Tips for Coaching the Female Athlete
“I am building a fire, and everyday I train, I add more fuel. At just the right moment, I light the match.”

Mia Hamm
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BE PREPARED! As a coach of female athletes, there are a number of items that the coach should carry with them in case of unforeseen circumstances. Generally, as athletes get older and more experienced, they also become more self-reliant and will be better prepared, but with younger skiers, it may be necessary to carry an emergency kit with items that will help in times of unexpected stress.

It is up to the coach to evaluate their group and decide what they feel is necessary. Here are a few suggestions for your race or training kit:

- Menstrual supplies (pads, tampons)
- Any medication that your female team members use during menstruation which are administered only with permission of their parents (e.g., Midol or Tylenol)
- Change of undergarments
- Extra ski suit
- T-shirt
- Underwear top(s) and bottom(s)
- Neck warmer or face protector
- Gloves, racing hat(s) and extra socks
- Contact solution and new lens case for storage
- Extra sunglasses
- Vaseline (not water based) or similar product applied to exposed skin in cold weather
- Sun block
- Needle and thread
- Nail clippers/scissors
- Safety pins, stain remover stick for out-of-town trips
- Hair brush, hair pins, elastics
- Water bottle and extra water bottle holder
- Gatorade or similar powder
- Chocolate, cereal bars, dried fruit in sealed container
- Power bar or similar products and/or gels
- Duct tape
- Plastic bags

Some of these items are not gender specific, but this “emergency kit” will meet the needs of both girls/women and boys/men. It would be a valuable exercise to have a meeting with your athletes and discuss and develop a “List of Horrors” or embarrassing or worrisome situations that could happen in training or at the competition site and to then have the group develop a plan of action for each of these circumstances. Prepare your athletes for every eventuality so they become independent individuals.
In the sport of cross country skiing, there are a number of factors that increase the risk of female athletes developing “the Female Athlete Triad” which is defined as a combination of amenorrhea, osteoporosis and disordered eating.

Endurance sports often have a high incidence of the above problems and the fact that cross-country athletes wear body-hugging Lycra increases the focus on body image. Athletes often know that low body weight can have a direct impact on maximum oxygen uptake (referred to as MVO2) which in turn positively affects performance. It is important that athletes maintain adequate body weight and nutrition to prevent developing the Female Athlete Triad. It is also important that the condition be recognized and detected early so that the negative effects can be minimized and so that the athlete can access professional medical intervention where needed.

It is a good idea to have an educational meeting for parents and athletes to inform them about the signs, symptoms, and long-term health effects of these potentially life-threatening conditions.

**Athletic Amenorrhea**
- Results from the stress of athletic participation
- The stress can be psychological or physiological or both
- Results in the cessation of normal monthly menses
- It is a symptom NOT a disease

**Possible Physiological Causes**
- High training volume or intensity
- Low body weight, body fat or weight fluctuations
- Inadequate nutrition
- Hormonal alternations due to changes in the hypothalamus

**Osteoporosis**
**Characterized by:**
- Low bone mineral density
- Bone fragility
- Increased risk of non-traumatic fractures (Wiggins and Wiggins 1997, p. 600)

If you feel that the athlete is having difficulties it is important to involve the athlete’s parent(s) or guardian and refer the athlete to their physician for diagnosis and treatment.
References


Coaches are in an excellent position to recognize and prevent eating disorders in their athletes and thus should insure that their knowledge of the topic is adequate and current. If you suspect that one of your athletes has an eating disorder it is appropriate to contact a dietician, family physician, psychologist or eating disorder clinic for further advice.

**Signs and Symptoms:**

**Anorexia nervosa**
- Dramatic weight loss
- Preoccupation with food, calories, and weight
- Wearing baggy or layered clothing
- Excessive exercise
- Mood swings
- Avoidance of food-related social activities

**Bulimia nervosa**
- Noticeable weight loss or gain
- Excessive concern about weight
- Bathroom visits after meals
- Depressed moods
- Strict dieting following by eating binges
- Increased criticism of one’s body
- Heath Consequences of Disordered Eating
- Delayed menarche
- Amenorrhea
- Stunting of growth
- Stress fractures
- Premature osteoporosis
- Disturbance of reproductive function
- Irreversible bone loss
- Psychological problems
- Cardiovascular and gastrointestinal problems (Wiggins and Wiggins 1997, p. 593.)

