

EFFECTIVELY COACHING FEMALE ATHLETES



"My biggest lesson is to never underestimate the impact you can have, especially for women in sport. Sometimes we can feel discouraged, and think nothing is happening, but this is not the case. Every single day you can make a difference for one person."

– Guylaine Demers, Professor (Université Laval), CAAWS board member

PRESENTED BY THE CROSS COUNTRY CANADA WOMEN'S COMMITTEE



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Girls leave sport at twice the rate boys do.

Coaches can help reverse this trend. Sport enriches girls' lives far beyond mere athletics. Coaches can help girls develop important life skills like teamwork, leadership and self-confidence.

Do you coach boys and girls the same way?

While many coaching strategies are effective for both genders, important biological and psychological differences between boys and girls warrant tailored coaching approaches. This document will highlight some of these differences and suggest strategies to help female athletes reach their psychological, social and physical potential.

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SOCIAL AND PSYCHO-SOCIAL ASPECTS OF COACHING

The coach-athlete relationship¹

A strong coach-athlete relationship helps athletes excel. Caring and respectful relationships with coaches can empower female athletes. An effective coach

1. Helps athletes cultivate self-awareness,
2. Builds strong coach-athlete relationships, and
3. Creates a fun and supportive training environment.

Coaches should strive to build a culture that fosters excellence through belonging.

Coaching Strategies

Many of these strategies apply to both genders but girls are likely to be particularly responsive to these tips.

Emotional/relational strategies

- Be open to listening to athletes' concerns
- Be honest and caring in all communications
- Be patient and take the time to build trust
- Foster a relationship in which girls feel safe to show emotions and discuss performance concerns
- Allow for social time during and surrounding training
- Allow female athletes' input around training

Motivational strategies

- Define achievement as personal mastery, rather than by comparison to others
- Create training environments that help build self-confidence
- Avoid (unrealistically) high expectations
- Be aware that some athletes tie achievement in racing and training to self worth
- Address motivational issues for athletes who are not performing up to their expectations



Photo credit: flyingpointroad.com

Communicating effectively with female athletes²

How a coach communicates with her or his athletes can influence how competent those athletes feel. Female athletes thrive when they have open, honest and respectful two-way communication with their coach about all training and racing decisions. Good communication will build strong and productive coach-athlete relationships.

"Honour the whole human being, not just the athletic being"

-Diane Israel, triathlete and runner

Coaching Strategies

1. **Establish a personal connection** with female athletes by showing interest in them as people, not just as skiers. Share a bit of yourself with them as well. A close friendship is not required but some level of personal connection is helpful.
2. **Do not try to stop, change or judge emotions.** Instead, acknowledge the emotion, understand that it is very real, and talk about what is making the athlete upset or angry. Do not belittle emotions or try to explain them away.
3. **Frame your technical feedback so that it isn't perceived as criticism.** Treating the body as a third person can work well. Here are some examples:
 - Instead of "you need to shift your weight more," try "the body will glide longer and be more stable if you commit to weight shift and glide on a flat ski. Here are some ideas of how to get into that position."
 - Instead of "your core is loose," try "a tight core will help the transfer of power to the skis, and make you faster. Here is a way to engage your core."



The athlete-athlete relationship

A strong team is made up of close personal relationships. Teammates are an important source of social support. These relationships are often the main reason girls come to practice. Strong team relationships can help athletes manage stress and contribute to feelings of competence.

