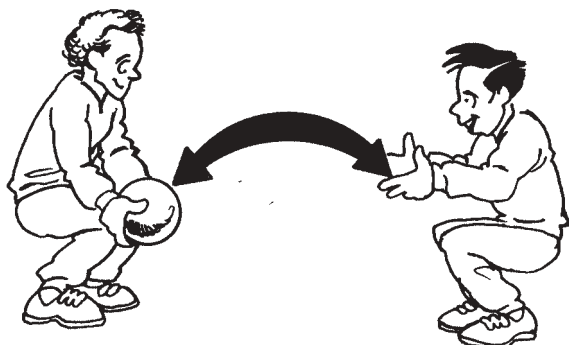
32. Two goalkeepers squat facing one another and using two tennis balls, throw back and forth. Goalkeepers should move from the squat position to one leg out; then the other leg out; to the butterfly position; to standing up; to the crouch.



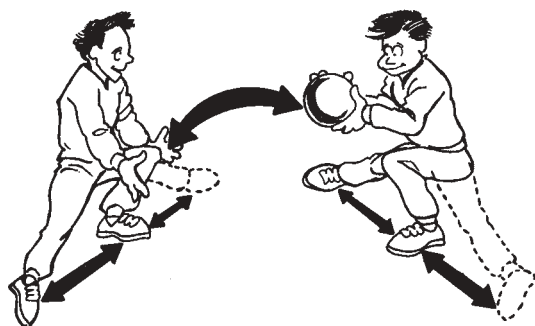
33. Goalkeeper without stick but with goalie gloves. The partner standing behind the goalkeeper, both facing the same way, drops the ball over the goalie's shoulder or head. Goalie has to react to the bounce, grab the ball and clear to the side. (Goalie's eyes should remain forward).



34. Using a medicine ball, two players will squat facing each other five feet apart. Throw medicine ball back and forth from a squat position.



35. Throw medicine ball back and forth from a squat position while throwing one leg out to the side, then the other.



For the following exercises, the goalie should have his/her stick and glove and the partner should have tennis balls and racquet. All moves by the goalkeeper should be practiced with gloves and stick on the ground.

Shadow Drill

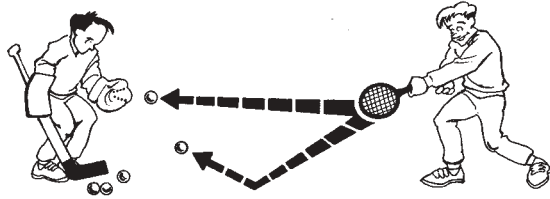
1. Goalie moves in response to partner's hand or racquet movement. Moves should be done as quickly as possible by both the partner and the goalie.



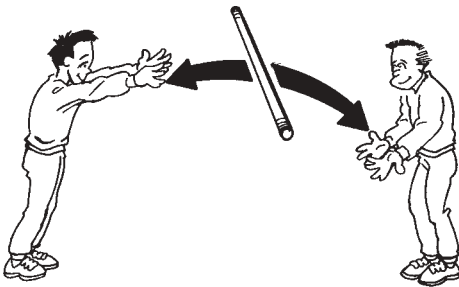
2. Move closer to the goalie and using the handle of your tennis racquet as a pointer, put the handle as quickly as possible on the ground and have the goalie react with his stick. The idea is for him to make contact with the handle while you're trying to move the handle as quickly as possible.



3. Partner moves about 15 feet from the goaltender and hits tennis balls at the goalie. Start out at medium speed, trying to get the ball up around the hands so the goalkeeper can react to both sides with his hands. You can hit them straight at the goalkeeper or with a bounce in front.



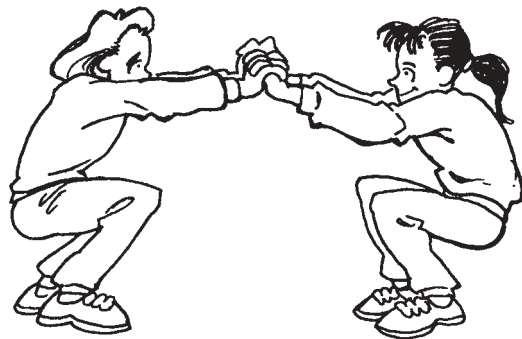
4. Two goalkeepers facing one another throw the bar back and forth underhand and overhand.



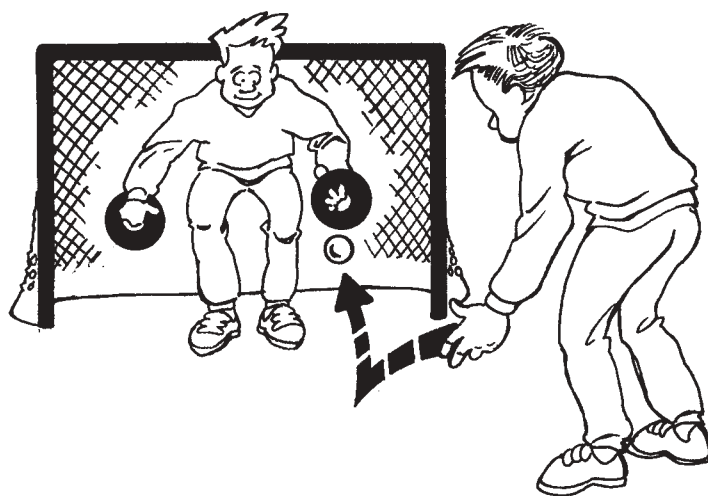
5. Using the fireman's carry, one goalie carries another goalie on his shoulders using relatively long strides across the floor, forward and backward. Naturally, the length of stride will be reduced when moving backward.



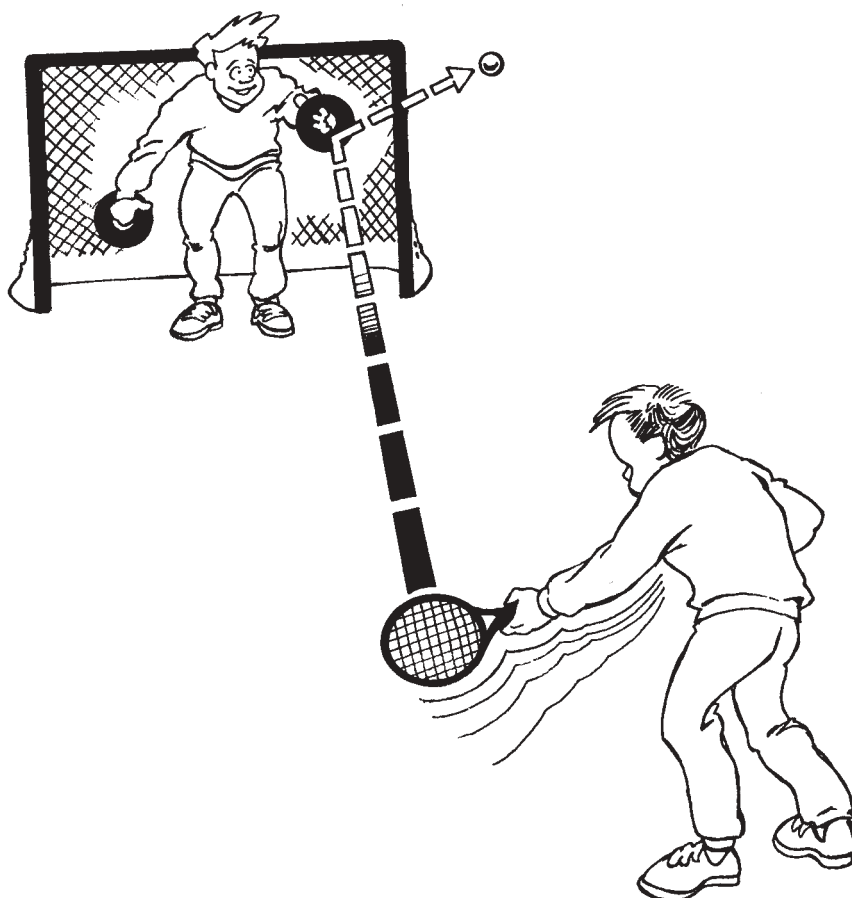
6. Goalies face one another putting hands forward and wrestling to push the other goalie from his/her stance. This can be done in a squat position, in a crouch position and standing up. (Hands on shoulder, also hands in hands).



7. Partner standing in front of the goalkeeper will bounce a tennis ball at the goalie. The goalie with 10lb. weights on each hand, will try to deflect the ball from the net. Use circular weights so goalie can put his fingers in both and put the back of the stick hand and the front of the catching hand facing out.



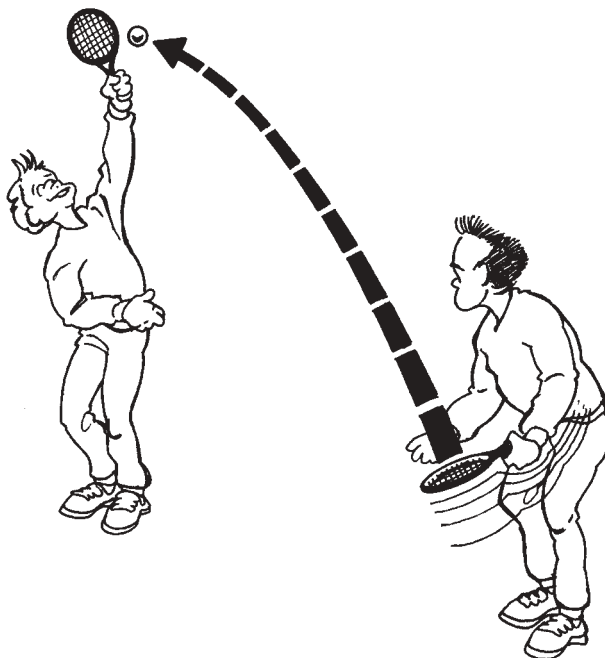
8. Move backward and with the use of a tennis racquet, drive the ball harder and have goalkeeper react with weights in hand.



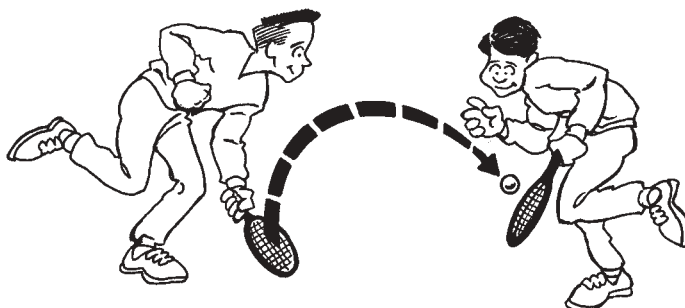
9. With stick and glove, put one goalie in the net, crouch position, and have the other goalie stand five to six feet in front to act as a screen. Partner then stands 10 to 15 feet out and bounces ball through the screen or drives it straight by the screen and goalie will react.



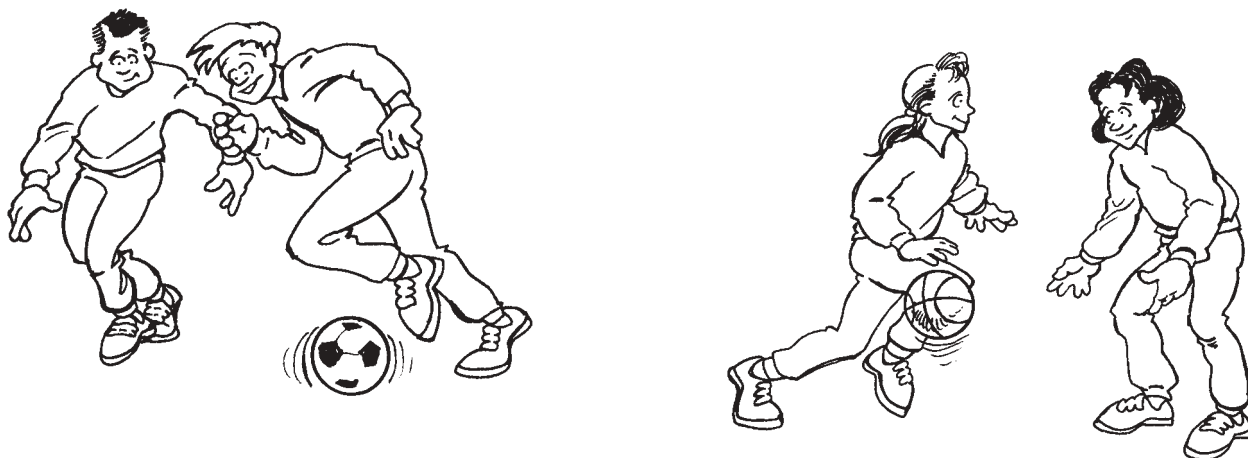
10. Have goalkeepers stand six feet apart with tennis racquets and hit tennis balls back and forth in the air.



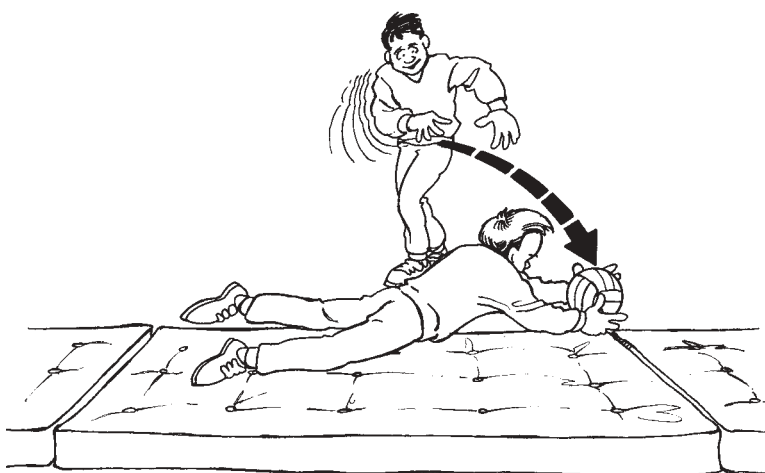
11. Same as above on one foot, then on the other.



12. Using a volleyball or team handball have goalies play one-on-one basketball or one-on-one soccer.

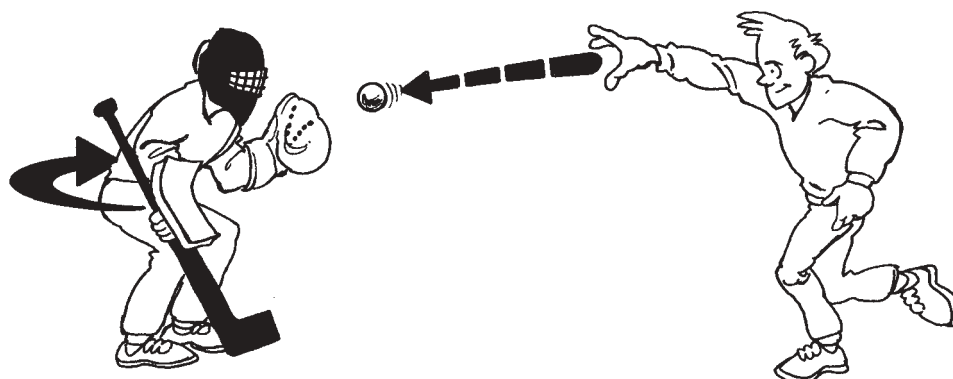


13. Using a mat or soft turf, one partner throws a volleyball or team handball to either side of the goalie and has him/her leave his/her feet to catch the ball.

