Hibbing/Chisholm Hockey

Off Ice Training

*Strength, Speed, Quickness and Agility
*Stickhandling
*Shooting
*Nutrition

Anything you do to improve in the off season puts you that much further ahead to the start of the season.

"It's not about how bad you want it. It's about how hard you're willing to work for it."

Strength, Speed, Quickness and Agility

Focus:

-Form
-Explosiveness
-Strength
-Speed, quick feet

*Hockey is a game of quick bursts of speed and changes of direction

*Short distance sprints help develop that explosive first steps/strides and powerful leg drive. (short sprints, hill sprints, change in speed, change in direction, plyometrics)

EXPLOSIVE NOT TIRED (it is not conditioning)

*Hockey is not a linear sport (need to incorporate change in direction-side to side and forward to backward movements)

*Explosive leg strength will help improve SPEED, QUICKNESS AND AGILITY

*Leg strength, core strength and upper body strength will help:
-Your Shot
-You win battles (stick battles, corner battles and battles in front of the net)

Tips:

*it's not "Practice makes perfect," it's "Perfect practice makes you Perfect"
Start slow, get your form correct, then start to increase speed. Always try to get FASTER, QUICKER and more AGILE.
***Challenge yourself.** Go beyond what you are comfortable with (your comfort zone)
*Work to improve NOT TO JUST GET IT OVER WITH

Workouts

JUNE 2020

example

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
*20 wrist shots.	1 10 weeks of summer 5,000 shot club *20 snap shots. *20 backhand. *40 others shots	2	3 *40 wrist shots.	4 10 weeks of summer 10,000 shot club *40 snap shots. *40 backhand. *40 other shots	5	6
7 **week 1**	8 strength training/ plyometrics/abs stick handle shoot pucks	9 upper body sprints shoot pucks	yoga(youtube) 10 stickhandle shoot pucks	11 track workout core agility shoot pucks	12 conditioning foam roll/stretch stick handle shoot pucks	13
14 **week 2**	15 strength training/ plyometrics/abs stick handle shoot pucks	16 upper body workout sprints shoot pucks	17 yoga stick handle shoot puck	track workout 18 core agility shoot pucks	19 conditioning foam roll/stretch stick handle shoot pucks	20
21 Father's Day **week 3**	22 strength train/ plyometrics/abs stick handle shoot pucks	23 upper body workout sprints shoot pucks	24 yoga stickhandle shoot pucks	25 track workout core agility shoot pucks	26 condition workout foam roll/stretch stick handle shoot pucks	27
28 **week 4** off week	29 stick handle shoot pucks	30 shoot pucks				

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JULY 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
week 4 off week			1 shoot pucks stick handle	2 shoot pucks	3 Independence Day Holiday	4 Independence Day
5 **week 5** use week 2's workout plan	6 strength training/ plyometrics/abs stick handle shoot pucks	7 upper body sprints shoot pucks	8 yoga stick handle shoot puck	9 track workout core agility shoot pucks	10 conditioning foam roll/stretch stick handle shoot pucks	11
12 **week 6** use week 3's workout plan	13 strength training/ plyometrics/abs stick handle shoot pucks	14 upper body sprints shoot pucks	15 yoga stick handle shoot puck	16 track workout core agility shoot pucks	17 conditioning foam roll/stretch stick handle shoot pucks	18
19 **week 7** use week 1's workout plan	20 strength training/ plyometrics/abs stick handle shoot pucks	21 upper body sprints shoot pucks	22 yoga stick handle shoot puck	23 track workout core agility shoot pucks	24 conditioning foam roll/stretch stick handle shoot pucks	25
26 **week 8** off week	27 shoot pucks stick handle	28 shoot pucks	29 shoot pucks stick handle	30 shoot pucks	31 shoot pucks stick handle	

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Week 1 example

Agility and conditioning (track workout)

Warm-up jog/jog in place/jump rope
High knees
Butt kicks
Shuffle
Carioca

Dynamic warm-up
Scoops
Side lunge stretch
Quad stretch w/hamstring stretch
Hip stretch
Leg swings F/B and side to side

Agility: Ladder drill or lines
*pick out 4-6 and repeat each one 2 times
Cone drill *use your resource cone packet
1) small 4 cone
2) 3 cone straight sprints
3) you pick
finish w/ 30 yd shuttle x 2

Plyometrics
2 jump squats into a quick 5 yd sprint, repeat 4x's

*stair workout
2 foot squat hops up stairs x 4
left ft hops up stairs x 2
right ft hops up x 2
2 foot box jumps up bleachers x 2

*finish with 10 hill sprints

Cool down/stretch *stretching is extremely important, don't skip this. Hold stretches for at least 20 secs.

Week 1 example

Strength Training plus Plyometrics

Warm-up jog/jog in place/jump rope
High knees
Butt kicks
Shuffle
Carioca

Dynamic warm-up
Scoops
Side lunge stretch
Quad stretch w/hamstring stretch
Hip stretch
Leg swings F/B and side to side

Workout *low weight high reps

1) Squats 15 reps x 3-4 sets
   box jumps after all sets
2) Reverse lunges 12 reps per leg x 3 sets
   Lunge scissor jumps after all sets
3) Bulgarian split squat 12 reps per leg x 3 sets
   bulgarian split squat jumps after all sets
4) Side lunge may alternate 12 reps per side x 3 sets
   Squat jumps after all sets
5) Wall sits x 30 secs followed by 5 jump squats x 3 sets
6) Walking lunges 40

Core
-10 V ups
-30 sec plank

repeat the above exercises 3-4 times

Cool down/stretch *stretching is extremely important, don't skip this. Hold stretches for at least 20 secs.

Week 1 example

Strength Training upper body

Warm-up jog/jog in place/jump rope
High knees
Butt kicks
Shuffle
Carioca

Dynamic warm-up for upper body
Arm circles f/b 12
Tricep stretch
Across body arm stretch
Side stretch
Stretch out chest
Stretch out back

Workout *use youtube for examples

1) chest press w/weight 10 reps x 3 sets
2) Dips/bench dips
3) Bicep curls w/weight 10 reps x 3 sets
4) Pushups
5) Dips on bench
6) Shoulder press w/weight 10 reps x 3 sets
7) Push ups
8) Dip/bench dips
9) Seated Back flys w/weight 10 reps x 3 sets

Core plank 30 sec
side plank 30 sec
plank 30 sec
side plank 30 sec

*repeat 2-3 times
*finish w/6 20 yd sprints

Cool down/stretch *stretching is extremely important, don't skip this. Hold stretches for at least 20 secs.

Week 2 example

Strength Training plus Plyometrics

Warm-up jog/jog in place/jump rope
High knees
Butt kicks
Shuffle
Carioca

Dynamic warm-up
Scoops
Side lunge stretch
Quad stretch w/hamstring stretch
Hip stretch
Leg swings F/B and side to side

Workout *low weight high reps * **Use youtube for examples**

1) Hamstring roll out with sliders or exercise ball
2) Single leg hamstring dead lift, light weight x 10 reps per leg
3) Reverse lunges, light weight x 12 per leg *may alternate
4) Stationary lunge w/light weight 12 reps

*repeat numbers 1-4 3-5 times through and finish with
Walking lunges 40

Core -russian twist x 40
-leg raisers x 20
-crunches x 20
-bicycle x 40

*may repeat core sequence 1-3 times as you get stronger

Cool down/stretch *stretching is extremely important, don't skip this. Hold stretches for at least 20 secs.

Week 2 example

Strength Training upper body

Warm-up jog/jog in place/jump rope
High knees
Butt kicks
Shuffle
Carioca

Dynamic warm-up for upper body
Arm circles f/b 12
Tricep stretch
Across body arm stretch
Side stretch
Stretch out chest
Stretch out back

Workout *use youtube for examples
1) chest press w/weight 10 reps x 3 sets
2) Dips/bench dips
3) Bicep curls w/weight 10 reps x 3 sets
4) Pushups
5) Dips on bench
6) Shoulder press w/weight 10 reps x 3 sets
7) Push ups
8) Dip/bench dips
9) Seated Back flys w/weight 10 reps x 3 sets

Core plank 30 sec
side plank 30 sec
plank 30 sec
side plank 30 sec

*repeat 2-3 times
*finish w/6 20 yd sprints

Cool down/stretch *stretching is extremely important, don't skip this. Hold stretches for at least 20 secs.

Week 2 example

Agility and conditioning (track workout)

Warm-up jog/jog in place/jump rope
High knees
Butt kicks
Shuffle
Carioca

Dynamic warm-up
Scoops
Side lunge stretch
Quad stretch w/hamstring stretch
Hip stretch
Leg swings F/B and side to side
Upperbody stetches

Agility: Ladder drill or lines
*pick out 4-6 and repeat each one 2 times
Cone drill *use your resource cone packet
1) small 4 cone
2) 3 cone straight sprints
3) you pick
finish w/ 30 yd shuttle x 2

walking lunges 50
backward walking lunges 50
tuck jumps 10-15
*repeat 3 x's

finish with 5 hill sprints
5 10 yard sprints

Cool down/stretch *stretching is extremely important, don't skip this. Hold stretches for at least 20 secs.

Week 3 example

Strength Training plus Plyometrics

Warm-up jog/jog in place/jump rope
High knees
Butt kicks
Shuffle
Carioca

Dynamic warm-up
Scoops
Side lunge stretch
Quad stretch w/hamstring stretch
Hip stretch
Leg swings F/B and side to side

Workout *no weights

1) Hamstring roll out with sliders or med ball x 10-15 reps
2) box jumps
3) pushups
4) Reverse lunges on sliders x 10-15 reps per leg
5) Lunge scissor jumps
6) pushups
7) Pistal squat x 6 reps per legs
8) Squat jack w/band
9) Pushups
10) Backward lunges x 20

*do exercises 1-10 repeat 1-3 times through

Core
plank 30 sec
side plank 30 sec
plank 30 sec
side plank 30 sec

*repeat 2-3 times

Cool down/stretch *stretching is extremely important, don't skip this. Hold stretches for at least 20 secs.

Week 3 example

Strength Training upper body

Warm-up jog/jog in place/jump rope
High knees
Butt kicks
Shuffle
Carioca

Dynamic warm-up for upper body
Arm circles f/b 12
Tricep stretch
Across body arm stretch
Side stretch
Stretch out chest
Stretch out back

Workout *use youtube for examples

1) Incline chest press w/weight 10 reps x 3 sets
2) Tricep kick backw/weight 10 reps each side 3 sets
3) Bicep curls w/weight 10 reps x 3 sets
4) Seated shoulder flys, w/weight 10 reps x3 sets
5) Chest flys w/weight 10 reps x 3 sets
6) Seated dumbbell tricep extention w/weight 10 reps x 3 sets
7) Bicep concentration curl w/weight each arm 10 reps x 3 sets
8) Shoulder press w/ weight 10 reps x 3 sets
9) Superman 30 sec x 3

Pushups
pullups

Core plank 30 sec
side plank 30 sec
plank 30 sec
side plank 30 sec

*repeat 2-3 times
*finish w/6 20 yd sprints

Cool down/stretch *stretching is extremely important, don't skip this. Hold stretches for at least 20 secs.