**Tips**
- Athletes are at a high risk for eating disorders due to the pressures placed on them by themselves as well as coaches (Bushman and Govero 2003, p. 53). However, they further state that female athletes are at a higher risk for this condition than male athletes
- Avoid any comments regarding weight and body size even if it is meant as flattery
It is important to encourage healthy eating habits in order to fuel the body adequately in the sporting environment.

Athletes that have experienced a traumatic event such as a death, the divorce of their parents, abuse or a move is at greater risk of developing an eating disorder.

Denial is often the first reaction from athletes with eating disorders.

Other food-related eating problems that the coach should be aware of are weight preoccupation, meal skipping, and frequent weighing.

**What should the coach do?**

- Set a time to talk
- Tell the athlete about your concerns
- Get the person to talk about these concerns
- Seek professional help where warranted
- When possible make appointments for the athlete with the professional
- Avoid conflicted or a battle of wills with this athlete
- Don’t place shame, blame, or guilt and avoid making insensitive remarks regarding their weight
- Avoid giving simple solutions or demand that the problem behaviour be stopped immediately
- Express your continued support
- Use self evaluation questionnaires as an assessment tool
- Emphasize the importance of long-term good nutrition
- Provide information about eating disorders
- Do not ask the athlete to leave the team or stop participation, unless so instructed by a specialist
- Treat the athlete like other team members and do not single them out in any way
- Avoid speaking with individuals that are not directly involved with this athlete or who are not professionals
- Act quickly (Weinberg and Gould 2003)

**For general information contact:**

National eating disorder information centre
200 Elizabeth Street
CW 1-328, Toronto, ON
M5G 2C4
416-340-4156
www.nedic.ca

Bulimia Anorexia Nervosa Association
Faculty of Human Kinetics
University of Windsor
Windsor, ON N9B 3P4
Tel: 519-253-4233 ext. 3063
Hotline: 519-253-7421
www.bana.ca
“A proper diet can’t make an average athlete elite, but a poor diet can make an elite athlete average” (Costill 1983).

Basic nutritional principles are similar for both males and females; however there are some dietary concerns that are specific to female athletes that the coach should be aware of.

- Iron
- Body composition control
- Calcium

Iron

Iron deficiency within the female athlete population is relatively common and can impair endurance performance (Hoshida et al. 1990; Drinkwater 2000). According to Noakes, there is evidence that exercise, especially running, causes increased iron losses from the body. Cross-country skiers often use large amounts of running for training during the dryland portion of their training year so this is a concern. Athletes, if not aware of their diet, may not receive the daily-recommended amount of iron resulting in reduced stores. It is therefore, necessary to monitor this nutritional factor. Blood analysis is very useful in evaluating the level of the body’s resources. It is necessary to have a baseline iron status measurement of both hemoglobin g/dl and serum ferritin mg/dl levels in order to assess athletes. Research suggests that during periods of heavy training loads, females would benefit from taking 60 mg of regular iron supplement daily in order to prevent iron deficiency (Yoshida et al, 1990, p. 279). Care should be taken to take one month off without the iron supplements, each year during the off-season.

Tips for Maintaining and Monitoring Iron Stores

- Athletic females should obtain a minimum of 16 mg of iron per day from their diet or through supplementation
- Check for numerical serum ferritin levels pre and post season. Serum ferritin levels for the average population range from 30-60 micrograms/L. For the very active athlete levels should be closer to the 60 micrograms/L.
- Check serum ferritin six weeks prior to peak performance competitions in order to have adequate time to replenish these stores if they are depleted
- Low serum ferritin levels can lead to anemia
- Proper diet with a good source of vitamin C at the same meal as the iron-rich food will improve iron absorption
- The Canadian Recommended Nutrient intake (RN should not be exceeded unless advised by a physician)
- Delay drinking caffeinated drinks until several hours after each meal to aid absorption
- Foods rich in iron include liver, red meat, egg yolk, legumes, dark green leafy vegetables and whole grains
Supplementation may be necessary (iron, zinc, vitamin B6, B12, and folic acid) to maintain and restore adequate blood status. There is a risk of constipation, stomach upset, nausea and other side effects when taking iron. Supplementation should cease when the athlete has an infection.

**Body Composition Control**

Many women experience a preoccupation with weight both due to societal pressures as well as from coaches, friends and family. It is important that everyone concerned realize that long-term caloric restriction can have negative health consequences such as fatigue, irritability, injuries, and ultimately lead to sports performance that is under par.

