

## HIGH ALTITUDE

### **What does this mean for athletes?**

Denver is called the “Mile High City” because it is 5,280 feet (1 mile) above sea-level. The high altitude of Colorado makes it harder for an athlete’s blood to deliver oxygen to working muscles and the brain. Players may experience more rapid fatigue or breathlessness while training and competing. They may also feel the effects of the altitude during everyday activities like walking up a flight of stairs. Typically, symptoms are limited to headache and feeling more winded than normal. Athletes should be well conditioned at home to prepare for competition at elevation.

Although unusual at elevations in and around Denver, some people may experience more profound symptoms of Acute Mountain Sickness (AMS). In addition to headache, other symptoms of AMS include difficulty sleeping, nausea/vomiting, dizziness and fatigue.

### **What can athletes do to prevent altitude sickness?**

Athletes should:

- Drink plenty of water a few days before and during their stay. The body’s mechanism to stimulate thirst lags behind the loss of water. Just because athletes don’t feel thirsty, doesn’t mean they aren’t dehydrated.
- Avoid caffeine-containing drinks such as soda, tea, or coffee. Caffeine increases urine production and therefore depletes the body of fluids.
- If athletes are planning on traveling to the mountains, we recommend traveling after the competition so their bodies have additional time to adjust.
- Take breaks as needed during training and competition.

## SUN/HEAT EXPOSURE

Because of its altitude, there is less atmosphere over the Denver metro area to absorb ultraviolet (UV) rays, the invisible light that causes sunburns. In addition, Denver has about 245 sunny days each year. Many people also think Denver is cool in the summer due to the altitude. The average daily temperature in July is about 92° Fahrenheit. The high temperatures and sunshine in the summer can affect athletes who train and compete outside.

**The intense sunshine and heat can also lead to heat illnesses such as heat cramps, heat exhaustion, and heat stroke. This becomes more likely if you are exercising heavily.**

- Heat Cramps: severe muscle spasms usually in the arms, legs and abdomen that often occur after training or competing.
- Heat Exhaustion: characterized by fatigue, irritability, headache, dizziness, vomiting and muscle cramps, flushed hot skin, high heart rate and, very rarely, elevated temperature.
- Heat Stroke: a medical emergency characterized by the same symptoms as Heat Exhaustion PLUS body temperature over 104° Fahrenheit and problems with the central nervous system such as confusion, loss of consciousness, or seizures.

### **What does the increased sun exposure in Colorado mean for athletes?**

- As little as 15 minutes of direct sun exposure can lead to painful sunburns. Athletes should use a sunblock with an SPF (sun protection factor) of 15 or higher twice daily (more frequently if sweating considerably) to avoid getting burned.
- If allowed, athletes should wear sunglasses with UVA/UVB protection and hats with a brim.
- Athletes should seek shade when not on the field.

### **What do I do if I think an athlete has heat illness?**

Alert a member of the medical staff immediately. Remove the athlete immediately from heat and sunshine.

## What can I do to prevent heat illness among my team?

- Make sure your athletes drink plenty of water before, during, and after competition.
- Consider a sports drink (ex. Gatorade) to replace electrolytes after prolonged activity (>1 hour) and sweating.
- During breaks have athletes rest in the shade, if possible, and allow them frequent breaks from competition.
- Consider bringing a spray bottle with water to mist athletes on the sidelines; fanning moist (not wet) skin is a quick, effective way to keep cool.

## ATHLETES WITH MEDICAL CONDITIONS

### What can I do to prevent heat illness among my team?

Remind athletes to bring any daily medications and/or rescue medications with them to the field.

- If they have severe allergies, they should **BRING THEIR EPI-PEN** if prescribed.
- If they have asthma, they should **BRING THEIR INHALER** and **SPACER**.

Alert Medical Staff if you are at all concerned that one of your athletes is having any symptoms of illness.

