

BOSTON BRUINS OFF SEASON CONDITIONING PROGRAM 1998

The information that is contained in this training manual is considered to be the state of the art in conditioning for the game of hockey. This information is intended to provide direction for your off season training. Veteran players have been provided with a shorter program that eliminates the need for a great deal of technical explanation. For those players who would like to improve their conditioning, this manual will provide you with all the necessary information.

In order to fully understand the purpose of our off-season program some basic concepts must be understood:

1) Hockey is an anaerobic game supported by an aerobic base.

Aerobic training is a means to an end not an end in itself. Sprint training is the actual key to hockey performance. This applies to both bike training and running. Hockey breaks down to approximately 7 sprints of 40 seconds or less done in a 20 minute period followed by a rest of 15 minutes. (Information from personal conversations with former Bruins assistant, John Cuniff). Try to explain to me why many teams are emphasising long slow distance training. As a player ages it becomes even more important to include sprint training in the program. It is my opinion that some players may train themselves out of the league by relying on a strict aerobic regimen to prepare them for the season. Speed is lost as age increases and, extensive aerobic training hastens this process. Long periods (greater than 30 min) of steady state bike work or running should be done only once or twice during the week after the first month of the summer. Excessive emphasis on aerobic training results in an athlete changing the physiological characteristics of his body from those of a sprinter to those characteristics of an endurance athlete. This is by no means a positive change.

2) Lower body strength and power must be the number one priority for the hockey player. The strength and power output of the lower body can and should be improved in the off season. Both research and anecdotal studies have shown a high correlation between vertical jump, land sprint speed, and skating speed. If you must train exclusively on a bike, perform two workouts per week of 5 seconds work to 25 seconds rest on either an Airdyne or a Fitron. For the Fitron set the dial for 120 RPM's. Work for the highest possible workload in 5 seconds.

3) It appears that running and/or slideboard work is essential to avoiding groin and abdominal injuries. There is no hard data to support this claim but, numerous college and professional trainers have noted the relationship between training in the off season on the bike and a subsequent shortening of the hip flexor muscles. This is due to the decreased range of motion used on the bike. In

addition the hip flexors are not strengthened on the bike. Running increases the range of motion and, actively involves the hip flexors in the recovery of the leg. Rollerblade sprints(less than 110 yds.),slideboard intervals (10-15 sec.) or on-ice sprints may take the place of land sprints if you so desire. Those players who have had groin problems will be given additional specific recommendations for resistive groin strengthening.

4) Abdominal strength, particularly rotational abdominal strength, should be emphasised to avoid abdominal wall tears. A recent theory (1991) has related overdevelopment of the obliques on the shooting side to abdominal hernias on the opposite side. The repeated action of forehand shooting overdevelops the abdominals and obliques on the shooting side and causes weakness on the opposite side. Most of the hernias in the athletes polled were in the oblique muscle on the side opposite of the shooting hand. A section is included in the manual on developing rotational abdominal strength.

5) Nutrition is the key to both in season and off season success. Please read the nutrition section of this manual carefully. Lack of attention to nutrition will sabotage your training efforts. If you generally encounter problems with weight gain over the summer a creatine supplement and a protein supplement are both highly recommended. The player of the future in the national hockey league will be over 200 lbs. with bodyfat in the 10% range. Work to increase your lean bodyweight (muscle mass) over the summer.

6) Time should be spent daily on stretching particularly to lengthen the hip flexor and groin muscles. Many of the groin and knee problems that are seen by our training staff appear to be related to lack of flexibility in the hip flexors. Hip flexor stretching is discussed in detail in the flexibility section.

PRESEASON TESTING 1998

- We are going to improve the quality of testing for veteran players. Testing will be done with more attention to detail and, with stricter standards.

The following tests will be done during the first week of training camp for all players:

- 1) **Repeat 110 Yd Sprint Test- 16 x 110 yds .** Sprints must be done in 16.5 sec with 44 sec rest between each sprint. Please follow the running program. **This is not a misprint, Sept 1998 will be a sprint test.**
- 2) **Percent Bodyfat** - all players will have bodyfat determined by skinfold. **This will be a new formula chosen for greater accuracy.** If you arrive in the same shape you were in last year expect to be 2-5 % higher. If you were less than 9% last year this should not be an issue. Players between 9-12% should be concerned.
- 3) **VO2 Max** - players determined **by the training staff** to be **medically unable** to complete the run test will have fitness assessed by VO2 max test on the bike.
- 4) **Upper Body Strength/Endurance-** maximum numbers of repetitions in the bench press with **110 %** of bodyweight, maximum number of pull-ups. (**Only pullups done to full extension will be counted, please consider this advanced notice**)
- 5) **Lower Body Power-** Vertical Jump. Two foot takeoff no steps.
- 6) **Abdominal Strength/Endurance-** new test. Crunches done with 18" between rear end and heels. Hands must slide along the floor and touch the heels.

SUMMER TRAINING RECOMMENDATIONS

As in previous years we are asking that players devote a minimum of nine hours per week to off season conditioning, The breakdown should be as follows:

1 HOUR - FLEXIBILITY,

EMPHASIS ON HIP FLEXORS and HIP ROTATORS This should be at least 15 minutes per day four days per week..

4 HOURS - STRENGTH AND POWER TRAINING.

Four days per week ,1 hr per day. Emphasis on leg strength through squats, single leg squats, lunges and step-ups. Leg power should be developed through simple plyometric drills or with Olympic lifts . Abdominal strength should be developed through a variety of different abdominal exercises. A videotape demonstrating some of the concepts above is available if you would like additional information.

5 HOURS - CONDITIONING

A mix of short sprints for speed , sprint interval running, and slideboard work is best for balanced development. It should be noted that the slideboard is the most effective tool available for specific conditioning for hockey. Do not rely on the bike to get in shape for camp.

Slideboard Training for Hockey- In training for the game of hockey the slide board may be the most important and affordable training device available to the hockey player. Until the advent of a low cost, readily available slideboard, hockey players were relegated to offseason training on an exercise bike or on the track. Although both techniques, running and biking, can increase aerobic capacity and anaerobic endurance there is little similarity to the motion of skating. The slide board provides a highly specific method for performing aerobic and anaerobic workouts for hockey players. In simple terms, the more specific the method the better the method.

In addition the slideboard allows the athlete to improve skating technique. Coaches can easily view their athletes knee flexion, knee extension and ankle extension while the athlete trains on the board. Athletes can also coach themselves if the board is placed in front of a large mirror.

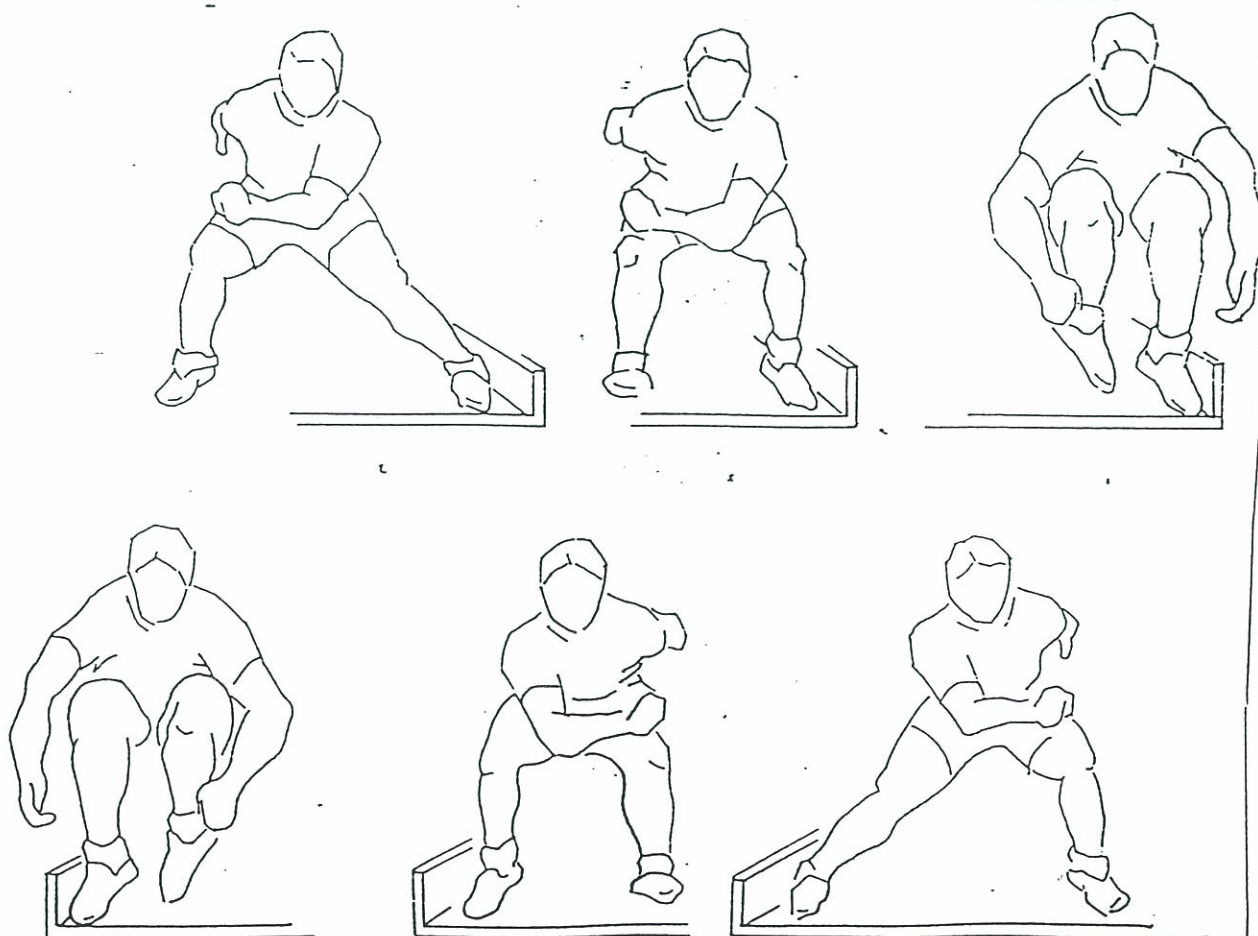
The slideboard also lessens drastically the players chance of incurring a groin injury in preseason . The range of motion of the slideboard works the adductor and hip flexor muscles, something that does not occur on the bike.

Training program suggestions- A slideboard training program can be developed by using simple interval training concepts. Most programs that you would utilize on the bike can be applied to the slideboard. Begin your slideboard program with some introductory workouts of one part work to three parts rest. This is a very simple program designed to familiarize the athlete with the concepts of interval training on the slideboard. The athlete works on the board for 30 seconds and follows this with a one minute and thirty second rest interval. Eight to ten intervals can be performed. The thirty second work period corresponds closely to one on-ice shift, while the rest interval mimics a three line format. As the athletes improve in both technique and conditioning the rest interval is shortened to one minute. This proves to be a challenging workout for most players.

