

## **Ice Hockey Coaching Manual for China Pioneers IHC**

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<p>The purpose of this thesis is to provide a coaching manual for China Pioneers Ice Hockey Club coaching staff to aid them in coaching. The manual is also going to be used in educating future coaches in to the club. Therefore this thesis is product-based.</p> <p>China Pioneers Ice Hockey Club is a relatively new club as it was founded in Spring 2012. The need for educated coaches ignited the idea that a coaching manual should be made to ensure the coaching of technical abilities to be consistent between different coaches and that the coaches work in a similar manner on the ice.</p> <p>This manual provides information on leadership when working as coach, long term player development program and information on skill development. Technical skills teaching manual provides information on what are the key points in basic technical abilities in 4 sport specific skills that are skating, passing, shooting and stickhandling. Pictures and explanations are provided for each presented skill.</p> <p>Results of this thesis can be drawn when the club starts to educate new coaches in to the club. Project started Summer of 2012 and finished Fall 2012.</p>	
<p><b>Keywords</b> Ice Hockey, Coaching, Juniors, Player Development, Technical Skills</p>	

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# 1 Introduction

Ice Hockey is a sport that challenges the player and the coach in several ways. Ice Hockey is a ball sport that is played on ice with sticks and other teammates. This requires a lot from a player physically and mentally to be able to succeed in this sport. Ice Hockey demands a player to have good physical, technical and tactical attributes and the mentality to compete with other players. This manual will cover technical and physical development of a player.

The idea to build an instructor guide started when the author committed to join China Pioneers Ice Hockey Club in Spring of 2012 at Beijing, China. Chinese ice hockey hasn't grown much even though resources to succeed are in place. After talking with the management group of the club decision was made to build a manual that would serve as a coaching tool for every day use and as an educational tool for new coaches.

Discussions with local players and ice hockey people tell that there is some enthusiasm in Beijing ice hockey players to join coaching after playing career is over. This is a good sign since most of these players are relatively young and probably want to educate themselves more to become good coaches. This motivated the author to get a starting level coaching manual made to help these future coaches begin their education in to becoming ice hockey coaches.

This manual consists of information how to behave and work as a coach in front of a team. Information about physical development and skill development of an athlete are presented as well. Teaching of technical skills in ice hockey is a big part of this manual as the author considers learning of skills correctly to be crucial at the club he is working at. Pictures and presentation of key points in every skill should give a clear picture on how to teach fundamental skills of ice hockey. These include skating, passing, shooting and stickhandling.

Results of this manual will be seen when the first new coaches arrive in to China Pioneers and education program can be started with them.

## 2 Coaching at Junior Levels

### 2.1 Role of the Coach

Training of children is a crucial part in developing future ice hockey players. Rarely can a player develop to his/her full potential without the help of a motivated coach. The base of a complete player is built in juniors. There children learn various movement skills and acquire the knowledge of how to train. It is important that children learn early how to behave at practice and learn to follow certain rules. This brings discipline to practice and creates an environment where teaching is possible. The coach is at practice for the players and should only focus on providing best possible training for the players. (Tervomaa, 2009. 26.)

A very important aspect for a coach is to realize the importance of being a leader, a teacher and an organizer. This means that the coach must understand that being an efficient leader has a big influence on players and on the coach too. The players appreciate a skilful leader and are eager to learn from him/her. The coach must understand the importance of working as a teacher. The players can't learn new skills without a coach who can provide proper teaching. The coach must understand the importance of organizing efficient practices. Organization and long-term planning provides structure to a ice hockey program. It is not possible to follow player development without a plan on how to develop that player. (IIHF, 2007. Role of the Coach.)

The coach must provide players a positive role-model for them. All the actions of the coach are seen by the players, other coaches and management personnel, parents and spectators. The coach must learn to keep negative actions and expressions inside and keep calm during controversial or unwanted incidents happening during the game or at practice. A good coach can keep his/her team under control at all situations.

## 2.2 Skill Development

Ice hockey requires a strong blend of physical and mental skills for competition. Players must develop a solid base of fundamentals (e.g. skating, passing, shooting) even before beginning to learn how to play the game. It is clear that unless athletes have developed the basic individual and technical skills, they will not be able to master the more complex and tactical team skills necessary for competing and winning at a high level. (Chambers, 2008.)

A general objective for ice hockey specific skill training would be that a player has learned the basic ice hockey specific skills (skating, passing, shooting and stickhandling) before hitting puberty or PHV. Learning specific skills and techniques needs to have a good base of overall motor skills that have been learned already before entering school (Ages 1-6). The link between overall skill and sport specific skill is that a junior level coach needs to monitor the player's overall skill development since it might affect learning of a certain sport specific skill. (Rissanen, 2004. 25.)

The objective of versatile training on the ice and off the ice is to learn sport specific skills and especially how to move these skills into a game situation. Progressive training from basics to advanced skills is a long process. In the end the result should be that a player can use overall athletic skill base, sport techniques and game skills together in a constantly changing game situations. This creates a demand that training should be conducted in a changing and different environments since automatic skill movements does not improve general skillfulness (e.g. stickhandling around cones compared to stickhandling against another player). (Rissanen, 2004. 26.)

Skills begin to develop from birth along with central nervous system maturation. Overall motor skills should be trained at ages 1-6 to ensure a solid foundation for sport specific skill training. Overall motor skill development continues at age 7-10 and sport specific skill basics are taught at this stage. Basic skills are continuously taught at ages 10-12 with inclusion of sport specific skill information. The window of accelerated adaptation for sport specific skill occurs at ages 7-12. Sport specific skills learning is focused at ages 13-15 and a player should know all the techniques at ages 13-14. After

that training is focused on physical conditioning (e.g. building strength) and skill refinement and stabilisation. (Haverinen, 2003. 9.)

### **2.3 Practice Planning**

Planning an effective practice is one of the most important aspects in coaching. Practicing prepares the player to play the game itself. Practice provides the player skills, conditioning and confidence to excel in a game situation. Planning of a practice starts from knowing how much time a coach has been allocated to run a practice. After that the coach must set goals for the practice what he/she wants the players to achieve. It is very important for the coach to set specific goals that are contributing to the long term plan. Ice time can sometimes be limited so it is crucial to use every practice as efficiently as possible. (IIHF, 2007. Practice Planning.)

The plan for practice should consider the players needs and aims to help player achieve his/her goals. The coach needs to analyze what are the age, skill level and previous experience of the players. Teach players new skills and repeat those skills until correct movement patterns are found. A skill should be repeated about 10000 times before it is learned and about 100000 repetitions to master a skill. Learning a skill means that the player is able to execute a movement correctly and mastering a skill means that the player is able to use a skill in different situations. (Balyi et al, 2009.)

Goal setting for practice has two different types: Overall goal setting and Specific goal setting.

Overall goal setting means the reasons and philosophies in participating in ice hockey. This comes from the coach's own experiences and views about hockey and what is wanted from the players. The coach needs to think what the players want to experience from ice hockey and what is target of the team. Recreational and competitive teams should have different overall goals. Recreational teams usually play only for fun and fitness and competitive teams go for player development with a goal to win as often as possible.



Specific goal setting is action that is realistic, achievable and measurable. Specific goals must be in line with the long term development plan. Specific goals need to follow the players needs and consider the space, time and resources available. A coach needs to understand the players development, physical ability, interest, skill, fitness, competition and motivation. With all these aspects in mind the coach should provide the players best possible training for every session. (IIHF, 2007. Practice Planning.)

Effective practices have certain principles that should be followed whenever possible. Below are listed different principles that should be incorporated when planning effective practices.

- Keeping everyone active for the whole session
- Giving clear and concise instructions. Learning improves when the players know what is expected from them.
- Progressive training moving from simple non-competitive skills training to simulation of a game situation.
- Break down skill training from whole movements to part movements. Present the total skill first and then teach different parts of the skill.
- Give positive feedback to individuals and team. Reinforce correct behaviour and correct execution of drills.
- Chart progress by measuring time or amount of passes/goals. This enhances the learning process when players can see progress.
- Acknowledge individuals on the team and give them training according to their needs. A coach may need to modify a drill suitable for the skill level during practice.
- Provide variety in training to prevent boredom
- Provide a fun learning experience for the players. Learning enhances and motivation stays high if the players have fun while executing a drill.
- Plan maximum use of resources available. Use different equipment and use the whole ice surface to run practice.