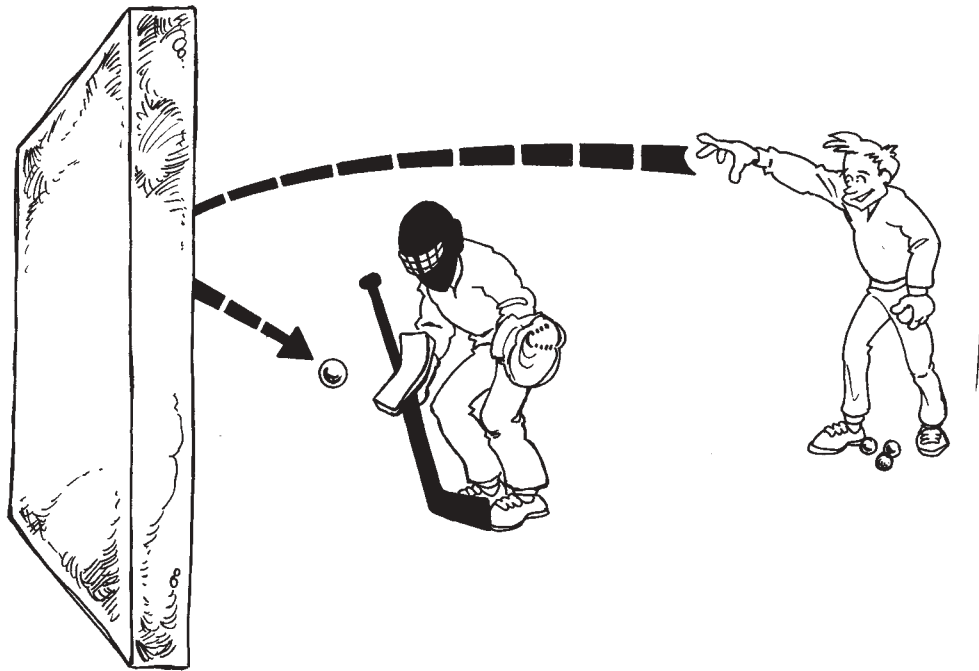


With full equipment - sticks, gloves and mask

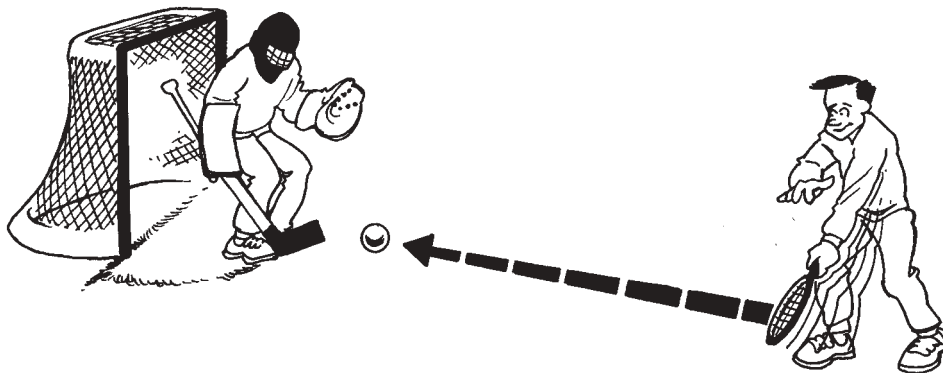
1. Goalie turns on command and deflects, catches or blocks tennis ball.



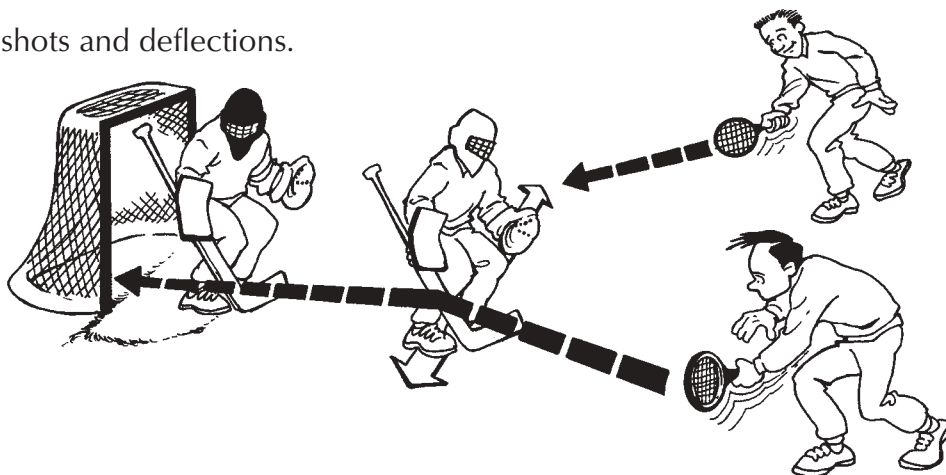
2. Goalie faces wall from 10 feet out with back to partner. Partner throws tennis ball off the wall, goalie reacts.



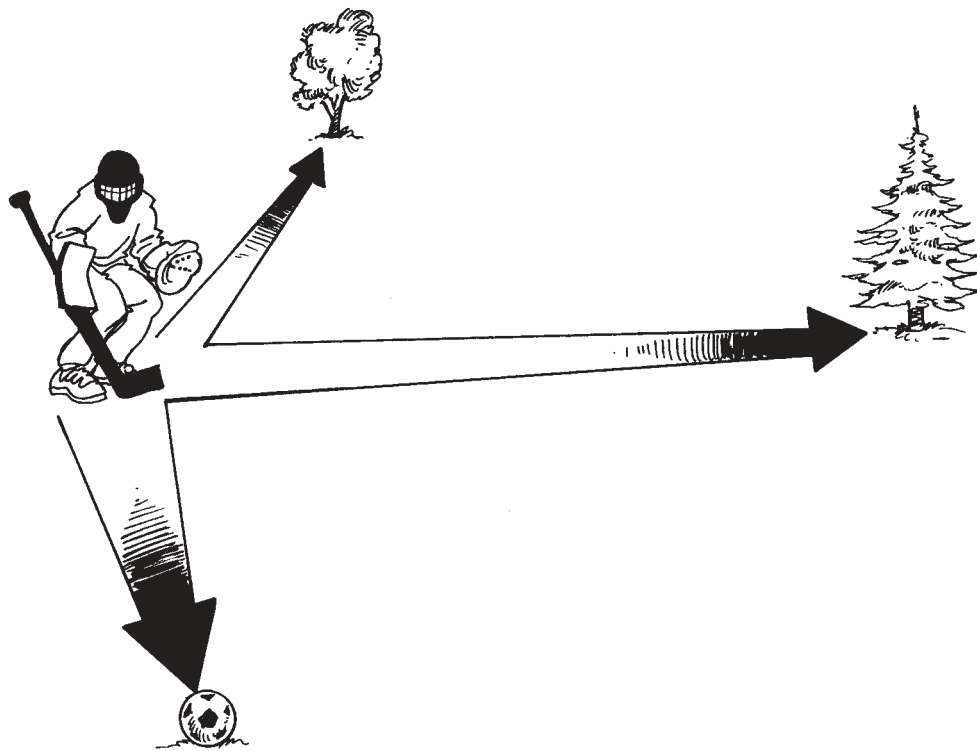
3. Angle shots - goalie is in goal. Partner fires tennis balls from various angles. Goalie moves and adjusts to angle.



4. Screen shots and deflections.



5. Adjusting eye focus to objects.



6. Correct use of gloves. Partner fires the tennis balls, one at a time, easy at first. It is important that the goalkeeper use correct technique.



There are hundreds of exercises one can utilize. These are just a few. Use your imagination. Goalkeepers should also be included with the rest of the squad in their dry land training program.

Chapter 3

Strength and Conditioning Program

OBJECTIVES

- To show the importance of athleticism
- To show what activities will enhance performance
- To provide guidelines for a safe conditioning environment

INTRODUCTION

The purpose of this strength and conditioning chapter is to introduce a wide variety of fundamental exercises and drills that athletes and coaches can implement in all phases of their training. The game of hockey presents the athlete with great demands in muscular endurance, power, overall strength, core strength, flexibility, and especially hockey specific strength. While attaining higher levels of the previously mentioned, your overall goals should include:

1. Develop a high level of athleticism
2. Performance enhancement
3. Prevention of injury

ATHLETICISM

All athletes should be striving for the development of total athleticism through participation in a variety of sports no matter what age. The game of hockey requires great reflexes, balance, flexibility, lateral movement, acceleration, deceleration, and powerful movements, etc. All of these skills can be further developed through other sports to promote a high level of athleticism. Many of today's top players have not developed to

their highest level of athleticism. It is never too late or too early to develop a strong athletic base. A great way to improve your weaknesses is to participate, mainly during the off season in recreational sports or summer leagues. Younger players should be encouraged to engage in many sports. Some examples of recreational or competitive activities which are specific to a hockey players' needs are: baseball, basketball, lacrosse, racquetball, soccer, street hockey and tennis. Through these sports, the many attributes of **athleticism** are touched upon:

- agility
- balance
- coordination
- core stability
- endurance
- flexibility
- power
- reaction/reflexes
- speed
- strength

PERFORMANCE ENHANCEMENT

Performance enhancement is the ultimate goal of strength and conditioning. The formula for one to develop to the next level and maintain that high level of performance is **Strength + Speed + Power + Conditioning (Aerobic and Anaerobic) + Athleticism + Nutrition + Recovery.**

The following questions and answers touch upon the basics of conditioning for hockey.

Q1. Should hockey players be concerned with both the Aerobic and Anaerobic energy systems?

A1. Anaerobic. This is a question that brings up much discussion and debate. Some coaches are still spending late spring and early summer running laps around a track. Others are spending the majority of time performing sprint training. Is there an effective means of training the major energy systems required in this highly complex game?

The main focus should be on the predominant energy system being used. Means of conditioning that system should be as specific as possible. While a hockey player should be concerned with both of the energy systems, it should be known that the bulk of conditioning should be Anaerobic.

A good Aerobic (w/oxygen) base should be developed in order to aid in the recovery of the damage done by the anaerobic systems. However, this base can be built up through a high volume of anaerobic training with the occasional aerobic bout. **Interval training** is an excellent way of targeting both the systems. Monitoring the **work to rest** intervals will determine what system will be working the most. A highly developed Anaerobic System (w/out oxygen) will assist the hockey players in their shifts using the off time as a rest interval. Means of improving

the Anaerobic system include: wind sprints, slide board sprints, racquetball, inline skating, intervals, and tempo runs. Concentrate on interval work (800's, 400's, 200's), slide boards, and different forms of tempos on football/soccer fields.

Q2. Does a hockey player need to work on Muscular Power more than Muscular Endurance?

A2. Yes. The definition of **Power: $P = \text{Force} \times \text{Velocity}$** . Performance is usually determined by the amount of power he/she can produce. Remember that a powerful skater is better than a strong skater. A high **force** initiated on the ice at a high **velocity** will produce a significant amount of skating **power**. **Muscular Endurance** is the ability to exert a sub-maximal force over a prolonged period of time. A hockey player needs a base such as performing leg circuits in the early off-season to endure what lies before him/her. The endurance level will also increase as Anaerobic conditioning increases. The training program for these components do vary. Muscular endurance can be attained by performing circuit and/or interval training. However, the path (Aerobic/Anaerobic) of training, will impact the whole career. **Power and Strength should be the focus through weight training, plyometrics, and sprints.**

Q3. To stretch or not to stretch?

A3. Stretch!!! It is not a hard question to answer. Flexibility is defined as the ability to move a joint or a group of muscles through a specific range of motion without causing injury. Poor flexibility will impact speed, agility, power output, and recovery time negatively. Being flexible will also reduce the chance of injury to joints and muscles as well.

There are many different basic stretching techniques that can be implemented; Static stretches, PNF, Dynamic, Mobility, Ballistics. The areas to stress are:

1. Adductors
2. Abductors
3. Hamstrings
4. Core (Low back/Abdominals)
5. Shoulders
6. Internal/External Hip Rotators

Stretching should be done after an easy warm-up. A consistent stretching program will increase flexibility and reduce the chance of an injury. If time is not allowed for a proper stretching routine to take place, the focus should be placed on a continuous warm-up. This includes large total body movements that takes the body through a wide variety of hockey specific motions. Stretching should be done before, during and after weight training, practice, games, sprints and plyometrics. Be sure to avoid over-stretching which may lead to hyper-mobility of some joints (i.e., shoulders).

Q4. Is Core Strength and Stability important to a hockey player?

A4. Unbelievably important!! Core Strength is a key element that many youth players and coaches neglect. The Core (low back, abdominals, hips, and obliques) obviously links the lower body to the upper body. But more importantly, a strong core allows a hockey player to transfer the power generated by the lower body to the upper body, absorb and generate impact, and skate efficiently. When

skating, the core/trunk area is in a constant state of isometric contraction which allows the skater to better control his/her movements. There are many different factors and motions that contribute to having a strong and stable core area. This area should be trained in a fashion such that is multi-dimensional and multi-plane. Always train all of the muscles to avoid imbalances.

1. **Flexion**
2. **Extension**
3. **Lateral flexion**
4. **Hyperextension**
5. **Rotation**
6. **Diagonal rotation**
7. **Stabilization (isometrics)**

All of these motions must be targeted in order to prepare for the onslaught of checks (given and taken), shots on goal, falls, changes of direction, etc. Take caution when training the core and remember that we are trying to prevent injuries, not have them occur.

Q5. How does it all fit together?

A5. It all fits together in a well organized format known as Periodization. Periodization is a changing and/or manipulating of the training stimulus over the course of a year. Load, intensity, tempo, recovery, mode of exercise, and focus on conditioning are structured to fit the proper time of the year. The factors that determine the cycles or phases are usually the competitions. However, in hockey, competitions span over a long period of time. The following page charts the periodization over a year for hockey.

PERIODIZATION FOR HOCKEY

	STRENGTH	POWER	SPEED/PLYOS/ COORDINATION	METABOLIC TRAINING	FLEXIBILITY TRAINING
OFFSEASON Hypertrophy Active Rest - 3 weeks	High foundation of general, max and absolute strength	Moderate to low levels of power training	Low levels of speed and coordination training	Low-aerobic and anaerobic threshold	High
OFF SEASON Hypertrophy	High foundation of general, max, absolute and endurance training	Low levels of power training	Moderate levels of speed, coordination, plyos and agility training	Low Aerobic, Low Moderate Anaerobic	High
PRE-SEASON	Moderate-relative, endurance and specific strength training	Moderate to high levels of power training	Moderate levels of speed, coordination, agility and plyometric training	Low Aerobic, Moderate anaerobic threshold, max V02 and lactic threshold	High
PRE-SEASON Basic strength to Strength and Power	High level of specific strength	High level of power training	High levels of speed, coordination, agility and plyometric training	Moderate to high levels of Anaerobic	Moderate training to maintenance
IN-SEASON Strength and Power to Peak	Maintain strength training and core lifts	Moderate to high levels of power training - complex and Olympic style lifts	High levels of speed, coordination, agility and plyometric training	High Anaerobic	Maintenance
IN-SEASON PLAYOFFS Peak	Maintain - concentrate on specific strength training (core and Olympic style lifts)	Maintain high levels of power training	Maintain levels of speed, coordination, agility and plyometric training	Maintain anaerobic intervals, primarily on ice	Maintenance

PREVENTION OF INJURY

Whether you are dry land training, on the ice/field/court, or in the weight room, the ever present risk for injury is always looming. Hockey, at any level, has some amount of contact (body to body, body to ice, body to boards, body to puck, stick to puck). It is our goal through the proper training programs to prepare the body's joints, muscles, and bones to withstand the various positions a hockey player might engage during the game. In order to do this, the training must be multi-directional, functional to their needs, and performed through a safe and effective range of motion with adequate flexibility.