Athletes should maintain a knee bend of 120 to 130 degrees and, work to perform a minimum of one push-off per second(30 reps in 30 seconds). Players should try to slideboard in a slightly deeper position than they would normally skate in. If done correctly a burning fatigued sensation should occur in the thighs. This generally results in heart rates of 160 to 190 beats per minute. These programs will be aerobic if the recovery heart rate is maintained above 120 beats per minute however, the real purpose of the slideboard is to provide an excellent anaerobic endurance workout. You may manipulate the work to rest ratios to meet your own needs. This information is intended only as a starting point.

Utilizing the Slide Board for Developing Sport Specific Conditioning and Lateral Explosion

The Slide Board is a tool for dryland training popularized by Olympic speedskater Eric Heiden. Speedskaters have used slideboards for a number of years to develop skating specific conditioning when ice surfaces were unavailable. However hockey players have been extremely reluctant to utilize the slide board in their off season training. The board usually consisted of an eight foot sheet of a formica type substance mounted on a wooden surface to provide stability. The surface was then lubricated with a spray or liquid lubricant to allow the skater to glide over the surface. This device provided an excellent method of training for skaters but, is space consuming and somewhat messy. The advent of relatively inexpensive slideboards has eliminated the negative aspects of slideboard training and provided skaters with an excellent dry land training method. These portable lightweight slideboards have proven to be an excellent training method for any athlete needing to improve lateral speed and power.



THE FOLLOWING CONDITIONING METHODS ARE STRONGLY RECOMMENDED:

1) **LAND SPRINTING** - twice per week. 5-10 sprints of 10-30 yards. Warm up prior to sprinting and be aware of tight or sore muscles. On ice sprints or rollerblade sprints may be substituted. Rest should be 5-10 times the work for speed and power development. (See Sprint/Plyo Program)

2) **INTERVAL SPRINTS**- another land sprinting activity. Distances of 110-440 yards done in a predetermined work to rest format. This is the best method to improve conditioning. (See track interval schedule). Without this type of training you will find yourself unable to pass the run test.

EXAMPLE: 4X440 YDS 440 YDS UNDER 1:30
REST 3:00 REPEAT

Interval running workouts are included to help prepare for preseason testing.

3) **SLIDEBOARD TRAINING** - Possibly the most effective and specific training tool available to the hockey player. Provides a high intensity cardiovascular workout while moving the hips and groin through a hockey specific range of motion. The slideboard is best used in either a 30 sec. on 1 min off format for defensemen or a 30 sec. on 1:30 sec off pattern for forwards. Beginners should start with :30 sec on 1:30 off regardless of position. Design a program based on your ice time. A separate section is included on slideboard training.

5) **CONVENTIONAL BIKE TRAINING**- The least effective and unfortunately most popular method of training for hockey players. Conventional bike training is most likely to lead to overuse injury in the hips and groin due to the position. Bike training is worst when done in a racing style crouch.

Slideboard Training Program Guidelines

Work Intervals - 30 sec. to 1 minute

Rest Interval - forwards 3 times the work interval

defensemen - goalies 2-3 times the work
interval

Length of workout - 20 - 30 minutes

Warm-up - 2-3 minutes of easy skating on the board, or 5 minutes on the bike.

Suggested Workouts

1) **30 sec work/ 1:30 sec rest** - this is the most realistic and specific workout. The 30 sec. work interval should be an all out sprint. Try to keep 27-30 trips across the board as your pace.

2) **30 sec work/ 1 min rest**- slightly more specific. Pace is now harder as the work to rest ratio is 1:2. This is an excellent workout for defensemen.

4) **45 sec work/ 1:15 sec rest** - this workout is for penalty killers and other players who regularly get a great deal of ice time. Keep the pace at 37-40 reps in 45 seconds.

- as the intervals get longer or the rest shorter it is important to work on maintaining the bent knee position.

- ordering information is contained in the back of the manual.

BOSTON BRUINS STRENGTH AND CONDITIONING SUMMER 1998

SLIDEBOARD INTERVAL SCHEDULE - TUESDAY-FRIDAY

Notes: Total time does not include warm up and cooldown on the slideboard. Warm up on the bike prior to using the slideboard and stretch the groin muscles. Try to work at a higher rate (more reps in thirty seconds) and work harder, not longer. Use a heart rate monitor if possible. Rest should allow the heart rate to recover to the low end of the listed range. You should be able to maintain a rate of 25-27 reps in a thirty second interval.

- Knee bend is a top priority on the slideboard. Work to maintain an exaggeratedly low position to stress the legs.
- Initially the workout will be a combination of bike and slideboard to allow the groin muscles time to adapt.
- When the workout calls for 2 sets of a particular time this means that you will do 2 series of intervals with a brief rest in between. For ex. **2 sets 4 x :30**. This means that you will do **8 30 second sprints**. Rest will be listed 1:30/ 3:00. This means **1:30 seconds between sprints and 3:00 between sets**. This format makes training more hockey specific.

WEEK 1 6/2-5	6 X :30	6X:30	1:30	12 MIN	130-170
FOLLOW WITH 20 MINUTE STEADY STATE BIKE					
WEEK 2 6/8-11	7 X :30	7X:30	1:30	14 MIN	130-170
FOLLOW WITH 20 MINUTE STEADY STATE BIKE					
WEEK 3 6/15-18	8 X :30	8X:30	1:30	16 MIN	130-170
WEEK 4 6/22-25	9 X :30	9X:30	1:30	18 MIN	130-170
FOLLOW WITH 18 MIN BIKE					

*ADD ONE MORE STEADY STATE BIKE THIS WEEK. YOU SHOULD NOW BE CONDITIONING OR SPRINTING 5 DAYS PER WEEK.

WEEK 5	10 X :30	10X:30	1:30	20 MIN	140-170
6/29-7/2					

WEEK 6 7/7-10	SET 1 5X:30 SET 2 5X:30	SET 1 5X:30 SET 2 5X:30	1:00 / 2:00/ 1:30 *	19:30	130-180
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* SET 1 :30 ON 1:00 OFF X5, 2 MIN REST, SET 2 :30 ON 1:30 OFF

- ADD ONE EXTRA STEADY STATE BIKE OR RUN 30+ MINS.

YOU SHOULD NOW BE CONDITIONING OR SPRINTING 6 X/WEEK

WEEK 7 7/13-17	SET 1 5X :30 SET 2 6X:30	SAME AS 1	1:00 / 2 MIN/ 1:30	21:30 MIN	130-180
WEEK 8 7/20-24	SET 1 6X:30 SET 2 6X:30	SAME AS 1	1:00/ 2 MIN/ 1:30	23 MIN	130-180

IF HR FALLS BELOW 130 BPM INCREASE INTENSITY OF WORK, NOT REST

WEEK 9 7/27-31	SET 1 6X:30 SET 2 7X:30	SET 1 6x:30 SET 2 7X:30	1:00 / 2 MIN / 1:30	25 MIN	130-180
WEEK 10 8/3-6	SET 1 7X:30 SET 2 8X:30		1:00 / 2 MIN/ 1:30	28:30	130-180
		SET 1 10X:15 SET 2 8X:30	:45 / 2 MIN / 1:30	28 MIN	130-185
WEEK 11 8/10-14	SET 1 12X:15 SET		:45/ 2 MIN / 1:30	26 MIN	130-185

	2 4X:30				
		SET 1 5X:30 SET 2 5X:30	1:30/ 3 MIN	29 MIN	130-185
WEEK 12 8/17-21	BEGIN ON ICE WORKOUTS. RIDE 10 MILE AIRDYNE TEST 2X'S PER WEEK AFTER SKATING.				
Week 13 8/24-28	BIKE 20 - 30 MINUTES 2 ADDITIONAL TIMES PER WEEK.				
DISCONTINUE ALL OFF ICE SHORT BIKE SPRINTS AND PLYOS.					

BOSTON BRUINS STRENGTH AND CONDITIONING SUMMER 1998

BIKE INTERVAL SCHEDULE - TUESDAY-FRIDAY

Notes: Total time includes warm up and cooldown time. Try to ride at a higher work interval and work harder, not longer. Use a heartrate monitor if possible. Rest should allow the heartrate to recover to the low end of the listed range.

- When the workout calls for 2 sets of a particular time this means that you will do 2 series of intervals with a brief rest in between. For ex. 2 sets 4 x :30 . This means that you will do 8 30 second sprints. Rest will be listed 1:30/ 3:00. This means 1:30 seconds between sprints and 3:00 between sets. This format makes training more hockey specific.

	DAY 1				HR RANGE
WEEK 1 6/2-5	STEADY STATE	STEADY STATE		25-30 MIN	
WEEK 2 6/8-11	STEADY STATE	STEADY STATE		30 MIN	
WEEK 3 6/15-18	STEADY STATE	STEADY STATE		35 MIN	
WEEK 4	7X 1MIN		1 MIN	20 MIN	140-170
6/22-25		7X1:00	1 MIN	20 MIN	140-170
BEGIN INTERVAL TRAINING THIS WEEK. ALL WORKOUTS SHOULD INCLUDE A 3 MIN WARMUP AND 3 MIN COOLDOWN					
ADD ONE MORE STEADY STATE BIKE THIS WEEK. YOU SHOULD NOW BE CONDITIONING OR SPRINTING 5 DAYS PER WEEK.					
WEEK 5	8X 1:00		1:00	22:00	140-170
6/29-7/2		8X1:00	1:00	22:00	140-170

	DAY 1	DAY 2	REST TIME	TOTAL TIME	HR RANGE
WEEK 6 7/7-10	3X 1:00 6X :30	SAME AS 1	1:00 1:30	24 MIN	130-180
WEEK 7 7/13-17	2 SETS 4X :30	SAME AS 1	1:30 / 3MIN	25 MIN	130-180
WEEK 8 7/20-24	SET 1 5X:30 SET 2 4X:30	SAME AS 1	1:30/ 3 MIN	27 MIN	130-180
IF HR FALLS BELOW 130 BPM INCREASE INTENSITY OF WORK, NOT REST					
WEEK 9 7/27-31	REPEAT DAY 1 WK 8	SET 1 10X:15 SET 2 4X:30	:45 / 2 MIN / 1:30	DAY 1 27 DAY 2 26	130-180
ADD ONE EXTRA STEADY STATE BIKE OR RUN 30+ MINUTES. YOU SHOULD NOW BE SPRINTING OR CONDITIONING 6 X'S PER WEEK.					
WEEK 10 8/3-6	SET 1 5X:30 SET 2 5X:30		1:30 / 3 MIN	29 MIN	130-180
		SET 1 10X:15 SET 2 5X:30	:45 / 2 MIN / 1:30	28 MIN	130-185
WEEK 11 8/10-14	SET 1 12X:15 SET 2		:45/ 2 MIN / 1:30	26 MIN	130-185

	4X:30				
		SET 1 5X:30 SET 2 5X:30	1:30/ 3 MIN	29 MIN	130-185
WEEK 12 8/17-21	10X :30		1:30	26 MIN	130-185
		SET 1 10X:15 SET 2 5 X:30	:45 / 2 MIN / 1:30	28 MIN	130-185
WEEK 13	BEGIN ON ICE WORKOUTS. RIDE 10 MILE AIRDYNE TEST 2X'S PER WEEK AFTER SKATING				
8/24-28	BIKE 20 - 30 MINUTES 2 ADDITIONAL TIMES PER WEEK.				
DISCONTINUE ALL OFF ICE SHORT BIKE SPRINTS AND PLYOS.					