Coaching Strategies

Coaches can create optimal team environments by focusing on a culture of belonging. Here are some strategies to do this:³

1. Promote teamwork By:
 - Requiring teammates to share resources
 - Designing training that emphasizes collective outcomes (like relays)
 - Creating your own collective outcomes (like team overall scores)
 - Emphasize competition between teammates only if a collective outcome is seen as the ultimate goal
 - Having the team problem-solve as a group⁴
2. Find a way for each team member to be the best at something, and to have a role on the team.⁵
3. Encourage positive social dynamics by:
 - Encouraging athletes not to judge one another based on their athletic abilities
 - Allowing for variety and flexibility in training to foster interest in, and enjoyment of training

TRAINING

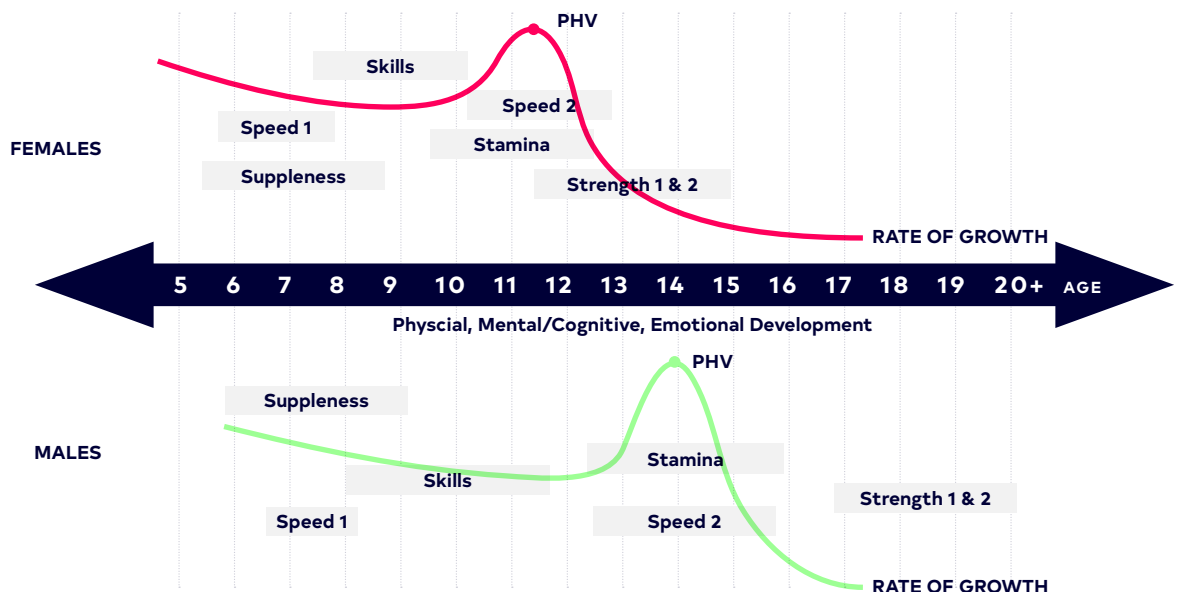


Puberty & Performance

It is important to respect physical development and modify training accordingly. Good communication with athletes is crucial during puberty. Help girls understand that puberty can temporarily affect their performance. Girls will often gain weight. Muscle development can lag behind, which may result in slower times and potentially lower self-esteem. Consider adapting training and racing to give girls time to maximize their changing bodies.⁶ Puberty is also often a time when girls are changing schools and peer groups, and are facing higher demands at school.

Athletes mature at different rates

Athletes mature at different rates and this affects their training and performance in a variety of ways. Coaches need to take individual development into account rather than relying on an athlete's chronological age. The beginning and peak of athletes' growth spurts vary significantly and might affect several aspects of training. Some research suggests that young athletes are more sensitive to particular types of training at different developmental stages. For example, the beginning of the growth spurt and peak height velocity (PHV) may be an optimal window to train stamina and strength (the PHV is the period during which adolescents grow the fastest). Females generally experience their adolescent growth spurt and PHV around age 12.





