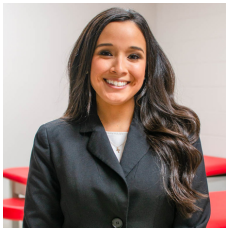


Winter Workout Wardrobe Safety



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Along with the fallen leaves and daylight savings time, comes falling temperatures. You've begun to notice the cooler air during your outdoor runs or club/intramural practices. While you may be reaching for your hoodies and hats, there are others who opt to practice in close to freezing temperatures wearing only a t-shirt and shorts. As RecWell's Head Athletic Trainer, I can't count the amount of times I have seen individuals with exposed skin and minimal layers in blistering conditions. While the body still warms-up and perspires with physical activity out in the cold, it is still in everyone's best interest to dress appropriately for the conditions as they risk suffering from cold related injury and illness. Two of the most commonly known cold injury and illnesses are frostbite and hypothermia and are defined below:

Frostbite

Frostbite presents itself when the skin and superficial tissues begin to freeze causing inflammation, gray skin, numbness, anesthesia, and hard feeling skin with no rebound to the touch (1, 3). In its most severe forms frostbite can lead to tissue necrosis or death.



Hypothermia

Hypothermia affects an individual as the body loses heat, falling below a temperature of 95 F, leading to shivering and cessation of shivering, high blood pressure, lethargy, impairment in fine motor skills, and cold skin (1, 3). In the most severe of cases hypothermia can lead to cardiac arrest.

Cold Injury and Illness Prevention 101



The best way to dress to prevent conditions such as frostbite or hypothermia is in layers and plenty of them! Literature suggests a minimum of three layers along with the appropriate covering(s) for your fingers, ears, feet, and head (3). When these appendages are not properly covered and exposed to the cool air, blood is more quickly shunted towards the core of the body to aid in keeping the internal organs warm and protected (2). This decrease in blood flow of the exposed appendages can then lead to potential tissue damage or frostbite.

For the body, the **first layer** worn closest to the skin should be an evaporative layer that does not allow for a lot of absorption (3).

Examples of these types of fabrics are moisture wicking polyester or polypropylene (3). For example, your Under Armour or other performance brand clothing would be a good first base layer. Materials like cotton or other tightly woven fabrics should never be worn closest to the body when exercising out in the cold because they do not allow for evaporation of your sweat and instead absorb and hold everything in which then conducts the colder air to your core (2).

The **second layer** to be worn over the first is known as an insulator. The job of this insulating layer is to help trap and keep the body's warm heat close so that the core temperature can be maintained (2, 3). Examples of fabrics that fall into this category are fleece or wool materials (3).

The **third layer** one should wear should be wind and water resistant to help with evaporation and the wicking away of potential moisture from the outdoor elements (3). Examples of this form of clothing are windbreakers or light water-resistant jackets with proper ventilating features (3). It is important to remember that in the event you are exercising in precipitating weather that you change into warm and dry clothing as soon as possible to prevent other adverse conditions to the body such as trench foot which affects someone with soaked shoes and socks. If these wet articles of clothing are worn for long periods of time without being replaced the feet may become numb, itchy, tingly, painful, and can develop blisters leading to broken skin (3,4).



It is my hope that the various cold injuries and conditions presented in this article provide you with enough information to encourage both yourself, your teammates, and friends to dress appropriately and thoughtfully when exercising in the cooler weather. I also hope that you can see how easy it would be for you to carry spare shirts, jackets, gloves, socks, and hats in your backpacks and equipment bags. Carrying these small additional items could be the difference between general warmth and comfort to that of an emergency situation such as, damaged skin and tissues and cardiac arrest. Cold related injury and illness may not be as prevalently publicized as much as heat related illnesses, but that is because most people wear layers when they are active outside during the winter months. Wouldn't you agree that it is much easier to peel off layers as you overheat then to have no articles of clothing available? Without the additional clothes, you don't have appropriate protection. Please consider holding your friends and teammates accountable when dressed inappropriately for the conditions and educate them on the importance of layering.

“BundleUp” for Safety!



Sources:

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