

AthletiHINTS



AthletiCare

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Cold weather exercise

Introduction

When exercising in cold weather, preventing cold-related injuries, such as “frostnip,” frostbite and hypothermia is a major concern.

Another problem for athletes exercising outdoors for long periods is dehydration — even in cold weather. Fluid loss can also be monitored and avoided. With proper precautions, many training regimens can be maintained regardless of inclement weather.

Frostnip and frostbite

Frostnip injuries to toes, fingers, ears, nose and cheeks can occur in cold weather. Frostnip is the freezing of superficial tissue. The skin has a white, waxy appearance. This can be treated immediately by the contact of warm skin to the frozen part. The color change will be almost immediate. **Do not rub.**

Frostbite is a deeper, significantly more serious deep freezing of tissue. This requires skilled treatment to prevent permanent damage. **Seek medical attention.**

Hypothermia

Hypothermia is the cooling of core temperature. This is not a local cooling danger, but a cooling of the entire body. It brings a number of physiological risks, including cardiac arrhythmia, ataxia and confusion.

Hypothermia is usually presented as uncoordinated movement, stumbling, slurred speech and often inability to continue. The result can be cardiac arrhythmia and death. Care requires the immediate removal from the cold environment, and especially protection from any wind and/or rain.

Seek medical attention immediately.

Clothing selection for exercise in the cold

Cold-related injuries are avoidable with proper clothing selection. Clothing reduces airflow near the skin to reduce heat loss. Layering of clothing allows more exact alteration of insulation relative to changing exercise levels.

1st layer:

Select a material with a high wicking ability and low vapor retention for next to the skin, such as CoolMax or polypropylene. The high wicking ability moves sweat away before the cooling effect of evaporation occurs.

2nd layer:

The next layer should be thicker material for insulation. Synthetic fabrics such as fleece are ideal for this. These come in various thicknesses.

3rd layer:

Finally, wear an outer layer to block wind or rain as appropriate. Windproof and breathable fabrics are ideal. Cold rain can be more chilling than much colder dry temperatures. The face can be protected with a hood which extends forward of the face, but be careful of the limitations this puts on peripheral vision.

Keeping the trunk, legs and arms warm with adequate clothing helps to keep toes and fingers warm. Remember that track shoes are usually designed for cooling, not insulation. Extra protection may be needed for the feet if running or cycling. Consult the running and cycling experts for good gear suggestions.

Over

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Frappier Acceleration
Sports Training

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Thirst and cold weather

Exercising or playing sports in cold weather tends to make people less thirsty than at higher temperatures. Therefore, many of us are not concerned with fluid intake when the temperature is cold. Unfortunately, thirst is not a good indicator of body fluid needs. Dehydration can be a serious problem in cold weather if fluid consumption is not adequately maintained. Even a 1 percent to 2 percent loss in water can negatively influence athletic performance.

Cold weather usually involves dry air, which makes it more difficult to notice fluid loss. Unlike a hot and humid environment, where sweat visibly drips off the body, in a cold environment sweat can evaporate so quickly that you are unaware how rapidly fluid loss is occurring. Along with

evaporation, cold weather also creates a loss of fluid through expired air. When cold air is inhaled it becomes saturated with water vapor from the respiratory tract and is then exhaled out of the body. When it is cold enough that you can “see your breath,” what you’re really seeing is water escaping from your body. This can account for a fluid loss of 0.2 - 1.5 liters per day. These values increase with activity intensity.

Conclusion

A lot of people perform activities in the cold, whether working, playing football, jogging or just walking. With proper clothing and fluid intake, most training regimens can be maintained in cold weather with excellent results.