Physiological Considerations

- Until puberty there are no major differences in body composition, strength, endurance or speed between boys and girls. In general, girls will experience growth spurts up to two years earlier than boys.
- When boys reach puberty (around age 13) greater differences between the two genders begin to emerge. At this point, muscle mass and strength gains begin to develop at a faster rate with boys. As growth rates decelerate, the 2-3 year advantage girls possessed over boys in terms of strength, stature and body mass begin to level off.
- At the younger ages hockey success is based on skill, agility and coordination. As females progress to the age of contact they need to rely on size/quickness, technical skill and decision making/awareness to play against and with boys who have hit puberty. If they possess these qualities they can play and excel with boys at the high school/Bantam and possibly midget levels.
- Example: A lot of parents and coaches think girls can’t shoot pucks as hard as boys. This theory is untrue at the younger ages. Girls who are given the same coaching and opportunity for skill development (through repetition) will be able to shoot the puck as hard as boys.
- Body contact is a skill that must be taught in practice. Introducing body contact at the 8U age level allows for the skill to be fully mastered by the 14U age level. Controlled body contact allows players to learn how to take away time and space while gap control may be a challenging skill to learn as checking is not permitted in girl’s hockey. Female players need to be strong, agile skaters in order to angle and close the gap between them and their opponent. It is important to teach girls that it is okay to be physical.
• Example: Some coaches feel that because the game is a non-checking game that it is not physical. If you have ever seen a women’s collegiate, national or Olympic game you know the game is extremely physical. Women’s soccer and basketball are great example of other physical sports.

• Peak Height Velocity (PHV) is evidence of hormonal change and is directly related to the developmental age of athletes. PHV is a measure of the maximum rate of growth in stature during a growth spurt. The age of maximum velocity of growth is called the age at PHV. PHV is a key component of the Long Term Athlete Development (LTAD) principles. Each athlete grows at a different rate; therefore a coach can have, on the same team or training group, early, average and/or late maturers.
  
  o On average, girls start growing two years before their male teammates. On average girls hit their Peak Height Velocity around age 12 while boys reach PHV around 14 years old.
  
  o Females age 11-15 often weigh more than males the same age. They produce more estrogen that keeps the amount of body fat on their bodies higher than boys who are producing more testosterone. This can be an advantage for females in terms of strength, stature and body mass.
  
  o Males age 15-18 usually weigh more than females the same age.
5 Basic Stages of Training and Performance: Critical Windows of Accelerated Adaptation

• The “critical/sensitive” periods of accelerated adaptation to training needs to be utilized to help the athlete maximize their potential development.

1. **Stamina (Endurance):** The optimal window of trainability occurs at the onset of Peak Height Velocity (PHV). Aerobic capacity (the maximal amount of oxygen the body is capable of taking up and using to produce energy for lower and moderate intensity work) training is recommended before athletes reach PHV. Aerobic capacity should be introduced progressively after growth rate decelerates.

2. **Strength:** The optimal window of trainability for girls is immediately after PHV or at the onset of menarche, while for boys it is 12 to 18 months after PHV.

• Many parents and coaches do not understand the importance of strength training (weights or bodyweight) for girls for performance and injury prevention. We see and find many strength and functional movement deficiencies in players who attend Select 14, 15, 16 & 17 National Player Development Camps as well as our collegiate U18 and senior National Team and Olympic players. 50% of sport injuries are caused by overuse. We see players at all levels who have suffered multiple injuries due to lack of emphasis on strength training, prehab, rehab, and basic functional movement training during the female strength window 1 & 2 (windows of accelerated trainability). Weight training is important and extremely useful- it helps prevent injuries, build power, strength and flexibility.

• Strength and Conditioning Recommendations (beginning at age 12 for females):
  1. Include dynamic warm-ups, cool downs, and basic bodyweight circuits- possibly including a stability ball, medicine ball, quickness ladder, etc.
  2. Core work is essential. Learning to activate core stabilizers to protect the spine and improve movement quality should be the primary focus.
  3. Develop athletes first. If they aren’t athletic off the ice it will be difficult for them to play the game well.
  4. Work with strength and conditioning experts when possible to implement prehab and rehab exercises into your team’s workouts to avoid common female injuries: ACL tears, labrum tears (hip & shoulders), Patella Femoral Syndrome and Female Athlete Triad syndrome.