Suggestions for Using the Stairmaster

The stairmaster or similar stairclimbing equipment is rapidly becoming the most popular piece of conditioning equipment available to an athlete. In fact the stairmaster has drastically reduced the use of the stationary bike in many training programs.

You should note that the stairmaster, like bikes and rowing machines, does not put the hip into extension and, does not force the athlete to use the hip flexors to recover the foot.

For this reason the stairmaster is not any more effective than the bike for conditioning for hockey. The two best methods for conditioning off ice are still running and the slideboard. Both running and the slideboard are more specific in terms of range of motion and muscle action than any other mode. The stairmaster is very similar to standing on the bike, if you avoid the "stairmaster crouch" that is usually adopted by most fatigued users. The stairmaster is most effective when used **without holding on with the hands**. This requires a little bit of practice.

If you are going to use the stairmaster:

- 1) Use the manual mode to design the program yourself based on the work to rest ratios outlined in your program. (1 part work to one part rest in June, 1 part work to two parts rest in July, and one part work to three parts rest in August)
- 2) Use long full steps. Do not get into small six inch steps. Push the pedals down nearly to the floor.
- 3) Do not get into the "stairmaster crouch". Stand as straight as possible no matter how fatigued you are. Do not hold onto the rails. Being bent over will further contribute to the shortening of the hip flexors.
- 4) Stretch the hip flexors vigorously after using the stairmaster to counteract the shortening effect on the hip flexors.

PLYOMETRIC TRAINING - DEVELOPING EXPLOSIVE LEG POWER

Plyometrics is a general name used to describe a large group of jumping, hopping, and throwing exercises that are designed to improve the explosive power of the muscles. Plyometrics have become extremely popular as a training tool over the last ten years due to their ability to help athletes improve speed and leg power.

The plyometric drills that are described in this manual are simple, safe drills that have proven to be effective with both beginners and advanced athletes. Two videotapes are available to illustrate the techniques described below detail.

Before attempting any plyometric training please read the following guidelines:

- 1) Plyometrics are intended to develop explosive power. Quality is much more important than quantity. Each rep should be both fast and explosive.
- 2) Properly executed plyometrics are **quiet**. If you are hearing loud ground contact you may be progressing too fast.
- 3) Take plenty of rest between sets. Remember, quality.
- 4) Never utilize plyometrics more than twice a week.
- 5) Always wear proper footwear. Basketball shoes or crosstrainers are preferred. No running shoes.
- 6) Perform plyometrics on a soft surface whenever possible.
- 7) Discontinue plyometrics if you experience **any unusual joint soreness**.
- 8) Always warm up prior to plyometric training.
- 9) Do not begin any advanced plyometric drills without first consulting with a coach or trainer.

BOSTON BRUINS STRENGTH AND CONDITIONING SUMMER 1998

- the following information is suggested for all players. Leg power is our number one priority and, the only way to develop leg power is through weights, sprints and plyometrics. If you are going to follow this program please contact Carol in the Bruins office so that we can send you a videotape explaining most of the information

SPRINT/ PLYOMETRIC SCHEDULE

WARM-UP

- High Knee Skip 2X20
- High Knee Run 2X20
- Heel Ups 2X20
- Lunge Walk 2X20
- Backward run 2X20
-
- Please be concious of sore hamstrings and groins. If you are sore substitute :05- :25 bike sprints for land sprints.
- LFR = Lean , Fall, Run Start - this is a standing , falling, start. Perform exactly as the directions indicate. From a standing position allow yourself to fall forward. This will force a quick first step .
- 90LFR= 90 Lean, Fall, Run Start- same as above but, with torso bent 90 degrees at the waist.
- Side R= Side Start w/ right leg back
- Side L= Side Start w/ left leg back
- Sprint Start = 3 point start
- Lateral Hurdle Tuck- side to side jumps over a 12" obstacle

Boston Bruins Sprint / Plyo Program							
	Start	Reps		Distance	Total Yds.	Phase 1 Weeks 1-4 Plyos 2xs per week	Total Ft Contacts
Week 1	LFR	5 x		10		Box Jump 4x5	
6-2-5	90 LFR	5 x		10	100	Lateral Hurdle Tuck 3x10 (use 1 hurdle 5ea. Side)	50
Week 2	LFR	6 x		10			
6/8-11	90 LFR	5 x		10	110		

Week 3	LFR	6	x	10		
6/15-18	90 LFR	6	x	10	120	
Week 4	Day 1					
6/22-25	Timed					
	LFR	6	x	10		
	90 LFR	6	x	10	120	
Week 5	Side R	7	x	10		Phase 2 Weeks 5-8
6/29-7/2	Side L	7	x	10	140	2x's/ week
						Hurdle Hop w/ stabilization 5x5
						Lateral Hurdle Tuck 2x6 jumps
Week 6	Side R	3	x	10		(R+L use 3 mini hurdles)
7/7-10	Side L	3	x	10		
	90 LFR	4	x	20	140	
Week 7	Side R	4	x	10		
7/13-17	Side L	4	x	10		
	90 LFR	4	x	20	160	
Week 8	Day 1					
7/20-24	Timed	4	x	10	40	
	Day 2					
	Side R	4	x	10		
	Side L	4	x	10		
	90 LFR	4	x	20	160	
						Phase 3 Weeks 9-14
Week 9	Side R	4	x	10		Plyos
7/27-31	Side L	4	x	10		Hurdle Hop 5x5 w/ bounce
	Sprint	5	x	20	180	Lateral Hurdle Tuck 2x6 jumps
						(R+L use 3 mini hurdles)
Week 10	Side R	4	x	10		Single Leg Box Jump
8/3-6	Side L	4	x	10		3x5 each leg 12" box
	Sprint	6	x	20	200	
Week 11	Side R	4	x	10		
8/10-14	Side L	4	x	10		
	Sprint	7	x	20	220	
Week 12	Side R	4	x	10		
8/17-21	Side L	4	x	10		
	90 LFR	4	x	20	160	
Week 13	Begin on ice workouts					

24.4.1

Recommended Foods

Breakfast

Egg Beaters
Cereal (Total, Raisin Bran etc.)
Pancakes
French Toast
Waffles
Muffins
Whole Grain Toast w/ jelly

Bagels (w/ jelly)
Fruit (oranges, bananas, etc.)

Skim Milk
Fruit Juice
Water

Non Recommended Foods

Eggs
Cereal (Captain Crunch)
Bacon
Sausage
Home Fries
White Toast w/ butter

Bagels (w/ cream cheese)
Butter

Whole Milk
Juice Drinks

Lunch

Recommended Foods

Soup (excluding cream base)
Salad (dressing on side)
Pasta (red sauce)
Pizza w/ onions + peppers
Turkey- mustard, no mayo
Chicken- baked or broiled
Fish- baked or broiled
Roast Beef- no mayo
Fruit- any type
Vegetables- any type

Skim Milk
Chocolate Milk- low fat
Fruit Juice
Diet Soda
Water

Non Recommended Foods

Steak and Cheese
Anything fried
Anything w/ mayo
Pizza w/ hamburger +sausage
Fast food chicken or fish
Chicken Cutlet- deep fried

Whole Milk

Note: When eating in fast food restaurants the lowest fat food may be the regular hamburger. Don't be misled by the fried fish or chicken.

Dinner- same recommendations as lunch

Suggestions for Losing Weight

If you are attempting to lose weight or to reduce bodyfat percentage follow the above listed guidelines very strictly. Do not skip meals . Skipping meals is nutritional suicide.

Missing meals will cause you to lose weight by losing muscle mass, not bodyfat.

Overweight athletes should not eat after seven P.M. Calories eaten late at night have a higher tendency to be stored as fat and, tend to be of lower quality. Do not attempt to lose more than two pounds per week. Crash diets only cause the body to eventually rebound. Learn to eat correctly and take weight off gradually. In order to lose weight a low calorie , nutrient dense, drink like METRX may be helpful. The increased protein intake will act as an appetite supressant.

Suggestions for Gaining Weight

Athletes desiring additional weight should still follow the above guidelines. A diet containing the correct balance of protein and carbs and low in fat will aid in improving performance. However the athlete attempting to gain weight should take in two to three snacks per day from the recommended food column. Fruit makes an excellent portable snack. Another great snack food is chocolate lowfat milk. One pint of chocolate lowfat milk provides 50 grams of carbohydrate and 320 calories with only two grams of fat. This is probably one of the best high carb, high protein, lowfat snacks available. For weight gain 4-5 small meals will be better than 3 large meals.

SHOPPING LIST FOR IMPROVING PERFORMANCE

24.7 - The following shopping list is intended for use by athlete living on their own and, selecting their own food. By following this list you will be providing yourself with a low cost, high quality diet that will involve minimal preparation.

- Please note: Food costs will be significantly lower if you shop regularly. The cost of eating will increase 3-4 times if you eat out regularly and, the quality of food will be lower.

- This list often recommends low fat alternatives to some frequently eaten foods. Follow these recommendations even if you are attempting to gain weight. Fat consumption will make you fat.

SHOPPING LIST

CEREAL- 2 large boxes per person, per week. Get a big bowl and fill up on this high quality, low cost item. In tight financial situations cereal is nutritious for lunch or dinner. Cereal may be the best food you can purchase on a budget. Choose from the following suggestions.

Raisin Bran

Honey Nut Cheerios

Total

Product 19

Nutri Grain

Grape Nuts

Any of the Healthy Valley Line

NOTE: Don't buy junk cereal

Breads etc.- no white bread, whole grains only

Branola

Rye

Wheat 1 Loaf per person per week
Pumpnickel
Pita

Bagels- 1 dozen per person per week
English Muffins

DAIRY PRODUCTS

Skim Milk- 1 gal / person / week minimum. No whole milk.
Chocolate Lowfat Milk- 1/2 gal / person/ week
Lowfat Yogurt
Lowfat or Fatfree Cheese
Fat Free Cram Cheese
Reduced Calorie Mayonaisse- (Hellmans Light)
Lowfat Ice Cream
Fat free Frozen Yogurt
Sherbert
Fat Free Pudding

FRUIT AND VEGETABLES - This is the crucial area in which most athletes fail.