It is very important for female athletes to maintain adequate caloric intake to meet their daily energy requirements in order to maintain a healthy body weight. These include the energy costs of daily living as well as those of their sport, building and repairing muscle, growth and development in younger athletes and finally the costs of menstruation (Manore 1999, p. 549). However, if weight loss is necessary there are a number of tips that can help the process.

- The reduction of weight is desirable only if it leads to improved athletic performance while maintaining good health in order to maximize the athlete’s MVO2 parameters.
- The most desirable time to deal with weight loss would be in the transition and general preparatory phases due to the low volumes of training.
- During the specific preparation phase, a natural weight loss can occur because of the high volumes of training.
- This can be a very sensitive subject with both male and female athletes so should be approached with care due to the psychological ramifications that can potentially lead to eating disorders.

**Keys to Weight Loss**

1. Choose high carbohydrate foods rather than foods high in fat thereby reducing your fat intake
2. Eat a complete breakfast rather than a large dinner
3. Consume the majority of your calories early in the day; eating in the evening tends to result in fat deposition
4. Even a better alternative is to eat small nutritional meals or snacks frequently (5 – 6 times daily) rather than eating three larger meals
5. Avoid foods containing refined sugar as they have a high caloric content, but provide few nutrients such as desserts, candy and soft drinks
6. Avoid skipping meals and plan meals and snacks in advance
7. Continuous aerobic exercise will reduce fat stores and of course aid in performance.
8. Do not attempt to lose weight rapidly by crash dieting.
9. Why? Due to the restricted caloric intake, low energy may result which could impair training effectiveness and performance as well as result in injury.
10. For the same reasons, weight loss should not be attempted during the specific preparatory phase involving high volumes of training or during the competitive phase because performance may be compromised. Adequate fuel for training is of utmost importance.

Remember that female cross-country skiers have higher protein requirements than the average population (1.2 – 1.4 g/kg) and that they need at least 5 g/kg of carbohydrates. Their carbohydrate needs may increase during periods of high intensity or duration (Manore 1999, p. 549).

References


Calcium
Female athletes should be encouraged to consume adequate amounts of calcium in their diets to ensure adequate bone density and reduce the risk of developing osteoporosis. Calcium is also necessary for muscle contraction and may play a role in alleviating symptoms of premenstrual syndrome. Females participating in thin-build sports such as cross-country skiing often fail to get enough calcium in their diet (Manore 1999, p. 557).

- RDI for young women ages 9-18 years is 1300 mg/d
- RDI for females 19-50 years is 1200 mg/d (Girard Eberle 2000, p. 18)
- Inadequate calcium intake can increase the risk of poor bone health and stress fractures
- Good sources of dietary calcium are milk, yogurt, cheese, bones in canned sardines and salmon, dark green leafy vegetables and foods that have been fortified with calcium
- Athletes who are lactose intolerant should eat foods rich in calcium or take calcium supplements. Another alternative is calcium enriched soy drink. 250 mL of fortified soy drink contains 365 mg of calcium. Some types of yogurt are also tolerated by these individuals and can be an excellent source of calcium
- Absorption of calcium is reduced by tannins in tea, which bind with calcium in the intestine inhibiting absorption. Adding reduced fat milk to caffeinated coffee or tea can negate calcium loss due to caffeine intake
- Calcium citrate is the best supplemental form of calcium. Calcium carbonate requires an acidic environment to be dissolved and therefore should be taken at mealtime which stomach acid production increases
- In order to achieve optimal calcium absorption, you need adequate Vitamin D found in fish, egg yolks, and milk products; 200 to 400 IU (International Units daily is an adequate amount). Note: Vitamin D in products is destroyed by sunlight so keep any products with Vitamin D supplements in dark containers
- If you consume tofu make sure it contains calcium sulfate
- Remember that iron absorption can be impaired by high doses of calcium, so if you are taking iron supplements and calcium supplements, take them separately
- If you are troubled by premenstrual symptoms, it may help to take 1200 mg of calcium daily for a period of 2 to 3 months. Note any changes in your training diary to help the evaluation process (Girard Eberle2000, p. 89)
- There are a number of websites which provide easy ways to calculate daily calcium intake. One such site is http://www.creating health.psu.edu/osteo/calcium_counter.html
References


There are a number of excellent tools for monitoring nutrition on the Coaching Association of Canada website at http:www.coach.ca/eng/nutrition/resources.cfm.
“Train us like men, but treat us like women” Mia Hamm

It is very important that coaches provide an environment wherein girls have a satisfying sport experience. This will allow for an increased chance that they will continue to participate in skiing throughout their life and that we retain talented individuals who will go through our system to the elite level. Sport participation is not only necessary for healthy living, but also can allow for life lessons that will be valuable in the development of individuals that are not equipped to deal with life in general. The opportunities for girls and women in sport have increased dramatically, but there is still strong pressure to conform to traditional gender roles. The coach has a significant role to play in understanding and creating an environment in which girls have a positive experience.