Coaching Strategies

1. Help girls understand that that training is a long-term process and that performances may be inconsistent over a season or from year to year.
2. **Teach athletes about natural and healthy body changes during puberty.** Help your athletes understand that is natural to gain weight due to an increase in fat tissue, bone and muscle.
3. **Discuss short-term and achievable process goals** with your athletes, rather than performance goals. For example: "I will do my strength training so that I can double pole more efficiently" instead of "I will place in the top 5 at the provincial cup race".
4. When designing training programs, consider the physical, physiological, and psycho-social aspects of an athlete's development.
5. **Emphasize and explain the importance of rest days** and the dangers of overtraining, and be aware that some girls often do more training than they are prescribed. Girls at risk for disordered eating often exercise to excess in order to burn calories.
6. Find out about things outside of sport that could be affecting your athlete's attitude and performance (school, other sports, etc.).
7. For some girls, focusing on loppet-type races during puberty can be positive. Longer races at slower paces can make puberty changes less visible. This focus can help keep girls in the sport by allowing them to gradually adapt to their new bodies, while also building endurance and strength.⁷



SELF ESTEEM & BODY IMAGE

SELF-ESTEEM IS AN ATHLETE'S SENSE of self worth. It influences how they feel about themselves and their sport performance. In childhood, girls and boys have similar levels of self-esteem. However, self-esteem often decreases in adolescence, especially for girls. Girls with low self-esteem often have a negative body image, which predisposes them to disordered eating.

Coaches can promote self-esteem and positive body image, as well help prevent disordered eating, by ensuring the messages athletes get are positive and empowering. Coach messages can impact the daily lives of athletes. By focusing on performance indicators rather than on body shape or image, coaches can be the positive role models that athletes need.

Natural Body Size. Female athletes who are still growing and training naturally gain weight and height each year. Generally, girls grow until 2 years after the start of their menstrual period. Coaches should be careful not to compare their athletes' bodies to those of others. Girls cannot healthily maintain a body size and shape that is unnatural for them for any extended period of time.

The following video made in 2016 by American skier Hannah Halvorsen highlights the impact of body image on self-esteem: <https://www.youtube.com/watch?v=dAhCeUMJtbA>

It is important for coaches to reflect on their desires for their athletes with respect to body weight and shape. If you find yourself wishing an athlete were physically different (bigger, smaller, more muscular, etc.), consider the following:

- Does the athlete eat well?
- Is the athlete healthy, happy, fit and active?
- What body type did the athlete likely inherit from her parents?
- Is it necessary for your athlete to alter their natural body to ski fast?
- What are the risks of altering the athlete's natural body shape?
- Evaluate your investment in your athlete's performance. Remember that a natural body size and shape cannot be changed permanently, and temporary changes can be very harmful to an athlete's health.

Coaching Strategies

1. **Compliment the "who", not the "what".** Compliment attitudes, actions and effort in athletes rather than appearance. Be specific! For instance, you might say: "you are really gliding on a flat ski," or "your ability to concentrate is really helping you today." This is more helpful than a general comment like "you are doing a great job." Your compliments can add to an athlete's language of self. Avoid body compliments altogether.
2. **Take care with language and comments.** Remember that comments and remarks (even positive ones) made about an athlete's body can have a huge impact on an athlete who is striving to please others and perform well.
3. Ensure that your own attitudes and beliefs about food, weight and body image are positive, and that the messages athletes get are positive and empowering.
4. **Be affirming rather than teasing.** The sport environment can be an invaluable source of support for an athlete. Teasing takes away from this support and can be very harmful to an athlete's self-esteem.
5. **Do not encourage athletes to try to alter their natural body size and shape.**
6. **Model balanced nutrition and stress the importance of fueling the athletic body.** Efforts to change a natural body weight and shape (through dieting or bulking up) can be harmful and may lead to disordered eating.
7. **Help athletes understand what is in and out of their control.** There are factors that affect athletes and their performances that are not in their control. Help athletes understand what can and cannot be controlled about sport and life experiences.
8. **Celebrate uniqueness, difference and diversity.** Acknowledge that each individual is different and being unique is wonderful, special and normal! There is no one perfect body weight, or shape.
9. **Use the "sandwich approach" for feedback:** Point out something positive, discuss or ask about something that needs improvement, and then finish with positive encouragement.
10. **Recognize achievements not related to performance.** Celebrate activities outside sport. Has someone done a great science experiment, gone on an interesting trip, or started to volunteer in the community? Start annual awards for an athlete who is "most improved", "most supportive of teammates," or any other self-esteem boosting quality you'd like to encourage in your athletes.
11. **Be aware of your own limitations.** If an athlete in your care is suffering from disordered eating, support her in finding professional help. If the athlete is not interested, call on a professional to support you in finding help.