Week 3 example

Agility and conditioning (track workout)

Warm-up jog/jog in place/jump rope
High knees
Butt kicks
Shuffle
Carioca

Dynamic warm-up
Scoops
Side lunge stretch
Quad stretch w/hamstring stretch
Hip stretch
Leg swings F/B and side to side
Upperbody stetches

Agility: Ladder drill or lines
*pick out 4-6 and repeat each one 2 times
Cone drill *use your resource cone packet
1) small 4 cone
2) 3 cone straight sprints
3) you pick
finish w/ 10 yd sprints x 4

Plyometrics
2 jump squats into a quick 5 yd sprint, repeat 4x's

*stair workout
2 foot squat hops up stairs x 4
left ft hops up stairs x 2
right ft hops up x 2
2 foot box jumps up bleachers x 2

walking lunges 20
backward walking lunges 20
tuck jumps 10-15

finish with 10 hill sprints
1 40 yard sprint

Cool down/stretch *stretching is extremely important, don't skip this. Hold stretches for at least 20 secs.

Off Ice Drills for Goalies *(courtesy of Steve Guider)*

1) Bounce one tennis ball and watch the ball closely.

2) Bounce the tennis ball and toss it in the air.

3) Bounce the ball between the legs and catch it.

4) Toss a ball back and forth with a partner and follow it closely with your eyes.

5) Toss and catch two balls with a partner.

6) Toss and catch two balls by yourself.

7) Face opposite directions with a partner. Turn and catch the tossed balls with your partner on command.

8) Bounce a ball off the wall and catch it with the glove hand only. Then do the blocker hand.

9) Turn away from the wall, toss the ball between the legs, then turn and catch it.

10) Move back and forth from the wall tossing a ball off the wall.

11) Bounce the ball off the wall, turn a 360° degree circle and catch the ball.

12) The goalie faces a wall and a partner stands behind him/her and throws balls off the wall while the goalie makes the save.

13) The goalie has his/her back to the wall and faces a partner who throws a ball off the wall. The goalie must turn and make the save.

14) A partner faces the goalie and uses a tennis racket to hit balls at various spots as the goalies attempts to make the saves.

15) Use #15 except another goalie acts as a screen.

16) Another person passes out a tennis ball to the partner with a racket in front of an imaginary net and the partner slaps the ball and the goalie makes the save.

17) Follow the leader. Work with a partner and mimic the moves and saves that he/she makes as you face him/her. Maintain the basic stance after each move.

Resources And Examples

Conditioning

Aerobic vs. Anaerobic

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 of 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 player in their shifts using the off time as a rest interval.

Means of improving the Anaerobic system include:

- Wind sprints
- Slide board sprints (aerobic as well as anaerobic)
- Inline skating sprints
- Intervals (can be both aerobic and anaerobic depending on work to rest ratios)
- Tempo runs
- Bike/ Treadmills

Tips

- Concentrate on interval work (800's, 400's, 200's), slide boards, and different forms of tempos on football/soccer fields.
- Vary the modes to avoid boredom but allow enough time for enhancement
- Alter work: rest ratios through out off, pre, and in-season. The work to rest ratios will be the determining factor in the systems worked. The shorter the rest period, the more aerobic the exercise becomes.

Mode	time on/off	Work to Rest	Season
Ex. Slideboards	:30 on 1:30 off	1:3	early off-season
	:30 on 1:00 off	1:2	late off-season
	:30 on :30 off	1:1	preseason

- The intensities along with the volume should also vary when conditioning for the different systems.

SPRINT LADDER

Run the following distances under times set, rest indicated time between each sprint.

DISTANCE	TIME	REST
1. 10 yard sprint	2 seconds	10 seconds
2. 10 yard sprint	2 seconds	10 seconds
3. 20 yard sprint	3 seconds	15 seconds
4. 20 yard sprint	3 seconds	15 seconds
5. 30 yard sprint	4 seconds	20 seconds
6. 30 yard sprint	4 seconds	20 seconds
7. 40 yard sprint	6 seconds	30 seconds
8. 40 yard sprint	6 seconds	30 seconds
9. 50 yard sprint	8 seconds	40 seconds
10. 50 yard sprint	8 seconds	40 seconds
11. 70 yard sprint	10 seconds	40 seconds
12. 70 yard sprint	10 seconds	40 seconds
13. 90 yard sprint	14 seconds	45 seconds
14. 90 yard sprint	14 seconds	45 seconds
15. 100 yard sprint	16 seconds	45 seconds
16. 100 yard sprint	16 seconds	45 seconds

To run a double sprint ladder, rest 5 minutes and start again with the 100 yard sprints first and climb 'down' the ladder.

QUARTER SPRINTS

Run the following distances under times set, rest indicated time between each sprint.

DISTANCE	TIME	REST
1. 40 yard sprint	6 seconds	15 seconds
2. 40 yard sprint	6 seconds	15 seconds
3. 30 yard sprint	4 seconds	15 seconds
4. 30 yard sprint	4 seconds	15 seconds
5. 20 yard sprint	3 seconds	15 seconds
6. 20 yard sprint	3 seconds	15 seconds
7. 10 yard sprint	2 seconds	15 seconds
8. 10 yard sprint	2 seconds	15 seconds
9. 5 yard sprint	>1 second	15 seconds
10. 5 yard sprint	>1 second	15 seconds
BREAK	**1.5 MINUTES REST**	
1. 40 yard sprint	6 seconds	15 seconds
2. 40 yard sprint	6 seconds	15 seconds
3. 30 yard sprint	4 seconds	15 seconds
4. 30 yard sprint	4 seconds	15 seconds
5. 20 yard sprint	3 seconds	15 seconds
6. 20 yard sprint	3 seconds	15 seconds
7. 10 yard sprint	2 seconds	15 seconds
8. 10 yard sprint	2 seconds	15 seconds
9. 5 yard sprint	>1 second	15 seconds
10. 5 yard sprint	>1 second	15 seconds
BREAK	**1.5 MINUTES REST**	
1. 40 yard sprint	6 seconds	15 seconds
2. 30 yard sprint	4 seconds	15 seconds
3. 20 yard sprint	3 seconds	15 seconds
4. 10 yard sprint	2 seconds	15 seconds
5. 5 yard sprint	>1 second	

To run a second Quarter Sprints, rest 5 minutes and then start at the beginning with the 40 yard sprints.

Cone Drill Instructions

Tips and Things to Remember: (MF Athletic)

- Begin with a proper warm up and flexibility program.
- Relax! You'll move with greater precision and balance if you avoid tensing your muscles.
- Always see if you can relate the elements of any drill to the movements you make in competition.
- Go as fast as you can: Not as fast as you can't. Don't sabotage yourself by attempting to make your feet go faster than they are able to. Remember: You want to develop quickness and control.
- Learn quickly, by first practicing slowly.
- Get a rhythm, then try to pick up your tempo.
  1. Get the drill right
  2. Get the drill right going slow
  3. Get the drill right going fast
- Allow for proper rest between drills. Do not perform to fatigue.
- Use your arms! (Try sprinting with your hands clasped behind your back. You will go much slower than you are able to run with your arms moving with you.) See if you can't generate more speed by employing your arms as an additional balance and power-producing force.
- Focus on learning one or two drills per training session until you have developed a good base of exercise options.
- Don't be afraid to fail! All of these drills can be learned quickly – if you don't quit on them!

Cone Drill Index

4 Cone Drills:

4 Cone: Carioca
4 Cone: Shuffle
4 Cone: Sprint/Sprint/Shuffle/Backpedal
4 Cone: Backpedal/Carioca/Sprint/Sprint
Small 4 Cone
4 Cone: Backpedal Cross
4 Cone: Inside Outside Figure 8

T Drills:

T Drill: Shuffle/Shuffle/Shuffle
T Drill: Shuffle/Carioca/Sprint
T Drill: Shuffle/Sprint/Shuffle

3 Cone Drills:

3 Cone: Straight Sprints
3 Cone: Inside Curl, Single 1-2
3 Cone: Inside Curl, Triple 1-2
3 Cone: Inside Curl into Triangle
3 Cone: Outside Curl, Triple 1-2

Zig-Zag Drills:

Sprint/Shuffle/Backpedal/Shuffle
Shuffle/Sprint
Sprint/Shuffle Step
Diagonal Shuffle
W Drills

Other Drills:

Figure 8 Drill
Wheel Agility Drill
I Drill
Y Drill

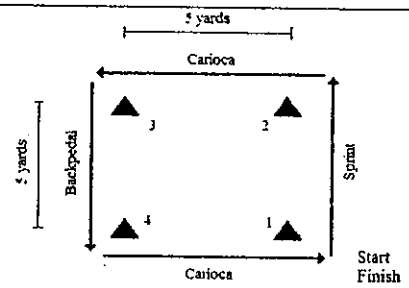
Shuttle Runs:

PRO Agility
30 Yard Shuttle
40 Yard Shuttle
60 Yard Shuttle
10 x 20 Seconds

Cone Drill Diagrams

4 Cone: Carioca

Sprint to the 2nd cone
Gather feet and carioca to 3rd cone
Gather feet and back pedal to 4th cone
Gather feet and carioca to Finish
Face the same direction through the entire drill

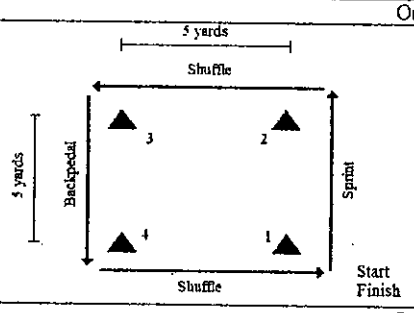


Orono

4 Cone: Shuffle

Sprint to the 2nd cone
Gather feet and shuffle to 3rd cone
Gather feet and back pedal to 4th cone
Gather feet and shuffle to Finish
Face the same direction through the entire drill

Keep feet apart with good base when shuffling



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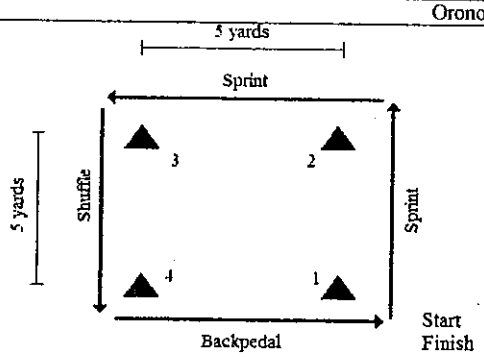
4 Cone:
Sprint/Sprint/Shuffle/Backpedal