Orange or Pineapple Juice- 1/2 gal / person /week
Apple Juice- 1/2 gal /person /week- Try Apple and Eve
Apples- 7 / person /week
Bananas- 7 / person /week
Lettuce
Tomatoes
Cucumbers
Baked Beans- an excellent source of carbs
Potatos- one large bag per week. These can be microwaved to provide an excellent source of carbs. Use butter buds for tasteand, moisten with skim milk.
Canned Vegetables- corn, stringbeans etc.
Applesauce

PLEASE NOTE: The fruit and vegetable group is the most important group on the list.

FISH,POULTRY,MEAT

Tuna Fish- packed in water only. Eat dry as an excellent protein source.

Mix with reduced calorie mayo.

Sliced Turkey Breast

Ground Turkey- use in place of hamburger

Chicken Breasts

- any other meat can be eaten in moderation. Remember, meat will be the most expensive item on your list and the most time consuming to prepare.

PASTA

Spaghetti, Ziti, etc. - 2 lbs. / person /week

Macaroni and Cheese Dinner- high cal / low fat, cheap. 4/ person /week

Frozen Ravioli, Manicotti etc.

MISC.

Spaghetti Sauce- Ragu Homestyle

Peanut Butter- high in fat but, a cheap protein source, Provides a meal in a hurry.

Grape Jelly- use in place of butter on toast, bagels etc.

Animal Crackers

Graham Crackers

Ginger Snaps

Archway Cookies

Snackwell Cookies

Canned Chili

- Please note that this is a suggested list. If you have ideas for good additions that are low cost and nutritious please let me know so that I can add them to the list.

Developing Rotational Abdominal Strength

In the introduction to the program the following comment was made concerning abdominal injury. "Abdominal strength, particularly rotational abdominal strength, should be emphasised to avoid abdominal wall tears".

As the introduction indicates, lack of development in the rotary muscles (the obliques) of the trunk may contribute to the unusual abdominal injuries often seen in well conditioned hockey players.

It is important to note that abdominal injury or tears often seem to occur in athletes who are in good physical condition. As a result the injury should not be blamed on lack of work but rather on improper work.

Abdominal work for hockey players should include rotary, lateral and straight line abdominal movements. The more movements that are included involving trunk rotation the better. 200-300 repetitions of abdominal work are recommended on all workout days.

A number of possible rotary and lateral trunk exercises are illustrated on video number 2. The most effective exercises are Off Bench Obliques, V- Twists, and Lying Trunk Twists. Please take a few minutes to watch these exercises and add them to your routine.

Other Possible Rotary Trunk Exercises.

- 1) Any type of twisting sit-up or twisting crunch
- 2) Medicine ball passing in back to back position
- 3) Medicine ball throws in "discus" style

Please include trunk rotation work in your abdominal routine at least twice per week.

LEARNING TO SQUAT

The back squat is the primary leg strength exercise in any quality strength program and, the number one lower body exercise. All athletes should use either the back squat or front squat as the foundation of their program. Most athletes will benefit greatly from learning the front squat before the back squat. Full squats should always be utilized. Half squats or quarter squats do not fully develop the glutes (large rear end muscles) or the lower back. Also half squats and quarter squats may actually pose a larger risk due to the heavy weights used in the smaller range of motion. The squat and its variations are the best exercises for developing lower body strength and power. Strength in the squat is the initial key to developing increased speed and jumping ability.

- The following technique points are critical to developing a technically correct, safe, squatting style.

INITIAL POSITION , BACK SQUAT -

1) Place the bar in a comfortable position on the trapezius muscles. Beginners should avoid a low powerlifting style bar placement. No towels or pads should be placed under the bar. If bar position is painful reposition the bar slightly lower. Feet should be placed approximately three inches wider than the width of the shoulders (see figure 1). The stance may be widened to allow the athlete to attain proper depth if flexibility is a problem. A 1 X 4 or 2 X 4 board can be placed under the heel if the athlete lacks the flexibility necessary to attain the full squat position, if the athlete tends to lean forward during the descent, or if the athlete's heels lose contact with the ground during the descent. Although many authorities caution against a board under the heels our athletes have experienced great success , with no knee problems.

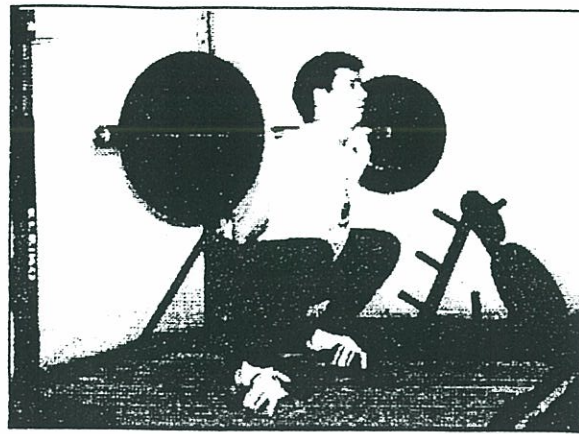


Figure 1 BOTTOM POS., SIDE

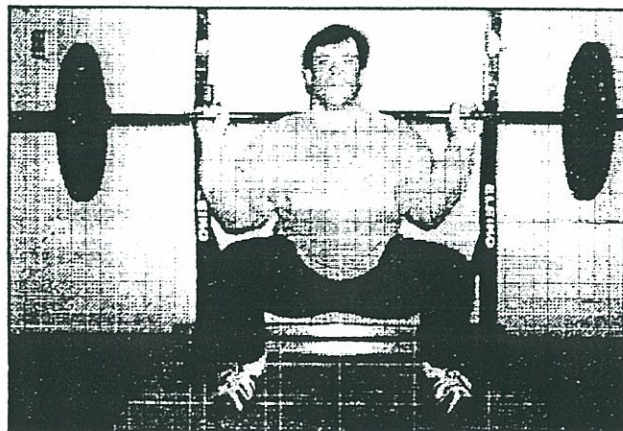


Figure 2 BOTTOM POS., FRONT

2)The chest should be up and the upper and lower back should be arched and tight. Place the hands 6-10 inches outside of the shoulders. Avoid an extremely wide hand placement. Feet should be turned out 10-15 degrees.

3)Assume eye contact with yourself in a mirror if one is available. Do not exaggerate and look up. Look straight ahead into your own eyes.

DESCENT-

1)Prior to descending into the squat take a maximum inhalation(a big breath) to fully inflate the lungs.The lungs will form an air brace for the upper and lowerback.

2)When descending into the squat concentrate on placing your bodyweight on your heels. Bodyweight on the midfoot or toes will cause the athlete to adopt an undesirable forward lean. Do not let the breath out.

3) Descend slowly to a position where the top of the thigh is parallel to the floor (see figure two). Note: Partial squats will build your ego, but will not develop the legs as well as the parallel squat. Squat to the proper depth with lighter weight for better results.

4)In the descent the knees should stay over the toes. Do not pinch the knees in, allow the knees to move outside over the toes. (See fig.3)

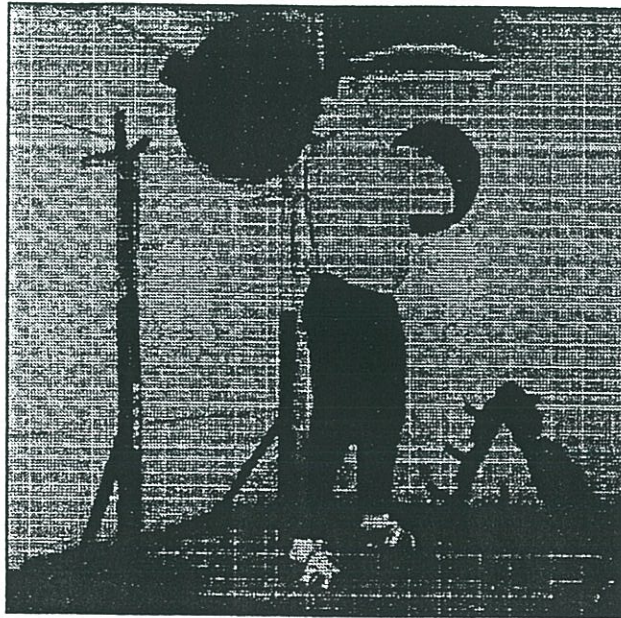


Figure 3 FRONT SQUAT, TOP

ASCENT-

1)From the bottom position concentrate on driving up with the chest out, bringing the hips up and forward. Concentrate on driving the heels into the floor and keeping the hips under the bar.

Please remember that the squat is a safe movement when done as described. Start with a light weight to develop proper technique and progress to higher weights only if technique is perfect. Injuries occur only when the athlete fails to adhere to proper technique.

*** IMPORTANT NOTE: If you are having trouble with squat technique you are probably attempting to use too much weight too soon or you have inadequate**

flexibility in the hips and achilles tendons. The optimum way to stretch for the squat is to sit in the full squat position, place the elbows inside the knees and push the knees out over the toes while attempting to arch the back. Master squat technique over the first month if necessary and, work hard on the leg press or one leg squat after your squat workout to fully work the legs.

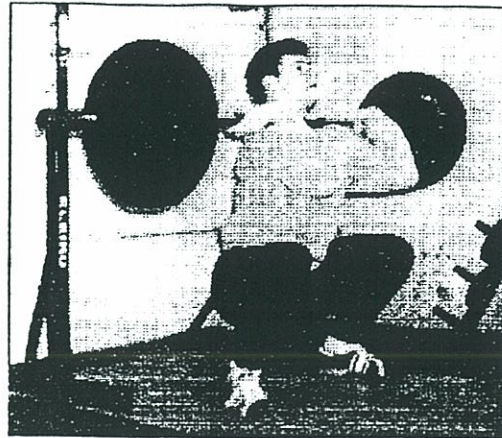


Figure 4 FRONT SQUAT, BOT.

THE FRONT SQUAT IS ACTUALLY AN EXCELLENT WAY TO TEACH THE BACK SQUAT.

- 1) Front squats require perfect body position.
- 2) Front squats develop shoulder flexibility, a big plus in our bench press dominated world of strength training. (Only if you use a clean grip, which we recommend.)
- 3) Front squats require less weight.

USING THE LEG PRESS TO COMPLEMENT THE SQUAT

For most athletes new to squatting the leg press is an extremely valuable tool. In the preceding section on learning the back squat it was recommended that an athlete learning to squat should work hard on the leg press after the squat. If squatting is supposed to be so beneficial, why do I need to work on the leg press after I squat?