MENTAL SKILLS⁸

Mental Skills are Important

It is a common misconception in the athletic community that sport psychology and working on mental skills are things an athlete does when they are struggling in their sport. The opposite is true. Just like having good technique, consistent physical training and good sport nutrition, having a strong mental game only adds to an athlete's success and well-being. Mental skills are great tools to have in your athlete toolbox. They can be pulled out at any time and in any situation. When athletes have similar talent and training, it will often be the strength of an athlete's mental skills that makes the difference on the race course.

Mental Skills Make Great Tools for XC Skiers

Every athlete is different and can use different mental skills to fit their needs. All mental skills can also be transferred to other sports and other areas of life. The most common mental skills used in cross country skiing are:

1. **Distraction Control.** In an endurance sport such as cross country skiing, athletes have to face any number of distractions, from dealing with teammates or parents, to facing delayed start times and poor wax conditions, to confronting a race plan not going according to plan, to having to tolerate massive pain. Having strategies to cope with these distractions and re-focus during a race can make or break a performance.
2. **Confidence.** Just like any challenge in life, ski racing comes with its share of stress and anxiety. One way to help manage this stress is to build confidence. Through reflection and skill acquisition, an athlete can build confidence and feel prepared whatever the challenge.
3. **Focus.** The sport of cross country skiing can give energy but it can also be very energy-taking. Learning when and where to focus energy is an important skill for an athlete. Bringing focus to every practice and every race will allow an athlete to learn and improve through quality experiences.
4. **Positive Perspectives.** Cross country ski athletes spend a lot more time training than racing. The phrase "enjoy the journey" is very true. Success at the end of the journey is great, but if an athlete is not learning or having fun with the process, then what is the point? Being able to shift negative thoughts into positive ones is a very useful skill to have.
5. **Gratitude.** The life of a competitive athlete can be all consuming. There are even times when being selfish is the right decision for an athlete in order to be at the top of their game. However, when sport and results become that athlete's whole identity, not just something they do, confidence and self-worth can plummet on the roller coaster that is racing. Practicing gratitude and giving back to the people and the community that are an athlete's greatest support will help keep things in perspective.

Coaching Strategies

Just like a physical training program allows athletes to practice getting stronger and faster, mental skills need to be practiced. A lot. Telling an athlete to “focus” at a race when they have never practiced focusing, is an unrealistic request that can be quite confusing. Luckily, mental skills are tools that can be practiced everywhere in life.

1. Incorporate a mental skill or theme into each physical ski practice.
2. Have a classroom session where the team learns about a mental skill such as distraction control, and then put what they have learned into play by delaying the start time of their next time trial or mixing up their equipment.
3. Have a practice where you challenge athletes to only focus on one part of their technique. When you say switch, they then shift focus to another part of their technique. And so on and so forth.
4. Any stressful situation can be a chance for an athlete to practice the skills you taught them.
5. Get creative, have fun, and try working on these skills yourself!

Finally, as a coach, it is important to know when you may be out of your depth. Often, even if you have a great relationship with your athletes, they may feel more comfortable talking to a third party such as a mental performance consultant. Know what resources are out there and don't be afraid to ask questions!





NUTRITION⁹

Basic nutritional principles are similar for both males and females. There are, however, some dietary considerations specific to female athletes that coaches should be aware of.

"When highly talented, motivated and well trained athletes gather for competition, the margin between victory and defeat is usually small. Attention to every detail can make that vital difference, and nutrition is a key element of the serious athlete's preparation."¹⁰

Nutrition for Athletes

Overall Energy Intake and Healthy Eating Patterns

Eating enough. Cross country ski training burns a lot of calories, and proper fueling is essential to support normal athlete growth and development, training, good recovery, motivation, and overall health (including the athlete's immune system). Many young athletes, and girls in particular, are prone to underfueling. This is due to poor planning, poor education, or a desire to restrict food to achieve a certain body type. Underfueling can have severe consequences for a female athlete's physical health. It can lead to problems like amenorrhea, hormonal disequilibrium, stress fractures, and growth interruption. Underfueling could lead to an eating disorder.

