RED-S: And How You Can **Play a Supportive Role for Your Athletes**

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UNITED STATES OLYMPIC & PARALYMPIC COMMITTEE



• **RED-S Definition & Origins**

Low Energy Availability

• Your Support Role

- How to Create Safety
- What to Listen & Look For
- Next Steps

RED-S Resources





GOALS FOR THIS CONVERSATION:

1. Introduce & define RED-S 2. Understand how you can play a role in preventing or correcting RED-S in athletes 3. Provide references & resources for future learning



RED-S: Relative Energy Deficiency in Sport



Expanding the Female Athlete Triad model to include:

- Better understanding of Energy Availability & the Eating Disorder Spectrum
- Additional physiological & psychological components
- Specific performance-related effects
- Male Athlete Triad & its effects

Female Athlete Triad / RED-S



Health Factors

• Female Athlete Triad

- Inadequate energy intake
- Low bone mineral density
- Menstrual dysfunction

• Physical stress

- GI alterations
- Cardiovascular strain
- Metabolic, endocrine, immune dysfunction
- Disrupted growth & development
- Psychological stress

Male Athlete Triad / RED-S



Health Factors

• Male Athlete Triad

- Decreased luteinizing hormone & testosterone
- Low bone mineral density
- Decreased sex drive
- Physical stress
- Psychological stress

RED-S Performance Factors

Performance Factors

- Decreased strength & endurance performance
 - $\circ \downarrow$ training response
 - $\circ \downarrow$ glycogen storage
- Decreased judgement & mental concentration
- Increased irritability
- Increased risk of injury



Relative Energy Deficiency • What does it mean? . Who is at higher risk? • Why does it happen?

What does it mean? Low Energy Availability (LEA)

- Low energy availability means the energy you get through food is not enough to support all of your body's physiological functions
- The body will start to make metabolic shifts to try to preserve the most important functions



Who is at higher risk for RED-S?

- Female **AND** male athletes
- Adolescents & young adults
- Certain sport groups:
 - Aesthetic sports
 - (e.g. gymnastics, ballet, figure skating)
 - Endurance sports
 - (e.g. XC skiing, triathlon, cycling)
 - Weight-class sports
 - (e.g. wrestling, taekwondo, boxing)



Why does it happen? Unintentional Under-Fueling



- Accidentally not getting enough energy because of:
 - Extremely high energy demands of sport
 - Little understanding of how much food/energy is needed to match training demands
 - Limited access to food (due to expenses, physical access, unknown food safety/origin, etc.)
 - One-off situations (e.g. busy day; travel day, etc.)
- No conscious avoidance or limiting of foods!

Why does it happen? Intentional Under-Fueling



- Not getting enough energy because of:
 - Limiting specific foods or entire food groups unreasonably
 - Following a fad/restrictive diet w/o guidance
 - Fasting or intermittent fasting patterns
 - Fear of gaining weight / growth & development
 - Comparing body unrealistically with others
 - Social anxiety eating in front of others
 - Purging; use of laxatives or diuretics
 - Excessive exercise without adequate recovery

Eating Disorder Spectrum

Body Acceptance

Non-restrictive, Healthy Eating Habits

Healthy Weight for Age, Height, and Body Type Weight/Shape Preoccupation

Excessive Exercising

Striving for Perfection

Compulsive Overeating

Healthy Eating Behavior **Disordered Eating (DE)** Anorexia Nervosa

Bulimia Nervosa

Binge Eating Disorder

Clinical Eating Disorder (ED)

Where do these behaviors stem from?

Altered View or Relationship w/ Food

Over-Emphasis on Sport Performance

Negative Self-Talk &/or Body Image







How do we help support healthier behaviors?

Your Support Role: Creating Safety

Start the conversation

- . With yourself
- With your colleagues
- With your athletes
 - & their support systems

Your Support Role: Creating Safety

Be <u>intentional</u> about the culture you are creating for your athletes around health & performance

- Be mindful about what messages athletes receive about food & body image from you & your staff (directly & indirectly)
- Make a safe space for athletes to discuss topics:
 - Menstruation, body image, nutrition, mental health
- Get very clear on what asking for help & speaking out around body image, mental health, ED/DE help means



Your Support Role: Creating Safety **Remember that Authenticity > Authority** Even when you don't have all the answers, just listening & being present with an athlete who is struggling is a great first step

Your Support Role: What to Listen For

Patterns an athlete might mention:

- Consistent struggles with sleep/insomnia
- Irregular or missing periods
- Increased feelings of stress, anxiety, sadness or depression
- GI upset (e.g. bloating, constipation)
- Foods or food groups he/she avoids
- Consistently feeling cold/shivering
- Feeling "out of control" in areas



Your Support Role: What to Look For

Patterns you might notice:

- Athlete consistently appears tired or sluggish despite rest
- Athlete gets dizzy when standing up
- Atypical brain fog or lack of focus
- Athlete is frequently ill
- Athlete is frequently injured
- Sudden changes in mood
- Dramatic changes in body size or shape



Your Support Role: Next Steps

If you are concerned an athlete may be at risk for RED-S:

Continue the conversation

- Provide a safe space for the athlete to share/continue sharing
- Consider who to include in the conversation next
 - Initial multidisciplinary support members might include:
 - Sports Medicine Physician
 - Sports Medicine Provider(s)
 - Sports Dietitian
 - Sports Psychologist

If you don't have direct access to all these providers, start with your Sports Medicine Physician / Athlete MD or Primary Care Provider

Your Support Role: Next Steps

- Anyone can help start the conversation, but RED-S is not something that can be fully identified or supported alone!
- For a full 360° evaluation you will want to include:

Physical Evaluation	Medical Evaluation	Emotional Evaluation	Behavioral Evaluation
Baseline anthropometrics Current dietary intake Training load and phase Food access and security	Review of biochemistry Food allergies, intolerances Menstrual history Bone health	Food and eating attitudes Body image, past & present Mental health comorbidities Actively pursuing body change Pathogenic weight control	<i>Current eating patterns Eating behavior history Food rules and beliefs Social interaction and food Compensatory behaviors</i>

For guidance, refer to the <u>RED-S Clinical Assessment Tool</u>

Your Support Role: Next Steps

Additional references:

- IOC RED-S Consensus Statement
- AIS Position Statement
- British Association of Sport & Exercise Medicine
- Norwegian Sunn Idrett
- The Emily Program
- WithAll
- Team USA Nutrition Fact Sheets
- Find a Nutrition Expert in Your Area

QUESTIONS?



Resources for further reading:

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