Please remember the squat is a difficult lift requiring the development of technique and flexibility. Also the squat involves the muscles of the abdomen, lower and upper back to stabilize the bar. The leg press on the other hand involves very little technique and involves primarily the lower body muscles. The advantages of the squat are also the reasons that the squat must be learned slowly and, initially followed by hard work on the one leg squat and the leg press. In simple terms, the beginner cannot safely take the squat to failure but, the beginner can safely take the leg press to failure.

If I can train safer on the leg press, why don't I just leg press and forget about the squat? Because the squat is the best overall method to improve total body size and strength. There is no movement, when done correctly, that provides more stress to the major muscle groups than the squat. The only people who should not squat are people who have been instructed not to by the training staff.

Technique Points- utilize a stance similar to the squat for the leg press. Narrow stances are for bodybuilders, not athletes. Keep the feet wider than width of the shoulders and turn the toes out slightly. Always bring the weight down to a position that approximates a full squat. Resist the temptation to boost your ego with partial reps and huge weights. Use a large range of motion. The athlete pictured is actually performing a single leg leg press. This is an excellent variation for advanced athletes but, should only be done on a machine that has a bottom stop to safeguard the non pressing leg. (see Figure 1)

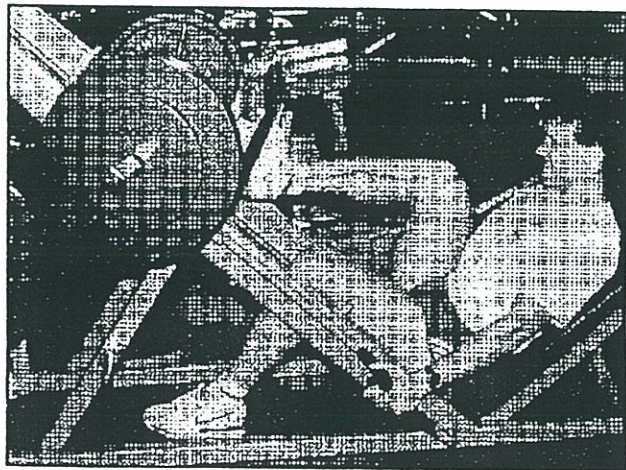


Figure 5 45 degree Leg Press, 1 leg

Which Leg Press Machine Should I

Use?- there are a number of different leg press machines that you might encounter in your gym. Generally speaking, any leg press machine that you find comfortable will do the job. Remember, the smoother the movement feels the better. A 45 degree

leg press or leg sled, as it is often referred to, is usually a good choice(again refer to Fig. 1). The Hammer Leg Press and Hammer Isolateral Leg Press are excellent if your gym has Hammer equipment.

Hyperextensions- The most underrated exercise

The hyperextension or back raise as it is sometimes called, is an exercise that should always be included in any strength program(see Fig. 1). The hyperextension has three main benefits:

- 1) Hyperextensions strengthen the posterior aspect of the trunk. The spinal erectors(lower back muscles) are critical to maintaining proper position in the squat and clean.
- 2) Hyperextensions strengthen the glutes and hamstrings as hip extensors. Many people think of the hyperextension as a lower back movement but, it is an excellent movement for the upper hamstrings and the gluteals.
- 3) The hyperextension promotes flexibility in the low back and hamstrings. Have your athletes bring their head down to the upright on the hyperextension bench to take full advantage of the stretch(see Fig. 2).

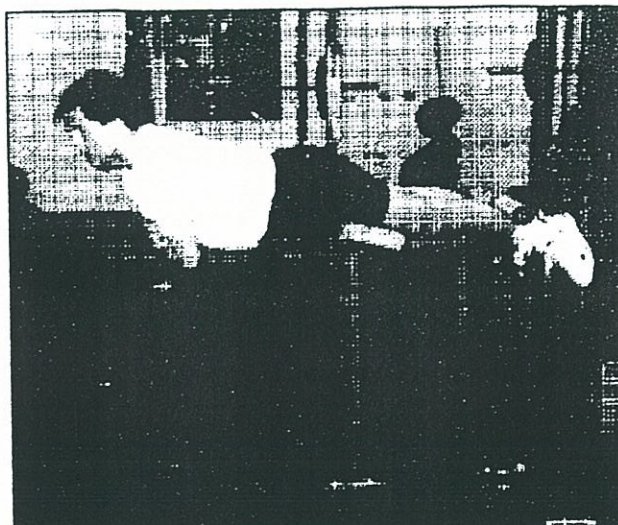


Figure 6 Hyperext. top pos.

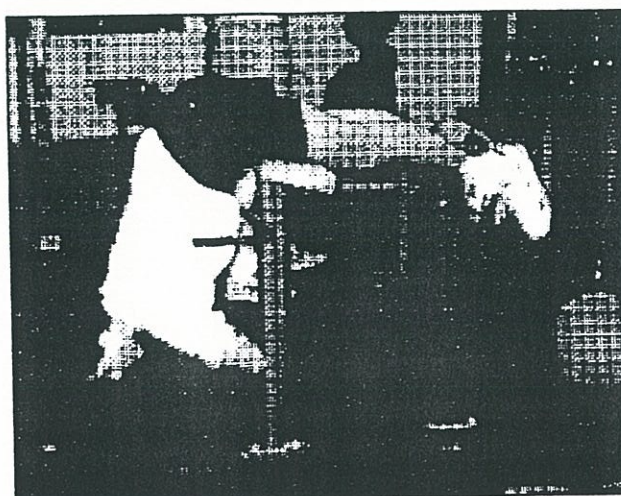


Figure 7 Hyperext. bot. pos.

Developing Single Leg Strength

Single leg strength is a quantity that has often been ignored in many conventional strength programs. Single leg strength is essential to the improvement of speed, balance and agility in all sports. Unfortunately most strength programs focus on conventional double leg exercises like squats and leg presses (both great exercises). However most sport skills

(skating, jumping, sprinting) are performed on one leg. For this reason it is important that single leg strength be targeted in the strength program. It should be noted that single leg strength can not be developed through double leg exercises.

A number of excellent exercises for the development of single leg strength are illustrated beginning with the 1 leg squat.

1 LEG SQUAT

The single leg squat is an extremely intense and specific exercise for any athlete. In my opinion the single leg squat is the best "new" exercise that we have added to the program. The 1 leg squat should be done from a box of at least 16 inches.

Technique Points- athlete stands on the box on one foot and squats down until the thigh is parallel to the floor. The knee must not move out beyond the toe of the foot. A conscious attempt should be made to sit back on the heel and to not allow the knee to travel too far out over the toes. It is permissible to allow the

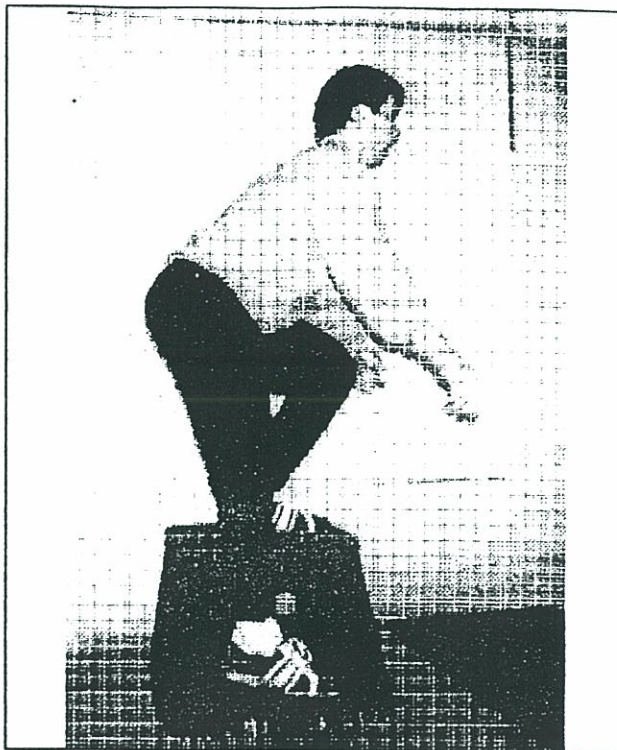


Figure 8 Single Leg Squat, side

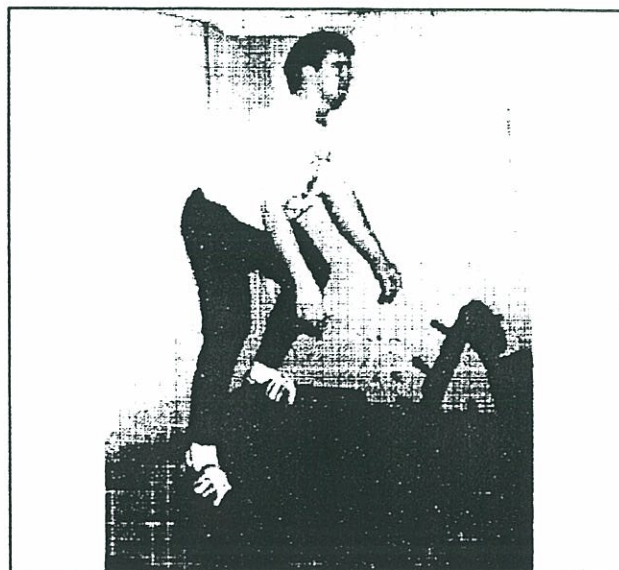


Figure 9 Single Leg Squat, front

body to lean forward slightly (see Figure 8+9)

Don't give up on the single leg squat if you feel unsteady or clumsy. The major benefit of the exercise is from the improved balance that is achieved when you overcome the unsteady, unbalanced sensation. The single leg squat is illustrated on the second video.

Once you can accomplish three sets of ten repetitions in the single leg squat, attempt to add weight with dumbbells. **Recent experiments with the single leg squat** have shown that body position is better when the free leg is held out in front of the body as in a leg raise. This is not illustrated in the photos but is shown on the video. It is recommended that the single leg squat be done in this manner as opposed to the manner shown in the photos.

LUNGES

Another beneficial single leg exercise is the lunge. The lunge is often considered to be an easy alternative to the squat but, in actuality the lunge is a very productive addition to the program if done intensely. Try to include both step-ups and lunges at least once per week on alternate lower body days.

Technique Points- The back should stay tight and arched and the upper body should stay erect. The length of the step should be long enough to feel the stretch in the hip flexor muscles of the rear leg. Lunges are an excellent dynamic stretching movement for the hip flexors and should be considered for inclusion in hockey strength training routines for this reason alone. (see Figure 10) Athletes who have had groin or hip flexor problems may find the lunge more important than the step up.

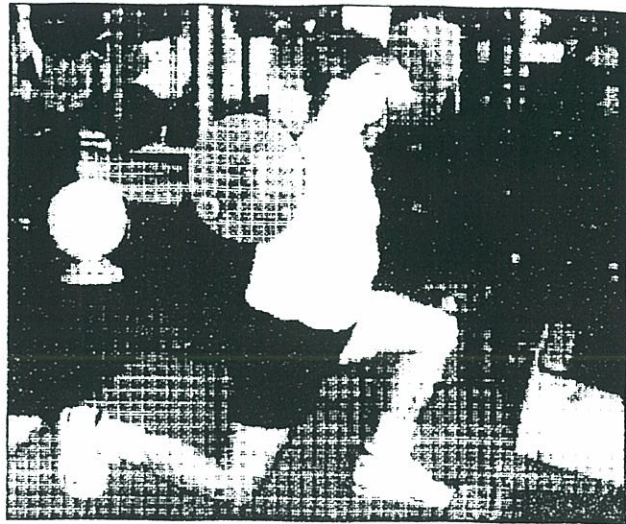


Figure 10 Lunge

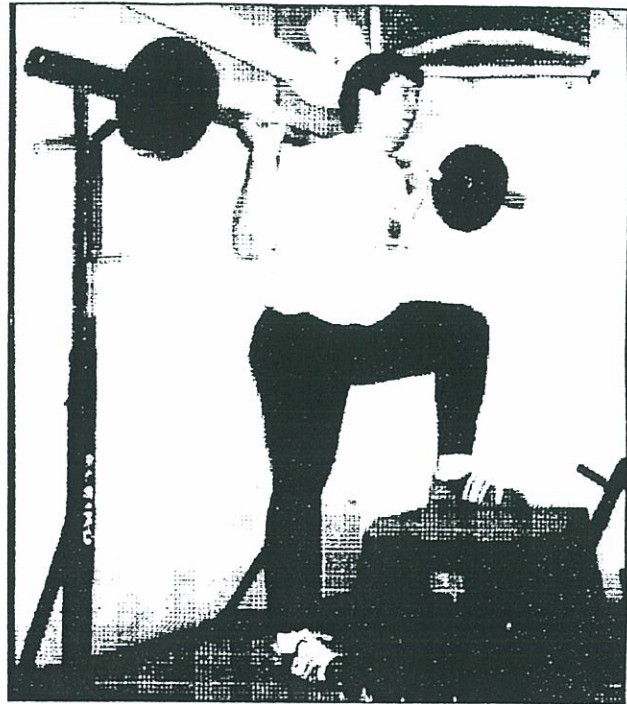


Figure 11 Step Up ,bot. pos.

STEP-UP

(Figures 11 and 12). The step up is an excellent alternative to the squat for athletes with back or knee problems as it puts much less stress on both of these areas than the squat. In addition significantly less weight is needed than in the squat. To perform the step up a sturdy box between 16 and 18 inches is needed. The general rule of thumb is that the thigh should be parallel to the floor when the foot is on the box.

Technique Points- To perform the step up begin with one foot on the box. Step up onto the box being sure to keep the head and chest up. In the top position do not place the bottom foot on the box. Allow the bottom foot to remain free and, force yourself to balance on one leg. Improving balance is one of the primary benefits of the step up. Perform all of your repetitions with one leg before switching to the opposite leg. Do not alternate legs. Repetitions should fall between 5 and 12 depending on the phase of the program.



Figure 12 Step Up, top pos.

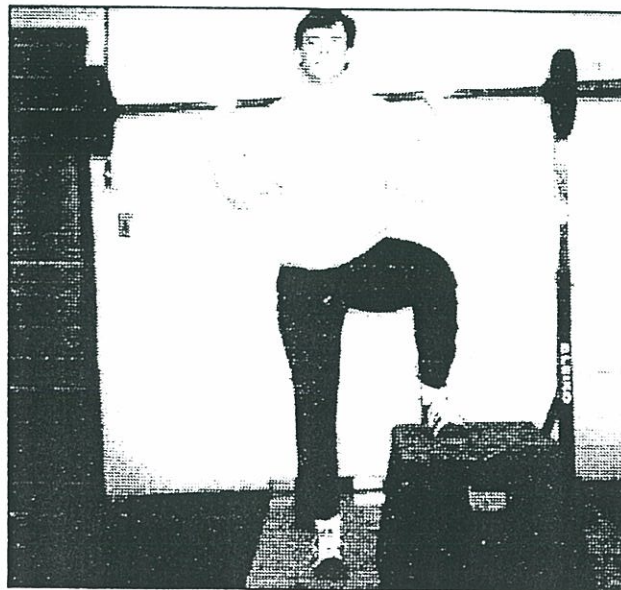


Figure 13 Lateral Step Up

LATERAL STEP UP

The lateral step up is a natural modification of the forward step up to provide greater stress to the adductor muscles(inner thigh). The exercises is performed in a similar manner to the forward step-up illustrated previously except the athlete begins to the side of the box and steps up laterally(see figure13) .The lateral step up can be utilized for any sport requiring emphasis on the groin muscles.

Technique Points- Same as step-up. The finish position for the lateral step up also requires

the athlete to balance on one leg. (see figure 14). As previously mentioned, do not stand with both feet on the box. Force yourself to balance.

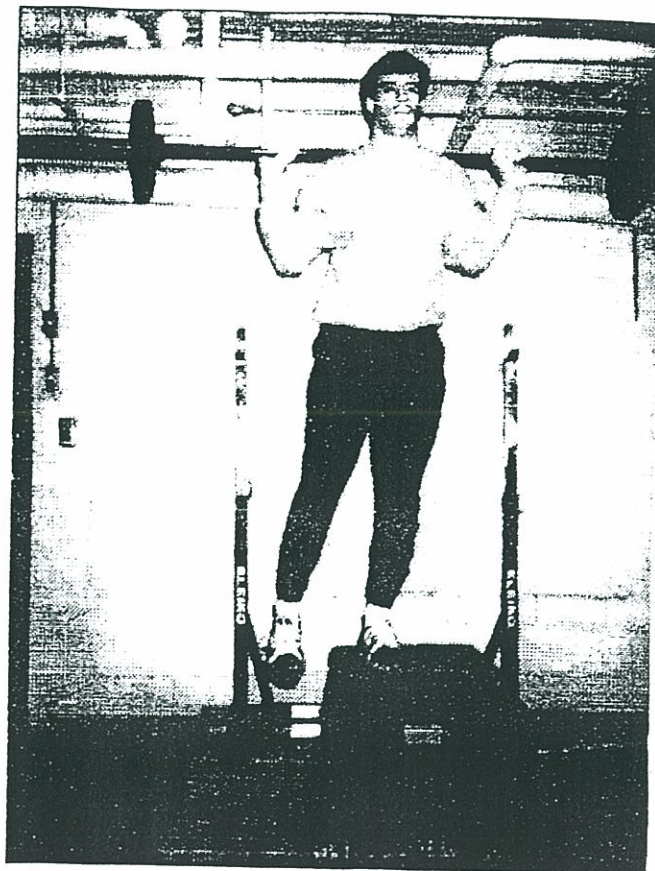


Figure 14 Lateral Step Up, top

UPPER BODY EXERCISES-

PLEASE REMEMBER THAT ALL SPORTS ARE PLAYED STANDING ON YOUR FEET. UPPER BODY TRAINING SHOULD NOT OCCUPY MORE THAN 40% OF YOUR TIME IN THE WEIGHT ROOM.

Please resist the temptation to include all three bench press movements in one workout. This will result in overtraining and shoulder problems. Choose your upper body exercises carefully. The chest, shoulder, tricep complex (the muscles used in the bench press and it's variations) is the most frequently overtrained area of the body.

Bench Press- the bench press is probably the most commonly used indicator of upper body strength for athletes and correspondingly is given a large amount of emphasis in most strength programs. The bench press is an excellent exercise for developing the chest, shoulders and triceps but, is overemphasised in most strength programs.

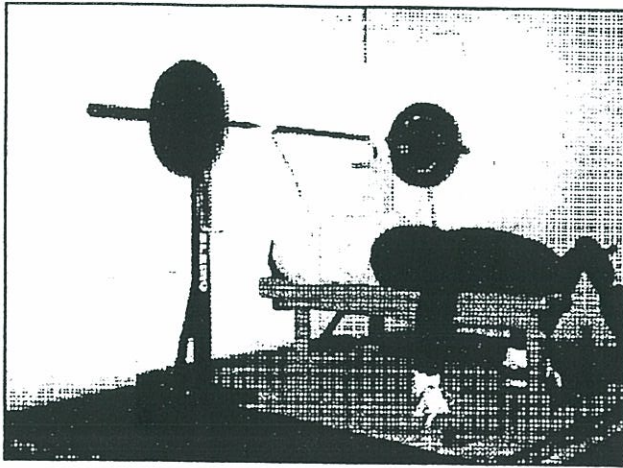


Figure 15 Bench press, top pos.

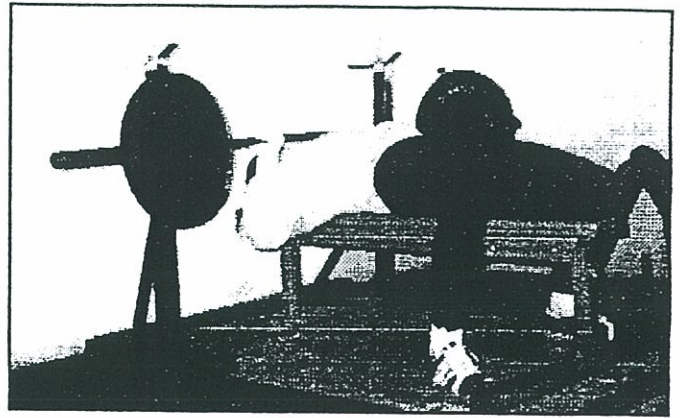


Figure 16 Bench press, bot. pos.

Technique Points

- 1) Set the upper body before removing the bar from the rack. Pull the shoulder blades together and inhale deeply to properly position the chest.
- 2) Take a medium width grip with the thumbs wrapped around the bar. Grip should be determined as follows. The hands should be over or outside the elbows when the bar is on the chest. A narrower grip puts the pectorals(chest muscles) at a leverage disadvantage and shifts the emphasis to the triceps. The bar should be brought down to the chest slowly and under control. The bar should be brought down to the low edge of the chest.
- 3) The bar should move in an arced path from a position over the face down to the low edge of the chest and, should move up along the same path.
- 4) Feet should be flat on the floor, elbows should be between 45 degrees and 90 degrees relative to the trunk.

Reminders

- Never bounce the bar off the chest. Control the bar's descent.
- Keep the hips on the bench at all times, never arch.
- Do not overemphasise the bench press, one heavy day per week for 3-5 sets is plenty.

Close Grip Bench Press -the close grip bench press (see Fig.19) is one of many variations on the bench press. The close grip shifts more of the stress onto the tricep muscles and, works the upper body through a more specific range of motion. Close grip bench presses are an excellent substitute for the bench press for athletes with shoulder problems and, can also be used to supplement the upper body program. Close grip bench presses are also more specific to the pushing movements performed in hockey.