Healthy eating patterns. An overall healthy diet that includes adequate energy/calories to fuel activity, with adequate distribution of protein, carbohydrates, and healthy fats is essential for the athlete's overall health and performance. Girls tend to fall short on the following vitamins and minerals:

1. **Iron.** Endurance athletes, particularly females and adolescents, are at risk for reduced iron stores and anemia. Adolescents are growing rapidly and iron demands are high. Females also lose iron through menstruation. Anemia can result in fatigue and decreased aerobic capacity, excess fatigue outside of training, and difficulties recovering.
 - **Intense training increases iron demands**, and exercise can deplete iron stores through increased red blood cell production, tissue inflammation, sweating, and destruction of red blood cells with impact (foot strike).
 - **Diet or supplements?** Studies show that adolescents and women don't consume enough iron in their diets, and experts believe that this inadequate intake is a major contributor to iron deficiency. If dietary measures aren't effective for improving iron stores, iron supplementation is often considered. It's important to take these supplements under the guidance of a physician or dietitian. You'll find more information on the iron needs of athletes and food sources of iron [here](#).
2. **Calcium and Vitamin D.** Calcium and Vitamin D are necessary for proper bone mass and density and proper muscle firing. Poor calcium and Vitamin D status can lead to stress fractures, osteoporosis, and muscle cramps.



Sports Nutrition for Endurance Athletes

Coaches should help athletes develop good sports nutrition habits. The principles of sports nutrition aren't the same as healthy everyday eating, and sometimes recommendations can confuse athletes. For example, though sugar is discouraged in a healthy diet, athletes completing long workouts rely on simple sugar to fuel their muscles for activity. Though vegetables are highly recommended as part of a healthy diet, they aren't a good pre- or post-workout food. Consult the resources listed below to familiarize yourself with general sports nutrition principals that you can share with your athletes.

Coaching Strategies

1. Understand and discuss how calorie restriction can impact performance and have negative health consequences such as fatigue, irritability and injury.
2. Encourage eating food in all food groups and discourage restrictive diets.
3. During training (especially long workouts), encourage athletes to bring food or fluids, and make time for athletes to eat and drink.
4. If you have access to a specialist in nutrition or sports nutrition, have them speak to your athletes about healthy eating and eating for performance.
5. **Do not recommend dietary supplements** (vitamins/minerals; protein powders/etc.). Athletes should eat real food to achieve nutrient needs, unless a physician or dietitian recommends a dietary supplement to meet a deficiency (e.g., iron).
6. Refer athletes who show signs of disordered eating to a psychologist or dietitian or both.
7. Provide athletes and their families with evidence-based resources (see next bullet) about healthy weight, good nutrition and sports nutrition.
8. **Inform with reputable resources.** The Internet is rife with misinformation about diet and nutrition that will confuse both coaches and athletes. Here are evidence-based resources for coaches, parents, and athletes.
 - [Coaching Association of Canada](#) – provides excellent sports nutrition information.
 - [Australian Institute of Sport](#)
 - [Sports Dietitians Australia](#) is a good resource with fact sheets covering the latest sports nutrition information and advice on a wide range of topics.
 - [Gatorade Sports Science Institute](#). Provides practical advice for athletes based on research and education in hydration and nutrition science. Gatorade is a product, and it's good to be wary of sponsored sites like these, but the articles and scientific credentials of the authors are excellent, and information does not appear to be biased.
 - [Nancy Clark](#) is a US sports dietitian with many informative and evidence-based articles.
 - [Sheila Kealey](#) is a nutrition & health researcher and cross country ski coach [with sports nutrition resources](#) designed for endurance athletes.