(IIHF, 2007. Practice Planning.)

## 2.4 Instruction and Communication

Giving clear instruction to players is a skill that every coach should possess.

Instructions provide the player information what is expected from him/her. Not only is it important to give players instructions, it is also important to listen to them.

Coaching should not be a one-way street with only the coach talking and players listening. Players should be allowed to express their opinions, feelings and concerns and the coach should listen to them. This does not necessarily mean that the coach should do what the players want but take their opinions in to consideration when making decisions.

The usual way of communicating for a coach is that the coach is talking and drawing drills on a whiteboard and then the players execute the drill. Communication should not only be restricted to training sessions but also outside training sessions. A coach should try to know more about his/her players than what they do at practice. This helps the coach to analyze players more deeply and what might motivate them better. Communicating with players can also reveal how the players feel about their teammates and who they might play good with together. This can also help prevent any possible hitches within the team as the coach can fix them before they become a bigger issue. Communicating with players also gives the player a sense of feeling that he/she is an important part of the team as the coach has time to have a chat with him/her.

A coach needs to communicate with either the whole team, a sub-group of players or individual. Same principles of good communication apply to every situation. Below is a list of good communication principles.

- Be enthusiastic as a coach. This affects players enjoyment of ice hockey.
- Be a positive coach. Interact with the players positively and provide sincere praise and encouragement as often as possible. Negativity and constant yelling decrease the players motivation.
- Demand a lot from players but stay realistic what they can achieve according to their experience and abilities.

- Be consistent in communicating with all players. Inconsistent communication with players can arouse confusion and the coach might lose respect of some players.
- Be a good listener. Show willingness to listen to players suggestions, concerns and feelings. Listening to your players is an important part of communicating with players.
- Explain each player their contribution to the team. This will make them feel more part of the team and teach players to respect each other's contribution to the team.
- Treat players individually. A coach should try to speak with each player individually during every practice and game. Greet and speak to players with their first names.

(IIHF, 2007. Communication Principle.)

A coach needs to understand that there are more ways of communicating than just talking and shouting. Communication can be split in to two different ways: verbal and non-verbal.

Verbal communication is the direct interaction between the coach and the players. The use of voice and body have an effect on bringing your message to players. The coach should speak loud enough so that the players can hear clearly what the coach is saying. Changes in tone can be used to emphasize different moods (e.g. energetic, patient, concerned, serious). Use of body in verbal communication can affect the way players receive the message. Remembering to use eye contact and moving closer or further from players gives the coach information who is listening and understanding what the coach is saying.

Non-verbal communication is the use of facial expressions and actions that send the player messages how they should feel. Coaches send a lot of information to their players through non-verbal communication. Non-verbal communication can be used by facial expressions, use of arms and hands, body position, overall posture, touching behaviours and voice characteristics. The coaches non-verbal communication should

be in line with verbal communication and consistent. (IIHF, 2007. Communication Principles.)

## **2.5 Feedback**

Feedback is crucial in player development. The player gets help from coach who provides feedback on the player's performance to fix any incorrect action. Positive feedback should be given to reinforce correct actions. Effective feedback is essential for the player's motivation, learning and self-image. Feedback should be given right after the player has executed an action. This is because the player will remember the action clearly and can imagine what went wrong. Feedback should be specific when giving feedback to individuals. Give general feedback when addressing the whole team or a group of players as it would take a long time to address them all individually. (IIHF, 2007. Communication Principles.)

A coach should use feedback to guide the player's development. A player should receive feedback after every execution of a drill. Depending on the nature of the feedback the player may fix incorrect actions or repeat learned correct movement. The player might make own assumptions on execution of a drill if feedback is not provided often enough and might go from a correct execution to incorrect. The player should know which parts of the drill he/she did correct so that the player can focus on fixing incorrect actions.

Feedback can be used to measure progress in player's development. The player might get feedback that he/she hit 8 out of 10 targets at a shooting range and if the player could not do this before it is a clear indication of improvement. Giving positive feedback will further motivate the player to work harder. (IIHF, 2007. Teaching Techniques.)

## **2.6 Demonstration**

Demonstrating a skill to players with vocal explanation of key points is an effective way of teaching new skills to players. The visual cue shows the players how a move-

ment should look like. The coach must provide vocal instruction at the same time so the players know and can look how to execute a skill. If it is possible a coach may use a player to demonstrate a skill if the player has the ability to perform the skill flawlessly. The coach has to put the players in to a correct formation in order for everyone to see the demonstration. The coach should mentally picture how the execution of demonstration looks like from players view and rotate 90 degrees or 180 degrees to give the players the best angle. Players can also see demonstrations during the drill by watching other players execute the drill. (IIHF, 2007. Teaching Techniques.)

A coach can also use different tools to provide a demonstration. A laptop, a tablet, television or even a cell phone screen can be used to show the player a video of the execution of a drill.

## **2.7 Role of the Parent**

Every young athlete's parent wishes the best for their child. Role of the parent in ice hockey is basically summarized in three areas, support the child, transport the child to practice and competitions and take care of expenses. The sufficient amount of good quality nutrition and sleep/rest is also part of parent's responsibilities. After that the parent can leave the rest to the ice hockey club. The ice hockey club will provide the training, leading in competition and teaching at lectures with their management group of head coach, assistant coaches and team leaders and managers. (Rissanen, 2004. 31; Tervomaa, 2009. 26.)

A child should not be forced to train only one sport. Parents must provide the child with a chance to try various different sports when young. Focusing only in one sport can cause damage to child's physical development. Parents must have patience with their child and let them mature and develop at their own pace. Parents can support and promote healthy active lifestyle by being an example for the child. (Tervomaa, 2009. 26.)

Parents can affect decision making at parents meetings held by the club. There parents have a chance to suggest their own opinions and a clear set of rules and regulations

should be decided together with the management of the club and parents. All decisions should be made with children's wishes, enthusiasm and skills in mind. If all parents and management group have harmony together it will ensure a good learning environment for the child. (Rissanen, 2004. 31.)

During competitions it is important that parents focus on supporting the child in a positive manner. The parent should not try to give "professional" advice during competition and should trust the management group of the club. Often the parent might give advice that is not in line with the instructions of the coach. This creates confusion in a child and often weakens the performance. Most important for the parent is to reinforce the child in a positive way and help the child gain positive experiences from the sport. Parents should remember that all educational work in ice hockey club, school and home strives towards development of mental growth, promoting a healthy lifestyle, growing into a social environment and to learn rules of fair play. (Rissanen, 2004. 31-32.)

## **2.8 Nutrition**

Doing sports and being active is not enough to ensure well-being in an athlete. Proper nutrition and sufficient rest is required to gain any benefits from physical activity. Not any nutrition suffice however as there is many ways of filling an empty stomach. Quality of nutrition and the amount of nutrition play a big role in how a player can perform in practice and competition as well as in every day routines. (Iländer & Kokko, 2006. 3.)

An ideal diet consists of versatile healthy components of proteins, carbohydrates, fats, vitamins and minerals. A diet also needs to contain enough energy to cover the daily need. Higher level of activity requires higher energy intake as the body uses more energy to perform. An athlete needs energy for daily use and excess energy when training or competing. Also it is good to remember that eating balanced amounts of protein, carbohydrates and fats help body recover from training, help increase growth and help repair broken muscle tissue. (Iländer & Kokko, 2006. 3.)

Eating high quality nutrients is important if objective is high quality performance. Some high quality food examples are such as lean meats, fruits, vegetables, grains, water, and other non-processed foods. (Rosmis, 2007.)

Low quality food (highly processed, “man-made” food) can slow down your body and eventually lead to an energy “crash” Some examples of low quality food are such as fast foods, energy drinks, sport drinks, candy, artificial fruit juices, most convenient microwavable foods, potato chips, etc. The body is able to recognize which foods can be used for energy more efficiently. Some foods cannot be used at all, and are then turned into waste. (Rosmis, 2007.)

Intake of nutrition should be divided into many smaller meals or snacks to keep the body functional all day. An ideal diet for a student athlete looks something like this: breakfast, snack before lunch, lunch, snack before practice, dinner (light dinner if before practice, normal dinner if after practice) and snack before bed. That is already 6 meals for one day and some athletes might think that it’s difficult to eat that many times during a day. Exact follow up of this diet may be difficult but even a small adjustment towards this diet can have big effect on daily performance. (Ilander & Kokko, 2006. 3-9.)