3. **Speed 1** - Segmented speed intervals less than 5 seconds: agility, quickness, change of direction- linear, lateral and multi-directional within 2-3 strides. Girls’ optimal time for training speed (period #1) is between the ages of 6-8.

**Speed 2** - Anaerobic capacity and power- chaotic speed 5-20 seconds. Optimal Speed period # 2 occurs between the ages of 11-13.
4. **Skill**: The window for optimal skill training for girls occurs between the ages of 8-11 while boys takes place between 9-12.
   a. ABCs- Agility, Balance & Coordination optimal skill acquisition for girls is between the ages of 8-11. This window of trainability can be 2-3 years shorter for females then males placing extreme importance on skill acquisition.
   b. Late developers (those that hit puberty later than their teammates) have an advantage when it comes to learning skills as the Learn to Train Stage lasts longer for them. On average, girls (11-15) hit puberty 2-3 years before boys (13-16) so they are at a disadvantage. This puts more of a critical emphasis on the skill development during the Fundamental (6-8) and Learn to Train Stages (8-11).
   c. Skills, Speed, Strength, Suppleness and Stamina are always trainable but it is vital to take advantage of the windows of trainability in order for the athlete to reach her full athletic generic potential.

5. **Flexibility (suppleness)**: The optimal period for girls occurs between the ages of 6-8. Special attention to flexibility should be paid during and after the growth spurt (PHV). If players are active in hockey and other physical activities/sports involving water, land, air and/or ice and snow suppleness will occur on its own.

**Communication, Motivation and Self-Esteem**

“With women, your effectiveness is through your ability to relate. They have to feel that you care about them personally or have some kind of connection with them beyond the game…..to be an effective leader of a men’s team, you don’t need personal rapport as long as there is respect. That’s the extent of the relationship. That’s all that’s really required. But in a women’s team, respect is only part of it, and it is derived from a personal relationship. Women have to have a sense that you care for them above and beyond their (athletic) abilities.”

— Anson Dorrance comments on motivating females.

**Communication**

- The best coaches are effective and strategic communicators. Communication is the key in delivering your message.
- The methods used for delivering information and feedback will affect performance. Keep confrontations private with the player and another staff member.
- Young girls are generally not used to a harsh style of coaching and usually will not respond well. Don’t be in their faces and confrontational. Be positive and find the right coaching moment to convey your message.
- Take a humanistic approach; respect them, communicate with them and ask them what they need.

“Coach us like men, treat us like women.”

— Mia Hamm

- Let your players participate in the decision-making process, create leaders and allow them to ask questions. Players are more likely to buy into your coaching plan if they have a voice and opportunities to embrace leadership roles. Ultimately it is the player’s team…….give them and let them feel a sense of ownership.
• Use the ‘Sandwich Theory of Criticism.’
  o Start with positive feedback
  o Follow this with 3 pieces of information. This includes (1) what happened, (2) what should have happened and (3) why is should have happened.
  o Finish with one more piece of positive encouragement.
  o This feedback should be delivered in a constructive manner. Positive feedback and interaction breeds success.

• Males and females have different conversational styles. Females, in general, prefer small working groups. The coach needs to create a connection/relationship with players in order to be successful. Girls are generally more empathetic. They use their verbal skills- want to know ‘why?’ and ‘how?’ They will react to how something is said- they may not even hear the message if your body language and tone don’t match your message. Females will express emotions more openly. This is not a sign of weakness but a sign of communication—expressing their feelings.

• When communicating with your players, think about your body language, facial expressions and tone. Maintain eye contact while you are talking or listening. Before approaching the athlete, contemplate what you want from them. Don’t make assumptions that they understand or automatically know what you want or are thinking. Try not to yell. Ask yourself why you are yelling. Is it because of their behavior or your emotions? As a coach, it is important to check you ego at the door. Remember, it is about the players. If you are emotional, calm down before any interaction.