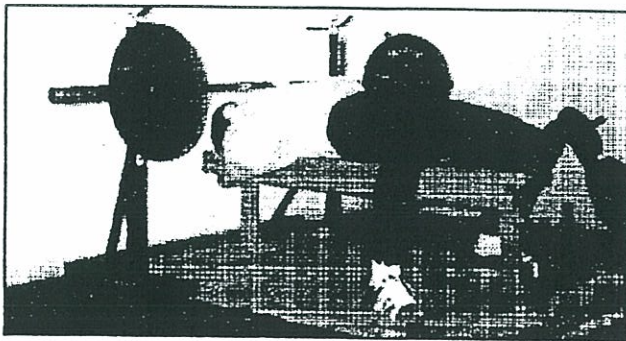


Figure 17 Close Grip, bot. pos.

Technique Points-

- 1) Place the first two fingers on the smooth part of the bar, the remaining two on the knurled(rough) part of the bar.
- 2) Keep the elbows close to the sides.
- 3) Observe all previous points made for the bench press.

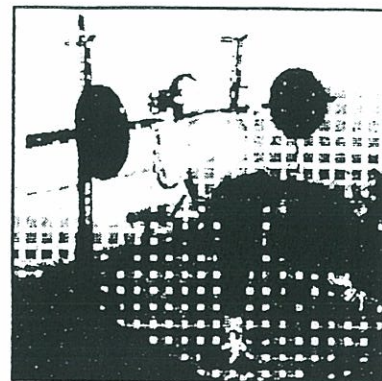


Figure 18 Incline Bench, bot. pos.

Incline Bench Press - The incline bench press is another variation on the bench press. The incline bench press places more emphasis on the upper portion of the chest and the shoulders. Incline benches are ,like close grip bench presses, more specific to the needs of most sports. Incline bench presses will be used in place of the bench press on the second day of each upper body workout.

Technique Points-

1) Lower the bar to the top of the chest, just below the collarbones. This will place the emphasis on the upper chest and anterior portion of the shoulders.

Overhead Pressing Movements

The overhead pressing movements can be done with either a barbell or dumbbell and, may be done sitting or standing. It is important in all overhead movements to keep the abdominals tight and the lower back as flat as possible. Pressing behind the neck is not recommended. Often athletes experience shoulder problems from pressing behind the neck. Please note: to avoid confusion overhead presses are frequently referred to as military presses, these terms are used interchangeably. Do not neglect the shoulders as they are frequently undertrained in favor of the chest muscles. The shoulders are more important in most sports than the chest.

Dumbbell Overhead Press

The dumbbell overhead press is an excellent overhead pressing movement and, is the movement recommended in the program. Barbell overhead presses can be substituted if dumbbells are unavailable or if the athlete has a preference. There is no reason to perform both movements. Dumbbell overhead presses will result in a more balanced development due to the independent arm action.

Technique Points-

- 1) Begin with the dumbbells at shoulder height with the palms facing forward.
- 2) Press the dumbbells overhead and touch the dumbbells together above the head.
- 3) Be sure to fully extend the elbows in the



Figure 20 Dumbbell Overhead Press Bot.

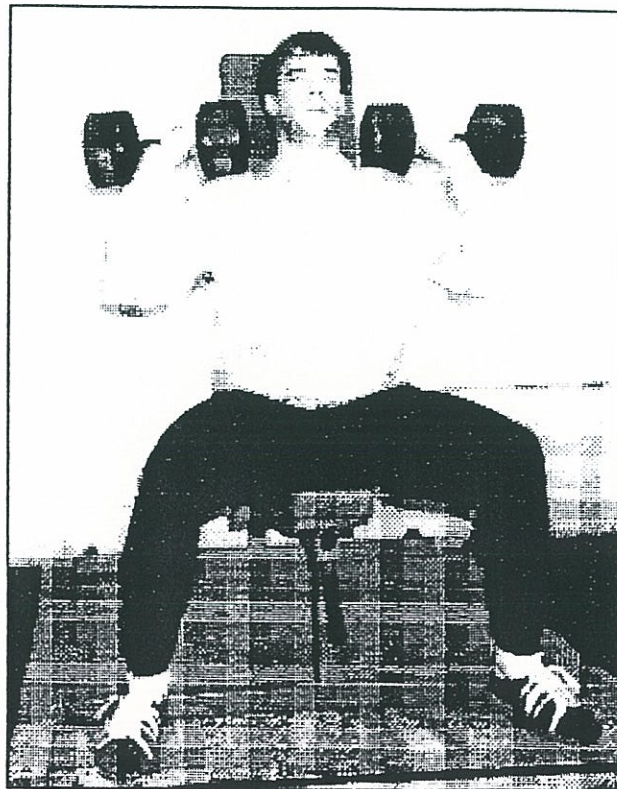


Figure 19 Overhead Press

top position.

Side Dumbbell Raise

The side dumbbell raise is one of the few isolation exercises recommended for inclusion in the program. The side raise is frequently done incorrectly and, with too much weight.

Technique Points-

- 1) Use a light weight (10-20 lbs.) to start.
- 2) Concentrate on lifting the elbows, not the weights. Arms should be bent slightly.
- 3) Do not lift the dumbbells higher than the the elbows, this will insure that the middle portion of the deltoid is isolated.

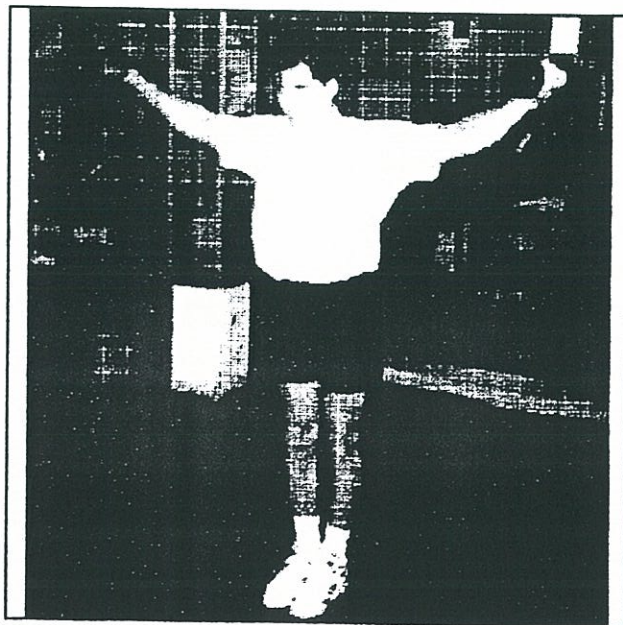


Figure 21 Side Dumbbell Raise

FLEXIBILITY

- It is extremely important that you pay attention to your flexibility. Increased flexibility will reduce the incidence of injury and, improve your efficiency of movement. An entire warm-up and flexibility program are shown on tape two of our videos. The picture is worth one thousand words.

The following guidelines are offered for your flexibility program.

- 1) Try to break a sweat before stretching. The hurdle warm-up and continuous warm-up shown on tape two are excellent pre stretch warm-ups. A warm muscle will stretch better than a cold muscle.
- 2) Do not bounce! Stretch to a position of discomfort and hold the position for 10-30 seconds. (Please note there is a difference between pain and discomfort, stretching should provide an uncomfortable feeling but, should not produce pain.)
- 3) Try to relax when you stretch. Stretching is not an aggressive activity, there is no need to grit your teeth and strain.
- 4) Stretch correctly. Observe the stretches illustrated and, note the key points.

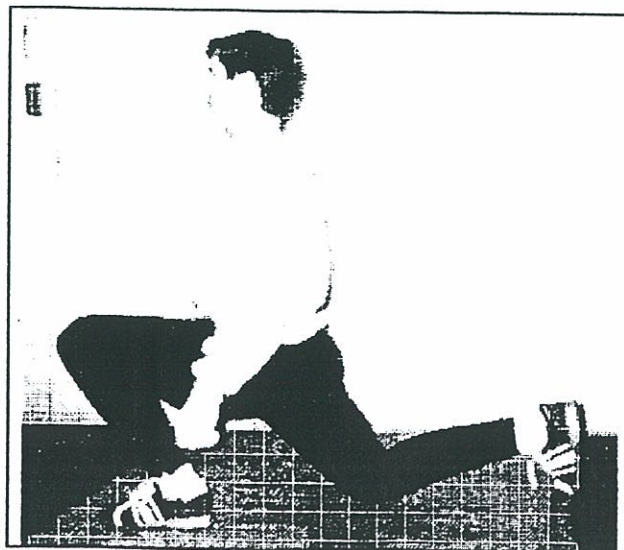
Stretch # 1 - THE LUNGE - this is, in my opinion, the most important stretch that you will do. The lunge stretches the hip flexor muscles in the groin area. The hip flexors are one of the most frequently injured muscles in sport and appear to be related to knee problems as well as groin and abdominal problems.

KEY POINTS:

- 1) Keep the head and chest up and, bring the knee to the floor.

2) Think about pushing the hip forward, do not lean .

- Watch the video tape and perform the stretches as shown every day. Increased flexibility means decreased injuries.



STRENGTH TRAINING PROGRAM

- The enclosed strength training program is provided for your off season use. The program is based on the theories that have been discussed in the preceding pages. Do not make drastic changes or additions to the program. Concentrate on a balanced approach to training emphasizing leg and ab work.

Ordering Information

Slideboards- Ultraslide 800-259-5356 speak to Barry

order w/ 2 pair of shoe covers.
This will allow you to train with a partner.

Heartrate Monitors- M-F Athletic
1-800-682-6950

order: Polar Favor \$99.95

Medicine Balls- M-F Athletic

order: 5 Kilo Convertaball

Groin Strength Tubing (you must also purchase ankle attachment) - Lifeline-
800-553-6633 Order red R-6 cable

Ankle Attachment for Groin Strength Tubing- JBN 1-800-487-2111 , ask for padded leather ankle strap #92004

Boston Bruins Strength and Conditioning Summer 1998

Please note that the strength program has been altered slightly. All exercises are now done in pairs. To follow the workout simply perform the first exercise in the pair, rest one minute, then perform the second exercise of the pair.

Example- Day 1 , Squat paired with Chinups- simply alternate a set of squats with a set of chinups.

This method is more efficient and will allow more rapid strength gains and, a faster workout.