Sprint to the 2nd cone
Gather feet and sprint to 3rd cone
Gather feet and shuffle to 4th cone (face away from cones)
Gather feet and shuffle to Finish
Alternate 1 and 4 as start cones

Keep feet apart with good base when shuffling

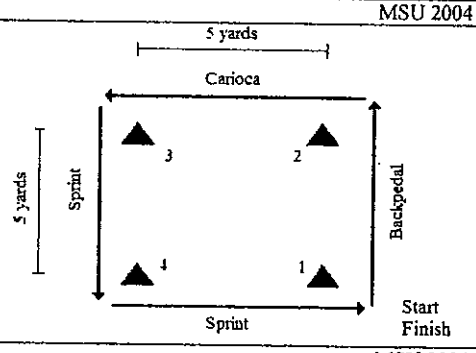


MSU 2004

4Cone:
Backpedal/Carioca/Sprint/Sprint

Backpedal to the 2nd cone
Gather feet and carioca to 3rd cone (face in towards cones)
Gather feet and sprint to 4th cone
Gather feet and sprint to Finish

Alternate 1 and 4 as start cones

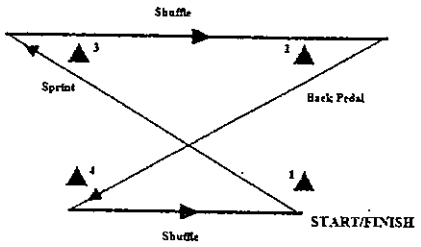


MSU 2004

4 Cone: Inside Outside Figure 8

Sprint to the 3rd cone
Gather feet and shuffle to 2nd cone
Gather feet and back pedal to 4th cone
Gather feet and shuffle to Finish
Face the same direction through the entire drill

Keep feet apart with good base when shuffling



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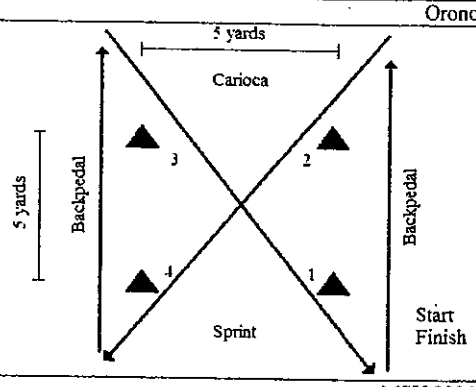
4 Cone: Backpedal Cross

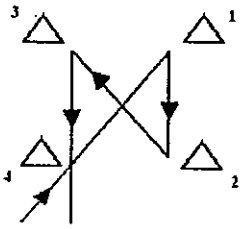
Backpedal to cone 2
Sprint to cone 4
Backpedal to cone 3
Sprint to Finish (cone 1)



MSU 2004

Small 4 Cone

Begin drill facing away from cone 4
Open hips and sprint to cone 1 – buzz feet at cone (3 foot touches)
Turn and sprint to cone 2 – buzz feet
Turn and sprint to cone 3 – buzz feet
Turn and sprint past cone 4



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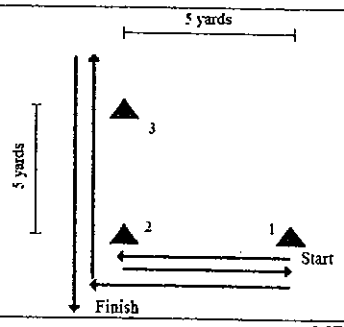
3 Cone Drills

3 Cone: Straight Sprints

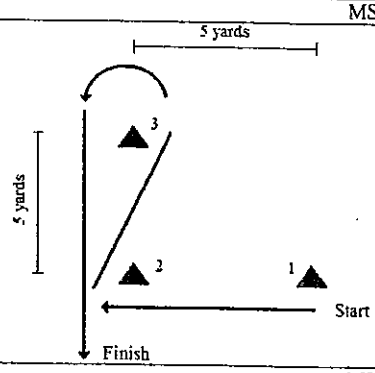
Sprint to cone 2
Sprint back to cone 1
Sprint back to cone 2
Sprint to cone 3
Sprint to Finish (cone 2)



MSU 2004

3 Cone: Inside Curl, Single 1-2

Sprint to cone 2
Sprint around inside of cone 3
Sprint to Finish (cone 2)



MSU 2004

Other Drills:

Figure 8 Drill
Wheel Agility Drill
I Drill
Y Drill

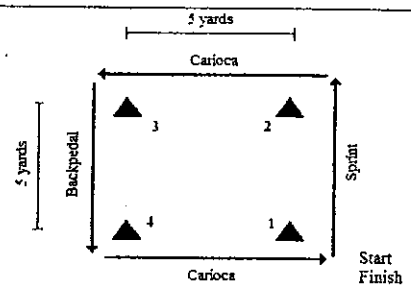
Shuttle Runs:

PRO Agility
30 Yard Shuttle
40 Yard Shuttle
60 Yard Shuttle
10 x 20 Seconds

Cone Drill Diagrams

4 Cone: Carioca

Sprint to the 2nd cone
Gather feet and carioca to 3rd cone
Gather feet and back pedal to 4th cone
Gather feet and carioca to Finish
Face the same direction through the entire drill



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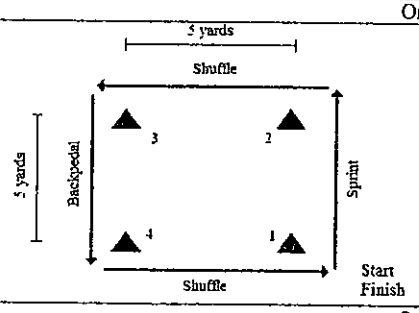
4 Cone: Shuffle

Sprint to the 2nd cone
Gather feet and shuffle to 3rd cone
Gather feet and back pedal to 4th cone
Gather feet and shuffle to Finish
Face the same direction through the entire drill

Keep feet apart with good base when shuffling



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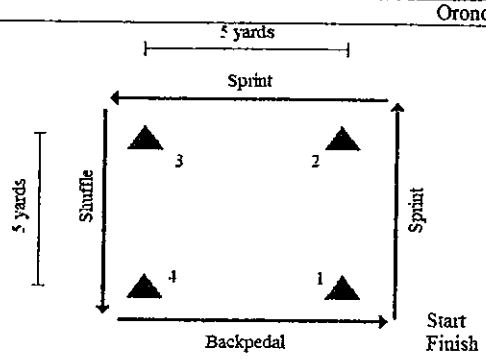
4 Cone: Sprint/Sprint/Shuffle/Backpedal

Sprint to the 2nd cone
Gather feet and sprint to 3rd cone
Gather feet and shuffle to 4th cone (face away from cones)
Gather feet and shuffle to Finish
Alternate 1 and 4 as start cones

Keep feet apart with good base when shuffling

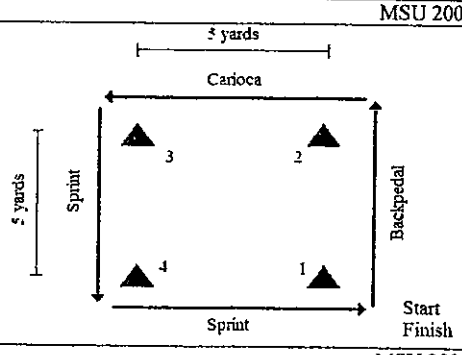


MSU 2004

4Cone: Backpedal/Carioca/Sprint/Sprint

Backpedal to the 2nd cone
Gather feet and carioca to 3rd cone (face in towards cones)
Gather feet and sprint to 4th cone
Gather feet and sprint to Finish

Alternate 1 and 4 as start cones

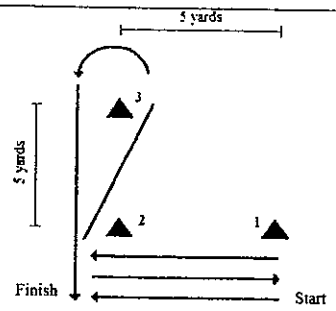


MSU 2004

3 Cone: Inside Curl, Triple 1-2

Sprint 5 yards to cone 2
Turn Sprint back to the Start, cone 1
Turn Sprint around cone 2
Sprint around inside of cone 3
Proceed around cone 3
Sprint to the Finish, cone 2

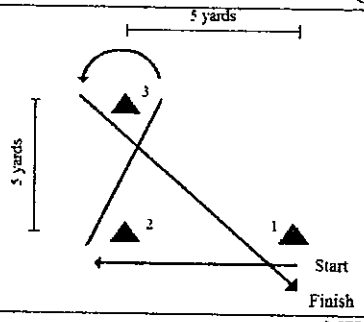
Variation: replace 1-2, 2-1 Sprints with Shuffle or Carioca



Orono

3 Cone: Inside Curl into Triangle

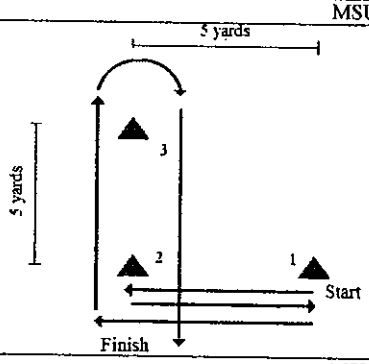
Sprint to cone 2
Curl around inside of cone 3
Sprint to Finish (cone 1)



MSU 2004

3 Cone: Outside Curl, Triple 1-2

Shuffle to cone 2
Shuffle back to cone 1
Sprint back to cone 2
Sprint around outside of cone 3
Sprint to Finish (cone 2)

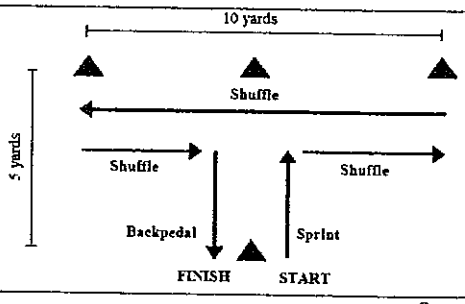


MSU 2004

T Drills

T Drill: Shuffle/Shuffle/Shuffle

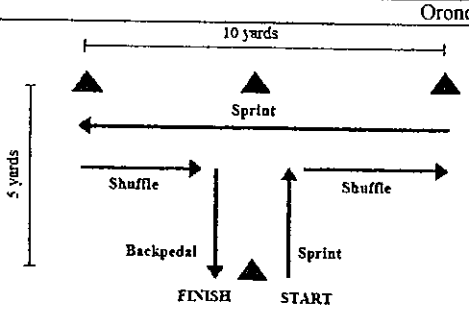
Sprint 10 yards
Shuffle 5 yards to the right
Shuffle 10 yards to the left
Shuffle 5 yards to the right
Backpedal through the Finish



Orono

T Drill: Shuffle/Sprint/Shuffle

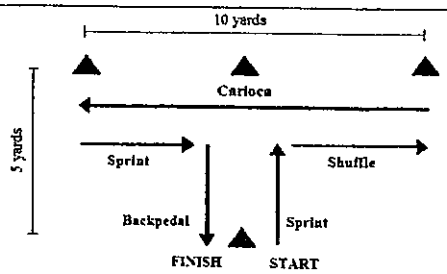
Sprint 5 yards
Shuffle 5 yards to the right
Sprint 10 yards to the left
Shuffle 5 yards to the right (to middle)
Backpedal through Finish
Alternate direction of shuffle.



MSU 2004

T Drill: Shuffle/Carioca/Sprint

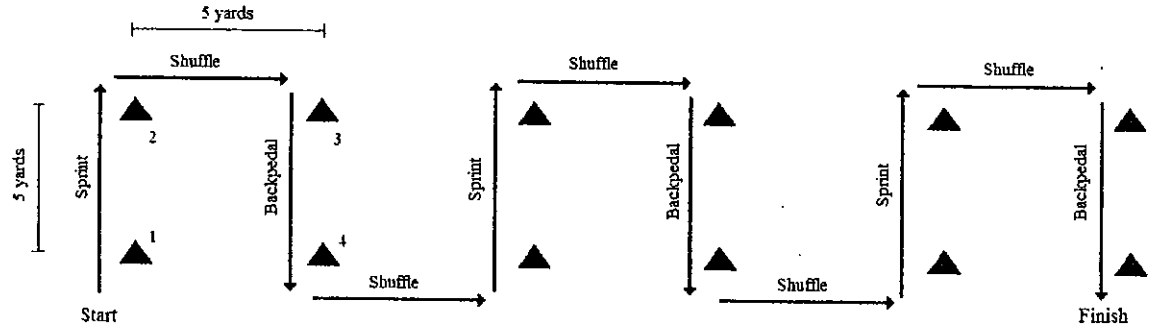
Sprint 5 yards
Shuffle 5 yards to left
Carioca 10 yards to right
Sprint 5 yards to left (to middle)
Sprint through Finish
Alternate direction of shuffle and carioca



MSU 2004

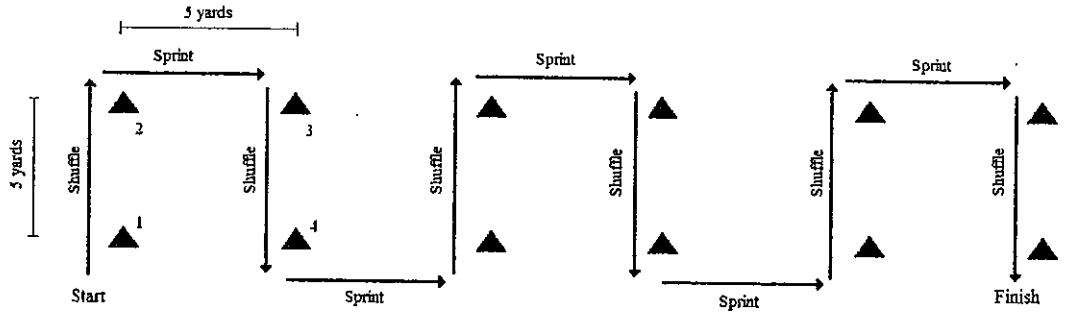
Zig-Zag Drills

Sprint/Shuffle/Backpedal/Shuffle



MSU 2004

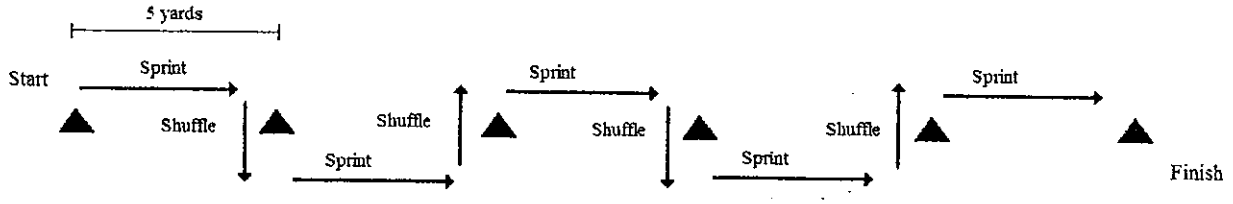
Shuffle/Sprint



Always shuffle facing the Finish end of the course

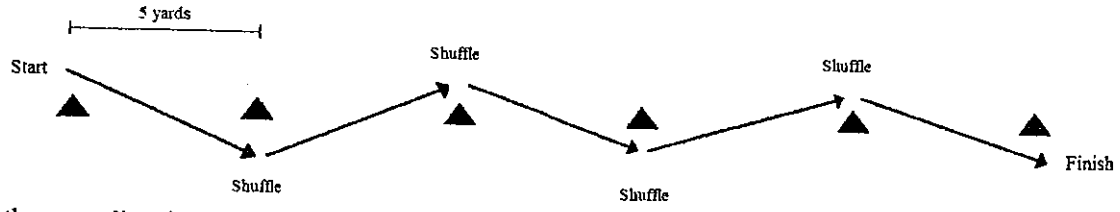
MSU 2004

Sprint/Shuffle Step



MSU 2004

Diagonal Shuffle

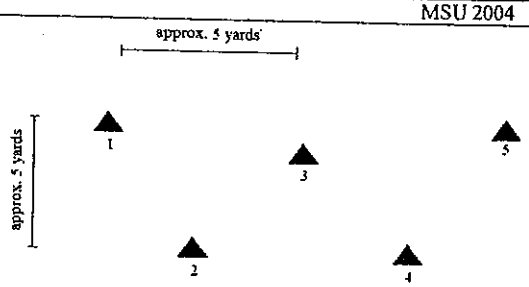


Face the same direction through the entire course.
Alternate directions

MSU 2004

W Drills

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. Once each cone is reached, change direction to the next cone.



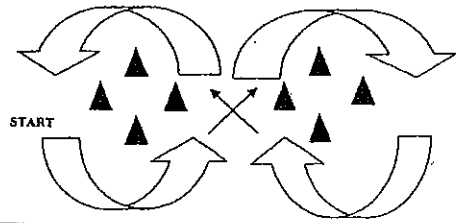
USA Hockey 1998

Other Drills

Figure 8 Drill

Sprint around the first circle of cones. Continue sprinting towards the next circle of cones in a figure 8 pattern. Continue around the second set of cones to the first circle of cones. Continue through Finish

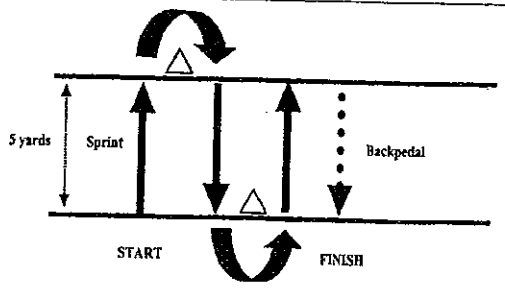
Stay as close to the circle as possible.



Orono

Wheel Agility Drill

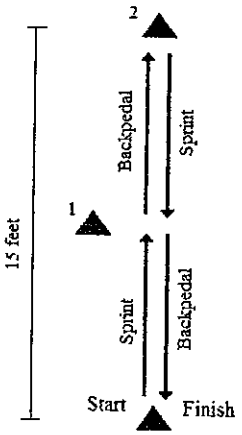
Sprint 5 yards around the cone to the right
Sprint 5 yards around the cone to the left
Sprint again 5 yards to line
Backpedal 5 yards to the Finish



Orono

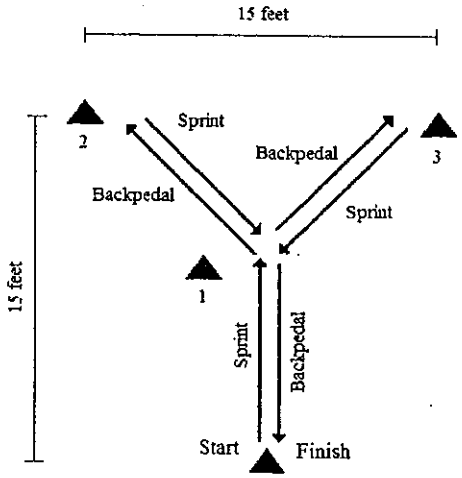
I Drill

Sprint to middle, cone 1
Turn and Backpedal to cone 2
Sprint back to middle, cone 1
Turn and Backpedal to Start
Repeat…
3 repetitions per set
Make sure the middle cone (cone 1) is off to the side so you don't trip over it when making turns. It is only needed as a visual to mark where to make turns.
Variations:
- Turn towards cone 1, turn away from cone 1
- Start with Backpedal, then Sprint etc.



Y Drill

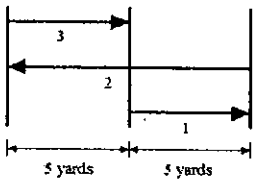
Sprint to middle, cone 1
Turn and Backpedal to cone 2
Sprint back to middle, cone 1
Turn and Backpedal to cone 3
Sprint back to middle, cone 1
Turn and Backpedal to Start
Repeat…
3 repetitions per set
Make sure the middle cone (cone 1) is off to the side so you don't trip over it when making turns. It is only needed as a visual to mark where to make turns.
Variations:
- Turn facing cone 2, turn facing cone 3
- Start with Backpedal, then Sprint etc.



Shuttle Runs

PRO Agility

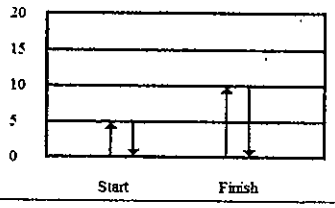
Begin the drill by straddling the middle line.
Turn to the right and run 5 yards -- Touch the line.
Turn and sprint 10 yards -- Touch the line.
Turn and sprint 5 yards through the finish.