• Think “Sell, not yell.”
Coaching Female Athletes

Motivation

• Girls and boys have a need for autonomy, the need to feel cared about and a sense of belonging. Girls carry these needs into the locker room, and onto the ice.
• Team/coach relationship is important to the success and growth of the player.
• Females are motivated by pleasing others. Get to know your players outside of just their hockey skills.
• Involve them in team decisions and be empathetic.
• Female athletes tend to want to develop relationships with coaches and prefer those who communicate openly and are empathetic. They need a coach who cares for them as a person and athlete. However, as an adult and authoritative figure, you must follow the appropriate boundaries that and not go too far outside of just hockey.

“The young female athlete is driven, committed and disciplined. They want to be coached and can appreciate and process constructive feedback. Most are not receptive to strong language or screaming. They want a clear understanding of their value and know they are continuing to develop. Often time’s young female athletes don’t grasp the balance of work versus rest ratio. Their tendency is to push to exhaustion. Coaches and parents need to be mindful of this pitfall.”

— Katey Stone, Head Coach 2011 USA Women’s National Team

• A coach’s style for motivating girls may need to be different when compared to motivating boys.
  o Positive communication delivered consistently, along with constructive feedback will earn the respect and trust of your players.
  o Build the confidence of your players instead of attacking it.
  o Ask questions of each athlete. Find out how she is thinking and feeling. Actively listen without making assumptions.
  o Validate their feelings. Show compassion and understanding about their feelings before you give advice on how to fix or rectify a situation.

Self-Esteem

• Female intrapersonal characteristics:
  Competence- Am I good enough
  Confidence- Will I stand out, fit in?
  Autonomy- Do I have a voice?
• Many girls have low self-esteem. If you find a player struggling emotionally or beyond normal levels of insecurity or you feel they may be dealing with depression notify her parents. There are national concerns over the rising number of young female teen suicides and the pressures they put on themselves.
• Girls love physical activity and it can help build confidence.
• Create an environment in which they will succeed in every practice and game. Success breeds confidence and confidence breeds success and passion for the game.
• Avoid comparing one teammate to another: comparisons can hurt a girl’s confidence. The comparison tends to make the player focus on their weaknesses. They will feel less than their teammate. Every player brings something unique and valuable to the team and the game. Focus on self improvement through goal setting.
Team Dynamics: Team Work and Team Building

“Girls crave and thrive off of communication and feedback...whether it comes from coaches, teammates, sport psych individuals, etc. In my personal experience, team building/unity activities in which females can share their thoughts, feelings, emotions, habits, weaknesses, and strengths with each other creates a very strong team dynamic. This team dynamic is an essential part to the success of the team on the ice.”
— Meaghan Duggan - 2010 USA Women’s Olympic Team member and 2011 Patty Kazmaier Memorial Award winner

- Female Interpersonal (social) characteristics:
  - Attachment/relationships with friends and adults
  - Challenge of Competition
  - Team Work
- Girls thrive in a cooperative environment.
- Females value attachment, intimacy and interdependence. Females fear rejection, isolation and abandonment. Girls bond and form alliances through conversation while boys bond and form alliances through shared activity.
- Team building can prove to be very critical for females—allows them time to bond through interaction and communication and socialization.
- Females use conversations as a time to share and develop relationships with their teammates. It helps unite and build trust between one another.
- The male player often gains acceptance through his performance and a female player needs acceptance to perform well. In order for them to put themselves on the line and make sacrifices for their team they must feel accepted first.
Coaching Female Athletes

“For women, sport is a social activity as much as a competitive one.”
— Kathy Deboer

- Females down play success as they don’t want to sound arrogant. They may even blame success on luck or contribute success to team work. Boys tend to blame others for their failures and mistakes or take 100% credit for their success and achievements.
- Competition and personal relationships are intertwined. Their teammates are their friends.
- Team chemistry – concept of selflessness…encourage team building and cohesiveness
- Females value friendships and can focus on team unity
- Most girls like to make decisions through collaboration and team consensus.