PITFALLS TO BE AWARE OF

A) Female Athlete Triad

Cross country skiers are at risk for developing the Female Athlete Triad, which is defined as a combination of amenorrhea, osteoporosis and disordered eating. Coaches should learn to recognize Triad symptoms (outlined below) early. The health consequences of the Female Athlete Triad can go far beyond sport performance.

Disordered Eating

Disordered eating is alarmingly high in female skiers ([a recent study](#) found that almost 1/5 of female junior Norwegian cross country skiers had some form of disordered eating). Disordered eating has serious health consequences. Be aware of the warning signs and refer your athlete to a specialist. [The National Eating Disorders Association following Coach Toolkit](#) is an excellent resource.

Disordered eating can take the form of calorie, carbohydrate, protein and/or fat restriction, or it can take a more extreme form, such as anorexia nervosa or bulimia nervosa. Disordered eating can cause decreased bone mineral density, gastrointestinal problems, cardiovascular abnormalities, hormonal problems, and psychiatric problems, including depression, anxiety and even suicide. Female athletes who have a negative energy balance (consume less calories than they expend) inhibit their body's potential for optimal growth and reduce their capacity for peak performance. Please also refer to the nutrition section of this manual.

As a coach, you are on the front lines of your athletes' lives, and are often the first to notice subtle changes in mood, behavior and performance that may indicate an eating disorder. Educate yourself about risk factors to be able to

identify eating disorders and to know what steps to take to address the problem.¹¹

Psycho-social risk factors for disordered eating include:¹²

- A coach who employs a "win at all costs" approach rather than emphasizing skill development,
- Performance anxiety and fear of failure. Athletes who feel they are not performing at their peak capability may turn to altering their body composition. If no improvement in performance results, they may believe they didn't lose enough weight or body fat and they may step up their efforts even more; and
- Social influences, including family and peer/teammate pressure about athletic ability and performance.

Athletic Amenorrhea

Amenorrhea is the absence of a menstrual period in a woman of reproductive age. Menarche (the onset of the menstrual cycle) occurs at the later stages of puberty. The average age of menarche is 12 years, but occurs anywhere between 8 and 16 years of age. A "normal" menstrual period usually occurs every 28 days but it can vary from 22-36 days (counting from the first day of a period to the first day of the next). Each period usually lasts from 3 to 7 days. Irregular periods are common in early adolescence and are not usually cause for concern. It may take several years from the start of menstruation for periods to settle into a pattern.

Even after adolescence, many factors can affect the timing of menstruation. Low calorie intake, high training intensity, and previous menstrual function all affect the menstrual cycle. Inadequate calorie intake is the primary factor leading to reproductive irregularities, but low body weight and low body fat can also impact reproductive function.

It is important for coaches and athletes to understand the negative consequences of amenorrhea, including low bone mineral density, higher incidence of stress fractures, infertility, and lower levels of the hormones estrogen and progesterone. These outcomes can have lifelong and potentially fatal health consequences.

Finally, during menstruation, female athletes may avoid disclosing why they are not feeling well, particularly to male coaches¹³. An open and honest coach/athlete relationship will encourage athletes to be more forthcoming.

Osteoporosis

Disordered eating and menstrual dysfunction are common risk factors for osteopenia (a condition) and osteoporosis (a disease). These occur when bone mineral density is lower than normal, leading to an increased risk of fractures.

Disordered eating habits limit important nutrients, and menstrual dysfunction lowers estrogen levels, both of which affect normal bone formation, growth, and maintenance. This can lead to an increased risk of stress fractures. [Experts recommend](#) having female athletes with stress fractures evaluated for the Female Athlete Triad.



B) ACL Injuries

Female athletes have a higher incidence of anterior cruciate ligament (ACL) injuries than male athletes. ACL injuries often occur as a result of the athlete's own movements, rather than contact with another athlete.

Neuromuscular training and conditioning programs can significantly reduce the rate of ACL injury among women. Educate yourself and your athletes about ACL-injury prevention methods, such as stretching, strength training, balance and plyometric training¹⁴. [The PEP Program](#) is a good example of an ACL injury prevention program.