### **3 Long Term Athlete Development Model**

To develop complete players who reach their maximum athletic potential it is essential to have a long term player development plan. Long term plan will give the coach a framework of optimal training, competition and recovery schedule for each stage of athlete development. The Long Term Athlete Development Model has been developed to properly manage youth and adolescent growth and development processes and identified critical periods of accelerated adaptation to training. (Balyi et al, 2012.)

Establishing a wide array of motor skills at early life enables the child to gain a sense of achievement and establish a positive attitude towards sports and physical activity. Positive attitude towards sports and a core set of motor skills allows the child to be proficient in a number of different sports. (Balyi et al, 2012.)

Being proficient in a number of different physical activities increases the chances that a child will have a long and better quality life. Long term athlete development plan not only is striving in to developing elite athletes but also encourages children to grow in to confident, healthy and active adults.

Long term athlete development model in late specialization sports (e.g. team sports such as ice hockey) has 9 different stages that are: Active Start, Fundamentals, Learn to Train, Train to Train, Learn to Compete, Train to Compete, Train to Win, Win for Living and Active for Life. (Balyi et al, 2012.)

#### **3.1 Active Start (Male ages 0-6, Female ages 0-6)**

Parents are basically the children's primary support system at this stage. Children are introduced to fundamental movement skills such as walking, running, twisting, throwing, catching, jumping and kicking. It is important that parents are educated on proper nutrition and daily physical activity needs for optimal development of a child. There is no coaching at this stage but some organized physical activity is recommended to provide the child an active movement environment combined with an introduction to well-structured gymnastics and swimming programs. Objectives of this stage of devel-



opment are to make physical activity and play fun and exciting and a daily routine throughout life. (Balyi et al, 2012.)

### **3.2 Fundamentals (Male ages 6-9, Female ages 6-8)**

Learning all fundamental movement skills and overall motor skills is essential at this stage as it affects on athletes trainability in the future. An emphasis on flexibility to develop or maintain optimal range of motion and development whole body strength begins at this stage. Development of flexibility at later stages requires more effort. Supervision during training sessions is advised to minimize injuries and development of bad behaviour. Introduction to simple rules involving safety and etiquette can begin at this stage. Objectives of this stage are to begin teaching agility, speed, coordination and balance and continue supporting the importance of daily play and physical activity. (Balyi et al, 2012.)

Window of accelerated adaptation for speed development happens at this stage and should focus on agility, coordination and quickness. Physical activity should be constant throughout the year and participation in multiple different sports should be encouraged. This will provide a good general athletic base for future training. (Balyi et al, 2012.)

### **3.3 Learning to Train (Male ages 9-12, Female ages 8-11)**

Learning of all fundamental movement skills and introducing all different athletic events is focused at this stage. Gender differences become more apparent at this stage due to growth. Individual monitoring and testing should be started at this age to follow physical development. Flexibility becomes increasingly important as the child approaches the phase of rapid growth and development. Training sessions should continue being supervised to minimize injuries and development of bad behaviour. Objectives of this stage are continuing to develop fundamental movement skills to build overall sports skills. Ancillary capacities should be begun to integrate physical, mental, cognitive and emotional components to a program. (Balyi et al, 2012.)

Development of speed should continue focusing on agility, coordination and quickness. General aerobic development should continue being trained through fun and games. The importance of warm ups, cool downs, nutrition, mobility and mental skills should be introduced during this stage. General talent selection starts at this stage. (Balyi et al, 2012.)

### **3.4 Training to Train (Male ages 12-16, Female ages 11-15)**

This is the period where individuals tend to change faster in terms of physical growth and development. Peak Height Velocity (PHV) or major growth spurt occurs during this stage of maturation and enables bones to grow first. This puts increased stress on connective tissues. Flexibility, posture and technique become very important as these elements can be compromised at this accelerated period of growth. Reduced range of motion can lead to abnormal movement patterns. Supervision and monitoring become very important when these changes happen. Individual training needs can be found in monitoring PHV. (Balyi et al, 2012.)

Fundamental movement skills should be learned already and focus can shift on sport specific training. Speed development will have increased focus in alactic power and capacity training. Aerobic and strength training begins at the onset of PHV and after PHV aerobic training should be prioritized. At this stage of development maturation levels vary a lot between athletes and training should be programmed as individually as possible. (Balyi et al, 2012.)

Objectives of this stage are to train speed, strength and endurance and learn sport specific skills, fitness and tactics. Athlete needs to build his/her “engine” to be ready to start training to compete. Integrating physical, mental, cognitive and emotional to ancillary capacities should be ongoing and further developed to support performance. Flexibility training should be emphasized as the growth spurt can cause muscle stiffness and possibility of injuries increases. (Balyi et al, 2012; Hakkarainen et al, 2006.)

### **3.5 Learning to Compete (Male ages 16-18 plus, Female ages 15-17 plus)**

This is a stage where specialization and competition are emphasized. Other sports activities are lessened and more focus is pointed towards a specific sport. Speed, strength, aerobic capacity and power are optimized to serve the purpose of the sport. Objectives of this stage are to develop sport specific physical preparation, to introduce sport specific protocols to identify strengths and weaknesses, to implement sport specialization and to further integrate physical, mental, cognitive and emotional development. (Balyi et al, 2012.)

### **3.6 Training to Compete (Male ages 18-21 +/-, Female ages 17-20 +/-)**

At this stage all physical capabilities are continue to be developed and motor skills are refined towards competition. Increased focus is put on mental training and preparation to deal with increased stress due to high level of competition. Training is all-year round and often models the competition situations. Individual training programs are tailored to support every athlete's needs. Lifestyle education is strictly "athlete-directed" and the athlete might think of himself/herself as a "full-time athlete" in preparation for Learning to Win stage. (Balyi et al, 2012.)

Objectives of this stage are to optimize sport specific preparation for competition, refine sport specialization, continue integration of physical, mental, cognitive and emotional development and conduct sport specific testing and monitoring. (Balyi et al, 2012.)

### **3.7 Learning to Win (Males ages 20-23 +/-, Females ages 20-23 +/-)**

This is the stage where athlete becomes a "full-time athlete" and all energy and resources are directed towards excelling at high level. All technical, tactical, physical and mental capabilities are maximized. Training is focused on maximizing performance and all testing and monitoring is focused on preparing the athlete physiologically, psychologically and medically towards elite performance. The athlete is learning what it takes to become a "full-time athlete". (Balyi et al, 2012.)

The objectives of this stage are to maximize sport specific preparation for high performance, continue integration of physical, mental, cognitive and emotional development and learn to compete when it counts. (Balyi et al, 2012.)

### **3.8 Winning for a Living (Males ages 23 +/-, Females ages 23 +/-)**

This is the stage where everything around the athlete from testing to training is maximized and refined to excel at the highest level of competition. Athlete may start to plan for retirement and prepare to move in to the “real world”.

Objectives for this stage are to maximize sport specific preparation for results at the highest level of competition, maximize training, competition and recovery activities in support of athlete’s career, to maintain consistency in competition and to plan for retirement from sport. (Balyi et al, 2012.)

### **3.9 Active for Life (Any ages for males and females)**

This is the stage when an athlete has fully withdrawn from competitive sport. Objectives for this stage are to retain former athletes back in to the sport to work as coaches, officials, management and administration. This stage can sometimes prove difficult as former elite athletes find it hard to adjust to life with different structure and competition that a sport provided. This stage is usually not addressed by coaches but is considered as an important stage since the athlete needs to plan retirement while still competing. Without retirement plans athlete can get distracted and focus and energy might be directed to somewhere else rather than performing at the best possible level. (Balyi et al, 2012.)

## **4 Windows of Accelerated Adaptation**

When designing a long term training program for children and adolescent athletes the coach must take in consideration windows of accelerated adaptation. There are periods in the growth process of an athlete when different attributes are more trainable such as movement skills (e.g. agility, coordination, balance), basic sport skills (e.g. throwing, skating, running) and physical capabilities (e.g. strength, speed, endurance). These periods should be designed with the athlete's chronological age, past experience and biological maturation in mind. (Balyi et al, 2009. 4; Hakkarainen et al, 2006. 8.)

