

Nutrition for the Female Athlete

Female athletes face a lot of unique nutritional challenges.¹ Properly fueling the body with the right amount of calories, macronutrients, vitamins and minerals is key to optimize and improve sport performance.^{1,2,3}



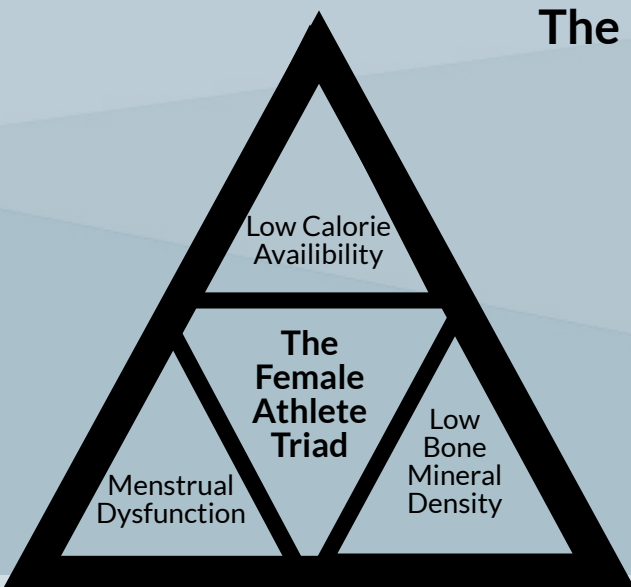
Energy^{1,3}: Getting the proper amount of calories for the energy needed to fuel performance and body maintenance is important. Calorie needs are unique to the athlete depending on their exercise intensity and training cycles.

Calorie Restriction^{1,2}: It is common for female athletes to intentionally or unintentionally restrict calories. Calorie restriction can hinder performance, recovery and energy levels. This can also lead to conditions such as the Female Athlete Triad or RED-S. RED-S is when an athlete has inadequate calorie intake to match their exercise energy expenditure. RED-S can cause fatigue, illness, injury, or nutrient deficiencies.



The Female Athlete Triad^{1,2,4}:

- Low calorie availability can cause menstrual dysfunction and low bone mineral density
- When these occur, it is known as the Female Athlete Triad
- The body is not getting enough calories for basic bodily functions
- Decreases bone strength, lowers bone mineral density, can cause stress fractures, osteoporosis
- Treated by increasing calories, vitamin D, calcium intake



Macronutrients^{1,3}:

- Macronutrients are carbohydrates, fats, protein
- Carbohydrates are recommended between 3-10g/kg/d and increase with exercise intensity
- Protein is recommended at 1.2-2.0g/kg/d
- 20-35% of total calories should come from fat
- Cutting out any certain macronutrient has not been shown to improve athlete performance



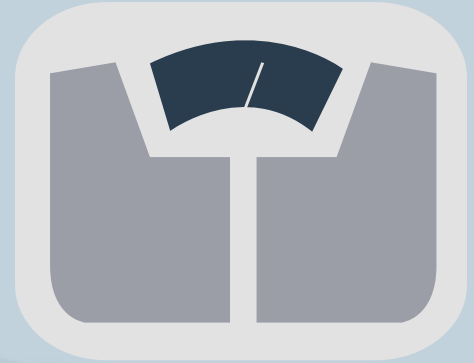
Micronutrients¹:

- Female athletes tend to be deficient in certain vitamins and minerals
- Female athletes should look to consume foods rich in these micronutrients:
 - Iron - red meat, liver, beans, lentils
 - Zinc - meat, shellfish, legumes
 - Calcium - dairy, seeds, canned fish
 - Vitamin D - milk, egg yolk, fish
 - B-vitamins (folate, B-6, thiamin, riboflavin) - meat, fish, eggs, fortified cereals and breads

Female athletes also usually face a lot of personal and outside pressures.² Female athletes often feel the need to lose weight or fit a certain body image.² Negative influences may cause an unhealthy relationship with food and body, which can result in an athlete developing an eating disorder.^{2,5}

Weight Loss^{1,3}:

- It is recommended athletes lose weight in the off-season or when training intensity is low
- Weight loss should be done slowly, with a focus on maintaining muscle composition



Eating Disorders^{1,2,5}:

- Common eating disorders seen among athletes are anorexia nervosa, bulimia nervosa, anorexia athletica, and orthorexia

Sources for Help

- Doctor or dietitian

- National Eating Disorder Helpline:
800-931-2237

- National Eating Disorder Association
website: nationaleatingdisorders.org

IUP Sources:

- Sports Performance Nutrition Services
(SPNS): dann.payne@iup.edu

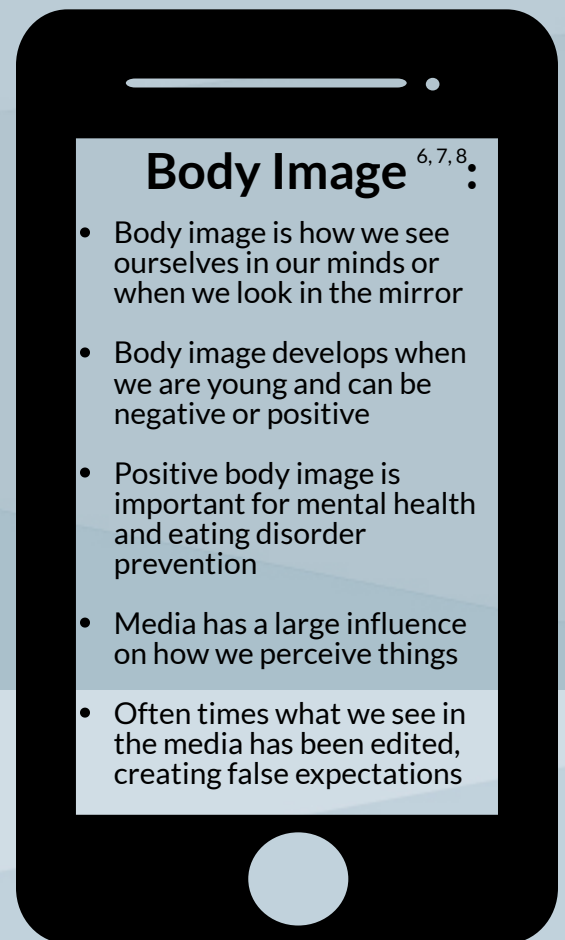
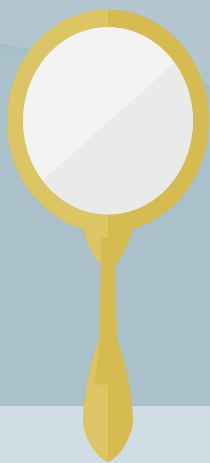
- Nutrition Connection:
nutrition-connection@iup.edu

- Counseling Center:
counseling-center@iup.edu

- Health Center: health-inquiry@iup.edu

Body Image^{6,7,8}:

- Body image is how we see ourselves in our minds or when we look in the mirror
- Body image develops when we are young and can be negative or positive
- Positive body image is important for mental health and eating disorder prevention
- Media has a large influence on how we perceive things
- Often times what we see in the media has been edited, creating false expectations



Do you have a nutrition question? Need advice and guidance to optimize your athletic performance?
Visit Sports Performance Nutrition Services by emailing our director, Ms. Nicole Dann-Payne (Dann.Payne@iup.edu)

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