Orono

30 Yard Shuttle

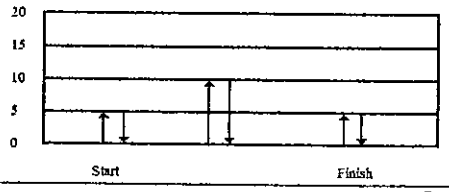
Sprint 5 yards and back to starting line
Sprint 10 yards and back thru starting line



Orono

40 Yard Shuttle

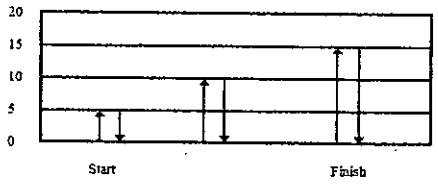
Sprint 5 yards and back to starting line
Sprint 10 yards and back to starting line
Sprint 5 yards and back thru starting line



Orono

60 Yard Shuttle

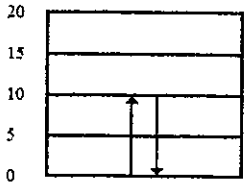
Sprint 5 yards and back to starting line
Sprint 10 yards and back to starting line
Sprint 15 yards and back thru starting line



Orono

10 x 20 Seconds

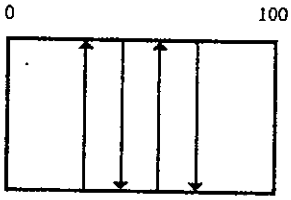
Sprint 10 yards and back to starting line
Continue for 20 seconds
Goal: 10 touches
Variations: Sprint/Backpedal
Shuffle/Sprint



Orono

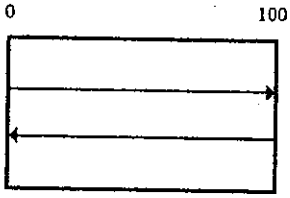
Gassers

Sprint the width of a football field 4X



200 yard Shuttle (100's)

Sprint from start line to 100 yard line and back to start

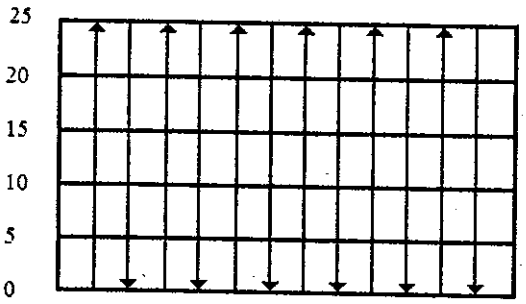


300 yard Shuttle (25's)

Sprint 6x from start line to 25 yard line and back to start

Run all 12 sprints before resting

Wk	Goal Run Times	RI
1	1:10, 1:12, 1:15	3:00
3	1:07, 1:10, 1:13	2:00
4	1:05, 1:08, 1:11	1:00
5	1:02, 1:05, 1:08, 1:11	1:00
7	1:00, 1:03, 1:05, 1:08, 1:11	1:00

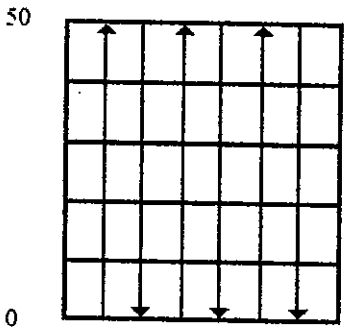


300 yard Shuttle (50's)

Sprint 6x from start line to 25 yard line and back to start

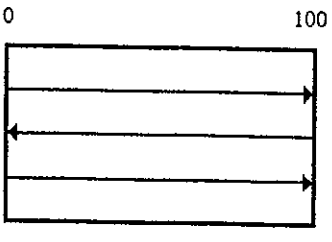
Run all 6 sprints before resting

Wk	Goal Run Times	RI
1	1:10, 1:12, 1:15	3:00
3	1:07, 1:10, 1:13	2:00
4	1:05, 1:08, 1:11	1:00
5	1:02, 1:05, 1:08, 1:11	1:00
7	1:00, 1:03, 1:05, 1:08, 1:11	1:00



300 yard Shuttle (100's)

Sprint from start line to 100 yard line,
Sprint back to start
Sprint final 100 yards



Example of Interval Runs

400m Runs

Week	Run	Rest Interval
1	1 mile jog	
2	1.5 mile jog	
3	2 mile jog	
4	2 mile jog	
5	2 x 400m	2:00 min
6	3 x 400	2:00
7	4 x 400	2:00
8	4 x 400	1:30
9	5 x 400	1:30
10	6 x 400	1:30
11	6 x 400	1:30
12	4 x 400	2:00

Once per week

Goal: 1:15 max time on 1st 400m

Less than or equal to :03 decline
On each consecutive 400m run

MSU 2004

Conditioning Runs

Turn Sprinting into more of an Aerobic activity as the season gets closer.

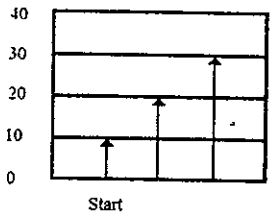
Cycle Sprints

Sprint 100% to 10 yard line

Jog back to start

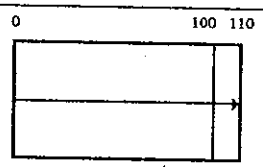
Repeat to 20 and 30 yards before resting

Rest Interval: 1:00



110's

Sprint from start line to 110 yard line

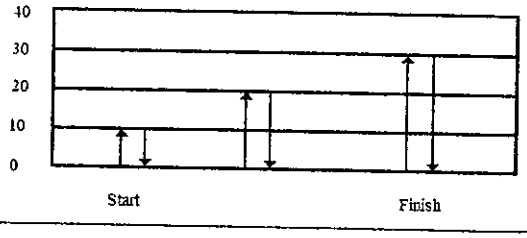


120 yard Shuttle

Sprint 10 yards and return to start

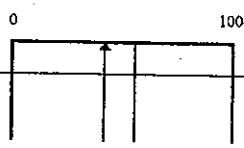
Repeat to 20 and 30 yards

Rest Interval: 1:00



Half Gassers

Sprint the width of a football field 2X



STICKHANDLING

FOCUS:

-QUICK HANDS
-EXPANDED REACH
-SOFT HANDS
-STICKHANDLING WITH HEAD UP (feeling and peripheral vision)

If you spend 10-15 minutes two or three times a week doing stickhandling drills, you will notice a significant improvement.

You can use stickhandling balls or pucks designed for off-ice stickhandling or you can make one using a whiffle ball with holes and strips of tennis ball stuffed into it. A puck on a slippery surface is also a good variation. A golf ball is also a good option (using golf balls increases difficulty because the bounce off the blade of the stick: it's like overspeed for stickhandling).

TIPS:

***WEAR YOUR GLOVES – IT WILL GET YOU USED TO THEM**

*The length of your stick is a personal preference, **BUT IF YOUR STICK IS TOO LONG IT MAKES IT HARD TO SKATE AND HANDLE THE PUCK PROPERLY.** A GOOD RULE OF THUMB IS TO MAKE SURE IT COMES UP BETWEEN YOUR NOSE AND COLLARBONE WHEN STANDING WITH SKATES ON.

***BE SURE TO STICKHANDLE IN A GOOD HOCKEY POSITION** (knees bent and shoulders up)

***IT'S NOT "PRACTICE MAKES PERFECT", IT'S "PERFECT PRACTICE MAKES PERFECT".** Start slow, get your form correct, then start to increase speed. Always try to get faster.

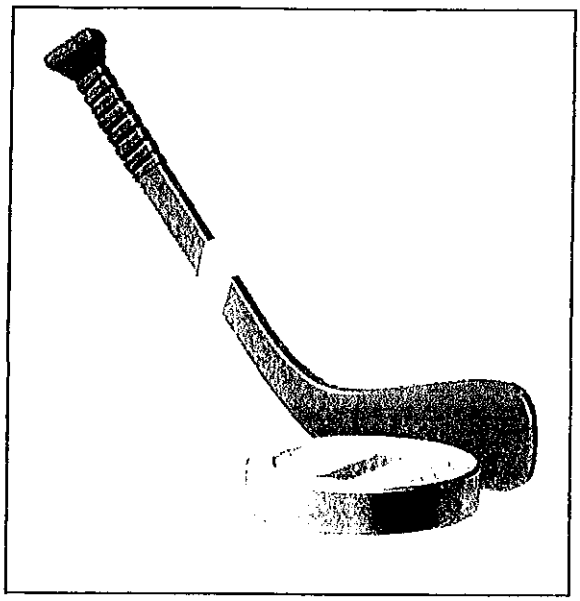
***KEEP YOUR HEAD UP. (USE FEEL AND PERIPHERAL VISION)**

***CHALLENGE YOURSELF: GO BEYOND WHAT YOU ARE COMFORTABLE WITH (YOUR COMFORT ZONE). EXPAND YOUR REACH AND INCREASE YOUR HAND SPEED—WORK TO IMPROVE, NOT JUST TO GET IT OVER WITH.**

***SOME VIDEOS THAT DEMONSTRATE SOME OF THE DRILLS AND OTHER IDEAS:

USA HOCKEY VIDEO "OFF-ICE STICKHANDLING" (PART 1)
USA HOCKEY VIDEO "OFF-ICE STICKHANDLING" (PART 2)

STICKHANDLING CONTINUED...



STICKHANDLING CIRCUIT

(description of each in off-season packet)

*EXPANDED REACH (STATIONARY)

20 Forehand

20 Backhand

*CUPPING

15 times

*GIVE TAKE AWAY, GO TO BACKHAND

10 times

*FIGURE 8

10 times

*WIDE MOVEMENT

10 times

*QUICK STICK

10 times

GO THROUGH THE CIRCUIT AT LEAST TWICE AND AT LEAST THREE TIMES A WEEK

OPTIONAL DRILLS:

PVC PIPE (see diagram)
BALANCE BOARD (see diagram)
HOPPING ON ONE LEG WHILE STICKHANDLING
HOPPING OVER A HURDLE WHILE STICKHANDLING
WATCH TV (or watch what is going on around you) WHILE STICKHANDLING
HACKEY (keep a ball bounding in the air off your stick)
GROUP HACKEY
OBSTACLE COURSE (spread a bunch of pucks around and stickhandle, pulling your stickhandling ball Through and around those pucks)

THERE ARE COUNTLESS OTHER THINGS YOU CAN DO FOR A VARIETY, BUT IF YOU JUST THE CIRCUIT THREE TIMES A WEEK YOUR STICKHANDLING WILL IMPROVE.

STICKHANDLING CIRCUIT EXPLANATION

***EXPANDED REACH (2 SETS)**

EXPANDED REACH FOREHAND—Stickhandle in front of you then quickly extend way out to your forehand (bringing hands closer together) then quickly back in front. REP 20 TIMES

EXPANDED REACH BACKHAND—Stickhandle in front of you then quickly extend way out to your backhand (release bottom hand or bring hands closer together) then quickly back in front. REP 20 TIMES

FOCUS ON:

QUICK AND WIDE RELEASE AWAY FROM BODY
QUICK RETURN IN FRONT

***CUPPING (2 SETS)**

Stickhandle on forehand side—push puck way out in front and then with the tip of your stick quickly pull back to stickhandle on your forehand. DO THIS 15 TIMES

Work to increase the distance you push puck out and the quickness in which you bring it back.