Weeks 1-4 Base Phase

Day 1	Week 1	Week 2	Week 3	Week 4
	6/2-5	6/8-11	6/15-18	6/22-25
Abs- 200 reps , emphasise rotation, Conditioning after workout, see schedules				
Squat - pair w/	2x10	3x10	3x10	3x10
Chinup - 6" grip width	2x10	3x10	3x10	3x10
1 Leg Squat or Step Up pair w/	2x10	3x10	3x10	3x10
Machine Row	2x10	3x10	3x10	3x10
Hip Adduction pair w/	2x10	2x10	2x10	2x10
Hip Abduction	2x10	2x10	2x10	2x10
Day 2				
Abs- 200 reps , emphasise rotation, Sprints and plyos before workout, see schedules				
Bench Press pair w/	3x10	3x10	3x10	3x10
Back Extension	2x10	3x10	3x10	3x10
Dips pair w/	2x10	3x10	3x10	3x10
Leg Curl	2x10	3x10	3x10	3x10
Side Raises pair w/	2x10	2x10	2x10	2x10
Reverse Curl	2x10	2x10	2x10	2x10

Boston Bruins
Strength and Conditioning Summer 1998 Weeks 1-4
Base Phase

Day 3	Week 1	Week 2	Week 3	Week 4
	6/2-5	6/8-11	6/15-18	6/22-25
Abs- 200 reps , emphasise rotation, Conditioning after workout, see schedules				
Light Squat - pair w/	2x10	3x10	3x10	3x10
Chinup- 12" grip width	2x10	3x10	3x10	3x10
1 Leg Squat or Step Up pair w/	2x10	3x10	3x10	3x10
DB Row	2x10	3x10	3x10	3x10
Hip Adduction pair w/	2x10	2x10	2x10	2x10
Hip Abduction	2x10	2x10	2x10	2x10
Day 4				
Abs- 200 reps , emphasise rotation, Sprints and plyos before workout, see schedules				
DB Incline Bench Press pair w/	3x10	3x10	3x10	3x10
Back Extension	2x10	3x10	3x10	3x10
Alternate DB Overhead Press pair w/	2x10	3x10	3x10	3x10
Leg Curl	2x10	3x10	3x10	3x10
Front Raises pair w/	2x10	2x10	2x10	2x10
Curl	2x10	2x10	2x10	2x10

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Weeks 5-8 Phase 2- Strength

Day 1	Week 5	Week 6	Week 7	Week 8
	6/29-7/2	7/7-10	7/13-17	7/20-24
Abs- 200 reps , emphasise rotation, Conditioning after workout, see schedules				
Squat - pair w/	3x5	3x5	3x5	3x5
Weighted Chinup - 6" grip width	3x5	3x5	3x5	3x5
1 Leg Squat or Step Up pair w/	3x5	3x5	3x5	3x5
Machine Row	2x10	2x10	2x10	2x10
Hip Adduction pair w/	2x10	2x10	2x10	2x10
Hip Abduction	2x10	2x10	2x10	2x10
Day 2				
Abs- 200 reps , emphasise rotation, Sprints and plyos before workout, see schedules				
Bench Press pair w/	3x5	3x5	3x5	3x5
Back Extension w / 25 lbs	3x10	3x10	3x10	3x10
Weighted Dips pair w/	3x5	3x5	3x5	3x5
Leg Curl	2x10	2x10	2x10	2x10
Side Raises pair w/	2x10	2x10	2x10	2x10
Hammer Curl	2x10	2x10	2x10	2x10

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Strength and Conditioning Summer 1998
Weeks 5-8 Phase 2- Strength

Day 3	Week 5	Week 6	Week 7	Week 8
	6/29-7/2	7/7-10	7/13-17	7/20-24
Abs- 200 reps , emphasise rotation, Conditioning after workout, see schedules				
Light Squat - pair w/	3x5	3x5	3x5	3x5
Weighted Chinup- 12" grip width	3x5	3x5	3x5	3x5
1 Leg Squat or Step Up pair w/	3x5	3x5	3x5	3x5
DB Row	2x10	2x10	2x10	2x10
Hip Adduction pair w/	2x10	2x10	2x10	2x10
Hip Abduction	2x10	2x10	2x10	2x10
Day 4				
Abs- 200 reps , emphasise rotation, Sprints and plyos before workout, see schedules				
Incline Bench Press (bar) pair w/	3x5	3x5	3x5	3x5
Back Extension	3x10	3x10	3x10	3x10
Alternate DB Overhead Press pair w/	3x5	3x5	3x5	3x5
Leg Curl	2x10	2x10	2x10	2x10
Front Raises pair w/	2x10	2x10	2x10	2x10
Curl	2x10	2x10	2x10	2x10

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Strength and Conditioning Summer 1998
Weeks 9-12 Phase 3- Strength/ Endurance

Day 1	Week 9	Week 10	Week 11	Week 12
	7/27-31	8/3-6	8/10-14	8/17-21
Abs- 200 reps , emphasise rotation, Conditioning after workout, see schedules				
Squat - pair w/	3x5	3x5	3x5	3x5
Pullup	3x8	3x10	3x12	3x12
1 Leg Squat or Step Up pair w/	3x5	3x8	3x10	3x12
Machine Row	2x10	2x10	2x10	2x10
Hip Adduction pair w/	2x10	2x10	2x10	2x10
Hip Abduction	2x10	2x10	2x10	2x10
Day 2				
Abs- 200 reps , emphasise rotation, Sprints and plyos before workout, see schedules				
Bench Press (110% BW) pair w/	3x5	3x8	3x10	3x12
Back Extension w / 25 lbs	3x10	3x10	3x10	3x10
Weighted Dips pair w/	3x5	3x8	3x10	3x12
Leg Curl	2x10	2x10	2x10	2x10
Side Raises pair w/	2x10	2x10	2x10	2x10
Hammer Curl	2x10	2x10	2x10	2x10

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Strength and Conditioning Summer 1998
Weeks 9-12 Phase 3 Strength/ Endurance

Day 3	Week 9	Week 10	Week 11	Week 12
	7/27-31	8/3-6	8/10-14	8/17-21
Abs- 200 reps , emphasise rotation, Conditioning after workout, see schedules				
Light Squat - pair w/	3x5	3x5	3x5	3x5
Pullup	3x8	3x10	3x12	3x12
1 Leg Squat or Step Up pair w/	3x5	3x10	3x12	3x12
DB Row	3x10	3x10	3x10	3x10
Hip Adduction pair w/	2x10	2x10	2x10	2x10
Hip Abduction	2x10	2x10	2x10	2x10
Day 4				
Abs- 200 reps , emphasise rotation, Sprints and plyos before workout, see schedules				
Incline Bench Press (bar) pair w/	3x5	3x8	3x10	3x12
Back Extension	3x10	3x10	3x10	3x10
Alternate DB Overhead Press pair w/	3x5	3x8	3x10	3x12
Leg Curl	2x10	2x10	2x10	2x10
Front Raises pair w/	2x10	2x10	2x10	2x10
Curl	2x10	2x10	2x10	2x10

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Strength and Conditioning Summer 1998 Weeks 13-14
Endurance Phase

Day 1	Week 13	Week 14
	8/24-28	9/1-
Abs- 200 reps , emphasise rotation, Conditioning after workout, see schedules		
Squat- light in week 14 pair w/	3x10	3x5
Pullup	2x10	2x10
Inverted Row pair w/	2x10	2x10
1 Leg Squat	2x10	2x10
Day 2		
Abs- 200 reps , emphasise rotation, Sprints and plyos before workout, see schedules		
Bench- pair w/	2x 110	1x 110
Back Extension	%BW 2x12	%BW 2x12
Dips pair w/	2x12	2x12
Leg Curl	2xmax	2xmax

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Strength and Conditioning Summer 1998 Weeks 13-14

Day 3	Week 13	Week 14
	8/24-28	9/1
Abs- 200 reps , emphasise rotation, Conditioning after workout, see schedules		
Light Squat pair w/	3x5	3x5
Pullup	2x10	2x10
Lunge	2x10	2x10
Machine Row	2x10	2x10
Day 4	Week 11	Week 12
Abs- 200 reps , emphasise rotation, Sprints and plyos before workout, see schedules		
DB Incline Bench pair w/	2x12	2x12
Back Extension	2x12	2x12
Alt DB Press pair w/	2x 12	2x 12
Leg Curl	3x10	3x10

Boston Bruins Summer 1998 Interval Conditioning Program							
Tuesday – Friday-							
Helpful Definitions:							
Tempo= stride with walk recovery, for 100's stride along the outside edge of a football field, walk the end zone for recovery							
Interval- run followed by a timed rest interval							
Shuttle- change of direction run, followed by a timed rest interval							
Phase 1		Day 1	Day 2	Work Time	Rest	Total Yards	
Week 1	Tempo	8x100		18-20	Walk end zone		
6/2-5			8x100	18-20	Walk end zone		1600
Week 2	Tempo	10x100		18-20	Walk end zone		
6/8-11			8x100	18-20	Walk end zone		1800
Week 3	Tempo	12x100		18-20	Walk end zone		
6/15-18			10x100	18-20	Walk end zone		2200
Week 4	Tempo	14x100		18-20	Walk end zone		
6/22-25			12x100	18-20	Walk end zone		2600
Week 5	Tempo	16x100		18-20	Walk end zone		
6/29-7/2			12x100	18-20	Walk end zone		2800
Week 6	Tempo	18x100		18-20	Walk end zone		3200
7/7-10			14x100	18-20	Walk end zone		
Phase 2							
begin intensive intervals, harder pace with 3-1 rest to work intervals							
		Day 1	Day 2	Work Time	Rest		
Week 7		6x220		31-33 sec	1:30 sec		
7/13-17			16x110	18-20	Walk end zone		3080

Week 8	Interval	7x220		31-33 sec	1:30 sec		
7/20-24	Tempo		16x110	18-20	Walk end zone		3300
Week 9	Interval	8x220		31-33 sec	1:30 sec		3520
7/27-31	Tempo		16x110	18-20	Walk end zone		
Week 10	Interval	9x220		31-33 sec	1:30 sec		3740
8/3-6	Tempo		16x110	18-20	Walk end zone		
Phase 3	add change of direction conditioning with 300 shuttle run, (stops + starts)						
	300 shuttle = 50 yd up + back X 3						
	change from tempo 100's to 110 intervals						
Week 11	Shuttle	3x300		60 sec	3:00 min		2660
8/10-14	Interval		16x110	16.5 sec	:45 sec	Note Change	
Week 12	Shuttle	4x300		60 sec	3:00 min		2960
8/17-21	Interval		16x110	16.5 sec	:45 sec	Note Change	
Week 13	Shuttle	5x300		60 sec	3:00 min		3260
8/24-28	Interval		16x110	16.5 sec	:45 sec	Note Change	
Week 14	Shuttle	6x300		60 sec	3:00 min		3560
9/1	Interval		16x110	16.5 sec	:45 sec	Note Change	

You should add one distance workout per week on either Wed, Sat or Sun. Begin with a 2 mile run at eight minute pace (7.4 mph) and add ¼ mile per week. You should finish at 5 miles in 40 minutes. Do not distance run more than this unless you are overweight. Concentrate on the interval workouts. Overweights should add one-two additional distance workouts per week.