It is intended that all these exercises and drills are to be monitored by a Strength and Conditioning Specialist to ensure safety and proper form. As with all age levels, correct technique must be stressed and the proper form has to be mastered before going on to any weight bearing exercise. Impatience with body weight and/or minimal resistance exercises at any age may lead to injury.

Although preventing an injury is not guaranteed, by performing a proper plyometric, agility, flexibility, and strength training program, the chances are decreased.

STRENGTH AND CONDITIONING GUIDELINES

Body Weight and Free Weight Exercises

A. **Perfect form** is a must, there are no excuses for performing an exercise or lifting weight without perfect form. Do not sacrifice for heavy weights. It typically leads to injury.

B. Perform in a **slow and controlled** manner (except Olympic lifts).

C. Body **alignment** (knee tracking, lordotic curve, head neutral, weight distribution).

D. **Avoid rounding** the lower back.

E. **Ask questions** if you do not know how, if you don't something will usually go wrong.

F. **Progressive Overload** - start with a wide variety of body weight exercises. Then progress to light weights, do not rush. A 2.5 pound increase per week over a year results in a total increase of 130 pounds.

G. **Closed Chain vs. Open Chain exercises** - Hockey is played, for the most part, on one leg. Strength training should be as sport specific as possible. Closed Chain exercises are those which are more functional towards the game involving more than one joint at a time. Having one foot or two feet in contact with the ground or apparatus is classified as a Closed Chain exercise. Open Chain exercises usually involve only one joint or muscle group. These types of exercises are typically used at the earlier stages of rehab and are not as functional to a healthy athlete. Remember that the body is the ultimate free weight.

H. **Overhead pressing movements** are to be done with the knees bent, hips pushed back, and head forward in order to reduce the strain on the lower back.

I. In any type of **squat motion** the knees must remain over the ankles as the hips move down and back so that the thigh bone is parallel to the floor/ice.

J. Once the body weight exercises have been mastered, vary the tempo by controlling the eccentric (lowering) and concentric (raising) speeds.

EXERCISE SELECTION (ALL LEVELS)

LOWER BODY	UPPER BODY	OTHER / PREHAB
<p>Squats / 1 Leg / Other</p> <p>a. Double Leg Squatting</p> <ul style="list-style-type: none"> – Front (should precede back) – Back <p>b. Single Leg</p> <ul style="list-style-type: none"> – 1 Leg Bench Squat – 1 Leg Squat – Step Ups - <ul style="list-style-type: none"> * <i>Regular</i> * <i>Lateral</i> * <i>Lateral Crossover</i> – Lateral Squat / Rocker – Lunges <ul style="list-style-type: none"> * <i>Straight Lunge</i> * <i>Lateral</i> * <i>Angle</i> <p>c. Other</p> <ul style="list-style-type: none"> – 4 Way Hip – Flexion – Extension – Abduction – Adduction – Glute Ham Raises – Hyperextensions <ul style="list-style-type: none"> * w/ twist * w/o twist * 1 Leg (more advanced) * 1 Leg w/ twist – Reverse Hyperextensions <ul style="list-style-type: none"> * unloaded * loaded – RDL/SLDL (machine, SB, MB, PR) 	<p>Pressing / Pulling</p> <p>a. Pressing</p> <ul style="list-style-type: none"> – Push Ups <ul style="list-style-type: none"> * <i>regular</i> * <i>modified</i> * <i>on 1 or 2 MB's</i> * <i>hands on box</i> * <i>loaded</i> * <i>narrow vs. wide</i> – Dips/Bench Dips <ul style="list-style-type: none"> * <i>loaded</i> – Bench Press <ul style="list-style-type: none"> * <i>flat</i> * <i>incline</i> * <i>dumbbells</i> * <i>narrow vs. wide vs. neutral grip</i> * <i>on physioball</i> * <i>tempo</i> * <i>negatives</i> – Overhead <ul style="list-style-type: none"> * <i>DB Military</i> * <i>Standing Military</i> <p>b. Pulling</p> <ul style="list-style-type: none"> * <i>Chin Ups</i> * <i>Pull Ups</i> * <i>Towel Grip, V Grip, Neutral Grip</i> * <i>Inverted Row</i> <i>(close, wide, under, over, towel)</i> * <i>DB Row</i> * <i>Barbell Row</i> * <i>Upright Row</i> * <i>Shrugs</i> 	<p>a. Auxiliary</p> <ul style="list-style-type: none"> – Shoulder FLB – DB Hammer Curls – Reverse Curls – Wrist Rollers – Lying DB Extensions – Hyperextension – Calves – Speed Trax (Hockey specific machine) <p>b. Prehab</p> <ul style="list-style-type: none"> – Shoulder <ul style="list-style-type: none"> * <i>Internal Rotation</i> * <i>External Rotation</i> * <i>Ab/Adduction</i> * <i>FLB Prehab</i> * <i>Slideboard</i> – Lower Body <ul style="list-style-type: none"> * <i>One Legged Squats</i> * <i>Balance Work</i> * <i>MVP Shuttle</i> * <i>Plyos</i> * <i>Bands</i>

OLYMPIC LIFTING

Olympic lifts are total body, multi-joint, explosive lifts which require the highest rate of force development. The development of explosive power is key in all sports from Badminton to Hockey. Recall the definition of Power: $P = \text{Force} \times \text{Velocity}$. Within the definition, the two components are force and velocity. A **greater velocity** at which the nervous system fires in order to inflict a high amount of force on an object (body, barbell, floor) will result in increased power output. **Increased power output** leads to better athletic performance.

If Olympic lifting is a new concept for an athlete or coach there are a few guidelines to follow:

1. Perfect Form! If lifting technique is not mastered, injury can occur, the lift will be inefficient and the maximum amount of force may not be developed.
2. Start with a broom stick, hockey stick, or aluma-lite bar.
3. Do not rush the process, it takes time to perfect the technique.
4. Make sure to have a qualified instructor to help you on your technique.
5. Everything is done from the Power Position.

Power Position

- a. head is in a neutral position, eyes straight ahead
- b. chest is out and shoulders are squeezed together
- c. arms are long and relaxed, rotate elbows outward
- d. torso is rigid, contract abdominal muscles
- e. back is flat to arched (lordotic curve, lower back)
- f. knees are slightly bent with the hips propped back
- g. hands and/or bar are slightly above knees
- h. shoulders should be in line with the bar
- i. weight should be distributed over the heels to the middle of foot, avoid being on the toes or balls of feet
- j. lower leg should be perpendicular to the floor to avoid forward flexion of the knees over the toes

Olympic Lifts - variation and progressions

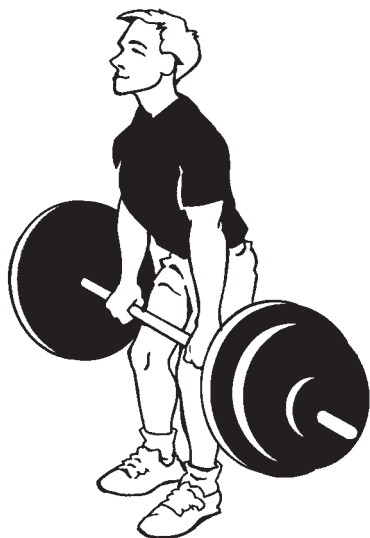
Power Shrug	Push Jerk	Hang Snatch/ Over Head Squat
High Pull	Push Press	DB Snatch
Hang Clean	Split Jerk	DB Clean
Power Clean	Over Head Squat	DB Alternate Puch Jerk
Hang Snatch	HC or PC/Front Squat	DB Clean/Front Squat
Power Snatch	HC or PC/Jerk	HC/FS/Jerk

All Olympic lifts should be performed in a range of 1-6 repetitions and 2-4 sets. They should also be performed at the beginning of a program following proper warm-up, abs, and plyometrics.

HANG CLEAN PROGRESSION

Starting Position

- Keep an athletic position
- Chest out
- Lower back straight
- Shoulders over bar
- Head up
- Bar just above knees



Pull Position

- In jumping action, extend knees, hips and ankles
- Keep the shoulders over the bar as long as possible
- Once bar clears hip, pull with elbows out
- Keep bar as close as possible to body on pull



Catch Position

- Drop under bar by rotating around & under bar
- Hyperextend wrists as elbows move under bar
- Move feet to a squat position & land flat footed
- Rack bar across front of shoulders
- Lower back and chest position rigid
- Drop as low as necessary to handle load
- Head up
- Elbows parallel to floor
- Lower back straight



CORE STABILITY EXERCISES (ABDOMEN, LOW BACK, HIPS)

Abdominal and core work should be done before any heavy lifting to aid as a warm up and make sure it gets done. It won't get done at home! The goal, whether it is more muscular endurance or strength, will decide the reps, sets, and intensities.

Total control of the torso is necessary to get the most benefit out of these exercises. Slow and controlled motion is required on all except the Medicine Ball twists and throws.

The Abdominals

1. Flexion (inc. lateral flexion)
 - a. Crunches
 - regular
 - reverse
 - w/plate
 - alternate hand toe
 - b. Others
 - V ups
 - leg throw downs
 - c. Lateral Flexion
 - side stack crunch on medicine ball
 - overhead medicine ball lateral flexion
 - off bench obliques w/o twist
2. Rotation
 - a. Lateral
 - Russian twist
 - lying trunk twist
 - medicine ball twists/throws

- b. Diagonal
 - alternate v twist
 - bicycles
 - off bench obliques w/twist
 - medicine ball twists/throws (standing/sitting)

The Lower Back

1. Hyperextension/Extension
 - a. Supermans
 - b. Bird dogs
 - c. Back extensions
 - with twist
 - weighted
2. Physioball Programs
 - a. The Hips
 - b. Pelvic Thrusts
 - a. w/medicine ball
 - b. thrust and hold
2. Medicine Ball work
3. Hip Extension off Medicine Ball

Other

1. Physioball/Swissball Stabilization Programs

MEDICINE BALL TORSO EXERCISES

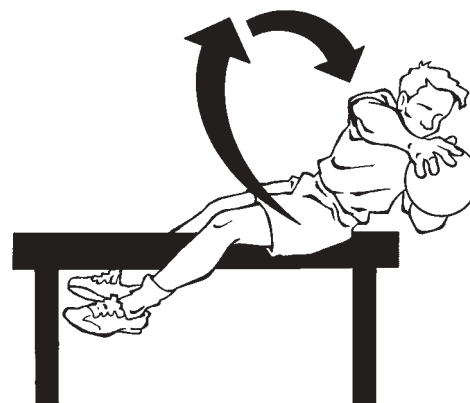
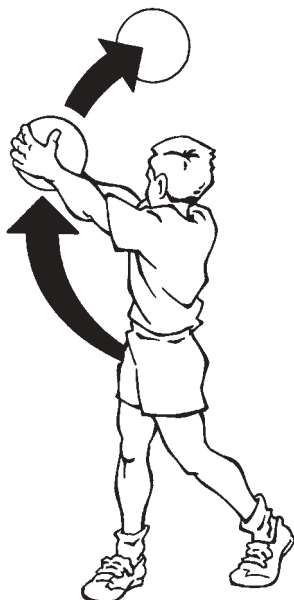
Hammer Throw

Starting Position: Straddle stand position with ball held waist high off of the hip and back to a partner.

Movement Description: Swing the ball from off the hip and throw over the opposite shoulder to a partner or against a wall.

Rhythm/Speed: Fast and explosive

Weight of Ball: 2 kg for beginner.
5 kg for advanced.



Russian Twist - Walking

Starting Position: Stride stand position with the ball extended out from the chest.

Movement Description: Walk forward and swing the ball to the side of the front leg, alternating the ball with each step.

Rhythm/Speed: Moderate

Weight of Ball: 3 kg for beginner.
5 kg for advanced.

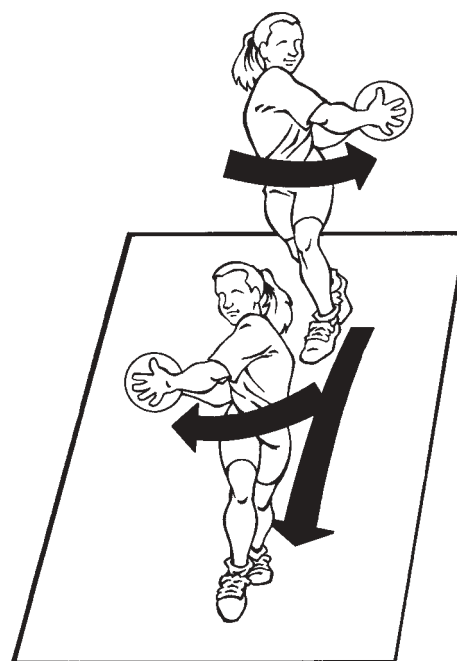
Russian Twist - Seated

Starting Position: Straddle sit position with knees bent and the body inclined back at 45 degrees; hold the ball extended from the chest; feet hooked under a bench.

Movement Description: Keep the legs and hips stationary and the arms extended, twist the torso around to the right and then to the left; pause one count in front of the body to begin each repetition.

Rhythm/Speed: Moderate

Weight of Ball: 2 kg for beginner.
5 kg for advanced.



Rocky Full Twist

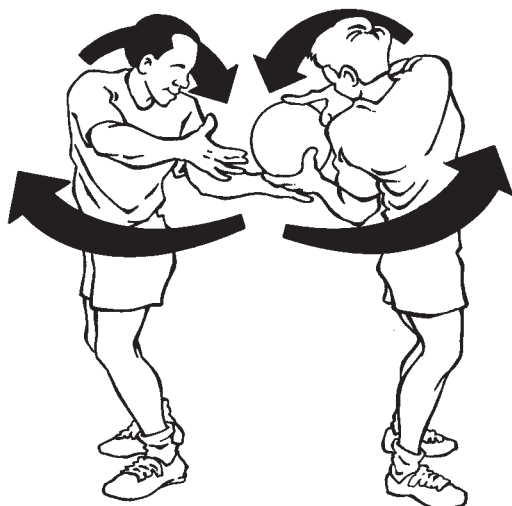
Starting Position: Straddle stand position. Back to the partner, an arm's length away with the ball extended out from the chest.

Movement Description: Keeping feet and hips stationary, twist the torso and pass the ball to the partner who twists the opposite direction. The pass is executed right to right and left to left.

Rhythm/Speed: Moderate to fast.

Weight of Ball: 3 kg for beginner.
5 kg for advanced.

Variations: (a) kneeling; (b) seated.



Seated Solo Twist

Starting Position: Straddle sit position with the ball on the ground behind the back.

Movement Description: Reach back, grasp the ball and pass it around to the starting position. Repeat in same direction until the desired number of reps is achieved. Repeat the exercise turning the opposite direction.

Rhythm/Speed: Fast.

Weight of Ball; 3 kg for beginner.
5 kg for advanced.

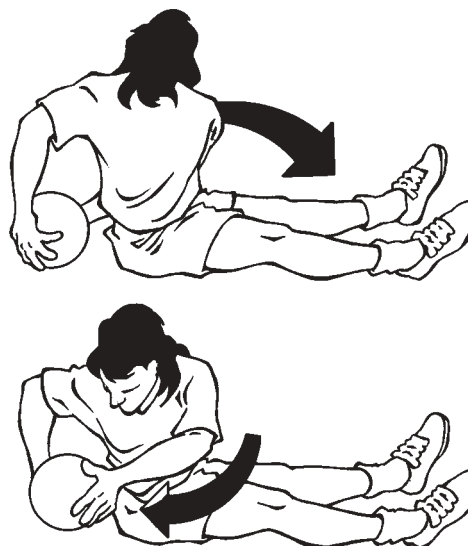
Medicine Ball Sit Up and Twist

Starting Position: Straddle sit position with knees bent at 45 degrees and ball extended overhead.