***GIVE TAKE AWAY, GO TO BACKHAND (2 SETS)**

Stickhandle on forehand side—push puck way out in front and then with the tip of your stick quickly pull back (as in #2) then pull quickly across your body to your backhand then quickly back to forehand. DO THIS 10 TIMES

WORK TO INCREASE THE DISTANCE YOU PUSH PUCK OUT AND THE QUICKNESS IN WHICH YOU BRING IT BACK, AND THEN THE QUICKNESS YOU BRING IT ACROSS YOUR BODY AND THE DISTANCE YOU CAN BRING IT TO YOUR BACKHAND AND THE QUICKNESS BACK TO FOREHAND.

***FIGURE 8 (2 SETS)**

STICKHANDLING IN A FIGURE 8 PATTERN AROUND TWO PUCKS
(see diagram)
DO 10 TIMES

*<u>WIDE MOVEMENT (2 SETS)</u>

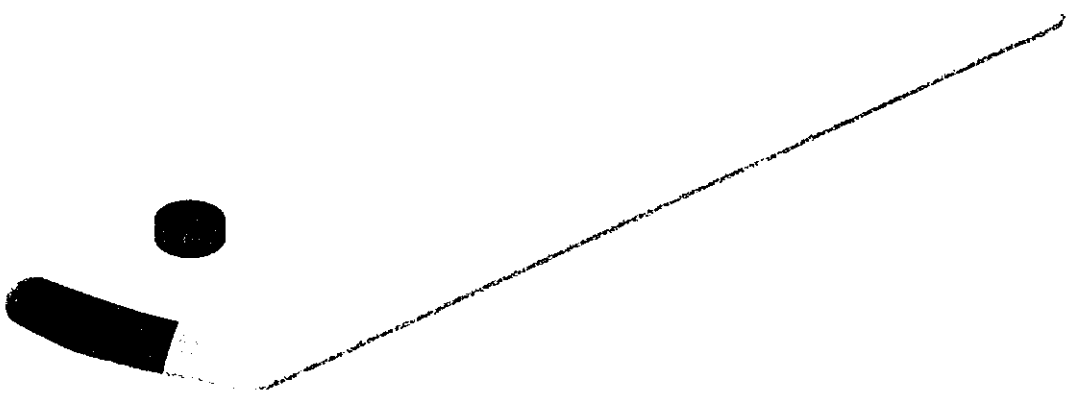
(see diagram)
USE 7 PUCKS FOR PATTERN
GO DOWN THE MIDDLE AND EXTEND TO BOTH SIDES
RELEASE BOTTOM HAND ON BACKHAND
WORK ON EXPANDING REACH AND INCREASING SPEED AT WHICH YOU PUT PUCK OUT AND BRING BACK
DO THIS 10 TIMES

*<u>QUICK STICK (2 SETS)</u>

(see diagram)
PUT 10 PUCKS IN A STRAIGHT LINE ONE FOOT APART FOR PATTERN
STICKHANDLE THROUGH AS FAST AS POSSIBLE (start slow)

*<u>SOFT HANDS</u>

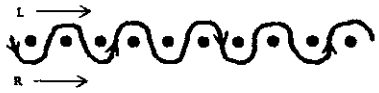
STATIONARY QUICK STICK
FOCUS ON:
SOFT HANDS
QUICK HANDS
CONTROL USING HANDS AND WRISTS WITH LITTLE OR NO ARM
QUICK MOVEMENT OF PUCK
CUP BLADE



Stick Handling Diagrams

Quick Stick

Straddle Middle



Left side of Pucks

Right side of Pucks

Wide Movement

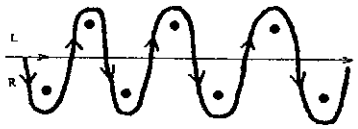


Figure 8's (with 8 on its side):

Standing in Front of 8:

Starting Counter-Clockwise

Starting Clockwise:

Standing on Left Side of 8:

Starting Counter-Clockwise

Starting Clockwise

Standing on Right Side of 8:

Starting Counter-Clockwise

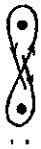
Starting Clockwise

Figure 8's (with 8 Upright):

Standing in Front of 8:

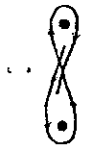
Starting Counter-Clockwise

Starting Clockwise



Standing on Left Side of 8

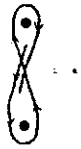
Starting Counter-Clockwise



Starting Clockwise

Standing on Right Side of 8

Starting Counter-Clockwise



Starting Clockwise

Balance Board

Stick handle while keeping your balance.

Stick handle in the middle, wide to forehand, wide to backhand, figure eights, toe drags to backhand pulls.

Have a partner throw a ball to a player on the balance board. The player catches and places the ball on the ground, stick handles and then flips the ball back to the partner.

USA Hockey

PVC Pipe

Cut a piece of PVC pipe about 6" long and slide it down over your stick.
Hold the PVC pipe with your bottom hand.

This drill will force you to control the stick with your top hand, and will prevent you from gripping the stick too tight with your bottom hand.

USA Hockey

360° Stickhandling

Move the puck back and forth on all sides of the body

Advanced: Combine this drill with jumping and/or sliding.

USA Hockey

SHOOTING

FOCUS:

-SHOOTING QUICKLY (without stickhandling)
-SHOOTING HARD AND ACCURATE (don't aim)
-CHANGING WHERE SHOT IS COMING FROM

TIPS:

*Wear your gloves so that you are used to the feel.
*The length of your stick is a personal preference, but a good rule of thumb is to make sure it comes up between your nose and collarbone when standing with skates on. **IF YOUR STICK IS TOO LONG IT MAKES IT HARD TO SKATE AND HANDLE THE PUCK PROPERLY.**
*Use a proper grip. TOP HAND SHOULD BE AT THE END OF THE STICK—KNOB IN THE PALM AND BOTTOM HAND SHOULD NOT BE TOO TIGHT.
*Be sure to shoot in a good hockey position (knees bent and shoulders up).
*Learn to change the release point—IT CAN FOOL THE GOALTENDER AND DEFENDER. It also helps to generate more power.
*Work on a more powerful shot, but it is important to work on getting it Off QUICKLY and ACCURATELY. *YOU CAN'T SCORE IF YOU DON'T HIT THE NET!* Also, putting it on net can create scoring chances.
*Learn to shoot quickly (that extra stickhandle is often the difference between getting it on net vs getting it blocked).
*Work on a variety of shots—different situations require different shots. Practice all shots with proper technique, but also work on shooting when You can't properly set up to shoot.

SHOOTING CONTINUED...

SET A GOAL TO SHOOT A CERTAIN NUMBER OF PUCKS

*EXAMPLE: Shoot 100 pucks a day or 100 pucks, three days a week.
*Keep track so that you can monitor if you are achieving your goal or not.

SHOTS THAT YOU SHOULD DEFINITELY WORK ON EACH DAY

PULL AND SNAP (Pull it in to your body and shoot quickly—changes where the shot comes from. Work on pulling and shooting to both sides of net.)

WRIST SHOT (without stickhandling)

BACKHAND (without stickhandling)

QUICK SHOT off a stickhandle (stickhandle in front of you, then quickly pull back and shoot quickly)

SHOTS THAT YOU CAN DO EXTRA OR IN PLACE OF THE REQUIRED FOR VARIETY

SLAP SHOT (short back swing and quick shot)

ONE-TIMERS (have someone pass to you, shoot off the pass)

CATCH AND SHOOT (have someone pass to you and CATCH AND SHOOT without stick-handling, or they can drop it down if there isn't the ability for a pass)

Nutrition

Nutrition

Nutrition plays a more important role in athletic success than most people probably realize. Natural athletic skill and diligent training are obviously the most important factors towards success in sports, but poor dietary habits may prevent some athletes from achieving their full potential. Proper nutrition can make a good athlete great and a great athlete superior. Muscle does not grow out of thin air. Energy is not magically produced to fuel workouts or competitive events. Nutrition is a necessary complement to training

The Right Fuels For The Serious Hockey Machine

- Debra Burton, USA Hockey November 2000

Warning! This article is intended for athletes who want maximum energy levels, exceptional performance and the winner's edge.

Athletes who want to be the best they can be know which foods and beverages steal their energy and which give them the extra edge in the heat of competition. The right foods eaten at the right time in the right amount will produce superior energy levels.

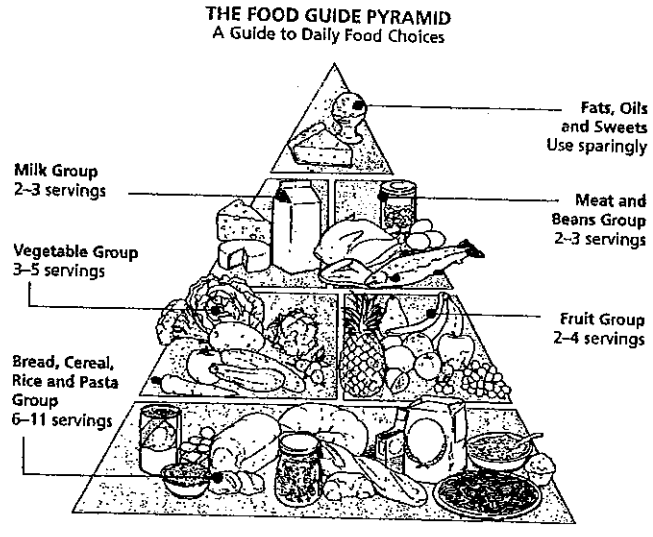
Too often young athletes think they can perform at their best when they eat foods that would make a couch potato proud. Let's face it, if you consume Twinkies and Coke, then you will have a Twinkies and Coke body.

You can't expect your undernourished, junk food-fueled hockey body to perform at its highest level, heal quickly from injuries, fight sickness and exhaustion, obtain maximum strength, or do anything spectacular for any period of time when it's not being fed as a hard-working machine. It's like trying to win a game with skates that have dull blades.

Eating the right foods should be taken just as seriously as intense weight lifting, consistent sleep, and hard work in practices.

Nutrition – general

- Food Pyramid Guide
  - Read it – Post it on your refrigerator



  - You should consume about 2200 Calories per day

- Athletes should get about
  - 65% of their calories from Carbohydrates.
    - For lasting energy, eat foods that are high in complex carbohydrates. Some of the best are potatoes, brown rice, oatmeal, grape nuts, whole-wheat pancakes and winter squash.
  - 15-20% of their calories from Proteins
    - Eat a small amount of high quality protein that is low in fat and easy to digest including tuna, turkey breast, eggs, and low-fat, low-sugar yogurt.
  - 25% (maximum) of their calories from Fats
- Water – drink water all the time. 80-100 ounces per day. Make sure you drink plenty of water before, during and after a game or practice.
- Do not skip Breakfast. Your body will have gone 18 hours without nutrients.
- It is best to try to eat as many small meals as possible. Five to six small meals spaced about 3 - 4 hours apart are ideal.
- Find the healthy foods you like and eat them more often
- Combine/Mix healthy foods with foods that you like
- Tip: Eat all of your food slowly – you will feel "full" so you can stop eating - if you eat fast, you tend to over-eat, which will increase your calories
- A varied well balanced diet will provide all the vitamins and minerals you need. (Excess supplements will not improve performance.)