### **4.1 Window of Accelerated Adaptation for Skill Development**

Skill is divided into overall skill and sport specific skill. Overall skill means the ability to learn different skills in different sports such as running, jumping, kicking, climbing etc. Overall skill also means the ability to control body in situations that require balance and change of direction. Sport specific skill means the use of a specific technical ability in a right situation of a certain sport, the capability to fix an incorrect sport specific technique and learn new sport specific techniques. Ages from 1-6 are best for developing overall skill and ages from 7-12 are best for learning sport specific skills and mastering overall skills. Window of accelerated adaptation for sport specific skill development occurs after the window for overall skills stage. Sport specific skills need to be trained on top of good overall skill base. (Hakkarainen et al, 2006. 8 & 10.)

### **4.2 Window of Accelerated Adaptation for Speed**

Speed training must be started at a very young age and use of window of accelerated adaptation is necessary to gain the most out of speed training. Speed is a very strongly inherited ability from parents. Speed is affected by frequency of movement, ability to react, sense of rhythm, skill and strength. All those aspects except strength need to be focused in training before athlete hits puberty as their development is dependent on functional ability of nervous system. Strength training should be started when window for accelerated adaptation for strength happens and not much before that. (Hakkarainen et al, 2006. 10.)

### **4.3 Window of Accelerated Adaptation for Endurance**

Endurance training of children and youth builds an overall base for future athletic ability. Functionality of heart starts from infant and develops steadily until end of puberty. This development occurs especially in strengthening of heart muscle cells and development of cardiac stroke volume. Thickness of capillaries, the amount of aerobic enzymes and lung capacity are big contributors to endurance and are developed already at an early stage of life if provided enough aerobic training stimuli. (Hakkarainen et al, 2006. 10-11.)

Endurance training and activity are important daily routines. 30-60 minutes of aerobic activity should be done in some form every day. Anaerobic training should not be done before puberty as child's body is unable to properly handle formation of lactic acid from anaerobic training. Instead it is recommended to train speed-endurance in short periods of time (10 seconds of intense work with 20-60 second recovery period) without accumulating lactic acid. Anaerobic training before puberty on purpose is not recommended and can in fact do more damage and affect the development of other attributes. (Hakkarainen et al, 2006. 10-11.)

### **4.4 Window of Accelerated Adaptation for Strength**

Muscle strength is mainly dependant on the innervation ability of muscle cells meaning the ability of nervous system to control muscle cells and the surface of muscle cells. Versatile development of nervous system before puberty builds a base for strength training, same as with development of speed and skill. Strength training before puberty should focus on training muscle coordination, practicing strength training techniques and training speed strength (e.g. jumping and training with gym ball). Versatile muscle coordination base enables the utilization muscle strength in different sports. (Hakkarainen et al, 2006. 10.)

Muscle endurance training should be focused before puberty especially the aerobic stamina of muscles. Strength training done with own body weight that doesn't accumu-

late much lactic acid enhances the recovery ability of muscles, prevent injuries and create a base for heavier training later. Ability to control core muscles is essential for heavy strength training and focus on improving core strength should be done before heavy strength training. Weighted strength training without proper core musculature can be dangerous. (Hakkarainen et al, 2006. 10.)

#### **4.5 Window of Accelerated Adaptation for Mobility**

Flexibility and being limber has a positive effect on strength, speed, endurance and skill capabilities. Mobility can be either passive or active. Passive mobility is the range of motion assisted by an outside force. Active mobility is the range of motion achieved during a movement and inflicted by own strength. Active mobility has a bigger effect in sports but both passive and active mobility should be trained daily. (Hakkarainen et al, 2006. 11.)

Mobility training should be started already in early childhood. Volume of training in mobility should be increased steadily so that maximal level of mobility is achieved by the age of 11-14 (especially passive mobility). Level of mobility that has been achieved by this age should be maintained at later ages and general mobility should be nurtured into active mobility required by the sport. Muscle stiffness occurs during growth spurt or PHV and versatile mobility training should be emphasized to prevent injuries. (Hakkarainen et al, 2006. 11.)

## **5 Teaching Technical Skills**

### **Teaching Technical Skills On-Ice**

Teaching technical skills is essential to develop effective ice hockey players. The players must know all the fundamental skills in ice hockey before they can start moving to tactical part of playing ice hockey. Fundamental skills of ice hockey are skating, passing, shooting and stickhandling. Learning these skills require a motor system that allows the player to be able to learn these skills. As discussed earlier (Chapter 2.2 Skill Development) an athlete must have a good base of overall movement skills before he/she can learn sport specific skills (e.g. if a player can't run, jump or balance himself/herself then it is doubtful that a player can learn how to skate.)

A coach needs to know how to perform a certain skill before the coach can teach it. Teaching skills need to be demonstrated and explained in detail to ensure players understanding. A lot of constructive feedback must be provided for the player and preferably after every execution of action.

The technical skills that we will go through here are basics of skating, passing, shooting and stickhandling. Every skill is explained and key points of every skill are presented. This helps new coaches to emphasize key points when teaching a skill. This manual will also provide pictures of every skill to reinforce understanding of every skill.

### **5.1 Skating**

Skating is an essential part of ice hockey. If you can't skate – you can't play. This section of manual will focus on the skating part of ice hockey. This section will cover skating stance, forward skating, backward skating, stops & starts, tight turns, forward crossovers, backward crossovers and pivots from forward to backward skating and backward to forward skating. Also skating forward while carrying a puck will be presented. Every skill will be explained in detail and with pictures.



### 5.1.1 Basic Skating Stance (Ready position)

Having a proper skating stance is important in ice hockey. In ice hockey you are required to make quick changes of direction, absorb body contact, make complex stickhandling moves and many more moves that might throw a player out of balance. It is essential that a proper skating stance is taught early to children so that it is easier to learn more complex moves. Also it is important that the equipment that the player is using is not prohibiting any movement. Skates should be the correct size to prevent learning any abnormal movement patterns. (Skinner, DVD.)



Figure 1. Skating stance

#### Key points in skating stance

- Legs are about shoulder width apart with toes pointing slightly out
- Knees are bent and are slightly over the toe line
- Ankles are flexed
- The angle of kneebend should be about 90 degrees
- Weight of the body is on the middle of the blade
- Hips should approximately be in a straight line with the middle of the blade
- Body should lean slightly forward

- Back is straight and head and chest are up
- Stick in one hand and on the ice

### **Important notice**

Skating stance is different when standing still and moving. Basic skating stance shown in picture could also be called as the ready stance. Ready stance is used when a player is on a two foot glide during a game. Two foot glide is the stance where most moves begin in ice hockey.

### **5.1.2 Forward Skating**

Forward skating is the fastest way of a player to get from spot A to spot B. It is important to pay attention to the change in skating stance when starting from standing position in to forward skating. This part of the manual will go through the starting, striding and stopping part of forward skating.

#### **Starting in to Forward Skating**

When starting from a ready position it is important to pay attention to the first few steps of movement. Pay attention to the change of skating stance and also the direction of movement. There are several different ways of starting but we are going to focus on the “V-start” as it is probably the most basic starting technique. There is little difference in acceleration speed between different starting techniques so emphasis must be on training a certain style (Skinner, DVD.)



Figure 2. V-Start phase of forward skating

#### Key points in Starting

- Start from a ready position
- Heels are brought close together with toes pointing out forming a V with your skates (Thus the name V-start)
- Push off stage starts on inside edge
- Pushing leg has it's ankle, knee and hip extended completely on every stride
- First 3-5 steps are directed behind the body and are performed with balls of the feet
- Upper body leans more forward and should form approximately a straight line with the pushing leg (Back is held straight but leaning forward)
- Body posture should not stand up or go too low and all movement energy should be pointed towards the desired direction of movement
- Weight is transferred from the pushing leg on to the gliding leg
- The gliding leg should have it's knee and ankle flexed
- Recovery after every kick under the body and as quick as possible

## Forward Skating Stride

Forward skating stride is the pushing part of ice hockey skating stride. After the acceleration phase a player starts striding to get to maximum speed.