Movement Description: Sit back to the ground. Maintain the ball in the extended overhead position. Sit up and twist, touching the ball to the right. Return to starting position and repeat to the left.

Rhythm/Speed: Moderate to fast.

Weight of Ball: 2 kg for beginner.
5 kg for advanced.



Standing Side to Side Passes

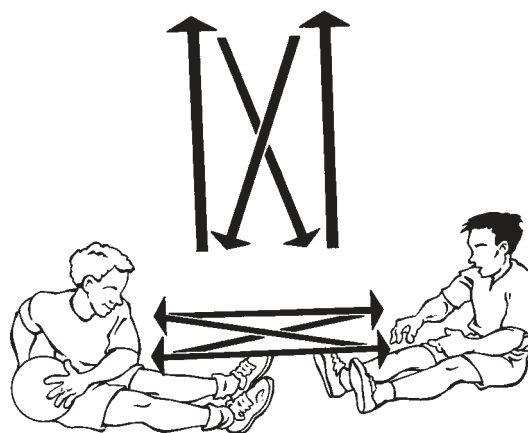
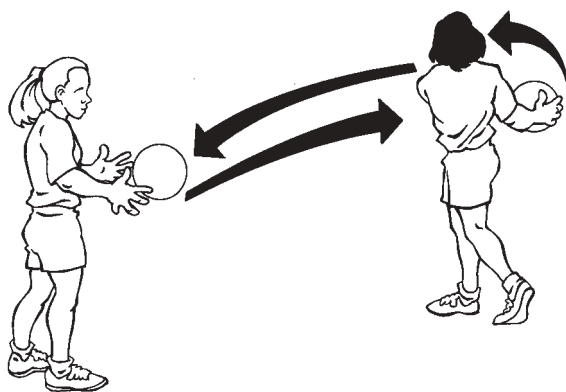
Starting Position: Straddle stand position with the ball held waist high off the hip.

Movement Description: Pass the ball to the outside of the partner's opposite hip forcing the partner to twist to that side upon catching the ball; throw back to the same side from which the throw originated.

Rhythm/Speed: Controlled.

Weight of Ball: 3 kg for beginner.
5 kg for advanced.

Variations: (a) kneeling;
(b) against a wall without a partner.



TRUNK ROTATION AND TWISTING

Rocky Half Twist

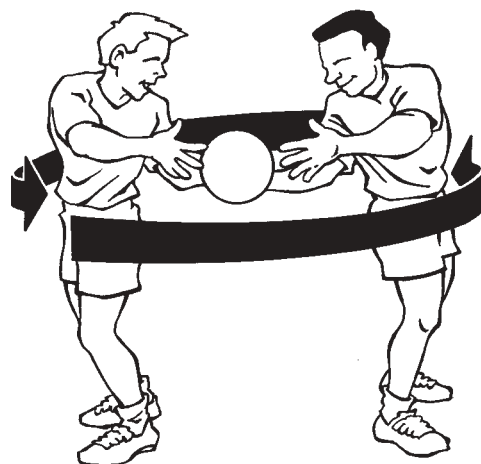
Starting Position: Straddle stand position. Back to the partner, an arm's length away with the ball held extended out from the chest.

Movement Description: Keeping the feet and hips stationary, twist the torso and pass the ball to the partner who twists in the same direction. The pass is executed right to left and left to right.

Rhythm/Speed: Moderate to fast.

Weight of Ball: 3 kg for beginner.
5 kg for advanced.

Variations: (a) kneeling; (b) seated



Partner Straddle Sit Passes

Starting Position: Straddle sit position facing partner sitting in the same position. Ball held at the side just off the hip.

Movement Description: Partner A passes ball down the side to partner B. Partner B passes the ball diagonally across to partner A's opposite side. Partner A then passes to B down this side and B returns ball diagonally to A at starting point. Repeat for the desired number of repetitions and switch the pattern so that each partner is doing the opposite action.

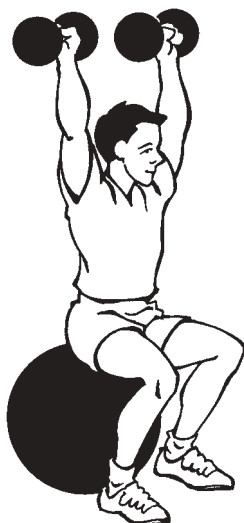
Rhythm/Speed: Moderate, emphasizing stretch upon catching the ball.

Weight of Ball: 3 kg for beginner.
5 kg for advanced.

PHYSIO/SWISS BALL EXERCISES

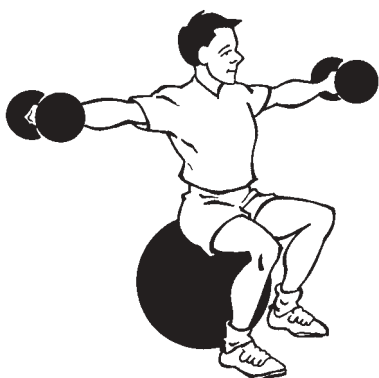
Swiss Ball - Dumbbell - Military

- sit tall
- press dumb bell overhead



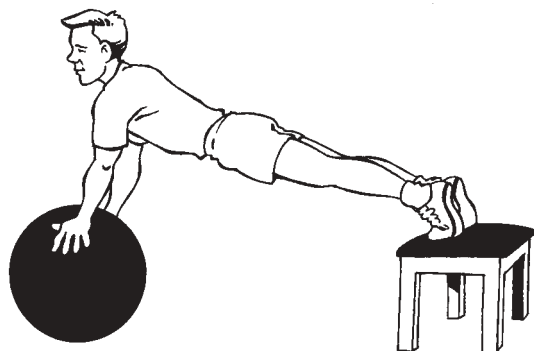
Swiss Ball - Dumbbell lateral - Raise

- sitting on ball, stay tight
- raise both arms up and down



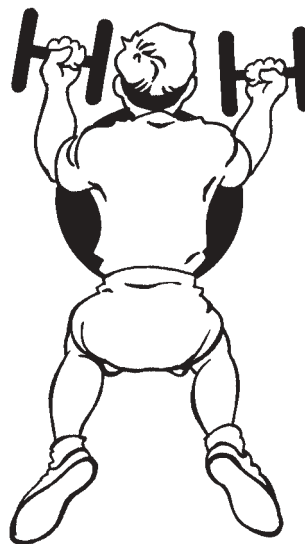
Swiss Ball - Push Up

- feet on bench, perform push up
- hands on ball



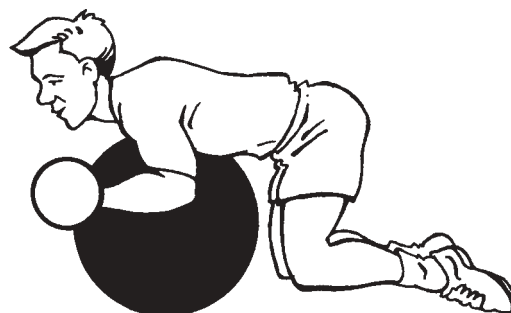
Swiss Ball - Prone External Rotation

- stabilize shoulders and externally rotate (top and side view)
- lie face down with ball on chest - arms flexed at 90 degrees



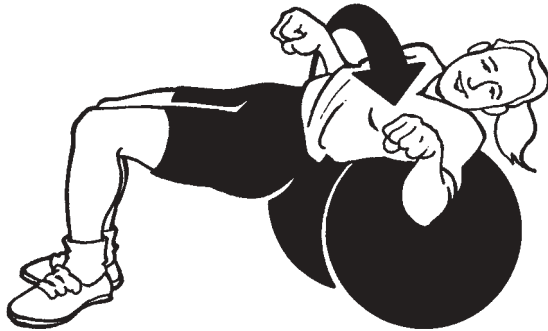
Supine Low Crawler - 2 balls

- roll lateral to one side and opposite side goes into shoulder flexion
- hold position and alternate shoulder presses



Swiss Ball - Ab Crunch

- keep low back in contact with ball and crunch up
- weight on upper chest



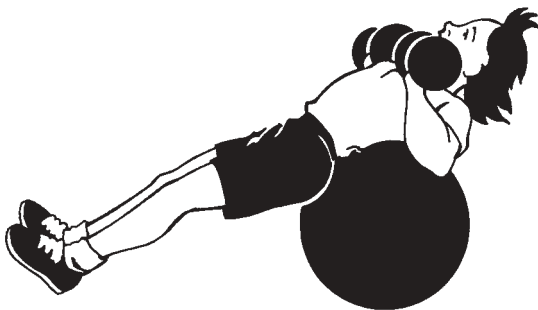
Swiss Ball - Dumbbell Bench Press

- keep hips up
- ball on upper shoulders



Swiss Ball - Incline Dumbbell Press

- hips down around ball
- press dumbbell up and back



Prone Ball Roll

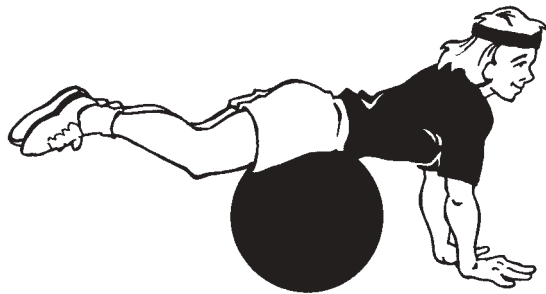
- keep legs straight
- roll to one side and back (left or right)
- keep form
- ADVANCED - cross crunch with counter kick - roll to side until ball gets close to armpit, then cross crunch - bring leg up on angle toward elbow

Prone Hip & Leg Extension (reverse hyper)

- roll out on to ball; find balance point with hands on floor; raise upper body and lower body together; hold three seconds and lower; drape body over ball and repeat
- to make this more difficult, take weight off hands, but leave in contact with floor
- ADVANCED - roll forward to hands and position elbows on floor, hold position for 10 seconds, slowly come down

Prone Forward Ball Roll

- kneel in front of ball, forearm resting on top and roll forward
- do not arch body, stay tight and don't let belly drop
- as you get better, stand with hands closer to you so as you roll the ball gets farther away, increasing load on abs
- ADVANCED - start on your toes in push up style position



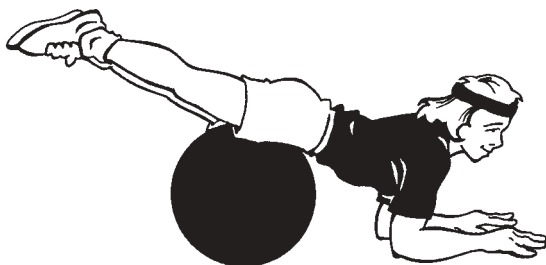
Supine Hip Extension

- lie on ball until head and shoulder rest on ball
- hamstrings, glutes and hips
- raise hips up, hold for three and lower
- if you roll forward (knees over toes) you emphasize quadriceps not hamstrings, therefore keep lower leg straight
- focus on tightening glutes - even it out
- ADVANCED - 1 leg at a time, arms out



Swiss Ball - Lower Ab Tuck

- lower abs
- don't roll back so far back that you increase lumbar curve
- you should feel no pressure in spine
- ADVANCED - 1 leg at a time



Supine Lateral Roll

- hams, glutes, abdominals, back, shoulder girdle
- head and shoulders on ball, arms spread
- start by rolling side to side (6-10 inches)
- ADVANCED - go farther
- keep pelvis up - do not let it drop down



PLYOMETRICS AND AGILITIES

PLYOMETRICS

Plyometrics is the movement/activity that **bridges the gap between strength and speed** by utilizing the Myotatic Stretch Reflex. This reflex is called upon when the muscles are loaded in an eccentric contraction (muscle lengthening) and then immediately followed by a concentric contraction (muscle shortening). By performing Plyometrics, the hips, knees, and ankles are worked. It is imperative that a strong base strength is developed before a program is started. Exercises include jumps, hops, bounds, leaps, skips, throws, and pushes. When performing these exercises, the goal is to train the nervous system to react explosively with maximal force production. Teaching muscles how to absorb shock also aids in injury prevention.

- A. All plyometric and agility drills should be supervised.
- B. Drills should be done for quality, not quantity (minimal foot/skate contacts, maximum intensity and quality of movement).
- C. Athletes should be able to squat 1.5 times their body weight before engaging in an intense plyometric program.
- D. Low level, double leg exercises must precede any higher level single leg movements.
- E. As strength level increases, plyometric intensities should increase.
- F. Do not perform to fatigue, allow for complete recovery time.
- G. Maintain core stability and perfect posture during exercises.
- H. When dry land training, be sure to wear the proper foot wear and have a shock absorbing surface.
- I. Movements should be as sport specific as possible.
- J. Plyometrics for the same body part should not be performed on consecutive days.
- K. Always perform a proper warm up and flexibility program.

There is a long list of plyometrics that an athlete can perform. The following are basic and very productive as long as they are performed correctly. Know your limitations and the stage of training that you are at.

Low Level

1. **Jump Rope** - use different variations and patterns to get the most out of this exercise. Start double legged and proceed to single leg variations.
2. **Squat Jumps** - same as a regular squat but now we are leaving the ground, with perfect form, performing the jumps continuously.
3. **Tuck Jumps** - standing with feet together, jump up bringing knees to chest, variations include heels to butt, include 90, 180, 270 degree turns, performed continuously.
4. **Box Jumps** - start with a low box 18" proceed to a higher one 24" - 36", jump onto the box making sure the landing is soft and quiet, try not to bottom out.
5. **Skippping** - a basic fundamental movement that involves coordination and explosiveness, involves jumping from one foot to the other.

Medium/High Intensity

1. **Explosive Step Ups** - start with one foot on the box and drive up as high as possible, switching feet in air. Use variations such as alternating lateral step ups.
2. **Ice Skaters** - lateral hops from one leg to the other, use different variations such as stick and hold, continuous, two bounces and go.
3. **Lateral & Forward Cone/Hurdle Hops** - set up cones/hurdles, start with two feet moving, hopping forward, switch to one foot landings as you progress. Change to lateral direction on two feet, changing direction, alternating one foot or two feet.
4. **Broad Jumps** - jumping on two feet for distance, use variations such as stick and hold, continuous.

5. **Hurdle/Barrier Hops** - try jumping for height off of two feet, landing soft and holding or more advanced should try continuous hops.
6. **Lunge Jumps/Slip Squat Jumps** - out of a lunge position, try to get as vertical as possible.

AGILITIES

Agilities are drills that emphasize the ability to rapidly and efficiently change direction while controlling the body's center of gravity.

- A. Should be as sport specific as possible.
 - B. Quality, not quantity, they should not be conditioning drills.
 - C. Combine agility training with balance, reflexes, anticipation and hand-eye coordination.
 - D. Should be monitored by coach or other instructor.
 - E. Begin with proper warm up and flexibility program.
1. Agility Ladder drills - work on foot quickness, changes of directions, body awareness and control. Serves as a great warm up. Use a variation of slides, twists, skips, crossover steps, and shuffle. Let the imagination adjust the movements to as sport specific as possible.
 2. W Drill - 5 cones are set up in the shape of a "W", vary the spacing between cones. Start facing down the line (looking at all cones). Move by shuffling, sliding, sprinting, backpedaling, and/or any other movement desired. Control the body's center of gravity as each cone is reached and then change direction to the next cone.
 3. Pro Agility/"NFL Shuttle" - use 3 cones, tape, lines on a field/ice spaced five yards apart. Start on middle line/cone/tape. On command/own action, sprint to either side, touch the line, change direction, sprint ten yards back to the other side, touch, change direction, and cross the middle line again. Sprint, shuffle, or backpedal. Try to improve your time on each rep.
 4. Jump Rope/Dot Drill - also a great agility workout, adding different foot work and combinations. Great for the improvement of coordination.