C) Vocal Chord Dysfunction¹⁵

Vocal chord dysfunction (VCD) commonly affects females who are active during puberty. Athletes have trouble breathing, particularly on inhalation. At first glance, it looks a lot like asthma. Asthma, however, involves trouble exhaling rather than trouble inhaling. With VCD, the vocal chords get things backwards. Instead of opening on the inhale, they close on the inhale.

Signs also include the athlete forming an "O" shape with their lips. Symptoms often occur during intensity or competition, when mental stress is a factor.

VCD is easier to tackle if it is caught early, before it becomes a habit and before it creates a psychological barrier for the athlete. Help the athlete to be calmer and to avoid shallow breathing when working hard. VCD can be treated with the following breathing exercise:

- first, take big inhales and long, slow exhales, then
- re-set with 5 short, explosive exhales through the nose.



RESOURCES & FURTHER READING

Coaches BC, Coaching Female Athletes, Coaches BC, online: www.coachesbc.ca/coachingfemaleathletes.

Coach.ca, Coaching Resources, Sports Nutrition, online: <http://www.coach.ca/sport-nutrition-s14783>

Harber, Vicki, The Female Athlete Perspective: Coach/Parent/Administrator Guide, Canadian Sport for Life, online: <http://canadiansportforlife.ca/sites/default/files/resources/The%20Female%20Athlete%20Perspective.pdf>.

Johnstone, Lori and Miller, Sydney, Actively Engaging Women and Girls: Addressing the Psycho-Social Factors, (2012) Canadian Association for the Advancement of Women and Sport and Physical Activity, online: www.caaws.ca/ActivelyEngaging/documents/CAAWS_CS4L_Engaging_Women.pdf.

National Eating Disorders Association, Coach and Trainer Toolkit, online: www.nationaleatingdisorders.org/sites/default/files/toolkits/coachandtrainertoolkit.pdf.

International Olympic Association, Nutrition for Athletes, (2012), online: http://www.olympic.org/documents/reports/en/en_report_833.pdf.

Breaking the Silence, Hannah Halvorsen, 2016 <https://www.youtube.com/watch?v=dAhCeUMJtbA>

Endnotes

1. Special thanks to Dr. Sharleen Hoar and Dr. Blair Evans for contributing to this section.
2. Special thanks to Kathy Davies for her insight into these points.
3. Special thanks to Dr. Blair Evans for his work in preparing and sharing the information that follows (Evans, 2015).
4. Johnson, D. W., & Johnson, F. (2006). Joining together: Group theory and group skills (9th ed.). Boston: Allyn & Bacon, in Evans, 2015.
5. Johnson, D. W., & Johnson, R. T. (1989). Cooperation and competition: Theory and research. Edina, MN: Interaction Book Company, in Evans, 2015.
6. Special thanks to Kathy Davies for her insight on this point.
7. Thanks to Kathy Davies for her insight on this point.
8. Special thanks to Katie McMahon for contributing the content in this section.
9. Special thanks to Sheila Kealey for contributing the content in this section.
10. International Olympic Association, Nutrition for Athletes, (2012), online: http://www.olympic.org/documents/reports/en/en_report_833.pdf.
11. Coach and Trainer Toolkit, National Eating Disorders Association, online: www.nationaleatingdisorders.org/sites/default/files/toolkits/coachandtrainertoolkit.pdf, p 3 [NEDA Toolkit].
12. Coaches BC, Coaching Female Athletes, Coaches BC, online: www.coachesbc.ca/coachingfemaleathletes [BC Manual], p 9.
13. Harber, V., & Beliveau, S. (2010). Female athlete development: 2010 Update. Victoria, BC: Canadian Sport Centres; in BC Manual, p 9.
14. American Thoracic Society (2006), Patient Information Series: What is Vocal Chord Dysfunction?, online: <http://lungcentre.vch.ca/docs/vcd.pdf>