Figure 3. Forward skating stride phase

### Key Points of Forward Skating Stride

- Every stride starts from under the body
- Pushing leg has it's knee, ankle and hip fully extended
- Push direction depends on speed (Straight behind to different angles to the side). Maximum speed = Push directly to side with gliding foot directly towards direction of movement.
- Upper body leans forward and back is up
- Weight is on the pushing foot and is transferred to gliding foot when the pushing foot is being fully extended
- Head and chest are held up
- Arm swing supports movement and should be directed from front to back (not the the side)

- Turn palm of the hand up when bringing the swinging arm in front of the body (helps maintain upright posture)
- Stick is held in one hand in front of the body and on the ice

## Stopping

Ice hockey is sport where quick changes of direction are required to keep up with the game. Sometimes there is no room or time to perform a turn and maintain speed so a player must stop moving completely before starting to move again. There are different ways to stop but one of the most common ways of stopping in ice hockey is called “hockey stop” or two foot parallel stop. (Skinner, DVD.)



Figure 4. “Hockey stop” or two foot parallel stop

### Key Points in Stopping

- Skates are about shoulder width apart
- Skates are turned 90 degrees
- Skates are pushed on the ice powerfully
- Front foot is on inside edge and Back foot is on outside edge

- Body leans towards the back foot
- Knees are flexed, head is help up and back is straight during the movement
- Stick is in control for the whole duration of movement

### 5.1.3 Forward Skating while Carrying a Puck

There are two basic styles carrying a puck while forward skating. Forehand two handed pushing of the puck and backhand one handed pushing of the puck. Forehand style carrying of puck allows the player to pass or shoot the puck quickly straight from skating. Backhand style of carrying the puck allows the player to skate faster with free-arm arm swing. Puck is carried in the middle of the blade. (Skinner, DVD.)

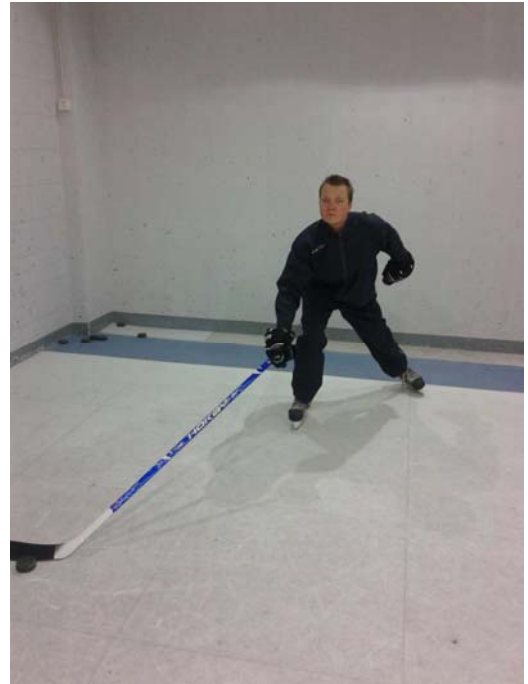
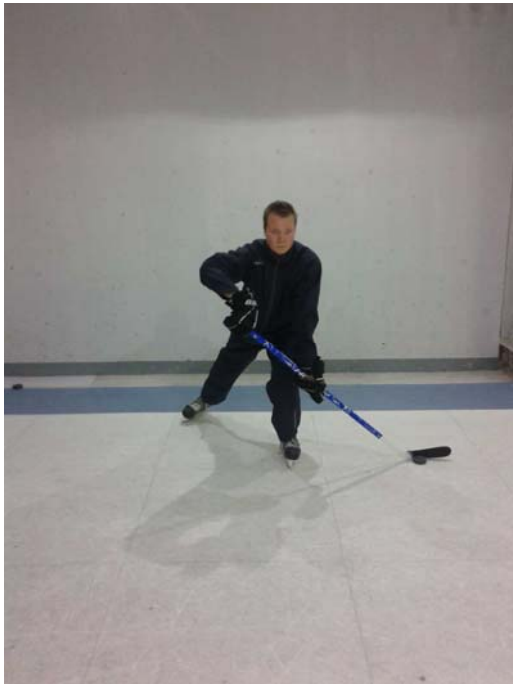


Figure 5. Puck carrying techniques on forehand and backhand

### 5.1.4 Backward Skating

Backward skating is commonly used technique in ice hockey by defenders but in modern game players need to know how to skate backwards properly no matter what position they play. Players need to face opposition puck carrier so that they can react quickly to puck carrier's movements. This part of the manual will provide information of backward skating start, stride and stop.

#### Backward Skating Start and Stride

Backward skating start is very similar to the actual stride. The pushing leg makes a C-cut on the ice. Technique is called the C-cut because if performed correctly, it will leave a cut on the ice that looks like the letter "C" (Skinner, DVD.)



Figure 6. Backward skating start and stride



Figure 7. Backward skating stride at full length

#### Key Points in Backward Skating Start and Stride

- Skating stance stays the same as in forward skating but weight a little bit more in front of the blade (not too much or the player will rise on toes and lose balance)
- Pushing leg moves in front of the body with toes pointing inwards
- Pushing leg makes a C-cut on the ice using the inside edge and pushing with the toe
- Stride direction is diagonally in front of the body
- Pushing leg is completely extended at the end of the stride
- Weight is transferred on to the gliding leg
- Pushing leg recovers under the body
- Head and chest are held up
- Back is straight
- Arm swing supports the movement and stick is held in front of the body in one hand



## Backward Skating Stop

Again there is different ways of stopping from backward skating. This manual will go through a backward skating stop technique called “backward snow plow” (Suomala, 2009. 36.)



Figure 8. “Snow plow” stopping technique

### Key points in backward skating stop

- Heels are brought close together with toes pointing out forming a snow plow with skates
- Skates push hard on the ice with inside edges to stop the movement
- Knees must be flexed
- Upper body leans forward to put more pressure on the ice surface and to hold balance
- Back is straight and head and chest are held up

### 5.1.5 Tight Turns

An ice hockey player is always told to keep moving on the ice. Starting and stopping use a lot of energy since the player needs to move his/her whole body weight from stop to full speed again. Tight turns are a way of keeping the player on the move but still can change direction quickly. Tight turns have 5 phases: Entry phase (coming in to the turn from full speed), de-acceleration phase (going in to a two foot glide to make the turn), turn phase (the actual change of direction), glide phase (two foot glide after start of the turn) and acceleration phase (coming out of the turn and accelerating in to full speed again). All these phases happen very quickly so a lot of training is required to maintain balance while doing tight turns. There are different ways to make a tight turn but according to Sean Skinner, research has shown that the quickest way to make a tight turn is a “heel turn with stop”. This manual will go through the key points on how to make a “heel turn with stop” -tight turn (Skinner, DVD.)

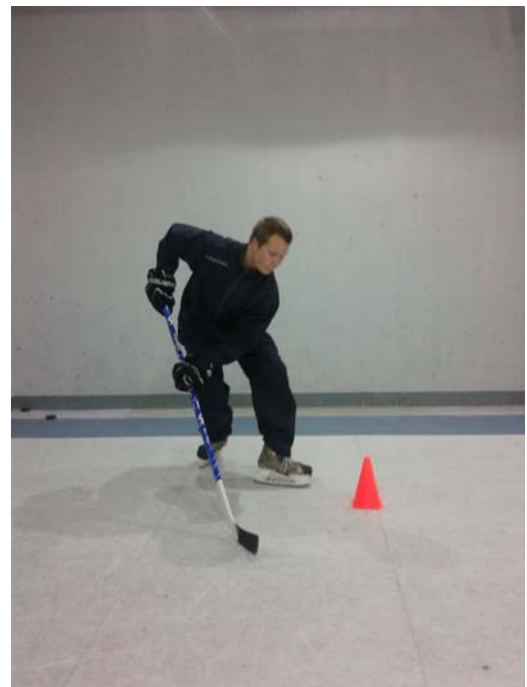


Figure 9. Entry and de-acceleration phases of a tight turn



Figure 10. Turning and acceleration phases of a tight turn

Key points in “heel turn with stop” –tight turn

- Keeping the body in control throughout the duration of the turn
- Skating in to the turn and moving to de-acceleration phase
- Inside foot is turned on outside edge in to a stop position
- Outside leg stays on inside edge
- When entering the turn phase head is turned towards the direction movement and leads the turn
- Shoulders and arms are turned towards the turn
- As the movement is closing to a stop, the outside leg will do a crossover
- Accelerate in to full speed after the turn

### 5.1.6 Forward Crossovers

Crossovers are used in ice hockey to make a wide turn while maintaining or gaining speed. Skillful skaters can use their both legs to push and gain speed instead of losing

it. Laura Stamm has named these two pushes as Stride -push and X –push (Stamm, DVD.)