PLYOMETRIC EXERCISES

Double Leg Hops

Equipment: None

Start: Stand with feet shoulder-width apart.

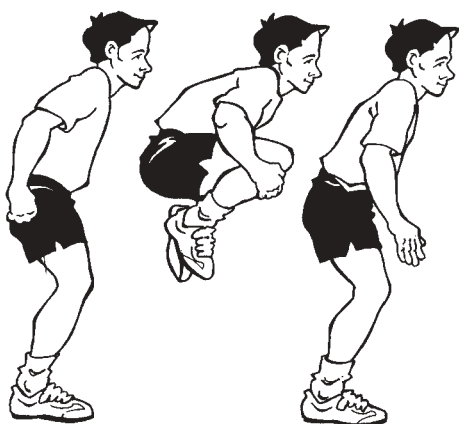
Action: Squat down and jump as far forward as possible. Immediately upon touching down, jump forward again. Use quick double arm swings and keep landings short. Do in multiples of three to five jumps.

Tuck Jump with Knees Up

Equipment: None

Start: Stand with feet shoulder-width apart and the body in a vertical position; do not bend at the hips.

Action: Jump up, bringing the knees up to the chest and grasping the knees with the hands before the feet return to the floor. Land in a standing vertical position, without any forward bend. Repeat the jump immediately.



Tuck Jump with Heel Kick

Equipment: None

Start: Stand with feet shoulder-width apart and the body in a straight vertical position with arms by your sides.

Action: Keeping the knees pointed down (still in line with the body), jump and kick the buttocks with the heels. Repeat the jump immediately. This is a quick-stepping action from the knees and lower legs. Swing the arms up as you jump.

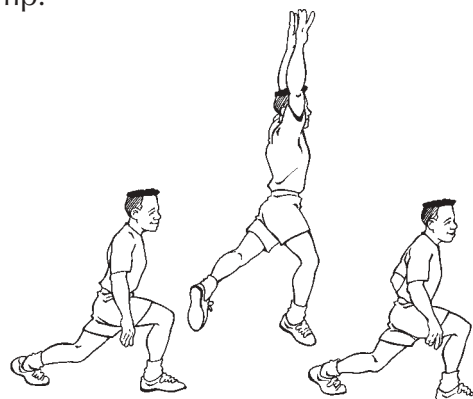


Split Squat Jump

Equipment: None

Start: Spread the feet far apart, front to back, and bend the front leg 90 degrees at the hip and 90 degrees at the knee.

Action: Jump up, using arms to help lift, hold the slip-squat position. Land in the same position and immediately repeat the jump.

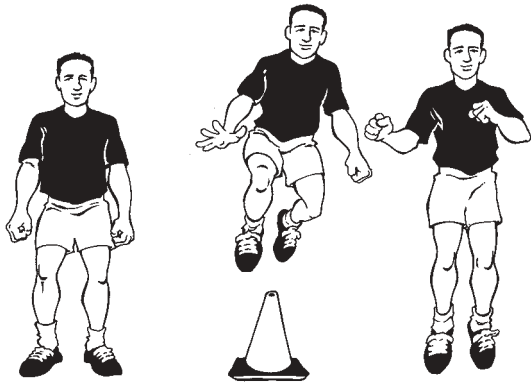


Lateral Jump Over Barrier

Equipment: One cone or hurdle.

Start: Stand alongside the object to be cleared.

Action: Jumping vertically but pushing sideways off the ground, bring the knees up to jump sideways over the barrier.

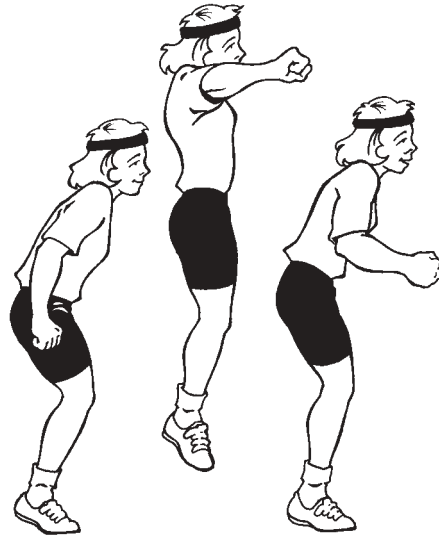


Two-Foot Ankle Hop

Equipment: None

Start: Stand with feet shoulder-width apart and the body in a vertical position.

Action: Using only the ankles for momentum, hop continuously in one place. Extend the ankles to their maximum range on each vertical hop.

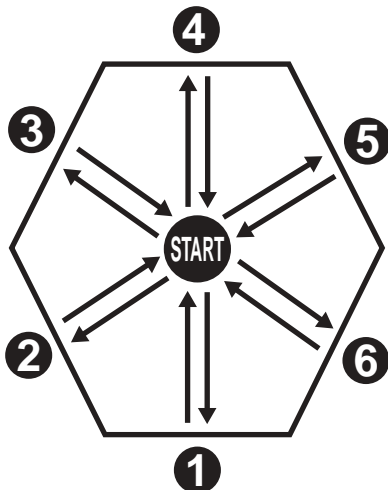


Hexagon Drill

Equipment: A hexagon of tape on the floor with sides about 24 inches long.

Start: Stand in the center of the hexagon with feet shoulder-width apart.

Action: Jump across one side of the hexagon and back to center then proceed around each side of the hexagon. This may be done for a specific number of complete trips around the hexagon or for total time.

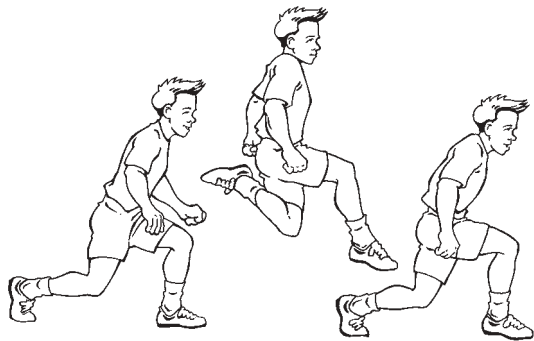


Split Squat with Cycle

Equipment: None

Start: Standing upright, spread the feet far apart, front to back, and bend the front leg 90 degrees at the hip and 90 degrees at the knee.

Action: Jumping up, switch leg positions - the front leg kicks to the back position and the back leg bends up and comes through to the front. While bringing the back leg through, try to flex the knee so that it comes close to the buttock. Land in the split-squat position and jump again immediately.

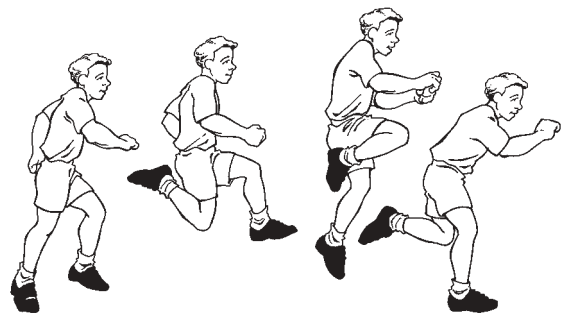


Single Leg Hops

Equipment: None

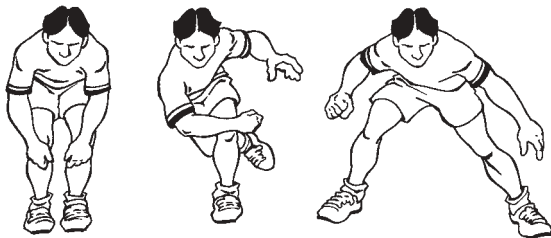
Start: Stand on one leg.

Action: Push off with the leg you are standing on and jump forward, landing on the same leg. Your opposite leg should swing to increase momentum. Once you land, take off again, your feet should move as if you were on a hot plate. The movement is very similar to running on one leg - Perform sets on both legs.



Lateral Bounds

Perform skating motion between two marks on ground, one yard apart. Work on lateral movement. Swing leg should come behind planted leg.



AGILITY LADDER EXAMPLES

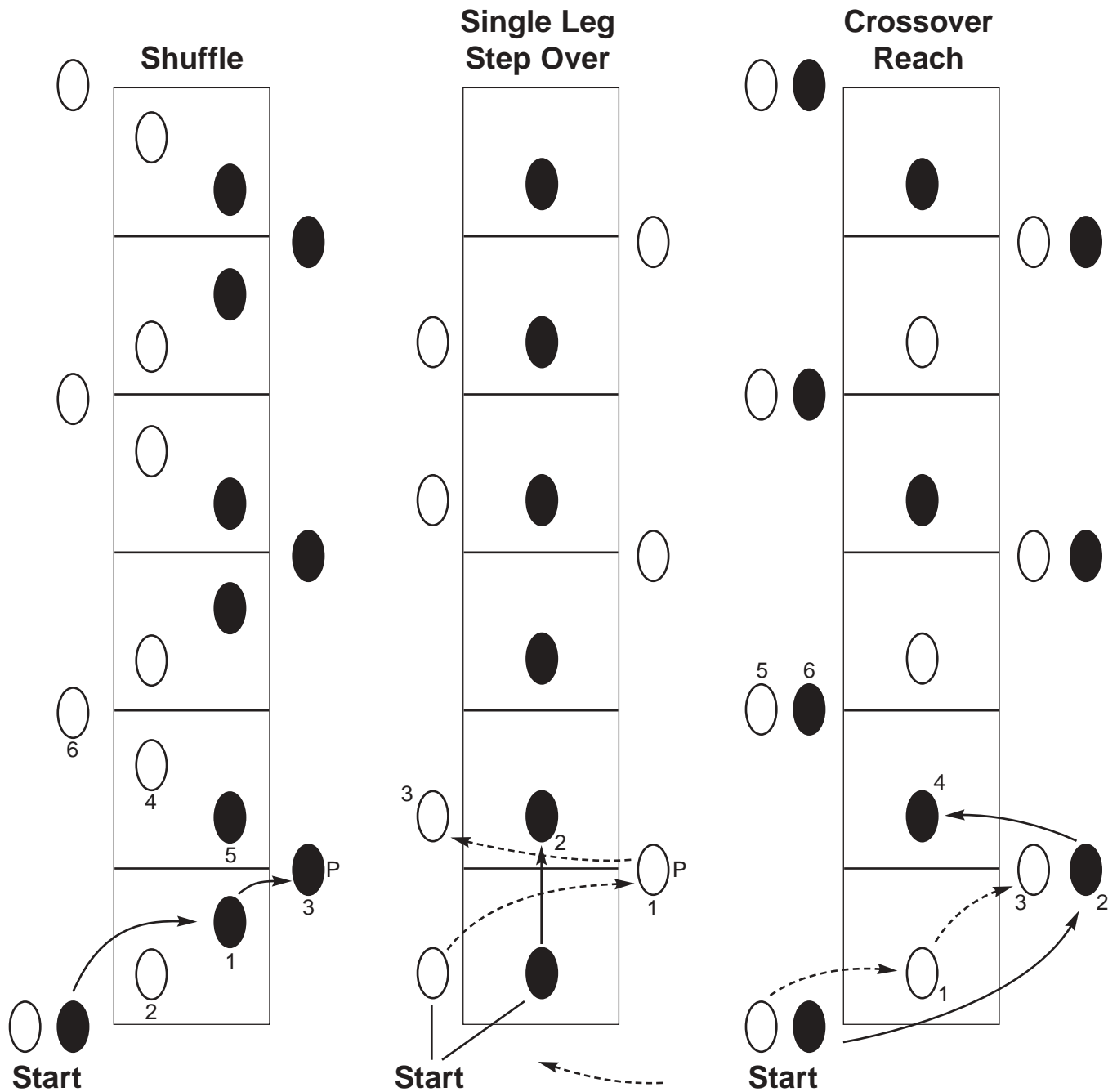
● = RIGHT FOOT

○ = LEFT FOOT

P = PLANT ON SINGLE LEG

----- = LEFT FOOT MOVEMENT

———— = RIGHT FOOT MOVEMENT



SPEED/SPRINTS/CONDITIONING

1. Speed Training

- the only way to get fast is to run fast
- however, there are many other ways of improving your speed and efficiency of movement

Means of Speed Training

1. run sprints really fast!!!!
2. over speed training (down hill sprints, cords, more advanced techniques)
3. resistive runs (uphill, cords, tire pulls, partner resistive)
4. slide board

Starts

1. **Leaf Falls** (straight, 90 degree, laterally)
 - start standing, torso erect, hands down along side
 - lean forward as far as possible
 - first step should be short and powerful
 - think about driving the ground down and back
 - try to avoid reaching with first step
 - finish by sprinting 10 yards
 - 90 degree - start same way, bend at the hips 90 degrees

2. Ball Drops

Work on reaction and first step explosion, also great for hand-eye coordination. Partner stands approximately 10 feet away. Hold a tennis ball at shoulder height and then drop it. On the action of the hand releasing, sprint as fast as possible and try to catch it before it bounces twice.

3. Conditioning

- as sport specific as possible
- vary the modes to avoid boredom but allow enough time for enhancement
- emphasize Anaerobic conditioning
- alter work: rest ratios throughout off, pre and in-season

<u>Mode</u>	<u>Time on/off</u>	<u>Work to Rest</u>	<u>Season</u>
Ex. Slideboards	:30 on 1:30 off	1:3	early OFF
	:30 on 1:00 off	1:2	late OFF
	:30 on :30 off	1:1	PRE-season

Means of Conditioning

1. intervals (can be both aerobic and anaerobic depending on work to rest ratios)
2. slide boards (aerobic as well as anaerobic)
3. tempo runs
4. wind sprint
5. on-ice sprints
6. bike/treadmills

It is important to remember that work to rest ratios will be the determining factor in the systems worked. The intensities along with the volume should also vary when conditioning for the different systems.

OFF SEASON

Sample

Warm-Up / Stretch 10 Min. Abs/Starts/Plyos							
Day 1		WK 1		WK 2		WK 3	
EXERCISE	REST	WT.	REPS	WT.	REPS	WT.	REPS
Hang Clean	:90		x6		x6		x6
			x6		x6		x6
			x6		x6		x6
Front Squat pair w/	none		x10		x10		x10
			x10		x10		x10
					x10		x10
Inverted Rows (close)			x8		x8		x8
			x8		x8		x8
					x8		x8
Lunges pair w/	none		x8R/L		x8		x8
			x8R/L		x8		x8
					x8		x8
DB Incline Press			x10		x10		x10
			x10		x10		x10
					x10		x10

Warm-Up / Stretch Abs/Sprints/Shuttles							
Day 2		WK 1		WK 2		WK 3	
EXERCISE	REST	WT.	REPS	WT.	REPS	WT.	REPS
Push Jerk	:90		x5		x5		x5
			x5		x5		x5
			x5		x5		x5
1 Leg Bench Squat pair w/	none		x10		x10		x10
			x10		x10		x10
					x10		x10
Push Ups		BW	xmax	BW	xmax	BW	xmax
		BW	xmax	BW	xmax	BW	xmax
				BW	xmax	BW	xmax
Back Extensions pair w/	none		x10		x10		x10
			x10		x10		x10
					x10		x10
Chin Ups (BW)			max		max		max
			max		max		max
					max		max

Warm-Up / Stretch Agilities/Plyos/Post Conditioning							
Day 3		WK 1		WK 2		WK 3	
EXERCISE	REST	WT.	REPS	WT.	REPS	WT.	REPS
DB Snatch	:60		x3R/L		x3R/L		x3R/L
			x3R/L		x3R/L		x3R/L
			x3R/L		x3R/L		x3R/L
Step Ups pair w/	none		x10		x10		x10
			x10		x10		x10
					x10		x10
Bench Dips		BW	x8		x8		x8
		BW	x8		x8		x8
					x8		x8
Glute-Ham pair w/	none		x8		x8		x8
			x8		x8		x8
					x8		x8
Pulls Ups (BW)			max		max		max
			max		max		max
					max		max

OFF SEASON
Sample Program

MONDAY	WEDNESDAY	FRIDAY
Warm Up 1. Dynamic Mobility 2. Stretch	Warm Up 1. Easy Jog 2. Stretch 3. Agility Ladder	Warm Up 1. Dynamic Mobility 2. Stretch 3. MB Work
Abs/Low Back 1. Crunches 3 x 20 2. Russian Twist 2 x 10 R/L 3. Supermans 3 x 10	Abs/Low Back 1. Flat Foot w/twist 2 x 20 2. Bicycles 2 x 30 3. Off Bench Obliques 3 x 10 4. Bird Dogs 2 x 15	Abs/Low Back 1. Rev. Crunch 2 x 30 2. Alt V Twist 3 x 10 3. Hip Thrust 3 x 20 4. Alt Superman 2 x 10
Starts 1. Ball Drops 10 x 5 yds 2. Lean Fall Run 5 x 5 yds	Sprints 1. Chase Sprints 6 x 15 yds 2. Resistive Runs 4 x 15 yds	Agilities 1. W Drill 5x's 2. Pro Agility 3x's
Plyometrics 1. Dot Drill 2. Box Jumps	Conditioning (pre lift) 1. 60 yard Shuttle 3x's	Plyometrics 1. Tuck Jumps 2 x 8 2. Lat. Cone Hops 4 x 4 R/L Conditioning (post lift) 1. Slide Boards 15 min

PRE SEASON

Sample

Warm-Up / Stretch 10 Min. Abs/Starts/P							
Day 1		WK 1		WK 2		WK 3	
EXERCISE	REST	WT.	REPS	WT.	REPS	WT.	REPS
Hang Clean	2:00		x4		x4		x4
			x4		x4		x4
			x4		x4		x4
Back Squat pair w/	none		x8		x8		x8
			x8		x8		x8
			x8		x8		x8
DB Row			x6		x6		x6
			x6		x6		x6
			x6		x6		x6
Angle Lunge pair w/	none		x8R/L		x8R/L		x8R/L
			x8R/L		x8R/L		x8R/L
			x8R/L		x8R/L		x8R/L
DB Bench			x8		x8		x8
			x8		x8		x8
			x8		x8		x8

Warm-Up / Stretch Abs/Sprints/Shuttles							
Day 2		WK 1		WK 2		WK 3	
EXERCISE	REST	WT.	REPS	WT.	REPS	WT.	REPS
Alt DB Push Jerk	2:00		x3R/L		x3R/L		x3R/L
			x3R/L		x3R/L		x3R/L
			x3R/L		x3R/L		x3R/L
1 Leg Squat pair w/	none		x8		x8		x8
			x8		x8		x8
			x8		x8		x8
DB Incline			x8		x8		x8
			x8		x8		x8
			x8		x8		x8
Hypers w/ Twist pair w/	none		x8R/L		x8R/L		x8R/L
			x8R/L		x8R/L		x8R/L
			x8R/L		x8R/L		x8R/L
Chin Ups 5/0/1			x5		x5		x5
			x5		x5		x5
			x5		x5		x5

Warm-Up / Stretch Agilities/Plyos/Tempo Runs							
Day 3		WK 1		WK 2		WK 3	
EXERCISE	REST	WT.	REPS	WT.	REPS	WT.	REPS
Hang Clean/ Front Squat	2:00		x3R/L		x3R/L		x3R/L
			x3R/L		x3R/L		x3R/L
			x3R/L		x3R/L		x3R/L
Step Ups pair w/	none		x8R/L		x8R/L		x8R/L
			x8R/L		x8R/L		x8R/L
			x8R/L		x8R/L		x8R/L
Dips 2/0/2			x6		x6		x6
			x6		x6		x6
			x6		x6		x6
Glute-Ham pair w/	none		x8		x8		x8
			x8		x8		x8
V Grip Pull Up	none		x8		x8		x8
			x8		x8		x8
			x8		x8		x8

PRE SEASON
Sample Program

MONDAY	WEDNESDAY	FRIDAY
Warm Up 1. Dynamic Mobility 2. Stretch	Warm Up 1. Easy Jog 2. Stretch 3. Speed Ladder	Warm Up 1. Dynamic Mobility 2. Stretch 3. MB Work
Abs/Low Back 1. Rev Crunches 3 x 20 2. OBO w/Twist 2 x 10 R/L 3. Supermans 3 x 10	Abs/Low Back 1. Flat Foot w/twist 2 x 20 2. Trunk Twist 2 x 10 3. OBO 3 x 10 4. Bird Dogs 2 x 15	Abs/Low Back 1. Plate Crunches 2 x 30 2. Alt V Twist 3 x 10 3. MB Twist 2 x 10 4. Alt Superman 2 x 10
Starts 1. Ground Starts 5 x 15 yds 2. 90 Deg Lean Fall 5 x 5 yds	Sprints 1. Up & Chase 4 x 20 yds 2. Resistive Shuffles 4 x 15 yds 3. 60 yards 4x's	Agilities 1. Agility Ladder 5x's 2. Wall Drills 3 x :30
Plyometrics 1. Box Jumps 3 x 5 ** 2. SL Lat Cone Hop 3 x 6 ** more advanced	Slide Board Sprints 8 x :30 on 1:00 off	Plyometrics 1. Barrier Hops 3 x 8 2. Ice Skaters 4 x 5 R/L (balance)
		Conditioning (post lift) 1. Tempo Runs 10 x 100 yds

IN SEASON

Sample

Warm-Up / Stretch 10 Min. Abs/Plyos							
Day 1		WK 1		WK 2		WK 3	
EXERCISE	REST	WT.	REPS	WT.	REPS	WT.	REPS
Hang Clean	2:00		x3		x3		x3
Front Squat			x3		x3		x3
Lunges	none		x6		x6		x6
pair w/			x6		x6		x6
Bench			x6		x6		x6
(close)			x6		x6		x6
Hypers	:90		x8		x8		x8
			x8		x8		x8

* Depending on the game schedule, two days may not be possible. Try to fit them in with low volume.

Warm-Up / Stretch Abs/Plyos							
Day 2		WK 1		WK 2		WK 3	
EXERCISE	REST	WT.	REPS	WT.	REPS	WT.	REPS
DB Snatch	2:00		x3R/L		x3R/L		x3R/L
			x3R/L		x3R/L		x3R/L
			x3R/L		x3R/L		x3R/L
1 Leg Squat	:90		x5R/L		x5		x5
pair w/			x5		x5		x5
Chin Ups			x8		x8		x8
			x8		x8		x8
Glute-Ham	none		x8		x8		x8
			x8		x8		x8
pair w/			x8		x8		x8
DB Military	none		x8		x8		x8
			x8		x8		x8

IN SEASON

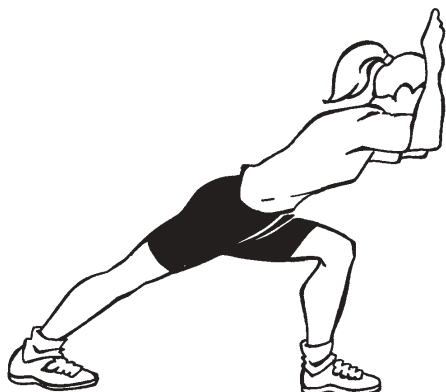
Sample Program

MONDAY
Warm Up <ol style="list-style-type: none"> 1. Dynamic Mobility 2. Stretch 3. Dot Drill
Abs/Low Back <ol style="list-style-type: none"> 1. Rev Crunches 2 x 20 2. Supermans 3 x 10
Plyometrics <ol style="list-style-type: none"> 1. Box Jumps 3 x 5 2. Jump Rope 3 x :40 sec

THURSDAY
Warm Up <ol style="list-style-type: none"> 1. Dynamic Mobility 2. Stretch 3. MB Work
Abs/Low Back <ol style="list-style-type: none"> 1. Plate Crunches 2 x 30 2. Alt V Twist 3 x 10 3. Supermans 2 x 10
Plyometrics <ol style="list-style-type: none"> 1. Squat Jumps 3 x 5 2. SL For. Hops 3 x 5 R/L
Conditioning (post lift) Optional

LOWER BODY STRETCHES

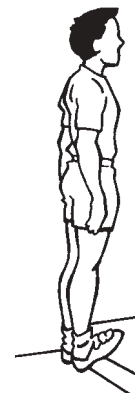
Thigh, Groin, Hamstring, Glutes, & Calves



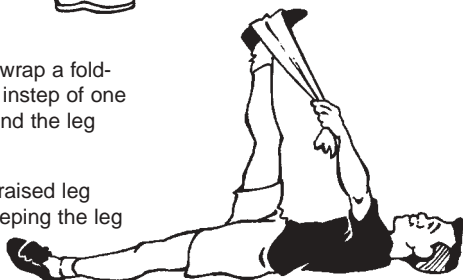
- Standing an arms length from a wall bend one leg forward and lean against the wall without losing the straight line of your head, neck, spine, pelvis, rear leg and ankle.
- Keep your rear foot down and parallel to your hips bend your arms and shift your weight toward the wall.
- Exhale and contract the quadriceps of your rear leg without jamming or locking the knee.

- Stand with the balls of your feet balanced on an edge or step.
- Exhale and lower your heels to the floor.

NOTE If necessary place one hand against a wall for balance and support.



- Lying on your back, wrap a folded towel around the instep of one foot, inhale and extend the leg upward.
- Exhale and pull the raised leg toward your face, keeping the leg straight.
- Also, if you have a bad back, flex the extended leg and slowly lower it to the floor.



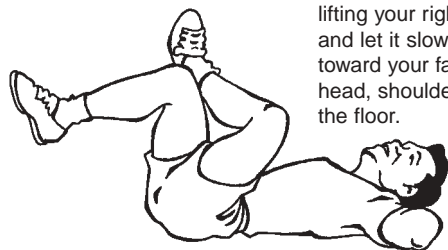
- Lie on your back and raise one leg keeping your hips square.
- Your partner anchors your leg on the ground and grasps your raised leg.
- Exhale as your partner raises your leg upward.

NOTE Remember to keep both legs straight and your hips squared.

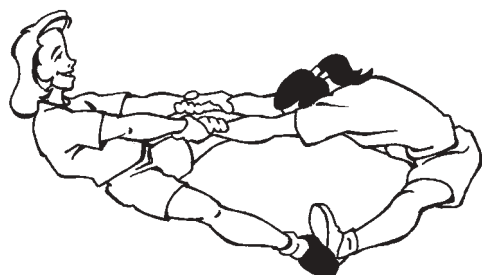


! Your partner should avoid grasping the heel because the leverage may result in straining the knee

- Lie on your back with your left leg crossed over your right knee.
- Exhale and flex your right knee, lifting your right foot off the floor, and let it slowly push your left foot toward your face, keeping your head, shoulders, and back flat on the floor.



- Lie on your back, knees flexed and hands interlocked under head.
- Lift your left leg and hook it on your right leg.
- Exhale and use your left leg to force the inside of your right leg the floor, keeping your elbows, head, and shoulders flat on floor.



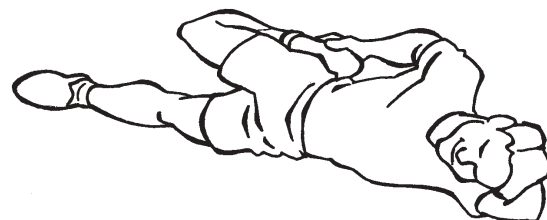
- Sit on the floor with your legs spread. Your partner assumes the same position with feet braced against yours. Lean forward and grasp each other's wrists.
- Exhale: keeping your legs straight, extend your upper torso and bend forward at the hips as your partner leans backward and pulls on your wrists.

- Lie on your side, flex one knee, and raise your heel toward your buttocks.
- Exhale, grasp your raised ankle, and pull your heel toward your buttocks without overcompressing the knee.

To maximize the stretch, make sure the medial sides of your legs touch each other and your pelvis rotates backward (visualize pulling your tailbone between your legs).

NOTE

Do not arch your lower back or twist your pelvis.



UPPER BODY STRETCHES

Chest, Shoulders, Arms, & Upper Back

Lateral shoulder



- Kneel on all fours, extend your arms forward, and lower your chest to the floor.
- Exhale, extend your shoulders, and press on the floor with your arms to arch your back.

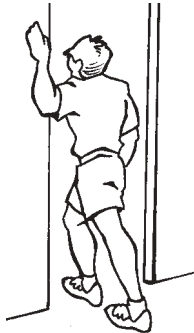


- Lie on your back on a table with your head hanging over the edge.

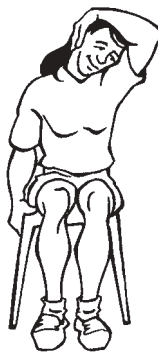
- Hold the stretch and relax.



Shoulder internal rotators (anterior)



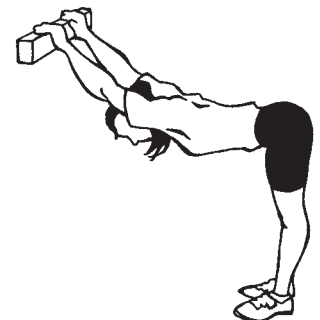
- Sit or stand with one arm flexed behind your back and grasp the elbow from behind with your opposite hand.
- Exhale and pull your elbow across the midline of your back. Grasp your wrist if you are unable to reach your elbow.



- Sit on a chair with your right hand grasping the lowest part of the chair frame to stabilize your right shoulder.
- Place your left hand on the upper right side of your head.
- Exhale and pull the left side of your head onto your left shoulder.

NOTE The stretch will be dissipated upon release of the chair.

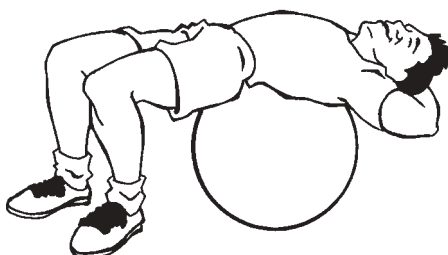
Upper back



- Stand with your back to a door frame.
- Rest one hand against the door frame with your arm internally rotated at the shoulder, your forearm extended, and your hand pronated with your thumb pointing down. Exhale and attempt to roll your biceps so they face upward.

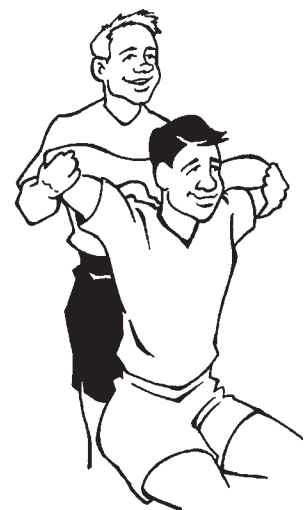


- Sit or stand, flex your right arm, and raise your elbow to chest height.
- Flex and raise your left arm so its elbow can support your right elbow and intertwine your forearms so your left hand grasps your right wrist.
- Exhale and pull your wrist outward and downward.



- Sit on the floor with a large Swiss ball against your lower back and your hands interlocked behind your head, elbows facing forward.
- Inhale, extend your thighs, raise your buttocks off the floor, roll the ball, and achieve a neutral position. The ball should be under your shoulder blades (scapula), with your lumbar spine flat, your knees flexed at 90 degrees, and your elbows abducted.