“Each gender approaches competitive situations from a vastly different context. Girls come to the gym seeking to bond as a means to success; boys battle to achieve the same thing. Women enter the workplace predisposed to connect to achieve goals; men compete to achieve goals. Both want to win and both want results, but they hold markedly different ideas on how to access their aspirations.”
— Kathy Deboer

Process Driven versus Results Driven

- Females are more process oriented and even if they don’t win, they feel a sense of accomplishment when they reach a training goal. Coaches need to help females set milestones/goals and to focus on the process. Boys are more result oriented-we won because I scored a goal. Girls-we won because of great team work and everyone was working hard individually. Process driven vs. result coaches will be more successful with females.
- Role of a Coach- The athletes experience should be about the process instead of the outcome. Don’t worry about the results on the score board. Make sure they are developing and having fun. Studies show girls are more process oriented in goal setting and boys are more focused on goal setting for the end result.

“Females generally have a higher tolerance than males for the mundanity of repetitive drills. Their process focus means they pay more attention to the details of particular skills and are more attuned to technical specifics. A drill-based training regimen also allows them to bond with each other and the coach through non-confrontational, method-focused activities. The valuation of process over outcome allows groups of females a synergy of spirit in practice settings rarely available for male groups.”
— Kathy Deboer

- Girls are task oriented.
- Sports help teach girls to be assertive and task oriented while functioning as part of a team.
- Boys seem to be much more literal while girls are process-oriented. They will question, not because they want to test you, but because they are looking at the final outcome.
- Give each female player a role on the team so she feels like a valued contributor.
- Create realistic team and individual goals. Team goals will create a sense of unity. Hold them accountable within reason.

Cultural / Societal Implications

“Society often positions women to just fit in. We coach them, however, to stand out, to make a difference, and for woman that can be an incredibly empowering experience.”
— Tony DiCicco
• Boys are traditionally encouraged to join sports at a young age. Girls aren’t offered this opportunity as often. Girls who start fundamental skill training later are at a huge disadvantage. This hurts their athlete success and confidence. Work on their skill sets, self esteem and confidence.
• Create an environment where they can be successful. Many females play on male dominated teams or teams with multiple skill levels. Ensure your players are receiving enough repetitions in order to develop the game’s fundamental skills.
• Girls are just as capable as boys of dealing with intense sports competition.
• Teach your female athletes that it is okay to be aggressive, competitive and assertive within practices and against the opponent.
• Don’t belittle boys while encouraging girls. This tactic actually embarrasses both genders and creates a negative environment. Some players are better than other players regardless of gender. Create a gender neutral environment.
• Avoid using language like “sissy” or “you play like a girl.” These statements only minimize female athletics and demoralize male athletes.
Coaching Female Athletes

- Encourage girls (and their parents) to enroll in multiple sports. Encourage girls to play 3 sports until high school. If she ends up taking the advanced/high performance player development track in high school, she may need to focus on 1 or 2 sports once she reaches the age of 16.
- 54% of our female players don’t make it to the squirt level: make it fun for the girls. During station work/practices place girls together for at least 2/3 of the allotted time so they can interact with their female peers/teammates. If skill level is appropriate, try to have girls on each team for cross ice games (8U). It’s important to stress fun and skill development. Work with all players; don’t assign them labels (defense, goalies, weak skater, etc.) at young ages. An 8-year-old is only an 8-year-old once. We don’t know at 8 what they will be at 14, 16 or 18 years old.
- Girls love sports and competition. Given a chance and direction they will play and thrive! Seek out opportunities to expose your players to high level women’s hockey such as college games or the US Women’s National Team.
- Make the female game visible to your players whenever possible and try to create mentors and role models.

Additional Resources

- Opportunities for Girls in Hockey
  www.usahockeymagazine.com

- QuickSilver: Adventure Games, Initiative Problems, Trust Activities and a Guide to Effective Leadership by Karl Rohnke and Steve Butler

- Catch Them Being Good: Everything You Need to Know to Successfully Coach Girls by DiCicco, Hacker and Salzberg

- Gender and Competition: How Men and Women Approach Work and Play Differently by Kathleen Deboer

- Games Girls Play: Understanding and Guiding Young Female Athletes by Caroline Sibly

- Built to Win: The Female Athlete as Cultural Icon by Leslie Heywood and Shari L. Dworkin
NOTEPAD: