

INTRODUCTION AND BACKGROUND

Canada Artistic Swimming is committed to the goal of fostering a sport culture that prioritizes athlete psychological and physical safety and well-being, and performance success. A safe and inclusive sport culture also addresses the well-being of other participating members, including coaches, officials, volunteers, sport administrators, and additional support personnel embedded in and interacting with the sport environment.

Consistent with this goal, a critical component of Canada Artistic Swimming's aims to implement safe sport policies and practices involves specifically addressing challenges that athletes experience related to body image and the risk of disordered eating and eating disorders. The Positive Body Image Guidelines are designed to establish a clear understanding amongst all members of the Canada Artistic Swimming community of (i) the risks for negative body image experiences that athletes may be exposed to within the sport, (ii) the unique physiological demands placed on artistic swimming athletes and associated nutritional considerations, and (iii) adaptive policies and practices to support positive body image, a safe sport environment and prevent negative outcomes.

There is growing recognition of the importance of positive sport experiences as facilitative of performance outcomes, as well as the risks that athletes are exposed to with regard to negative body image that can have profound emotional, social and physical repercussions. This awareness makes attention to fostering sport cultures in which positive body image is actively cultivated a critical priority. Particularly in sports in which a traditional focus on body weight and shape has been embedded in the system of evaluation, and thus has become perceived to be intertwined with performance outcomes, as is the case with artistic swimming, thorough and sensitive attention to these issues is needed.

The physical and aesthetic demands on artistic swimming athletes are complex. The multi-faceted judging system within the sport involves evaluation of technical skill, synchronization, and artistic impression in which an emphasis on aesthetic appearance and matching physiques between teammates is undeniable (Robertson & Mountjoy, 2018). The heightened attention and pressures related to body composition, appearance, weight, and shape that this context can place on athletes and coaches must be acknowledged. In addition, the language, support staff can have a significant impact on athletes' perceptions of and behaviours related to their bodies. Therefore, there is a need for all participants in artistic swimming training and competition environments to be cognizant of the risks for compromised physical and psychological health that certain body-focused practices can pose, as well as the communication, behaviours, and policies that are supportive of positive body image and protective against vulnerability to disordered eating and eating disorders.

RATIONALE

The Positive Body Image Guidelines are intended to be used as an educational resource as well as actively applied in artistic swimming training and competition environments in Canada, with all ages and competitive levels. It is acknowledged that research in the areas of body image, disordered eating, and eating disorders in sport continues to develop, and this document will continue to evolve as new knowledge and insights are generated in the field. The guidelines aim to set a foundation for ensuring that artistic swimming can provide a safe and positive sport experience that allows all participants to thrive and reach their performance and personal potentials. It is expected that all stakeholders, including Canada Artistic Swimming, actively engage and align their practices with the recommendations outlined herein.



BODY IMAGE

Body image comprises an individual's thoughts, perceptions, beliefs and attitudes about one's physical appearance, including body weight, shape, and size (Cash, 2004). Body image can be positive or negative, and the emphasis throughout these guidelines is on how to foster positive body image amongst artistic swimming athletes and shift toward a sport culture that embraces body inclusivity.

Positive body image is a general respect and positive view of one's body that includes a) appreciation of its appearance and functions, b) acceptance and admiration of one's body, c) feeling confident in one's body, d) and a focus on one's physical assets rather than imperfections (Tylka & Wood-Barcalow, 2015). A focus on body appreciation, which is appreciating the functionality and health of the body (Tylka & Wood-Barcalow, 2015), is also a relevant concept for athletes, a group in which high demands on the capability and functioning of the body is inherent.

Positive body image is associated with physical and psychological health benefits, including self-care behaviours and higher self-esteem. It is also protective against negative outcomes such as depressive symptoms, body dissatisfaction and drive for thinness, which are psychological factors that can motivate harmful dieting behaviours and disordered eating (Gillen, 2015). Body appreciation is positively related

to intuitive eating (making eating choices based on the body's needs without being influenced by diet culture), self-compassion, positive emotions, and adaptive health-related behaviours (Hahn oh et al., 2012; Homan & Tylka, 2015; Tylka & Kroon Van Diest, 2013). Unfortunately, athletes in aesthetic sports may be prone to negative body image because of heightened pressures to conform to a specific, and for some unattainable, body ideal (Greenleaf et al., 2009). Negative body image is associated with increased risk for experiencing emotional distress, low self-esteem, and disordered eating attitudes (Verplanken & Velsvik, 2008).

Navigating the circumstances of athlete body image, physical appearance, weight management, and performance can be challenging and complex. A straightforward or "one approach for all" is unlikely to be appropriate. However, to combat engrained practices and attitudes toward athletic bodies that may put the physical and mental health of athletes at risk, consideration of the specific risks for artistic swimming athletes, of communication, language and assessment practices that influence body image, and of key nutrition and performance concepts is critical to understand the recommendations outlined in these guidelines. See Appendix B for a summary of the guidelines included herein additional examples of how to prevent negative body image in the sport context.

AESTHETICALLY JUDGED SPORTS

Athletes participating in aesthetically judged sports, including artistic swimming, gymnastics, and figure skating, among others, are at greater risk for experiencing negative body image, body dissatisfaction, disordered eating, and clinically diagnosable eating disorders (Taek, 2005; Douka et al., 2008; Ferrand et al. 2007). Aesthetically judged refers to the concept that the appearance of the body, including weight and shape, is perceived as relevant to key performance outcomes of the sport. While body shape may not be explicitly identified as a judged element in an artistic swimming performance, the overall synchronization, and thus uniformity between the bodies within a team is relevant to the overall artistic impression of the performance. These circumstances can contribute to cultures within training and competition environments in which appearance and body composition become a focus for coaches and athletes (Robertson et al., 2014). In turn, such circumstances contribute to the risk of harmful attitudes and behaviours if coaches, athletes, and other support personnel are not sensitive to the safe implementation and management of body-focused practices.

In addition to the influence of performance outcomes on attention to body weight and shape in aesthetically judged sports, form fitting uniforms and scrutiny from coaches, judges, family members, and peers can also have a significant influence on athletes' body image (Petrie & Greenleaf, 2012). Those athletes who do not perceive their body or appearance as meeting the standards of the sport or expectations of influential individuals in the sport environment may experience negative body image and the associated physical and psychological repercussions.



RISKS FOR THE DEVELOPMENT OF DISORDERED EATING AND EATING DISORDERS

Acknowledging the risk for athletes developing disordered eating and eating disorders is important for being able to prevent these physically and psychologically harmful conditions and identify warning signs so that athletes can be supported in accessing appropriate care resources. Disordered eating exists on a continuum of severity regarding maladaptive eating and food-related behaviours, and preoccupation and psychological distress associated with body weight and shape and eating. If symptoms reach a threshold of severity and frequency such that significant physical and psychological harm is occurring, a diagnosis of an eating disorder such as anorexia nervosa, bulimia nervosa, or an other specified feeding and eating disorder may be applicable (American Psychiatric Association, 2013). Common disordered eating behaviours include restrictive eating, extreme dieting, excessive exercise to control weight and shape, vomiting, laxative use, and binge eating. Of concern in addition to the negative physical outcomes that result from these behaviours (e.g., insufficient energy availability, becoming underweight, damage to digestive and cardiovascular systems) are the distressing thoughts and emotions that can motivate them.

A range of risk factors in sport have been linked to athletes developing disordered eating thoughts and behaviours, including a body weight and shape-preoccupied coaching style, injuries, performance-related pressure to regulate body weight and shape, and over-training (Bratland-Sanda & Sundgot-Borgen, 2013). The consequences of experiencing eating disorders include serious physical and psychological effects. Delayed puberty and improper bone development and health can significantly increase the risk of musculoskeletal injury, and depression, anxiety, and suicide risk are heightened (Melin et al., 2014; Mountjoy et al., 2018).

Unfortunately, disordered eating and eating disorders can be very difficult to identify in athletes as the symptoms may not be visible to others and/or may be effectively hidden for prolonged periods. In addition, in competitive sport cultures there is often a normalization and validation of particular body shapes, reinforcement of characteristics such as "self-control" when it comes to body-related practices, and an emphasis on "healthy eating" that may be masking harmful restrictive behaviours.

Key signs of an athlete experiencing disordered eating or harmful thoughts and attitudes related to body image include the following: rigid eating rules or hyper-focus on "healthy eating"; extreme perfectionistic thinking and behaviours; intense fear of weight gain; verbal expressions of negative body image or consistently comparing one's body to others; low mood; self-worth appearing to be dependent on body weight, shape, appearance, and sport achievements; weight loss or significant weight fluctuations; low energy, weakness, and fatigue; fainting; not eating with others; frequent bone-related injuries; inadequate fueling before and/or after training and competitions; excessive exercise or training outside of planned sport training. See Appendix A for additional resources regarding eating disorders in athletes.



BODY-RELATED ASSESSMENTS AND PRACTICES

Body composition assessments involve the measurement of physical characteristics, such as body mass, and proportions of fat and muscle mass to inform, outcomes. Data collected to inform a body composition assessment may include height, weight, limb lengths, bone breadths, arm span, girths, and/or skin folds depending on the assessment method (Kasper et al., 2021).

The purpose of body composition assessment in the sport context is a sensitive topic that must be carefully considered due to the potential for the practices surrounding the assessments and interpretations of the data to have a significant impact on an athlete's body image. At the time that these guidelines were created, evidence that body composition and body weight are key performance indicators in artistic swimming is scarce and inconclusive. In addition, the interpretation of body composition assessments and the physical characteristics and training required for optimal health and performance are highly individual, making generalized conclusions regarding "ideal" measurements and applying these to a group of athletes entirely inappropriate. Therefore, the primary purpose for body composition assessments should be to monitor the physical health of individual athletes, including identifying problematic weight loss and noteworthy changes in fat mass to muscle mass ratios, and monitoring healthy growth and development so that training, competition, and recovery programs can be tailored appropriately.

The following guidelines should be applied in all contexts in which body composition assessments are being conducted (Benardot, 2002; Robertson et al., 2014):

- A health professional (i.e., registered dietician, physician) or anthropometrist should be the only people monitoring athletes' weight and body composition
- A health professional should be the only individual interpreting and conveying data collected from body composition assessments to athletes
- Body composition assessment data should be treated as confidential and shared with external parties (including coaches and family members) only with the explicit consent of the athlete
- Body composition assessments should be conducted on an individual and private basis
- Body composition assessments should only be conducted after the delivery of adequate education about the process and purpose of the testing and how the data collected will be used, and once written consent has been received from the athlete or from the parent/guardian if the athlete is under the age of 18
- The purpose of body composition assessments should be to inform dietary and training plans to either sustain positive changes or reverse negative changes that impact the health and well-being of the athlete
- No punitive action should be taken against an athlete as a result of the data collected from body composition assessments
- Canada Artistic Swimming strongly recommends against mandatory body composition assessments or coaches or staff weighing athletes in the daily training environment



KEY CONSIDERATIONS REGARDING NUTRITION AND PERFORMANCE

The physiological demands of artistic swimming can be intense and complex as it is a sport that requires aerobic endurance, anaerobic power, musculoskeletal strength, agility and flexibility in the production of precisely synchronous movements in a zero-gravity environment (Robertson et al., 2014). Given that between 40-50% of the sport is performed underwater, exceptional cardiovascular strength is also needed to maximize breath control. Adequate fueling and proper nutrition are critical to support an athlete's ability to meet these demands, as well as to support healthy growth and maturation and overall physical health.

Given the range of misinformation and conflicting philosophies that athletes may be exposed to when it comes to nutrition and fueling their bodies for sport, it is strongly recommended that a qualified nutrition professional be accessed to assist with any creation and implementation of nutrition plans in the sport environment. In addition, care should be taken to ensure that a nutrition plan that may be aimed at optimizing an athlete's health and performance not outrightly or inadvertently promote restrictive eating or a preoccupation with body weight and shape.

Attention to proper nutrition and adequate fueling is important because insufficient energy consumption can have profoundly negative effects on performance and critical health functions of the body. Relative Energy Deficiency in Sport (RED-S) is a syndrome resulting from energy deficiency such that health and the activities required to support daily living and sport participation become impaired. The physical and psychological health effects of RED-S are broad, including impairment in bone health, cardiovascular function, menstruation, and immune system function (Mountjoy et al., 2018). See Figures 1 and 2 for the symptoms and health consequences of RED-S. Elements of RED-S were previously described as the Female Athlete Tried (which outlines the impact on bone health, menstrual function, and eating issues associated with under-fueling in female athletes); however, RED-S more accurately captures the broader array of health functions that are impacted by energy deficiency and acknowledges that male athletes also experience the syndrome. Artistic swimming athletes are likely at an increased risk for low energy availability (i.e., not consuming enough dietary energy to meet the energy output

needed for training and competition) and RED-S due to training demands and the focus on leanness that has been present within the sport (Robertson & Mountjoy, 2018).

Figure 1. HEALTH CONSEQUENCES OF RELATIVE ENERGY DEFICIENCY IN SPORT



Figure 2. SYMPTOMS OF RELATIVE ENERGY DEFICIENCY IN SPORT



COMMUNICATION AND LANGUAGE

An athlete's perceptions and feelings related to their body can be significantly impacted by influential individuals in their environment, including coaches, peers, parents, judges, and staff. Research has found that critical comments and pressure from coaches regarding body weight and appearance can strongly negatively influence athletes' body image and disordered eating behaviours (Beckner & Record, 2016; Ferrand et al. 2007). Therefore, mindfulness and care regarding how body weight, shape and appearance are spoken about is necessary, even when intentions are positive or neutral. For example, a comment such as "this athlete has the perfect body for artistic swimming" can be interpreted negatively and contribute to the belief that only the "perfect body" is acceptable and required to be successful.

In addition, athletes in aesthetically judged sports tend to hold the belief that a lower weight or specific body shapes enhance sport performance, which can have negative consequences for mental and physical health (Byrne & McLean, 2002). The language used to speak about and toward an athlete and their body can de-emphasize the focus on body weight and shape and promote positive body image and a focus on objective performance outcomes. Practical recommendations of appropriate communication and language with these concepts in mind are found below and additional examples and recommendations are provided in Appendix B:

• Significant effort should be made to avoid critiquing or commenting on the physical appearance, body weight, shape, or size of an athlete, regardless of whether the intent of the message is to be "truthful" or "helpful". Functional and supportive messaging that encourages athletes to care for their bodies and otherwise prioritize physical and mental health should be considered.

- Any terminology that relates to body shaming or language that is disrespectful of any particular body type should not be used in the sport environment, including directly to or about an athlete (e.g., "fat", "overweight", "large", "heavy", "skinny", or "stick thin", etc.). Even apparently simple comments or certain word choices can have an impact on creating a culture that contributes to negative body image.
- Rather than praise or criticism for body appearance, weight, shape, or size, language that focuses on performance, skill execution, power, strength, fitness, and other attributes that are not appearance-based (e.g., teamwork, leadership, persistence) should be used.
- Avoid conversations with coaches, staff, and other athletes about the bodies or eating habits of athletes or staff, particularly in front of athletes. If such conversations are necessary for performance, well-being, or other health-related reasons they should be handled sensitively and privately with the involvement of an appropriate health professional.
- If you are a member of the sport community who is in a position of power, it is important to be mindful that your thoughts and feelings about your body appearance, shape, size, weight, and eating behaviours, and how you speak about them will impact others.
- In all communication and language choices, be thoughtful about personal circumstances, cultural differences, individual characteristics and experiences that may influence the interpretation of messages. These are a range of factors that can lead to messages being received differently to how they are intended.



PREVENTION

In addition to thoughtful communication and language, many steps can be taken to prevent and appropriately address disordered eating and eating disorders and promote positive body image in sport. For example, the use of screening tools to identify vulnerable athletes, dietician support, investment in mental health literacy for all sport participants, and access to educational resources can have a positive impact. Importantly, buy in from all members of the sport community to challenge cultural norms and traditions and change practices that put athletes' physical and mental health at risk is necessary to prevent harm.

Consider the following strategies for facilitating the prevention of disordered eating and eating disorders among athletes (Joy et al., 2016; Kroshus, 2015):

- Conduct annual pre-participation examinations by a qualified sport medicine physician and mental health clinician with all athletes to detect any potential medical or psychological risk factors that can be supported by early intervention.
- **Develop** awareness of the symptoms of disordered eating and eating disorders, and the factors that put athletes at risk for experiencing these issues.
- Facilitate athletes' access to a registered sports dietician for any matters related to nutrition for optimal health and sport performance.
- Be aware of referral avenues to appropriate health professionals (e.g., mental health clinician and/or physician) in order to support athletes in help-seeking for disordered eating or other psychological or physical concerns.
- **Encourage** help-seeking for all mental health concerns, including disordered eating and eating disorders.
- Openly communicate and dialogue with athletes about the importance of adequate fueling, nutrition, and preventing injury for optimal performance and well-being.

The following factors can help promote positive athlete development in general, including positive body image:

- **Positive**, person-oriented coaching style through which health and well-being, alongside performance, are prioritized.
- A culture within the sport environment that is positive and supportive of healthy attitudes toward all body shapes and sizes.
- Coaches and other influential individuals who emphasize factors related to performance and generalized skill development and success in multiple domains of life, such as motivation, commitment, effort, teamwork and collaboration, instead of body appearance, weight, shape, or size.



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Questions regarding these guidelines can be directed to Canada Artistic Swimming's safe sport office at feedback@artisticswimming.ca

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REFERENCES

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). https://doi.org/10.1176/appi.books.9780890425596

Beckner, B. N., & Record, R. A. (2016). Navigating the thin-ideal in an athletic world: Influence of coach communication on female athletes' body image and health choices. Health Communication, 31(3), 364–373. https://doi.org/10.1080/10410236.2014.957998

Benardot, D., & Benardot, D. (2002). Advanced sports nutrition (2nd ed.). Human Kinetics.

Bratland-Sanda, S., & Sundgot-Borgen, J. (2013). Eating disorders in athletes: Overview of prevalence, risk factors and recommendations for prevention and treatment. European Journal of Sport Science, 13(5), 499–508.

https://doi.org/10.1080/17461391.2012.740504

Byrne, S., & McLean, N. (2002). Elite athletes: Effects of the pressure to be thin. Journal of Science and Medicine in Sport, 5(2), 80–94.

https://doi.org/10.1016/S1440-2440(02)80029-9

Cash, T. F. (2004). Body image: Past, present, and future. Body Image, 1(1), 1-5.

https://doi.org/10.1016/S1740-1445(03)00011-1

Douka, A., Skordilis, E., Koutsouki, D., & Theodorakis, Y. (2008). Prevalence of eating disorders among elite female athletes in aquatic sports. Inquiries in Sport & Education, 6(1), 87–96.

Ferrand, C., Magnan, C., Rouveix, M., & Filaire, E. (2007). Disordered eating, perfectionism and body-esteem of elite synchronized swimmers. European Journal of Sport Science, 7(4), 223–230.

https://doi.org/10.1080/17461390701722168

Gillen, M. M. (2015). Associations between positive body image and indicators of men's and women's mental and physical health. Body Image, 13, 67–74. https://doi.org/10.1016/j.bodyim.2015.01.002

Greenleaf, C., Petrie, T. A., Carter, J., & Reel, J. J. (2009). Female Collegiate Athletes: Prevalence of Eating Disorders and Disordered Eating Behaviors. Journal of American College Health, 57(5), 489–496. https://doi.org/10.3200/JACH.57.5.489-496

Hahn Oh, K. H., Wiseman, M. C., Hendrickson, J., Phillips, J. C., & Hayden, E. W. (2012). Testing the Acceptance Model of Intuitive Eating With College Women Athletes. Psychology of Women Quarterly, 36(1), 88–98. https://doi.org/10.1177/0361684311433282

Homan, K. J., & Tylka, T. L. (2015). Self-compassion moderates body comparison and appearance self-worth's inverse relationships with body appreciation. Body Image, 15, 1–7.

https://doi.org/10.1016/j.bodyim.2015.04.007

Joy, E., Kussman, A., & Nattiv, A. (2016). 2016 update on eating disorders in athletes: A comprehensive narrative review with a focus on clinical assessment and management. British Journal of Sports Medicine, 50(3), 154–162.

https://doi.org/10.1136/bjsports-2015-095735

Kasper, A. M., Langan-Evans, C., Hudson, J. F., Brownlee, T. E., Harper, L. D., Naughton, R. J., Morton, J. P., & Close, G. L. (2021). Come Back Skinfolds, All Is Forgiven: A Narrative Review of the Efficacy of Common Body Composition Methods in Applied Sports Practice. Nutrients, 13(4), 1075.

https://doi.org/10.3390/nu13041075

Kroshus, E. (2015, February 23). 10 Eating Disorder Awareness Tips for Coaches and Athletics Professionals. http://www.ncaa.org/health-andsafety/sport-science-institute/10-eatingdisorderawareness-tips-coaches-and-athletics-professionals

Melin, A., Torstveit, M. K., Burke, L., Marks, S., & Sundgot-Borgen, J. (2014). Disordered eating and eating disorders in aquatic sports. International Journal of Sport Nutrition and Exercise Metabolism, 24(4), 450–459.

https://doi.org/10.1123/ijsnem.2014-0029

Mountjoy, M., Sundgot-Borgen, J., Burke, L., Ackerman, K. E., Blauwet, C., Constantini, N., Lebrun, C., Lundy, B., Melin, A., Meyer, N., Sherman, R., Tenforde, A. S., Torstveit, M. K., & Budgett, R. (2018). International Olympic Committee (IOC) Consensus Statement on Relative Energy Deficiency in Sport (RED-S): 2018 Update. International Journal of Sport Nutrition and Exercise Metabolism, 28(4), 316–331.

https://doi.org/10.1123/ijsnem.2018-0136

Petrie, T. A., & Greenleaf, C. A. (2012). Eating Disorders in Sport: From Theory to Research to Intervention. In G. Tenenbaum & R. C. Eklund (Eds.), Handbook of Sport Psychology (pp. 352–378). John Wiley & Sons, Inc. https://doi.org/10.1002/9781118270011.ch16

Robertson, S., & Mountjoy, M. (2018). A Review of Prevention, Diagnosis, and Treatment of Relative Energy Deficiency in Sport in Artistic (Synchronized) Swimming. International Journal of Sport Nutrition and Exercise Metabolism, 28(4), 375–384. https://doi.org/10.1123/ijsnem.2017-0329

Robertson, S., Benardot, D., & Mountjoy, M. (2014). Nutritional Recommendations for Synchronized Swimming. International Journal of Sport Nutrition and Exercise Metabolism, 24(4), 404–413. https://doi.org/10.1123/ijsnem.2014-0013

Robertson, S., Benardot, D., & Mountjoy, M. (2014). Nutritional Recommendations for Synchronized Swimming. International Journal of Sport Nutrition and Exercise Metabolism, 24(4), 404–413. https://doi.org/10.1123/ijsnem.2014-0013

Taek, L. D. (2005). Eating Attitudes, Weight Concerns, Dietary Intake, and Menstruation Among Korean Female Elite Athletes. Nutritional Sciences, 8(2), 118–124.

Tylka, T. L., & Kroon Van Diest, A. M. (2013). The Intuitive Eating Scale-2: Item refinement and psychometric evaluation with college women and men. Journal of Counseling Psychology, 60(1), 137–153. https://doi.org/10.1037/a0030893

Tylka, T. L., & Wood-Barcalow, N. L. (2015). What is and what is not positive body image? Conceptual foundations and construct definition. Body Image, 14, 118–129.

https://doi.org/10.1016/j.bodyim.2015.04.001

Verplanken, B., & Velsvik, R. (2008). Habitual negative body image thinking as psychological risk factor in adolescents. Body Image, 5(2), 133–140. https://doi.org/10.1016/j.bodyim.2007.11.001



Education, Intervention, and Treatment Resources

Many resources are available to support athletes' and other sport community participants experiencing body image challenges and disordered eating. Accessing support that is sport specific, professional, and appropriate to the specific needs of the individual can be of significant benefit. The following is a list of suggested education, intervention, and treatment resources relevant to the Canadian context:

Education:

- Body Image and Sport: https://www.bodysense.ca/tools
- National Eating Disorder Information Centre (NEDIC): https://www.nedic.ca
- Association for Applied Sport Psychology: https://appliedsportpsych.org/resources/health-fitness-resources/body-image-and-physical-activity
- Body Project Collaborative: http://www.bodyprojectsupport.org/home
- Mental health literacy workshops for athletes, coaches, parents, and sport organizations: https://www.ccmhs-ccsms.ca/workshops*
- Coaching Association of Canada Mental Health Module: https://coach.ca/mental-health-sport
- Coaches Association of Ontario SafeSport 101 Playbook: https://safesport101.coachesontario.ca

- Eating Disorders in Sport: https://www.ncaa.org/sports/2014/11/4/mind-body-and-sport-eating-disorders.aspx
- Information for parents of a child experiencing an eating disorder: https://nedic.ca/helping-your-child

Intervention and Treatment Resources:

- Mental Performance Consultant: www.cspa.acps.com
- Canadian Centre for Mental Health and Sport (CCMHS): https://www.ccmhs-ccsms.ca*
- Consult your provincial psychological association to find a psychologist in your area (e.g. www.psych.on.ca)
- Sport dietician in your area (use filters such as athlete or sport): https://members.dietitians.ca/DCMember/s/find-dietitian?language=en_US
- Sports medicine doctor in your area: https://casemacmse.org/public-directory/find-a-sport-medicine-doctor

Athletes, coaches, parents, and support staff can contact Canada Artistic Swimming at (feedback@artisticswimming. ca) if they have any questions or concerns.

*It is acknowledged that a primary contributor to the development of these guidelines (Rachel Jewett) has a professional affiliation with the Canadian Centre for Mental Health in Sport as a supervised mental health clinician

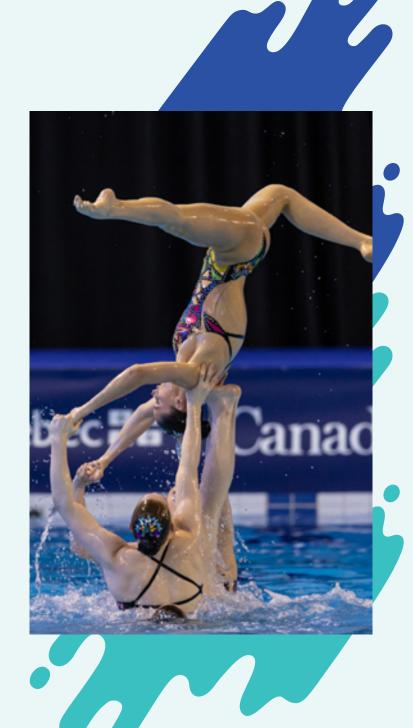


APPENDIX B

Guidelines and Recommendations for Navigating Body-Related Concerns in the Artistic Swimming Context: Considerations for Language, Policies, and Practices

Guidelines for Body composition assessments:

- A health professional (i.e., registered dietician, physician) or anthropometrist should be the only people monitoring athletes' weight and body composition
- A health professional should be the only individual interpreting and conveying data collected from body composition assessments to athletes
- Body composition assessment data should be treated as confidential and shared with external parties (including coaches and family members) only with the explicit consent of the athlete
- Body composition assessments should be conducted on an individual and private basis
- Body composition assessments should only be conducted after the delivery of adequate education about the process and purpose of the testing and how the data collected will be used, and once written consent has been received from the athlete or from the parent/guardian if the athlete is under the age of 18
- The purpose of body composition assessments should be to inform dietary and training plans to either sustain positive changes or reverse negative changes that impact the health and well-being of the athlete
- No punitive action should be taken against an athlete as a result of the data collected from body composition assessments
- Canada Artistic Swimming strongly recommends against mandatory body composition assessments or coaches or staff weighing athletes in the daily training environment



GUIDELINES FOR BODY POSITIVE LANGUAGE AND COMMUNICATION PRACTICES:

- Significant effort should be made to avoid critiquing or commenting on the physical appearance, body weight, shape, or size of an athlete, regardless of whether the intent of the message is to be "truthful" or "helpful". Functional and supportive messaging that encourages athletes to care for their bodies and otherwise prioritize physical and mental health should be considered.
- Any terminology that relates to body shaming or language that is disrespectful of any particular body type should not be used in the sport environment, including directly to or about an athlete (e.g., "fat", "overweight", "large", "heavy", "skinny", or "stick thin", etc.). Even apparently simple comments or certain word choices can have an impact on creating a culture that contributes to negative body image.
- Rather than praise or criticism for body appearance, weight, shape, or size, language that focuses on performance, skill execution, power, strength, fitness, and other attributes that are not appearance-based (e.g., teamwork, leadership, persistence) should be used.

- Avoid conversations with coaches, staff, and other athletes about the bodies or eating habits of athletes or staff, particularly in front of athletes. If such conversations are necessary for performance, well-being, or other health-related reasons they should be handled sensitively and privately with the involvement of an appropriate health professional.
- If you are a member of the sport community who is in a position of power, it is important to be mindful that your thoughts and feelings about your body appearance, shape, size, weight, and eating behaviours, and how you speak about them will impact others.
- In all communication and language choices, be thoughtful about personal circumstances, cultural differences, individual characteristics and experiences that may influence the interpretation of messages. These are a range of factors that can lead to messages being received differently to how they are intended.

GUIDELINES FOR THE PREVENTION OF DISORDERED EATING AND EATING DISORDERS IN ATHLETES:

- Conduct annual pre-participation examinations by a qualified sport medicine physician and mental health clinician with all athletes to detect any potential medical or psychological risk factors that can be supported by early intervention.
- Develop awareness of the symptoms of disordered eating and eating disorders, and the factors that put athletes at risk for experiencing these issues.
- Facilitate athletes' access to a registered sports dietician for any matters related to nutrition for optimal health and sport performance.
- Be aware of referral avenues to appropriate health professionals (e.g., mental health clinician and/or physician) in order to support athletes in help-seeking for disordered eating or other psychological or physical concerns.
- Encourage help-seeking for all mental health concerns, including disordered eating and eating disorders.
- Openly communicate and dialogue with athletes about the importance of adequate fueling, nutrition, and preventing injury for optimal performance and well-being.

ADDITIONAL APPLIED EXAMPLES OF HOW TO PREVENT NEGATIVE BODY IMAGE:

1) If food, nutrition, and eating practices arise in conversation the language used should be neutral and focused on encouraging a balanced diet. Athletes should also be encouraged to view and speak about food in these ways. For example, instead of referring to certain foods as "good", "bad", or "a guilty pleasure", which imply a moral dimension to eating practices, the focus should be on eating a variety of foods that convey nutritional benefits as well as enjoyment based on personal preferences.

2) When eating in a group setting within the sport environment (e.g., team dinners or meals/snacks eaten together while travelling to competitions), commenting on athletes' food choices and/or eating behaviours should be avoided. Whether comments are intended to be critical or positive, directing attention to these behaviours can contribute to overconcern with body image, a preoccupation with food and eating, shame, or comparisons that may have a negative impact. If a coach or other support personnel notice behaviours that are concerning from a disordered eating perspective in these contexts, these concerns should be discussed with the individual athlete in a private and sensitive manner.

3) To normalize and support adequate fueling and adaptive nutritional practices for sport performance and health, coaches should schedule specific breaks during training sessions for athletes to eat and rehydrate. Athletes should be strongly encouraged to bring food to training sessions to consume during these breaks and should be expected to fuel adequately before and after training and competitions as part of a regular routine.

4) Comments that use the body or adjectives that imply a focus on body weight, shape, or appearance as a coaching tool or feedback method should be avoided. For example, statements such as "heavy in the water", "not looking fit" should be replaced with specific performance-based language that targets the skill for the athlete to work on, e.g., "skull harder to lift yourself in the water."

5) In general, any advice or instruction related to nutrition, food and eating related behaviours, and body composition should be conveyed by the appropriate health professional (e.g., a sports medicine doctor, nutritionist, dietician) rather than coaches. Within the training and competition environments coaches should focus on measurable and evidence-based performance indicators within their scope of expertise when working with athletes.

6) If an athlete expresses concerns about negative body image or nutrition/eating behaviours, the response from coaches and other support personnel should aim to normalize these feelings, help the athlete feel less alone in their experience, and convey that you are interested in supporting them. For example, instead of potentially dismissing the concern with statements such as "you don't need to worry about that" or "don't think about that", engage in a conversation about what might be helpful to address the concern and what resources may be relevant (e.g., those listed in Appendix A).