Food Groups:

Vegetable Group ***(5 servings per day)***

- Good choices that are 1 serving: 1/2 cup of raw or cooked vegetables – (broccoli, cabbage, spinach, carrots, sweet potatoes, parsnips, tomatoes, beets, eggplant, cauliflower, green beans), 3/4 cup of vegetable juice
- Hints to eat more veggies:
  - Try to drink V8 in the morning or before dinner
  - Put veggies with stir fry chicken or beef
  - Put veggies on salads
  - Put some (not a lot) of melted cheese or other sauces on it

Whole Grain Group ***(6-11 servings per day)***

- Good choices that are one serving: 1 slice of whole wheat bread (no white bread!), 1 cup of dry cereal, 1/4 cup of granola, 1/2 cup of pasta or rice, 1 tortilla, 1/2 cup of cooked beans, 1/2 bagel, 1/2 cup hot cereal
- Eating slowly is especially beneficial with pasta/spaghetti or other grains

Fruit Group ***(4 servings per day)***

- Good choices that are 1 serving: 1 medium whole fruit, 1/2 cup of canned fruit, 1/4 cup of dried fruit, 1 cup berries, 3/4 cup fruit juice (apple, banana, orange, grapefruit, peach, plum, pear, kiwi, strawberries, blueberries, raspberries, raisins, dates, figs, pineapple)
- Hints to eat more fruits:
  - Put blueberries /raspberries/strawberries/banana slices on your cereal
  - Drink orange juice, apple juice or grape juice instead of pop – NO POP!
  - Have fruit around the house, especially sliced
  - **Eat an apple or your favorite fruit <u>before</u> you eat dinner**

Meat Group ***(2 servings per day)***

- Good choices that are 1 serving: 2-3 ounces (half a chicken breast) of chicken (not fried), any type of fish (tuna, frozen or fresh), 1 cup of cooked beans, 4 tablespoons of peanut butter, 3/4 cup of nuts

- Hints:
  - Stay away from fast food fries & burgers
  - Try Subway or make your own sandwich – chicken, turkey, tuna and ham are good choices

Milk, Yogurt, Cheese Group ***(2-3 servings per day)***

- Good choices that are 1 serving: 1 cup of skim milk, 1 cup of yogurt, 1/2 cup of cottage cheese

Fat Group ***(Sparingly)***

- Add a very small amount of high quality oil to meals, especially extra-virgin olive oil.
- How to Lower Fat content in food:
  - Eat skinless chicken breast, fish or lean red meat
  - Trim fat from meat, remove skin from chicken
  - Bake, broil, poach or steam food, DO NOT FRY!
  - Use skim milk and low fat dairy products
  - Be careful what you put on your food. Use only a small amount of butter, syrup and mayonnaise, or use none at all
    - Make Kraft Mac & Cheese without adding butter and use skim milk
    - Put a little jelly or honey (not a lot) on toast without putting on butter
    - Do not use mayonnaise
    - Use light cream cheese or none at all on bagels
- Hints:
  - Stay away from pop!
  - If you have a choice between 1/2 Snickers bar and 2 bags of juju fruits or <u>any high sugar/low fat candy</u> – PICK THE SNICKERS – it will fill you up.
  - 1 teaspoon of sugar is 16 calories & will turn into 4 g of fat
  - 1 tablespoon of sugar is 48 calories & will turn into 12 g of fat

Pre, Post and During Game Nutrition

NOTE: The information below is not limited to games, but applies equally to practices and workouts.

Pre-game Nutrition

A productive game requires adequate energy to maintain intensity.

- Pre-game Meal
  - High Carbohydrate
  - Low Fat
  - Low Protein
  - Plenty of water and juice
  - Eat 5-6 hours before game (if possible) 2-3 hours minimum. High calorie meals take a tremendous amount of energy to digest. Save energy for hockey by eating a smaller meal before a game. This will provide maximum energy for peak performance.
  - Stick with familiar foods
  - Eat easily digestible foods
  - Good pre-game meals may include salads, vegetables, chicken dishes, pasta, rice, potatoes, pizza (hold the pepperoni and sausage), pancakes (hold the syrup), cereals and breads. Then there's the pre-game snack, oftentimes fruit and a bagel.

- Pre-game Snack
  - 2-3 hours before game
  - Lighter and more liquid food (yogurt, fruit juice, bananas)
  - No carbohydrates within 60 minutes of the game
  - Good pre-game snacks may include fruit, bagels, pretzels, popcorn (hold the butter), cereals and breads.
- Pre-game Fluids
  - Water is one of the best sources for high energy levels. On the other hand, soda, juice, and coffee will steal your energy.
  - Try to consume 12-24 ounces of water about 2-3 hours before exercise
  - Stop drinking fluids 90 minutes before the game (so kidneys can process excess liquid)
  - Drink one to two cups of water 5-10 minutes before the game
- Foods to ***stay away from*** before games:
  - High-sugar foods and drinks such as soda, juice, desserts, sugared yogurts and sugar-coated cereals. These foods steal your mental focus.
  - High-fat foods such as pork, hot dogs, fast food items, cheese, chips, salad dressing, mayonnaise, cream cheese and sour cream. These foods will slow you down in your physical endeavors.
  - Hard-to-digest foods such as red meat, beans, nuts and seeds. These are great for after a game or practice when your body needs refueling.

During Game Nutrition

- Drinking plenty of water replenishes valuable fluids lost during the heat of competition. It gives you energy, power and stamina.
- Cold water is preferable. It helps cool the body and leaves the stomach faster.
- Drink **before** you are thirsty – the thirst mechanism is designed to protect us in extreme situations
- Drink throughout the game – between shifts, between periods
- Drink as much as you can without causing stomach discomfort
- Try to consume 6-12 ounces every 15-20 minutes during exercise
- Drinking liquid carbohydrates (6-8% carbohydrate) throughout the game will help ensure enough carbohydrate is available for energy late in the third period – Commercial Sport Drinks work well as long as they are not more than 6-8%

Post-game Nutrition

- Post-game Meal - The most important meal of the day.
  - The 20 minute window after a game (or practice) is crucial – your muscles are most receptive to taking in carbohydrates and storing them as muscle glycogen.
    - Eat and drink in the locker room right away – the sooner the better.
    - Favor simple sugars and easily digestible foods
    - Fruits and juices are the best choices
    - A liquid feeding composed of dextrose and whey protein would also be a great choice.
    - Post-game carbohydrates are more important than pre-game carbohydrates. Ideally, the meal should be high in carbohydrates and moderately high in protein in a 2 to 1 ratio. Carbohydrates will replenish muscle glycogen and protein will help rebuilt muscles.
  - Eat a full meal 1-2 hours after the game – similar to pre-game meal
- Post-game Fluids
  - Best sources are plain water (filtered, bottled or spring)

- For every pound of weight loss, you need to drink 2 cups of water (some players can lose a couple of pounds during the game)
- Try to consume 24-48 ounces after exercise
- Caffeinated pop slows rehydration and recovery

Good pre- and post-game meals and snacks may include pasta, rice, potatoes, pretzels, popcorn (hold the butter), pizza (hold the pepperoni and sausage), pancakes (hold the syrup), cereals and breads.

Calories, Weight Gain and Weight Loss

- Taken from: Sports Nutrition for MSU Athletes, 2004

Caloric Intake

The most important aspect of any diet is determining the proper amount of calories to consume each day. Eating too few calories will create a negative energy balance and result in weight loss. Eating too many calories will create a positive energy balance and cause weight gain. A maintenance caloric intake should keep bodyweight stable as you are balancing the calories in the food you eat with the amount of calories consumed by daily activities and exercise. In a very basic sense:

Calories Consumed> Calories Burned = Weight Gain

Calories Consumed < Calories Burned = Weight Loss

Calories Consumed = Calories Burned = No Weight Gain/Loss

Although the above equations are rather simplistic, they do give a pretty accurate indication of metabolism. If you eat more energy (food) than energy used (activity), weight gain can be expected. If you eat less energy (food) than energy used (activity), weight loss can be expected.

All people have unique calorie requirements. The amount of lean body weight (muscle), circulating hormones and activity level are the main determinants of calorie needs. A distance runner might have higher calorie requirements than a football lineman due to the greater number of calories consumed during training. You must match your caloric intake to your body and activity level. You may need more calories doing manual labor over summer break than during the school year. You may need fewer calories during the offseason than inseason due to the decrease in training demands. Critically analyze eating habits and changes in body composition throughout the year and take proactive steps to optimize results.

The bottom line: Set your calorie consumption according to your body weight, body composition, and activity level. Lean, active athletes will normally have higher calorie requirements than less active individuals with higher body fat if body weight is equal.

Determining Caloric Intake

Consult Table 1 to estimate your daily calorie requirements. Find your weight in the left-hand column and follow the columns towards the right to determine calorie, protein, carbohydrate, and fat allowances per day. It is very important to accurately consume the amount of protein, carbohydrate, and fat as suggested by Table 1. You may need to record and add together the protein, carbohydrate, and fat content of all foods you eat to ensure you are in the recommended ranges. You will need to read labels or consult a food counts book to determine how many grams of each macronutrient are in a serving size of food. After a few weeks, you should remember portion sizes and macronutrient values for most of the foods you commonly eat. Keep in mind that these suggestions are only rough **estimates**. You need to monitor body weight and body composition to make adjustments in order to reach your individual goals. If you are carrying excess body fat (females >20% body fat) then use the first row corresponding to your weight. If

you have a body composition with some excess body fat, but relatively lean (females 15-20%) then use the second row corresponding to your weight. If you are quite lean (females <15% body fat) then use the third row corresponding to your weight.

	Body Wt.	Calories	Protein(g)	Carbs(g)	Fat(g)
excess fat	120	1800	99	248	46
some fat		2018	111	277	52
lean		2236	123	307	57

Approximately how many calories are in each nutrient?

Protein = 4 calories per/gram
Carbohydrates = 4 calories per/gram
Fat = 9 calories per/gram

It is best to try to eat as many small meals as possible. Five to six small meals spaced about 3 —4 hours apart are ideal. It is important to maintain steady blood sugar levels to prevent hunger and even energy levels. Constant feedings can help to keep amino acids circulating throughout the blood for continuous muscle repair. Several small meals help reduce overfeeding where nutrient overload may cause fat accumulation. Eating several small meals of equal size will also make it easier to eat the proper amount of food each day. You simply need to eat the same portion size of protein, carbohydrate, and fat for each meal. Divide the daily allowance of each macronutrient by the number of meals to be eaten for the day.

