

# RED-S



## What is RED-S?

RED-S stands for Relative Energy Deficiency In Sport. It is described as “Impaired physiological function including, but not limited to, metabolic rate, menstrual function, bone health, immunity, protein synthesis, cardiovascular health caused by relative energy deficiency”

It is when the energy we take in through fuel doesn't match the energy we expend through activity, and therefore the energy our bodies have available to maintain organs/cells, our temperature, our immune function, growth and reproduction.

Energy Availability = Energy In – Energy Out

### Why does it matter?

It could have serious long term implications on your health (for example, bone health) and performance.

### Why does it happen?

It may be intentional or unintentional. Decreasing intake or increasing expenditure, or a combination of both may lead to lower energy availability.

### Who might be affected?

Any athlete, male or female, can be affected by Energy Availability

### How can RED-S affect performance?

- Increased injury risk
- Decreased endurance performance
- Decreased muscle strength
- Decreased training response
- Impaired judgement
- Decreased glycogen stores
- Depression
- Irritability
- Decreased concentration
- Decreased coordination

### How can RED-S be avoided?

RED-S can be avoided by balancing training, recovery and energy intake. Try to pay close attention to your carbohydrate intake around training and your recovery nutrition.

It may be helpful to plan your nutrition intake around your training load and how you are feeling.

### When to seek advice

Seek advice from your medical support team or GP if you or a fellow athlete has or is worried about a recurrent injury or illness, menstrual dysfunction, consistent unexplained under performance, fatigue, low mood, bone stress response, issues around recovery, low body mass or struggling to maintain body mass.