Figure 11. Stride -push and X –push of a crossover

#### Key Points in Forwards Crossovers

- Knees are bent and weight on the middle of the blade
- Body is leaning in to the turn
- Shoulders are kept level and parallel to the ice surface
- Inside leg glides on outside edge
- Outside leg glides on inside edge
- Stride -push is executed with outside leg and is essentially the same stride push as in forwards skating
- X -push is executed with inside leg and is named because of the position of the legs after finishing the push
- The skate is recovered in front of the gliding foot after a push
- Weight is transferred on to the gliding foot
- Stick is held on one hand when executing crossovers on backhand side and two hands when on forehand side

### 5.1.7 Backward Crossovers

All players need to know how to execute backwards crossovers in the modern game of ice hockey. Effective use of backwards crossovers can be to track an opposition player while moving laterally. The backwards crossovers have two pushes and are named same as forwards crossovers, Stride -push and X -push. The difference comes in execution of these pushes (Stamm, DVD.)

#### Key Points of Backwards Crossovers

- Knees are bent and weight on the middle of the blade
- Body is leaning towards the turn
- Shoulders are kept level
- Inside foot is on outside edge
- Outside foot is on inside edge
- Stride push is executed with outside foot and is essentially the same as backwards skating stride C-cut
- X -push is executed with inside leg and is named because of the position of the legs after finishing the push
- The skate is recovered in front of the gliding foot after a push
- Weight is transferred on to the gliding foot
- Stick is held on one hand when executing crossovers on backhand side and two hands when on forehand side

### 5.1.8 Pivots

In ice hockey it is crucial to know how to turn from forward skating to backward skating and from backward skating to forward skating. Knowing this skill helps the player always have his/her chest towards the puck and the game.

## Pivot from Forwards Skating to Backwards Skating

Pivoting from forwards skating to backwards skating is an essential skill that every player should know and master. This manual will teach the correct way of doing the movement.



Figure 12. Entry, turn and acceleration phases of a forward to backward skating pivot

## Key Points in Pivot from Forwards Skating to Backwards Skating

- Keeping the body in control for the duration of the move
- Knees are bent and back is straight
- Head and chest are held up
- Body leans in to the turn
- Shoulders are held parallel to the ice
- Inside leg is on outside edge
- Outside leg is on inside edge
- Legs are turned in to backwards skating when making the turn – Not before and not after making a forward turn first
- Both legs push on the ice to gain speed out of the turn rather than stopping
- Stick is held in one hand and controlled throughout the move

## Pivot from Backward Skating to Forward Skating



Figure 13. Entry phase of a backward to forward skating pivot



Figure 14. Finishing the pivot and acceleration phase

#### Key Points in Pivot from Backward Skating to Forward Skating

- Keeping the body in control for the duration of the move
- Knees are bent and back is straight
- Head and chest are held up
- Shoulders are held parallel to ice
- Both legs are on inside edge when executing the pivot
- Hips are opened to make the pivot
- One leg slide with outside leg to start the pivot
- Accelerate out of the turn in to forward skating
- Stick is held in one hand and controlled throughout the move



## **5.2 Passing and Receiving a Pass**

Passing and receiving a pass are very important skills in ice hockey. The puck is the fastest moving object on the ice during the game. No player can skate as fast as a passed puck. That is why it is important to know the technical aspects of passing and receiving so that during a game it is possible to move the puck fast around the ice with teammates. Passing the puck can create scoring chances much quicker than trying to skate around every player to try to score. There are different ways how to pass the puck but in this manual we will go through sweep pass and receiving a pass on forehand side as they are the easiest to learn first. After these fundamental passing skills are learned the players can move in to advanced passing moves (Chambers, 2008.)

### **5.2.1 Forehand Sweep Pass**

Being able to give a good hard forehand sweep pass right on the tape of a player on the same team is important when playing ice hockey. Teamplay is much faster than individual carrying the puck from one end to another. With accurate passing a team can lure the opposition out of position and make a quick play to create a scoring chance. Powerplay opportunities are often practiced with passing tactics to gain all the benefits from being on man advantage. Passing can be divided in to 3 phases: Windup phase, passing phase and follow through. Passing can be practiced in two postures so that the skates are parallel towards target or skates are pointed towards target. The technique in both postures is quite similar. When skates are pointing towards target the upper body needs to twist more and weight is slightly on the puck-side leg and there is no weight transfer phase. Most of the power to the pass comes from arms and core when skates are pointed towards the target. Key Points are explained when standing sideways towards receiver. (Suomalainen, 2010. 43.)



Figure 15. Windup, pass and follow through phases of a forehand sweep pass

#### Key Points in Windup Phase of the Forehand Sweep Pass

- Puck is in front of the body when beginning to pass
- The puck is moved slightly behind back skate and weight is moved on back skate
- Arms are off the body and out

- Lower arm is extended and upper arm is bent
- Puck is on the heel of the blade of the stick
- Puck is cupped with the blade of the stick by rolling the wrists
- Eyes look at the target of the pass

#### Key Points in Passing Phase of the Forehand Sweep Pass

- Upper hand pulls the puck, elbow leading the movement
- Lower hand pushes the puck
- Weight transfer from back skate to front skate
- Puck is cupped with blade of the stick by rolling the wrists
- Tip of the stick blade points at the direction of the pass at the end of the movement

#### Key Points in Follow Through Phase of the Forehand Sweep Pass

- Weight is completely on the front foot
- Arms don't swing too far out. Hands should be aligned in front of chest.
- Tip of the stick blade points at the direction of the pass

## 5.2.2 Receiving a Pass

Receiving a pass is as important as giving a pass. Without proper technique the puck will bounce off the stick blade and it will take a longer time to gain the puck in control. The player is required to receive a pass perfectly whether facing the passer sideways or face to face. Key Points are explained when receiving a pass sideways (Suomalainen, 2010. 46.)

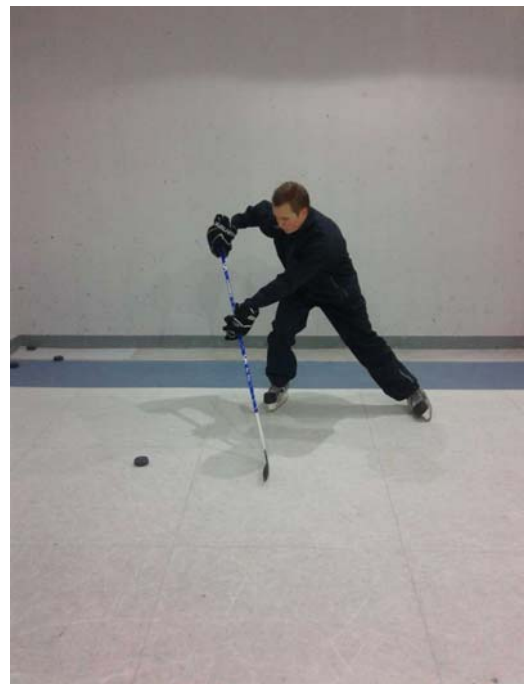
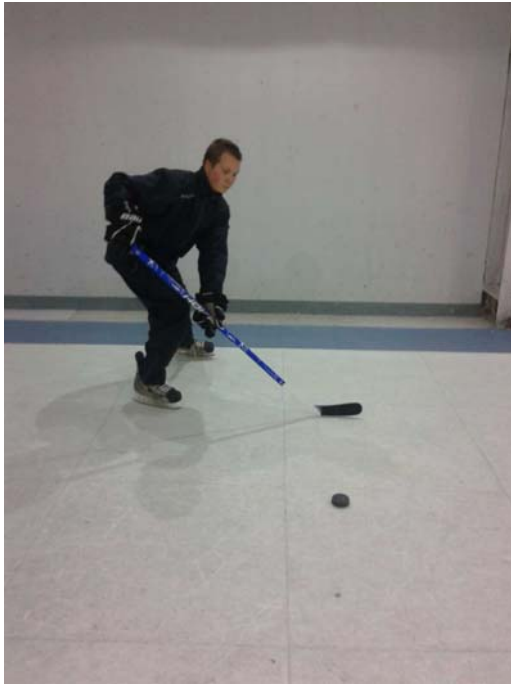


Figure 16. Receiving a pass on forehand

## Key Points in Receiving a Pass

- Weight on front foot
- Arms off the body
- Stick blade is in front of the body, slightly moved towards the passer to receive the puck in optimal spot
- Head is held up to see the ice and the passer, focus on the puck
- Arms move back to cushion the puck when receiving the pass
- The puck should stop in front of body and between the legs
- Stick blade cups the puck by rolling the wrists

## 5.3 Shooting

Shooting is the main tool for scoring goals in ice hockey. A hard shot can be a dangerous weapon and goalies will remember who can shoot the puck hard on the other team. There are different ways on how to shoot the puck and this manual will cover 4 of them. Sweep shot, snap shot, slap shot and a backhand shot. Different shooting techniques are used in different situations during a game.

