

# Energy Availability and Athletes

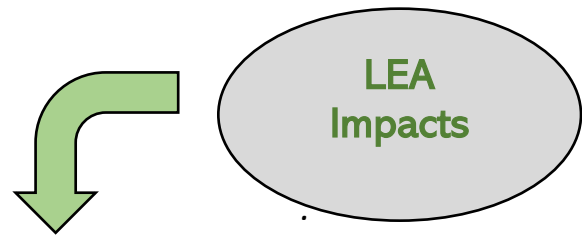
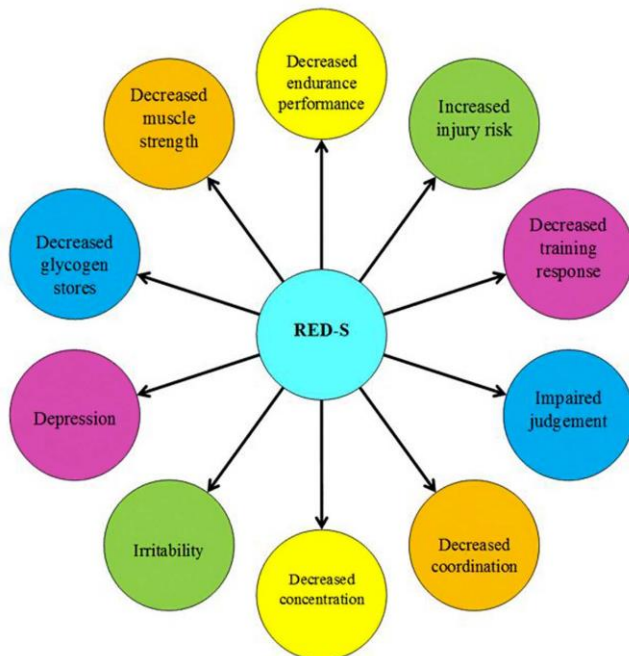
*As an athlete, one of your main priorities is your energy level. You can optimize your energy through adequate training, fueling, and resting. When your intake doesn't match your output, your performance and health may be impacted.*

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## What is Relative Energy Deficiency (RED-S)?

**RED-S** is characterized by *low energy availability (LEA)*. Which means there is a mismatch between food intake and energy expenditure. This results in an inadequate energy to support body in maintaining optimal health and performance.

*\*The body will prioritize fuel for training above daily needs at first*



- Metabolic rate
- Menstrual function
- Immunity
- Hormone function
- Protein synthesis
- Bone health
- Cardiovascular function
- Absorption of vitamins & minerals

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## SIGNS & SYMPTOMS TO LOOK FOR

- Chronic fatigue
- Recurring injuries and illnesses
- Depression
- Disordered eating
- Poor performance
- In ability to gain or build muscle/strength
- Weight loss
- Anemia
- Absent or irregular menses
- Stress fractures or repeated bone injuries
- Irritability
- Gastrointestinal problems

### What can do you to ensure you are fueling optimally:

- Follow a well-planned nutrition strategy to help you perform your best. This means enough calories for daily life, training, and recovery.
- Optimize your carbohydrate intake – as an athlete, your body runs on carbohydrates. Fruit & vegetables alone, are not enough for you!
- Aim for 3 meals & 2-3 snacks. Yes, that means you will be eating every few hours!
- Consume enough food so that you are not walking around hungry during the day. You should feel satisfied after each meal and snack.
- Include protein at each meal & snack for rebuilding & repairing muscle tissue.
- Consider an increase in calories & decrease in training if you have LEA.
- Aim for having a regular menstrual cycle.
- Discuss any concerns you have with your athletic trainer, sports dietitian, or primary care provider at health services. They can help determine if a bone mineral density (DEXA) scan, vitamin D test or other treatment is appropriate for you.

**If you are training like an athlete, you need to fuel like an athlete!**

#### **Sources:**

- CPSDA - Energy Availability Fact Sheet
- BMJ - IOC consensus statement on relative energy deficiency in sport (RED-S): 2018