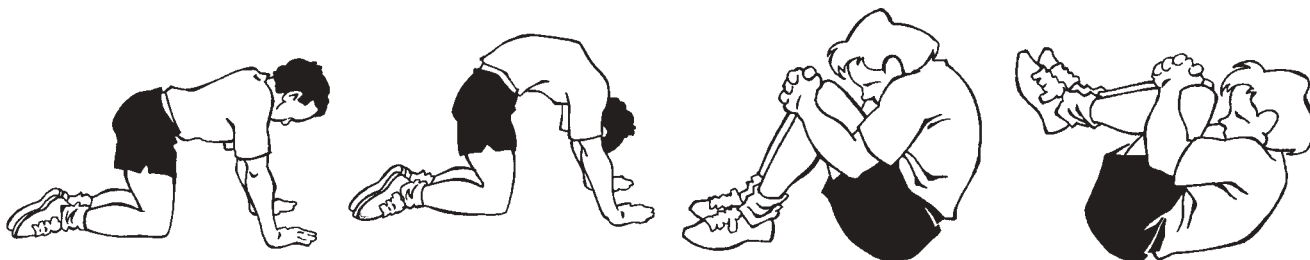
NOTE You should feel the stretch in the upper chest area.



- Sit with both arms flexed and your hands interlocked behind your head.
- Your partner grasps both elbows and pulls them backward toward each other.

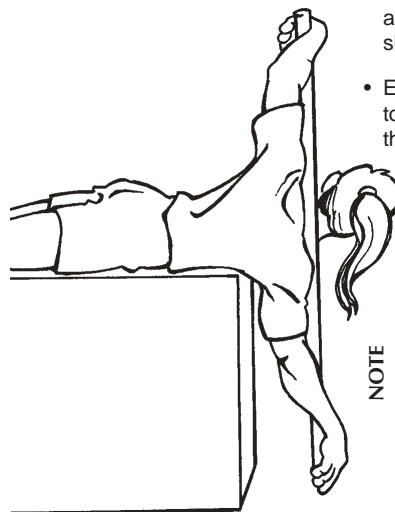
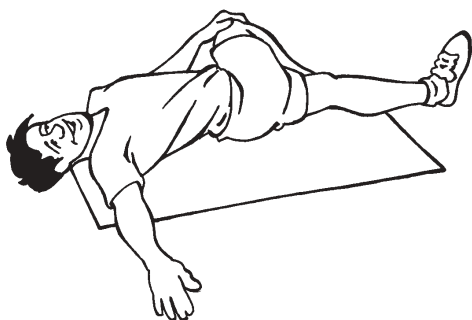
UPPER BODY STRETCHES

Torso (Abdominals & Lower Back)



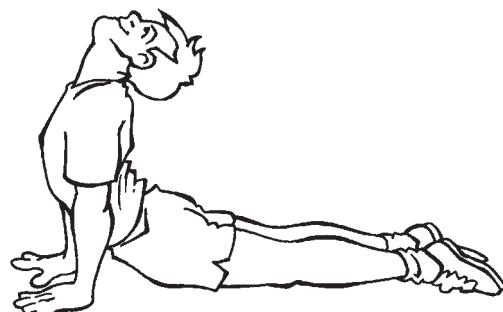
- Kneel on all fours with your toes pointing backward.
- Inhale, contract your abdominals, and round your back.
- Exhale, relax your abdominals, and return to the “flat back” position.

Lower Back Stretch



- Lie face down on a table with your upper torso extended over the edge, grasping a stretching stick that rests across your shoulders.
- Exhale as you slowly twist your upper torso as high as possible and return to the starting position.

NOTE This stretch is great for the motion of shooting the puck



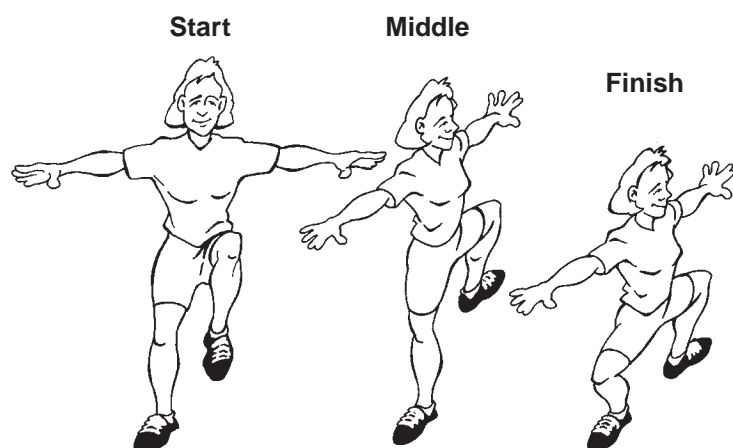
DYNAMIC MOBILITY EXERCISES

Ballet Dancer

Start: Standing with feet shoulder width apart. torso tight. Lift left knee straight up to a parallel position keeping heel tucked under hip.

Middle: Keeping right foot planted, rotate left leg and hip 180 degrees to the left.

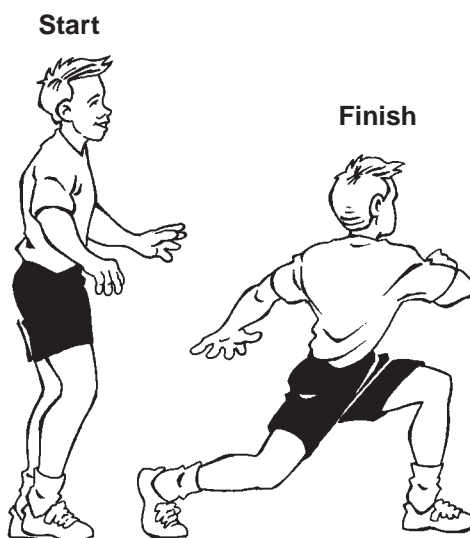
Finish: Keeping chest & head up, plant left foot in line with the right foot and squat down. Repeat 10 times each leg.



Lunge & Twist

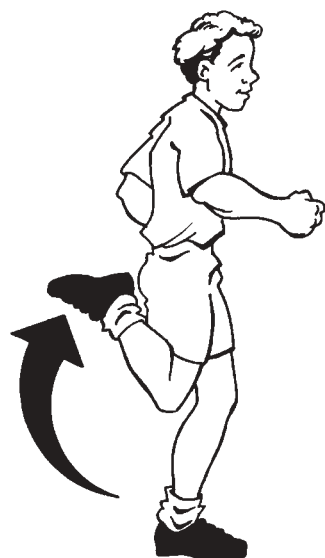
Start: Standing tall, torso erect, lunge forward with left leg. Lunge to a 90 degree bend in left knee making sure that your knee does not go past your ankle.

Finish: End by twisting your torso to the left side. Alternate and repeat.



Butt Kicker

Moving forward try to kick your heels up as high as possible making contact with the butt. Keep Torso tight, ankles dorsi-flexed.



High Knee Pull

Walking forward, keeping torso erect. Head up. Raise knee as high as possible. Grab knee and pull it to your chest. Alternate pulling knees in.



REFERENCES

- Alter, Michael, J. (1996). Science of Flexibility (2nd ed.). Champaign, IL: Human Kinetics
- Alter, Michael, J. (1998). Sport Stretch (2nd ed.). Champaign, IL: Human Kinetics
- Amateur Hockey Association of the United States (1985) Fundamentals of Coaching Youth Hockey
- Baechle, T. (ed.) National Strength and Conditioning Association. (1994). Essentials of Strength and Conditioning. Champaign, IL: Human Kinetics
- Boyle, Michael. Strength and Conditioning Coach, Boston University Hockey, Boston Bruins, Sports Acceleration North.
- Blaterwick, Jack. (1992). Over-Speed Skill Training for Hockey. Colorado Springs, Co: The Publishing Group.
- Chu, Donald, A., (1998). Jumping Into Plyometrics. (2nd ed.). Champaign, IL: Human Kinetics
- Gambetta, Vern. Why Medicine Ball Training? P. 32-35.
- Goldenberg, Lorne. 1997 Strength and Conditioning Manual, Ottawa Senators. Physioball illustrations.
- Twist, Peter. (1997). Complete Conditioning for Hockey. Champaign, IL: Human Kinetics

Chapter 4

Player Training Log

OBJECTIVES

- **Point out the importance of keeping a training log**
- **Outline what should be kept in a player's log**
- **Give an example of a log book**

INTRODUCTION

Any elite athlete will tell you that keeping a training log is an absolute must if you want to make the most of your training. Detailed record keeping helps you remember what you did during a certain day, week or month allows the player and coach to make judgements on what training method works best.

Nearly all the advantages of keeping a training log stem from regular comparisons the coach and athlete are able to make.

A log enables you to chart the peaks and valleys in the player's performance. You may think you'll never forget a particular practice or game, but can you remember the exact practice or workout the day or week before, that prepared you for a particular game, tournament or series?

A training log is also a great place to record the results of competition. By jotting down this information, you can see trends in your performance.

Players' recovery from an injury can be documented in their log books and can be used as a reference for future injuries. Regular record keeping will show what type of treatment and

rehabilitation was used for a particular injury.

TRAINING LOG COMPONENTS

Here are some suggestions for training log components

- Hours of sleep
- Type of appetite
- Daily resting pulse rate
- How you feel
- Practice goals (individual)
- Practice goals (team)
- Skills to work on
- Mental goals for practice
- Mental goals for games
- Goals for games (team)
- Goals for games (individual)
- Pre-Practice attitude
- Pre-Game attitude
- Post-Practice comments
- Post-Game comments
- Self talk
- Injury record
- Rehabilitation record
- Life skill goals
- Life skill accomplishments
- Academic goals
- Academic achievements
- Game results

SAMPLE LOG SHEETS

Here are some samples of a log book page.

TRAINING LOGBOOK A

Date: _____

Hours Sleep: _____

Appetite: ☐ good ☐ poor

Resting Pulse: _____

Muscles Feel: ☐ good ☐ hurt ☐ sore

WORKING ON TODAY

Skills: _____

New Skills: _____

Practice Goals: _____

PRE-PRACTICE ATTITUDE

How motivated are you?

1

2

3

4

5

Don't want to practice

Average motivation

Can't wait to get training

Mental Goals for Practice:

1. _____

2. _____

POST PRACTICE COMMENTS

Energy Level: How much energy did you have?

1

2

3

4

5

VERY LOW

VERY HIGH

Why? _____

Performance: Did you accomplish your specific practice goals?

1

2

3

4

5

Met No Goals

Met 50% of Goals

Met 100% of Goals

SELF-TALK

What were you saying to yourself before practice? _____

What were you saying to yourself during practice? _____

Name at least one positive accomplishment from today's practice: _____

Notes: _____

SEASON REVIEW LOG BOOK B

The Best:

1. Game _____
2. Practice _____
3. Attitude _____
4. Grades _____

Need Improvement

1. In my Game _____
2. In my Practicing _____
3. In my Attitude _____
4. In School _____
5. Mental Preparation _____

WEEKLY LOG BOOK C

Week: _____

What's on the Schedule:

- Practices _____
- Game _____
- School _____
- Other Activities _____

School:

- Homework _____
- Special Assignments _____
- Tests _____
- Goals this week _____
- What did I learn _____

Game ReCap

- | | | | | |
|----------------------|--------------------------------|-------------------------------|----------------------------------|-------------------------------|
| • Performance | <input type="checkbox"/> Great | <input type="checkbox"/> Good | <input type="checkbox"/> Average | <input type="checkbox"/> Poor |
| • Goals Met | <input type="checkbox"/> Yes | <input type="checkbox"/> No | | |
| • Pre-Game Attitude | <input type="checkbox"/> Great | <input type="checkbox"/> Good | <input type="checkbox"/> Average | <input type="checkbox"/> Poor |
| • Post-Game Attitude | <input type="checkbox"/> Great | <input type="checkbox"/> Good | <input type="checkbox"/> Average | <input type="checkbox"/> Poor |
| • Did You Have Fun? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | | |

Chapter 5

GAME DAY PREPARATION: Locker Room and Bench Management

OBJECTIVES

- **Provide coaches with an idea of what it takes to prepare**
- **Provide coaches with game statistical sheets**
- **Provide an outline of game day responsibilities**

INTRODUCTION

The second most important preparation task of a coach is game preparation. Your preparation or lack of it can set up for a win or loss. This part of coaching is your “bread and butter,” so no stones should be left unturned. A coach should prepare his team for what will be expected during a game, so there are no surprises for the players and coaches. Proper preparation will enable the coaches and players to focus on the task at hand.

Preparation will vary with a coach depending upon:

- age group he/she is coaching
- level of play he/she is coaching (pro, college, jr., high school, etc.)
- resources available
- man power
- is the job full time; part time; amateur; paid; volunteer
- time available to prepare

Having your team and individual players well prepared will:

- give your players confidence
- send a message to your team that you, as a coach, are well prepared

STATISTICS PLAY AN IMPORTANT ROLE IN PREPARATION

The use of statistics is very helpful for you in your game preparation:

- shows the tendencies of your opponent
- reaffirms your thoughts on your opponent’s strengths and weaknesses (team and individuals)
- gives necessary feedback to coaches
- gives necessary feedback to players
- gives valuable information to coaches during the game
 - to modify strategy
 - shift time of players
 - line matching /combinations
 - scoring chances
 - specialty teams

Also, remember to keep statistics in perspective when talking to your players about their own statistics.

Facts to Consider

- Ice time logged
- Their experience
- Their role on the team

GAME DAY PREPARATION

Considerations

1. Home game or away game
2. Two game series; with the same team
3. Two game series; with two different teams
4. Single game
5. Number of games in number of nights
6. Distance traveled/mode of transportation
7. Day of the week
8. Time in the season
9. Type of game: exhibition, conference, play-off
10. Size of rink/type of building

Information Needed to Gather

1. Opponent's scouting report: team breakdown, key players' tendencies
2. Opponent's tendency tape
3. Statistics on opponent
4. Opponent's last game information
5. Line up/specialty teams
6. Opponent's tendencies when they pull their goaltender
7. How do they change lines: fly, after goal, after penalty, after power play, etc.
8. Tendencies during the first and last two minutes of a period

Game Plan

1. Style
2. How team will start the game
3. Line rotations: match, units, short bench, 3/2, etc.
4. Tempo
5. Putting right players on the ice, at the right time, in the right situation

6. Bench game plan
 - who's up
 - who's next
 - who's up after power play
 - who's up after penalty kill
 - who's on the checking line
7. What to do when
 - they pull their goalie
 - who goes out when we pull our goalie
 - when do we pull our goalie
 - last 5 minutes: down by 1 goal; 2 goals
 - last 5 minutes: up by 1 goal; 2 goals

Game Day Outline

Time

Agenda

coaches preparation meeting
team breakfast
pre-game skate
individual meetings
coaches detail meeting
pre-game meal
team meeting
depart for arena
team stretch
pre-game warm up
game time
post game meal
depart for home/motel

Examples of Information and Stat Sheets

The following pages are some forms for coaches and players to use to assist them in their preparation for competition.