### 5.3.1 Sweep Shot

Sweep shot is the first shot that every player usually learns and masters. It does not require as much strength as other shots as most of the power comes from weight transfer and upper body twist. Sweep shot is very similar in technical points as sweep pass except that with sweep shot the puck may be lifted to score a goal. Sweep shot is divided in to 3 phases same as sweep pass. Windup, Shot and Follow through (Suomala, 2010. 47.)

#### Key Points in Windup Phase of Sweep Shot

- Puck is in front of the body when beginning to shoot
- The puck is moved slightly behind back skate and weight is moved on back skate
- Arms are off the body and out
- Lower arm is extended and upper arm is bent
- Puck is on the heel of the blade of the stick
- Puck is cupped with the blade of the stick by rolling the wrists
- Eyes look at the target of the shot

### Key Points in Shooting Phase of Sweep Shot

- Upper hand pulls the puck, elbow leading the movement
- Lower hand pushes the stick on the ice surface to bend the stick
- Powerful weight transfer from back skate to front skate
- Middle of the body twists to create more power in to shot
- At the end of the movement wrists curl to produce more power in to shot and direct the puck
- Puck moves from heel of the stick blade to close to the tip of the blade
- Eyes look at the target of the shot

### Key Points in Follow Through Phase of the Sweep Shot

- Weight is completely transferred on to front skate
- Upper body is fully rotated
- The tip of the stick blade points at the direction of the shot
- Stick blade must be opened to get elevation to the shot

#### **5.3.2 Snap Shot**

Snap shot is a dangerous shot in hockey as it is the fastest shot to take in ice hockey. It doesn't have much of the windup phase of the sweep shot or the slap shot. Instead a snap shot can be shot directly with the puck in front of you without touching the puck before the shot is taken. Snap shot can be described as the mixture of slap shot and sweep shot (Skinner, DVD.)



Figure 17. Windup, shooting and follow through phases of a snap shot

#### Key Points of Snap Shot

- Windup for the shot starts from a small distance behind the puck
- Upper hand pulls and lower hand pushes the stick blade on the ice to bend the stick



- Weight transfer from upper hand side on to lower hand side creates more power in to the shot
- Puck is being shot from either the side or in front of the body
- The only time the stick blade touches the puck is when it shoots it

### 5.3.3 Slap Shot

Slap Shot is the hardest shot in ice hockey. But it is also less accurate than sweep shot and snap shot and it takes more time to shoot a slap shot. Usually slap shot is used on powerplay and when there is time to windup for the shot.

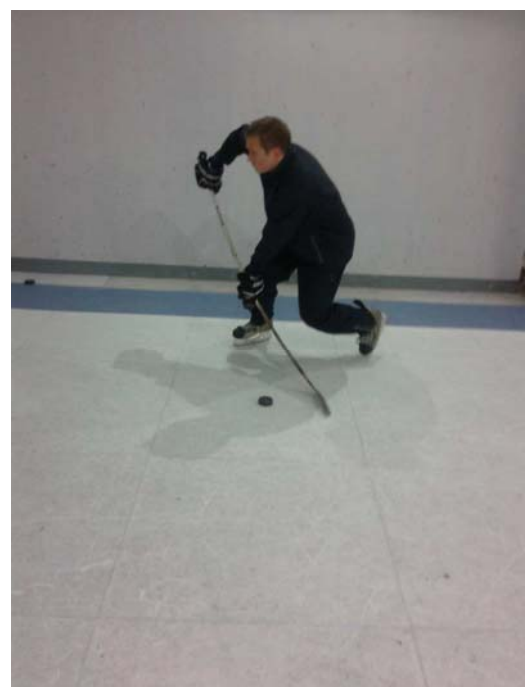


Figure 18. Windup and shooting phases of a slap shot



Figure 19. Follow through phase of a slap shot

#### Key Points of Slap Shot Windup Phase

- Grip of the stick should be widened a little bit from shoulder width
- During the windup phase the stick is brought up and behind
- Wrists turn the stick blade to face down
- Weight is at the back leg
- The stick is brought back down and lower hand pushes the stick blade on the ice about 15cm before hitting the puck

#### Key Points of Slap Shot Shooting Phase

- Approximately the middle of the stick blade hits the puck
- Flexing the stick creates more power in to the shot (needs correct flexibility of stick)
- Weight moves from back leg to front leg
- Wrists curl at the end of the movement to point the tip of the stick blade towards the target and create extra power

## Key Points of Slap Shot Follow Through Phase

- Weight is completely on front foot
- Upper body is completely rotated
- Stick blade points towards the target

### 5.3.4 Backhand Shot

Backhand shot is often described as the most difficult one for the goalie to read. Mainly because of the curve of the stick the shot might end up everywhere. The curve of the stick affects a lot on the ability to shoot a backhand shot. Straight curve stick blades are better at shooting backhand shots than stick blades with big curve. The technique is similar to sweep shot except it is performed from backhand side (Skinner, DVD.)

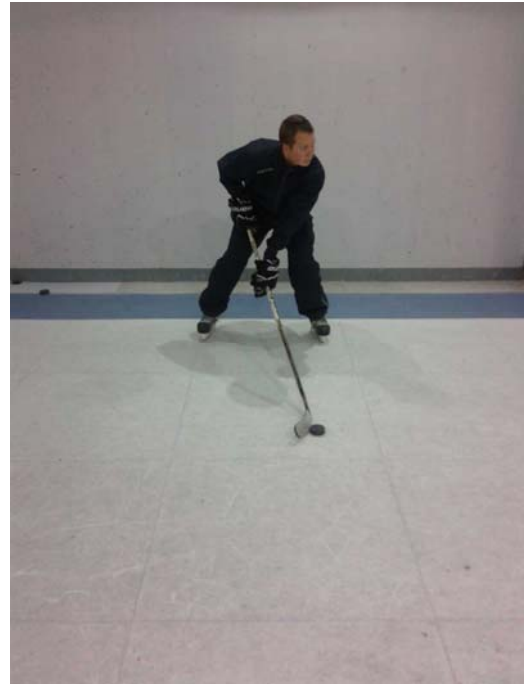


Figure 20. Windup and shooting phases of a backhand shot



Figure 21. Follow through phase of a backhand shot

#### Key Points of Backhand Shot Windup

- Puck is in front of the body when beginning to shoot
- The puck is moved slightly behind back skate and weight is moved on back skate
- Arms are off the body and out
- Lower arm is extended and upper arm is bent
- Puck is on the heel of the blade of the stick (Usually there is a straight part on the curve near the heel of the stick. Depending on the curve obviously.)
- Puck is cupped with the blade of the stick by rolling the wrists
- Eyes look at the target of the shot

#### Key Points in Backhand Shot Shooting Phase

- Upper hand pulls the puck, elbow leading the movement
- Lower hand pushes the stick on the ice surface to bend the stick
- Powerful weight transfer from back skate to front skate

- Middle of the body twists to create more power in to shot
- At the end of the movement wrists curl to produce more power in to shot and direct the puck
- Puck stays near the heel of the stick blade
- Eyes look at the target of the shot

#### Key Points in Backhand Shot Follow Through

- Weight is moved completely to front foot
- Upper body is fully rotated
- Stick blade points towards the target

### **5.4 Stickhandling**

To control the puck a player must possess the adequate stickhandling skills. With good stickhandling skills a player can perform dekes and fakes to fool the opposition players. Stickhandling moves are numerous and going through them all would take a long time. Instead this manual will present the basic stickhandling dribbling technique that works as a base for the rest of the moves. Using the toe of the blade is also introduced. Holding the stick correctly is presented and a recommended stick length for junior players.