Tip 1.
Girls drop out of sport by adolescence at a far greater rate than boys do. Self-esteem in girls peaks at approximately age 11 or 12 and is very low at age 14 or 15 which corresponds with their high adolescent drop out rate (Gilbert 2001, p. 123).

What can we do?

- It is imperative that programs build self-esteem and are enjoyable during this critical age period
- Coaches play a part in the self-perceptions of female athletes so be sure to give positive feedback to each individual at every practice
- There seems to be a high correlation between having fun and performing skills well to continuation in sport. If girls feel embarrassed by poor performance due to poor skill execution, they find their experience very negative
- Skill development is therefore imperative, so stress technical development and give personal instruction when possible
- Instruction can be facilitated by using video feedback and video modeling while providing correction and instruction being careful to maintain an encouraging environment
- It is very important to create opportunities for success
- Females respect clarity in the message from their coach
- Provide the girls with strong female role models showing them that it is possible to be successful in sport. Have an evening get together and invite some of the clubs elite female athletes to participate
Tip 2.
Females use goal setting more often than males and find it more effective.

What can we do?
- Encourage the use of SMART goal setting (Specific, Measurable, Attainable, Realistic, and Tangible)
- Give a seminar on the uses of goal setting and allow time for the girls to develop their skills giving them feedback during the process

Tip 3.
Female athletes enjoy working in smaller groups comprised of only females. Duda (1987) found that females are generally less competitive than men, which may have a bearing on this preference. They feel more at ease in this setting than in a comparative competitive type environment.

What can we do?
- If may be important to practice the mass and dual starts with female athletes and encourage assertive behaviour when trying for position for example. This may not come naturally to many girls
- Instruct technical skills in small groups of females if they express an interest to do so

Tip 4.
Female athletes tend to be more motivated by social rather than competitive motives (Flood and Hellstedt 1990, p. 160).

What can we do?
- Social concepts such as team work, being a member of the team, making friends and fun are important to stress in your program especially for younger athletes
- Give athletes time during practice to foster social connections
- Arrange social activities outside of sport

Tip 5.
Generally females are concerned with and wish to build relationships with their coaches (Schooler 2002, p. 54).

What can we do?
- Relate to the female athlete on a personal level
- It is advantageous to use a coaching style that is positive, democratic, and pay close attention to the use of communication as females seem to be attuned to the coach’s use of body language and tone of voice
- Being yelled at by their coach is not appreciated and is perceived as VERY negative
• Small things like remembering their birthday and getting to know their families can be helpful in building personal relationship
• If you have a tendency to lose your temper in difficult situations, walk away and revisit the issue when you have control over your emotions
• Females are more sensitive to and internalize criticism. Think before you speak!
• However, always be cognizant of the parameters and restrictions of the coach/athlete relationship. You must guard against any action that has the slightest appearance of harassment

**Tip 6.**
Females often express their emotions more openly.

**What can we do?**
- Outline what type of behaviour is both acceptable and unacceptable
- A team or individual meeting dealing with the subject of emotion will help the coach in dealing with and preventing emotional outbursts more effectively

**Tip 7.**
Females excel in verbal skills and want to know the justification for practice components (King et al. 1992).

**What can we do?**
- Have explanations ready when athletes ask for the reasoning behind the use of certain types of training, travel plans, tactics etc.
- Be prepared!

**Tip 8.**
At the elite level an athlete’s psychological profile is very similar regardless of gender. Some of the qualities that have been identified as necessary for successful performance are: aggressiveness, assertiveness, determination, leadership, competitiveness and self-confidence.

**What can we do?**
- As coaches we have to foster these qualities in all our athletes, but realize that due to socio-cultural influences, some female athletes will need greater guidance and direction than others in developing these characteristics

**Newsflash!**
When reviewing gender research it appears that females and males are more similar than different, and that regardless of gender, it is imperative that the coach get to know the athletes as distinctive individuals and coach them accordingly.
References


Proud supporter of cross-country skiing development

Canadian Pacific