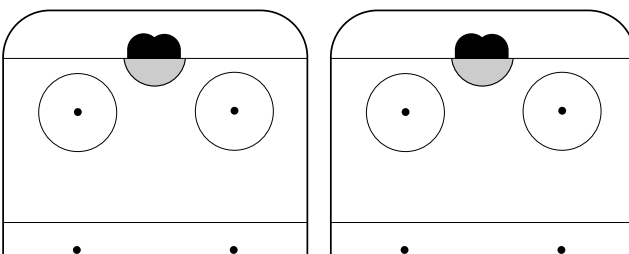
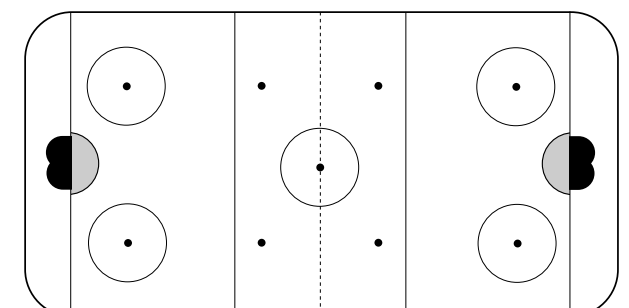
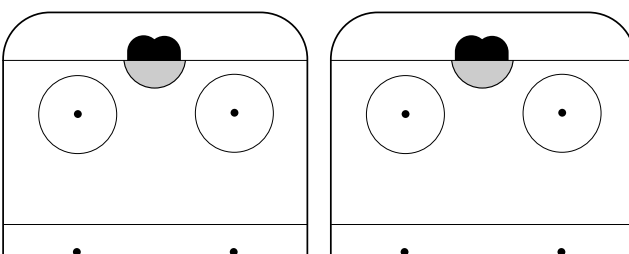
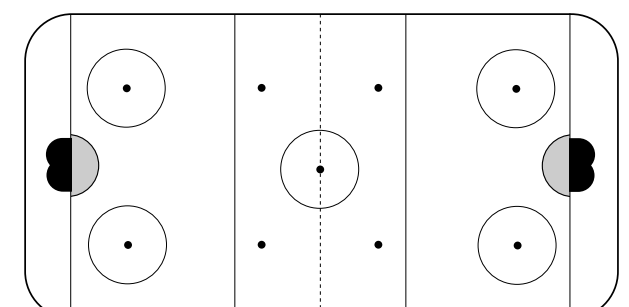
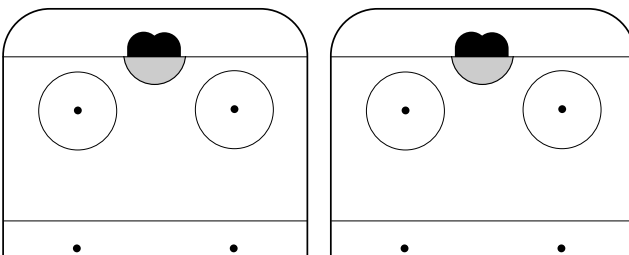
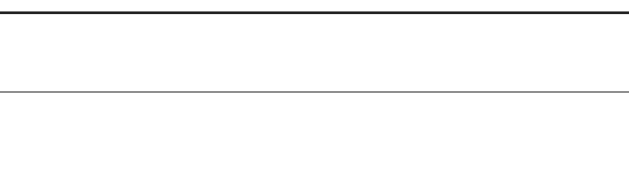
USA HOCKEY SCOUTING REPORT

DATE / /

GAME

ENTER OPPONENT NAME			STRENGTHS	
LW	C	RW		
LD	RD	13 th FWD	WEAKNESSES	
NOTES: 			TENDENCIES	
			GOALTENDING	
OFFENSIVE ZONE & FORECHECK			DEFENSIVE ZONE & BREAKOUT	
NEUTRAL ZONE OFFENSE & DEFENSE				

USA HOCKEY SCOUTING REPORT (continued)

POWER PLAY					
<div style="text-align: center; margin-bottom: 10px;">1st UNIT</div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="text-align: center; margin-bottom: 10px;">2nd UNIT</div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="text-align: center; margin-bottom: 10px;">LINE AFTER PP</div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>			
PENALTY KILL					
<div style="text-align: center; margin-bottom: 10px;">1st UNIT</div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="text-align: center; margin-bottom: 10px;">2nd UNIT</div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="text-align: center; margin-bottom: 10px;">3rd UNIT</div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="text-align: center; margin-bottom: 10px;">LINE AFTER PK</div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>		
FACE-OFFS & ADDITIONAL NOTES					
					

HOCKEY TRAVEL ITINERARY SAMPLE

Colorado Springs, Colorado
February, 15-17, 2005

Hotel: _____

Thursday, February 15

3:00 p.m.	Practice at Ice Arena
4:00 p.m.	Load bus at Practice Arena
4:15 p.m.	Depart for Colorado Springs
10:15 p.m.	Arrive in Colorado Springs
10:30 p.m.	Team Stretch and hotel check-in

Friday, February 16

8:30 a.m.	Wake-Up call
9:00 a.m.	Team Breakfast
9:30 a.m.	Depart for Ice Arena
10:15 a.m.	Practice (meeting to follow)
2:30 p.m.	Pre-Game Meal
5:30 p.m.	Depart for Ice Arena
7:30 p.m.	Game
10:00 p.m.	Post-Game meal
12:00 p.m.	Lights Out

Saturday, February 17

9:00 a.m.	Wake-Up call
9:30 a.m.	Team Breakfast
2:00 p.m.	Team Meeting
2:30 p.m.	Pre-Game Meal
4:30 p.m.	Check-Out of Hotel - Depart for Game
7:30 p.m.	Game
10:30 p.m.	Depart for Home
2:00 a.m.	Arrive Practice Ice Arena at Home

MENTAL PREPARATION FOR TOURNAMENT

Mental Attitude for Week

- Project a strong air of confidence
- A week of intensity and total focus
- Determined to get better
- Focus on performance

Action

1. “Can” and “Will” must become a part of our vocabulary
2. High-energy enthusiasm at the rink and on the ice at practice
3. Review practice objective
 - 70% completed pass
 - 60% shots on goal
 - no unforced give-aways in scrimmage

Game Objectives

1. More grade A attempts than opposition
2. Win 60% of all face-offs
3. Greater power-play % and penalty killing % than opposition
4. Less than 40 second average shift time
5. Zero direct retaliation penalties
6. Did not go off-sides more than 1 time in even or superior offensive situations
7. No face-off goals against
8. Finish plus or even in first and last minutes of each period
9. No majors, misconducts or unsportsmanlike penalties
10. Played the body and finished checks effectively

Percentage of objectives met:

GAME LINEUPS

Home Team	Visiting Team
Forwards (Player's name and number)	Forwards (Player's name and number)
() <u> LW </u> () <u> C </u> () <u> RW </u>	() <u> LW </u> () <u> C </u> () <u> RW </u>
<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
() <u> LW </u> () <u> C </u> () <u> RW </u>	() <u> LW </u> () <u> C </u> () <u> RW </u>
<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
() <u> LW </u> () <u> C </u> () <u> RW </u>	() <u> LW </u> () <u> C </u> () <u> RW </u>
<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
Defenseemen (Player's name and number)	Defenseemen (Player's name and number)
() <u> LD </u> () <u> RD </u>	() <u> LD </u> () <u> RD </u>
<u> </u> <u> </u>	<u> </u> <u> </u>
() <u> LD </u> () <u> RD </u>	() <u> LD </u> () <u> RD </u>
<u> </u> <u> </u>	<u> </u> <u> </u>
() <u> LD </u> () <u> RD </u>	() <u> LD </u> () <u> RD </u>
<u> </u> <u> </u>	<u> </u> <u> </u>
Extras (Player's name and number)	
() ()	() ()
<u> </u> <u> </u>	<u> </u> <u> </u>
Opposition Power Play (Player's name and number)	
() <u> LW </u> () <u> C </u> () <u> RW </u> () <u> LD </u> () <u> RD </u>	
<u> </u> <u> </u> <u> </u> <u> </u> <u> </u>	
Home Power Play (Player's name and number)	
() <u> LW </u> () <u> C </u> () <u> RW </u> () <u> LD </u> () <u> RD </u>	
<u> </u> <u> </u> <u> </u> <u> </u> <u> </u>	
Opposition Penalty Killing (Player's name and number)	
() <u> C </u> () <u> W </u> () <u> LD </u> () <u> RD </u>	
<u> </u> <u> </u> <u> </u> <u> </u>	
Home Penalty Killing (Player's name and number)	
() <u> C </u> () <u> W </u> () <u> LD </u> () <u> RD </u>	
<u> </u> <u> </u> <u> </u> <u> </u>	
Home injured players <u> </u> <u> </u> <u> </u>	
Visitors injured players <u> </u> <u> </u> <u> </u>	

CONTROLLED FACE-OFFS

Players' Names		First Period				
		Def.	Neut.	Off.	Total	Remarks
1.	Won					
	Lost					
2.	Won					
	Lost					
3.	Won					
	Lost					
4.	Won					
	Lost					
Team Total	Won					
	Lost					

Players' Names		Second Period				
		Def.	Neut.	Off.	Total	Remarks
1.	Won					
	Lost					
2.	Won					
	Lost					
3.	Won					
	Lost					
4.	Won					
	Lost					
Team Total	Won					
	Lost					

Players' Names		Third Period				
		Def.	Neut.	Off.	Total	Remarks
1.	Won					
	Lost					
2.	Won					
	Lost					
3.	Won					
	Lost					
4.	Won					
	Lost					
Team Total	Won					
	Lost					

GIVEAWAYS — OUR END

Date _____ vs. _____ at _____							
No.	Players	Bad Pass	Bad Clearing	Stick Handling	Out-Fought	Missed Pass	TOTALS
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
	TOTALS						

SHOOTING CHART

[illegible]

INSTRUCTIONS FOR SHOOTING CHART

1. Name of each player in left hand column.
2. Every shot by each player during drills and scrimmages is marked in appropriate column.
3. At end of practice, total shots for each player is placed next to his name in the left hand column.
4. Shooting % is the total number of shots on net divided by the total number of shots attempted. Example:

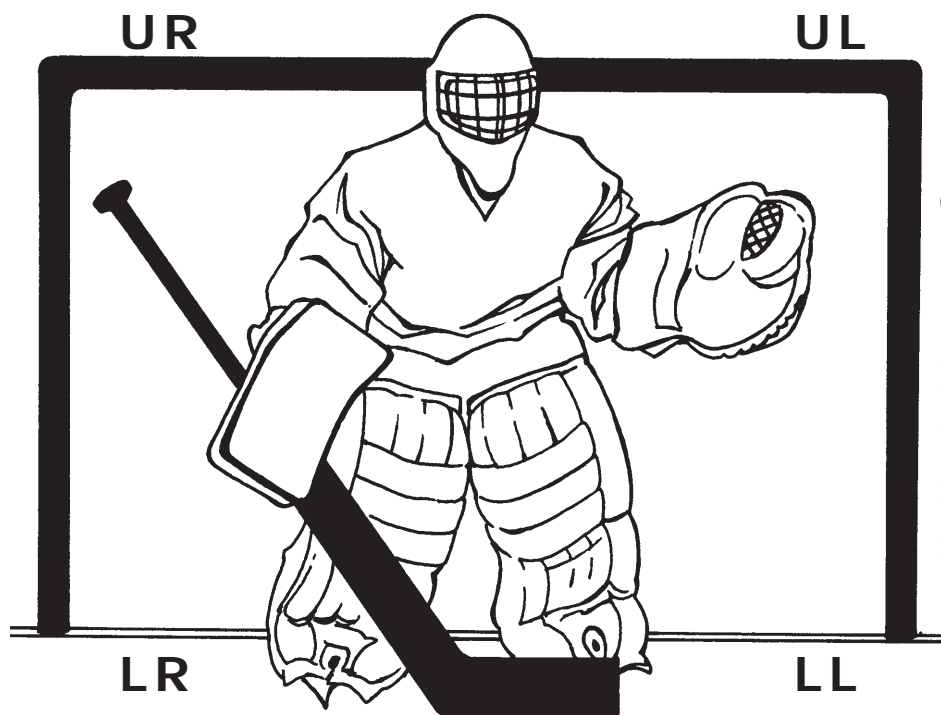
Misses	4
Blocked	1
Saved	8
Goals	2
<hr/>	
Total Shots	15

$$\begin{aligned}\text{Shooting \%} &= (\text{goals} + \text{saved}) \div \text{total shots} \\ &= (2 + 8) \div 15 \\ &= 10 \div 15 \\ &= .6667 \\ &= 67\%\end{aligned}$$

5. Scoring % is the total number of goals divided by the total number of shots attempted. Example:

$$\begin{aligned}\text{Scoring \%} &= \text{goals} \div \text{total shots} \\ &= 2 \div 15 \\ &= .1333 \\ &= 13\%\end{aligned}$$

PRACTICE GOALTENDER CHART



Date _____

Goaltender _____

Lower Left _____

Lower Right _____

Upper Left _____

Upper Right _____

Drill GPSG

Shots:

Scrimmage GPSG

Total for Day

Shots:

Comments:

-
- an X is placed wherever a goal is scored during drills; an (X) when a goal is scored during scrimmages.
 - to determine goals per shot on goal (GPSG):
 $\text{shots} \div \text{goals} = 35 \div 4 = 8.75$ which is 1 goal for every 8.75 shots
-

PLUS-MINUS CHART

[illegible]

LOCKER ROOM MANAGEMENT

When to Report to the Rink

1. Staff
2. Players
3. Trainer/equipment manager

Responsibilities and Assigned Areas at Rink

1. Head coach
2. Assistant coaches
3. Equipment manager
4. Trainer
5. Players playing tonight
6. Players not playing tonight
7. Locker room cubicle assignments for players
8. Trainer location
9. Equipment/skate sharpener

Locker Room Policy

1. Who is allowed in locker room before, during, and after the game
2. Talking/no talking
3. Trainer roles
4. Individual players reinforcement
5. Team discussion
6. Assistants make individual adjustments
7. Head coach makes team adjustments
8. Need quiet time
9. If the team needs a stern talking to:
 - speak to the team in a direct tone of voice
 - leave the team alone
 - go back in the locker room and be positive

End of Game

1. Cool down
2. Be positive
3. Looking ahead to next challenge
4. Support personnel role

BENCH MANAGEMENT

A. Consideration:

1. Arena Layout

- a. size of rink
- b. size of zones
- c. location of benches
- d. location of penalty box
- e. arena entrances/exits
- f. location of scoreboard
- g. location of press box/video location/electrical outlets
- h. type of lighting in arena
- i. normal temperature of rink

2. Utilization of Assistant Coaches

- a. bench/press box; one in each area for the whole game
- b. define their roles
- c. assistant on the bench makes: individual small corrections; answers players questions; keeps coach informed regarding pertinent information
- d. assistant in press box watches individual players; opponents; system; affirms preparation details
- e. head coach gives pats; watches ice at all times; unit changes; specialty team changes

3. Bench Configuration

- a. 2 tier bench
- b. one level bench/open front/no behind
- c. one level bench/open front and back
- d. two gates/one gate
- e. neutral zone gates
- f. two zone gates
- g. glass in back/no glass
- h. area size
- o. zone sizes

4. Operation of Bench During Game

- a. most important element - lines of communication
- b. support personnel and their responsibilities (conference limitations)
 - trainer
 - equipment manager
 - stick boys
 - gate operators
- c. on ice/hop over
off ice/through gates

- d. defense/forwards sides
- e. move toward middle
- f. penalty over change/position of player
- g. pull the goaltender play
- h. special plays
- i. change lines: regular; goals for; against
- j. stall time/player; goalie

B. Head Coaching - Game Time

1. define personnel roles
2. keep lines of communication open
3. your system on the bench:
 - no notes
 - index cards
 - plastic plan sheets
 - tape recorder
 - steno pads
 - preparation notes
 - line ups
 - specialty team
 - notes
 - between period remarks
4. players must know all personnel's roles, and the system and lines of communications
5. tone of the bench
 - players sit or stand
 - getting ready for the next shift
 - keep the confusion down
 - tone of the head coach
6. atmosphere - you as the head coach are trying to set
7. rotation of the line:
 - do you get the last change
 - who plays best on the road
 - who plays best at home
 - matching/not to match
 - units of five
8. late in the game:
 - short bench
 - down a goal
 - up a goal
 - goalie pulled
 - time outs

NOTES



**1775 Bob Johnson Drive
Colorado Springs, CO 80906
www.usahockey.com**