#### **5.4.1 Holding the Stick and Stick Length**

It is important that the stick is held correctly in hands. The upper hand should cover the knob of the stick so that a player is able to control the puck on the toe of the blade more efficiently. The stick should be held so that the upper hand forms a V with thumb and the hand. This is called the V –grip and is used in most situations. Only when using the toe of the blade should the upper hand grip change in to a side grip (Skinner, DVD.)



Figure 22. V-Grip

Hands should be off the body and in front to ensure full range of motion while stickhandling. A player needs to be able to stickhandle all around his/her body. Body may prevent movement if hands are close to the body.

Stick length is recommended to be from the ice to the collarbone when the stick blade's toe is on the ice surface. This gives the player more control in small areas and a better range of motion. Junior players should play with a short stick to learn correct stickhandling techniques easier as it is easier to stickhandle with a shorter stick. Stick length rule should stop when a player grows older and understands different styles of stickhandling.



Figure 23. Correct length of a stick when having skates on

#### **5.4.2 Dribbling the Puck**

Dribbling the puck means that the puck is moved from backhand side of the blade to forehand side of the blade and then back. Dribbling the puck is a skill required to be mastered before a player can start deking and faking with the puck. Dribbling the puck can be done in a different width of motion. Different widths of dribbling are used in different situations. Bottom hand movement is crucial if dribbling is done from wide position to wide position. When the puck is far away from the centre of the player then the hands get close together at the knob end of the stick. If the puck is close then hands are wider.

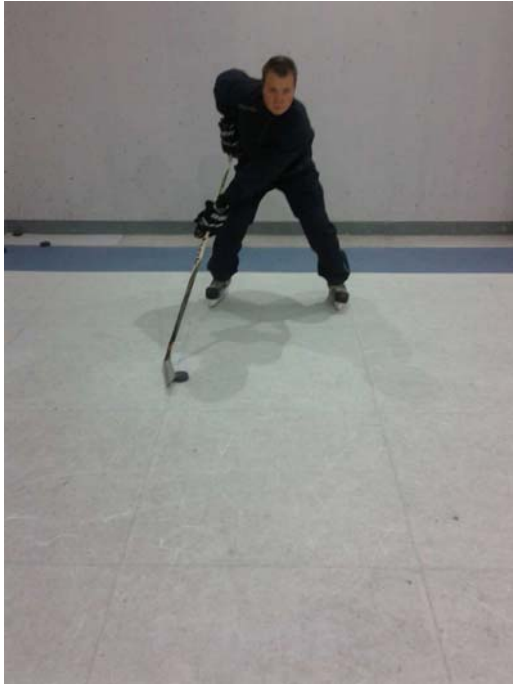


Figure 24. Narrow dribbling technique

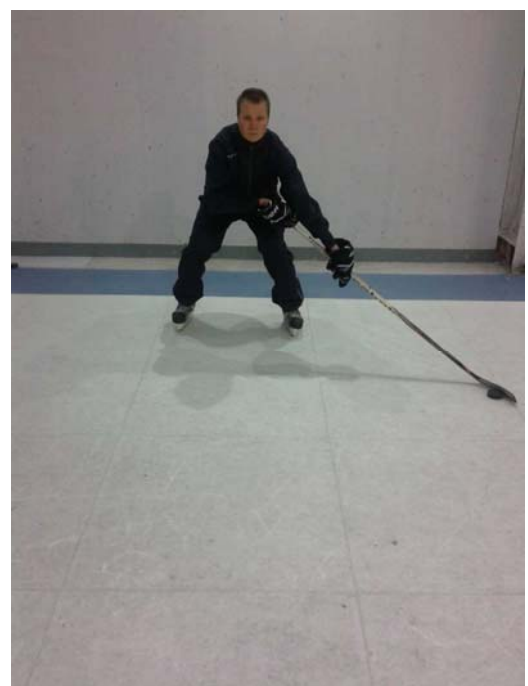


Figure 25. Wide dribbling technique



## Key Points to Dribbling the Puck

- Skating stance is normal
- Stick should be gripped about shoulder width
- Hands and arms are relaxed and off the body
- Puck is in the middle of the blade
- Head is held up but eyes should look a little bit down so that a player can see the ice and the puck at the same time with peripheral vision
- Body weight is always shifted to the side where the puck is
- Upper hand pulls the stick and lower hand pushes the stick
- Rolling of the wrists to cup the puck (check pictures below)

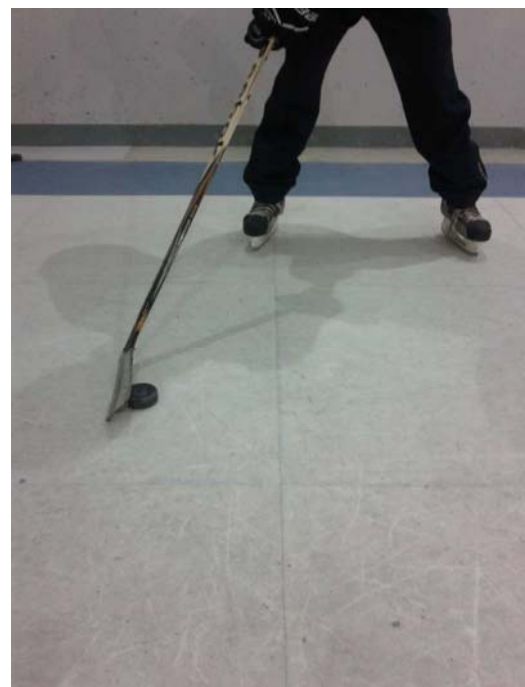


Figure 26. Cupping the puck

### 5.4.3 Using the Toe of the Blade

Using the toe of the stick blade can offer the player precision in stickhandling a puck. Toe of the blade can be used to move the puck in tight spaces and perform a toe-drag move. The grip changes a little bit when stickhandling with the toe of the stick. The normal V-grip changes in to a side grip where thumb is on the side of the stick. The blade of the stick is turned so that the forehand side is facing the ice. The change of

grip should happen automatically and in one fluent motion. It is not possible to change grip quick if hands are gripping the stick too hard. (Skinner, DVD.)



Figure 27. Using the toe of the blade

## 6 Discussion

The main idea behind creating this thesis came from discussion how to get more educated coaches in to China Pioneers Ice Hockey Club. Bringing foreign educated coaches in to China is expensive and sometimes foreign coaches can't adjust to the culture. The idea of educating coaches from retired players in the Beijing area to become coaches for the grassroots program started. This manual is to be used in China Pioneers IHC to provide the club an educating tool for teaching new coaches and to ensure that the teaching of technical skills is handled in a similar way by every coach.

The request from the China Pioneers was to have a manual that has information on how to work as a coach on the ice. How to communicate with players? How to plan effective practice sessions? How to behave as a coach in front of the players? How to develop athletes in long term? I tried putting together a guide that would have all this and I feel that it succeeded in achieving that.

One of my biggest challenges was to find resources in Beijing, China. It was hard to find information that I needed to know in English. China also restricts accessibility to many websites so it was even more difficult. Finally I found some books and ebooks with the information that I could use in this manual. Also I didn't want to dive too deep into scientific information as new recruited coaches don't have much education in the area of sports management and coaching. So by keeping the manual relatively light I think that it will be easy to read and understand. Moving to advanced information in the future might be possible but basics have to be educated and learned first.

Finding information on teaching technical skills was the most difficult to find and a lot of information was through my own playing experiences from ice hockey and analyzing different materials offered on educational videos. I feel that emphasizing key points to players in teaching a technical skill with instruction and demonstration will be a good start for new coaches to begin their careers. Providing a technical skills teaching manual was vital for new coaches as they may have been able to perform different

skills when they were still playing but don't have a clue on how to teach that skill to someone.

The continuation of this project would obviously be moving towards more advanced athlete development studies. For technical skill training the obvious continuation would be to move to more complex moves. Tactical side of the game and developing game sense would also be an interesting subject to move into from here.

I hope that this manual can help to teach new coaches into China Pioneers IHC and that a coach can use this manual as a coaching tool for teaching technical skills. I feel that the information put together can help China Pioneers establish themselves as one of the top ice hockey clubs in Beijing area. The results of this project can be seen when the club starts taking in new coaches and they are being educated with the help of this manual.

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