Bodyweight _____ lbs.
Calories/day _____ kcal (from Table 1)
g protein/day g (from Table 1) ÷ _____ meals/day = _____ g protein/meal
g carbs/day g (from Table 1) ÷ _____ meals/day = _____ g carbs/meal
g fat/day g (from Table 1) ÷ _____ meals/day = _____ g fat/meal

The bottom line: Use Table 1 as an estimate of your caloric intake. Watch for weight and body composition changes, then make adjustments. Eat small, frequent meals. Learn portion sizes. Memorize macronutrient (protein, carbohydrate, fat) values for common foods.

Weight Gain

If you are having difficulty gaining bodyweight, you are not eating enough calories.... Period. If you cannot gain weight, then eat. If you still cannot gain weight, then eat some more. People with "fast metabolisms" (naturally lean or thin) may need to consume foods with higher caloric and fat value such as whole eggs, whole milk, ice cream, natural peanut butter, etc. For gradual weight gain, increase calories on Table 1 by 250—500 kcal/day and take notice of changes in bodyweight and body composition. The bottom line: Eat, eat, eat.

Weight Loss

Although body fat is a vast resource for energy, excess body fat impairs performance in most sports. Unwanted body fat means unwanted weight, which can hinder speed and quickness. Left unrecognized, high body fat levels now could lead to obesity in the future. Obesity can cause numerous health problems including cardiovascular disease. Body composition should be controlled throughout the year, but especially near the competitive season. We prioritize speed in our strength and conditioning program, thus we would like all athletes to have a safe, healthy, and lean body composition relative to their sport and position.

Weight loss should be accomplished gradually. Restriction of calories impairs strength and size gains to some extent due to lack of consuming building blocks for muscle growth and adequate energy substrates. Weight loss should be targeted at 1-2 pounds per week. Weight loss greater than this rate may signal losses of lean muscle mass which will hinder performance and further

fat loss. Start by reducing calories on Chart 1 by 250-500 kcal/day over 1-2 weeks. Adjustments (increase or decrease) can be made to your caloric intake after observing your progress.

An increase in activity, such as moderate cardiovascular exercise, will consume additional calories to accelerate fat loss. Be sure to coordinate exercise volume and caloric intake so you are eating enough food to sustain strength and maintain lean body mass. Cardiovascular exercise performed early in the morning on an empty stomach or immediately following strength training workouts may increase the rate of fat loss as muscle glycogen will be depleted, forcing the body to use fat as energy.

The bottom line: Try to maintain a lean body composition required by your sport and position. Gradually decrease calories by 250-500 to strive for a maximum of 1-2 pounds of fat loss per week. Perform moderate amounts of cardiovascular exercise. Do not stay on a calorie-restricted diet indefinitely.

Weight

- Managing Your Weight
  - Establish tolerable, enjoyable and stable eating and exercise programs
  - Focus on small gains and benefits to health and well being initially
  - Establish maintainable goals
  - Make a lifetime commitment to a healthy lifestyle that includes exercise, food choices and stress management
  - De-emphasize food as a central focus

Eating Disorders

- Anorexia Nervosa – excessive preoccupation with food, self-starvation and/or extreme exercising to achieve weight loss
- Bulimia Nervosa – binge eating followed by inappropriate compensating measures taken to prevent weight gain.
- Binge Eating Disorder – binge eating without the excessive measures to lose the weight gained.

Why do we need Proteins, Carbohydrates, Fats & Supplements

- Taken from: Sports Nutrition for MSU Athletes, 2004

Protein

Proteins in foods provide amino acids and nitrogen necessary to sustain life. Proteins play many different roles in the body, but protein's role in muscle growth is our primary concern. Muscle fibers are made of protein, which is composed of chains of amino acids. Strength training causes damage to muscle fibers so dietary protein's needed to repair the muscle fibers in order for them to become bigger and stronger. This simplified model suggests that consuming more protein would lead to more muscle. Yes and no. Strength training athletes do need more protein than sedentary people, but research suggests that about 0.8 grams of protein per pound of body weight is all that is needed to provide maximal recovery from a workout. More than this amount does not increase muscle growth, but can be stored as fat just as all unused calories. Muscle magazines (who usually are trying to sell their own protein supplements) often suggest much higher protein intakes, but our recommendations come from SCIENTIFIC STUDIES.

Good protein sources: eggs (1 yolk: 2 whites), skinless chicken breast, lean red meat, cottage cheese, turkey breast, tuna, salmon, white fish, protein powders (whey, milk, egg) **See Table 3 for details**

The bottom line: Consume about 0.8 gram of lean protein per pound of bodyweight throughout the day to aid in muscle recovery and growth.

Carbohydrates

Carbohydrates have a Jekyl/Hyde personality. Carbohydrates are the major source of energy used by the body. However, overconsumption of carbohydrates can quickly lead to fat gain. Athletes must consume carbohydrates in large quantities to meet the energy demands of training and competition, but food choices and timing of meals is crucial. There are no bad carbohydrates, just *mis*timed carbohydrates.

Carbohydrates are commonly referred to as "simple sugars" or "starches". Glucose (dextrose) would be considered the "simplest" carbohydrate source. Glucose is the form of carbohydrate that is carried through the blood stream to be delivered to cells. All carbohydrates are broken down into glucose before they are used for energy. Simple sugars enter the blood stream quicker than starches. Simple sugars cause a large rise in insulin and quick uptake of glucose but the energy is short lived resulting in a "sugar crash". Starches allow for a smaller release of energy and slower glucose uptake for a longer, sustained delivery of energy.

Simple sugars →	↑↑↑ insulin	↑↑↑ glucose uptake
Starches →	↑ insulin	↑ glucose uptake

Glucose uptake by muscle cells is highly desired. Glucose is stored in muscles as glycogen to be used for energy in the future. Muscle glycogen is the primary source of energy used during exercise. After exercise, muscle glycogen is often exhausted so a simple sugar would be useful to quickly replenish glycogen stores. During other times of the day when muscle are filled with glycogen, consuming simple sugars might cause fat cells to take up glucose to be stored as fat. In other words, try to limit simple sugars to post workout and eat complex carbohydrates throughout the day.

Simple Sugars: dextrose, sport drinks, sweetened cereals, white bread, mashed potatoes, white rice **See Table 3 for details**

Starches: beans, most fruits, yams, oatmeal, whole wheat bread, sweet potatoes, brown rice, whole wheat pasta **See Table 3 for details**

The bottom line: Try to limit simple sugars to post workout and eat starches throughout the day.

Fats

Fats are necessary for energy, steroid hormone production, cell membrane structure, and fat-soluble vitamins. Fats are not evil, but consumption should be limited. Fat "tags" along with almost all foods especially dairy and meat products. You will probably not need to make an effort to consume more fat. Try to limit saturated fats and concentrate on monounsaturated and polyunsaturated fats.

Fats: cold oils (olive, flax, canola, safflower, sunflower, sesame), olives, natural peanut butter, nuts

The bottom line: Do not eliminate fats, but try to avoid saturated fats.

Supplements

Dietary supplements are just what their name implies, supplementary to your diet. There are no magic pills. You do not need to consume supplements if you are consuming adequate nutrition through whole foods. However, supplements are often a convenient way to consume nutrients. Be very careful when buying supplements as most sales people have little knowledge of the products they sell beyond what they read in magazines. Just as with muscle magazines, they are trying to sell you a product. The FDA has very loose laws concerning dietary supplements so many of the

claims made by manufacturers and sales people are exaggerations or blatant lies. Please educate yourself or ask for **qualified** help.

The bottom line: You do NOT need supplements for optimal athletic performance. A carefully planned diet consisting of whole foods can provide all nutrients necessary to achieve maximal benefits from our strength and conditioning programs. Supplements can provide convenient sources of calories if there are gaps in your diet. Carbohydrate and protein supplements for post workout nutrition would be the most beneficial supplements to quickly provide nutrients to muscle cells for enhanced recovery.

Fluids:

Cold Water is the Best Medicine for Fluid Replacement

- Alan B. Ashare, M.D., USA Hockey October 1997

A frequent topic of discussion in athletics revolves around fluid replacement – is it necessary for athletes to drink fluids during exercise, or will doing so cause an athlete to "drag"? So goes the debate, but the reality is that restricting fluids during exercise could actually cause a decrease in an athlete's performance and could result in serious medical problems. Some investigators have found that drinking fluids before and during exercise can actually improve an athlete's performance.

Fluid replacement is a very important performance component for athletes. An 18-year-old who is **not** vigorously exercising needs approximately 2.5 quarts of replacement water every day.

During exercise, an athlete's body produces a large amount of heat internally. As the core temperature of the body rises, the body dissipates this additional heat by perspiring. Players also lose additional water during exercise by exhaling air from the lungs. The body can react very unfavorably to fluid loss and an athlete can experience early muscle fatigue, loss of coordination, irritability and an inability to perform at an appropriate level if he/she becomes dehydrated.

How, when and with what should this fluid be replaced?

Water replacement should start before a game or practice, continue during the activity, and include post-activity hydration.

Plain water, preferably cold, is the best fluid replacement. Water leaves the stomach much faster than drinks containing glucose (sugar), such as soft drinks or sports drinks, and cold water leaves the stomach faster than warm water and will decrease bloating.

Water is a must during games and practices. Players should have their own water bottles to reduce the risk of spreading communicable disease, and the water bottles should be stored in a tray or receptacle that prevents them from falling on the floor and becoming contaminated.

Contrary to the widely held belief, drinking water before a game or practice, even cold water, will not cause cramps. In fact, there is a good possibility that cramps can result from dehydration due to drinking too little water.

The American College of Sports Medicine recommends drinking about two glasses (17 ounces) of fluid two hours before a scheduled game or practice. During exercise, athletes should start drinking early and at regular intervals in an attempt to consume fluids at a rate sufficient to replace the water lost through sweating and exhaled air. In a practice this could be two to four ounces (a half glass) of water every five to ten minutes, or, in a game, two to four ounces after every shift.

Calendars

MAY 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
10 Mother's Day	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25 Memorial Day	26	27	28	29	30
31						

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JUNE 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21 Father's Day	22	23	24	25	26	27
28	29	30				

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JULY 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3 Independence Day Holiday	4 Independence Day
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	

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AUGUST 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						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					

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SEPTEMBER 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7 Labor Day	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

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Sun	Mon	Tue	Wed	Thu	Fri	Sat

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Sun	Mon	Tue	Wed	Thu	Fri	Sat

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