

BY BART BLANKENSHIP

DRINK SMART TO STAY WARM

Teaching survival courses in the mountains and deserts for the past several years has taught me that staying warm takes more than keeping yourself dry and wearing several layers of clothing. Preparing your body for the elements also means eating and drinking specifically for the cold. And the most important of these steps is the one that's usually the most ignored: drinking enough water to keep yourself in tune.

When you're dehydrated, your blood volume decreases. The blood is thicker and harder to pump around, and it simply can't cover all the areas it needs to. Poor circulation means that you're more susceptible to the effects of the cold, including hypothermia and frostbite.

Increased activity level, bulky clothing, and altitude are all causes of dehydration. Walking, even slowly, over fallen timber, hills, and uneven terrain, takes a great deal of energy. We also have to work harder than normal at high altitudes, where the air is thinner. Add to this bulky cold weather clothing that restricts movement, and we wind up having to breathe and perspire more, which greatly increases fluid loss.

Another cause of dehydration is a high tolerance toward thirst. Most of us are slightly dehydrated, operating below optimum efficiency, throughout our lives.

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The book *Medicine for Mountaineering*, edited by Dr. James A. Wilkerson, states that "thirst is not usually experienced during dehydration." In fact, from experience in the field, I have found that by the time you feel thirsty you may already be two quarts low.

In addition, cold increases susceptibility to dehydration. We all know that we

have to drink fluids in warm weather, but few of us know that it may require more water to perform the same activity in the cold. It's the dryness of the air that is responsible. Cold air often starts out dryer, since the colder the air is, the less moisture it can hold. Even if the air is humid, breathing cold, wet air can dehydrate you more than breathing warm, wet air. Both leave the body with the same amount of moisture, but because the cold air enters the body with less moisture, its net gain (and your loss) is greater.

Unfortunately when you're out in the cold, finding and consuming enough water from natural sources isn't always easy. The risk of pollution, giardia, and other waterborne diseases prevents many, sportsmen from drinking from natural water sources. Making this water safe takes a conscious effort and certain procedures with which many are unfamiliar. Consequently, water that could be made potable might not be utilized. Also, available water is usually so cold that it's difficult to drink in

sufficient quantities because you get chilled in the process.

Consuming the wrong kinds of drinks may only add to the problem. Some of our favorite drinks are poor hydrators. Coffee, many kinds of tea, and some soft drinks contain caffeine, which is a diuretic, and causes the liquids to pass right through your system without replenishing the body's fluid volume the way water would. Alcohol also increases dehydration and, as a side note, dilates the capillaries. You may feel warm after a drink of alcohol, but cold blood from your extremities is rushing toward your core. The net effect is more cold.

Now that you know some reasons for dehydration, how can you prevent it?

First of all, drink before you're thirsty and consume plenty of hot fluids. Water, straight, is the best remedy for dehydration, but I also like to get a little energy and replace electrolytes with my drink. I often carry two water bottles, one of which is filled with a quart of hot Tang. I keep it warm throughout the morning by insulating it with a piece of closed cell foam. (A couple of scraps of ensolite pad will do. Just tape them around the bottle leaving an opening at the top so you can get to the lid.)

Drink often. I try to drink at least a gallon of fluids a day. There have been times under extreme conditions when even this was

inadequate, but a gallon is a good place to start.

Drink when you're thirsty, but spread it out. Allow your body a chance to absorb the fluids. Too much at once can upset the stomach, and the fluids will pass through your system doing little good. Be careful when drinking cold water. Here it is especially important to drink just a little at a time. Chugging large amounts of cold water on a cold day is asking for trouble.

Frozen water is also a problem. To prevent your water bottle from freezing at night, try pulling a couple of old wool socks over it and setting the bottle by your head. In camp I have a 2-gallon collapsible water jug for convenience. To keep it from freezing when it's really cold, I bury it in pine needles, or even snow if it's available.

During any outing, monitor your hydration. A simple way to do this is through the amount and color of your urine. If it's plentiful and clear then you're probably on the right track; if it's dark yellow and low volume, you need to drink more.

Pack a filter, purification tablets, or both, so you can safely refill your water supply from streams when you run out. If long stretches without a water source are anticipated, carry extra water. Stay away from drinks containing caffeine and alcohol.

Cold weather also demands a change in eating habits. Consumption of fats should be increased. Foods like bacon, butter or margarine, nuts, and cheese are slow to digest and keep you warmer for a longer time. Cold-weather outings are no time to go on a diet. A favorite

cold-weather dinner is macaroni and cheese with lots of margarine. For in-between meals, nibbling a little trail food throughout the day will keep the internal fire stoked.

This gradual consumption of food and water also applies to nighttime. Hunger, thirst, and the cold that results from these conditions are some of the biggest reasons for lack of sleep on chilly outings.

Another sleep robber is having to get up and urinate. Besides being uncomfortable, holding urine wastes energy. Your body burns up a lot of calories to keep that urine hot, so you should go whenever you feel the need. Timing your fluid intake here is the key. I try to have the major portion of my fluids consumed a few hours before turning in for bed. This is easy if you've been drinking steadily throughout the day. Then a few sips taken during the night will do the trick, quenching thirst without building up an uncomfortable urine volume.

So remember, when the mercury drops, make a conscious effort to drink extra water and eat the right foods; it could mean the difference between having a safe, enjoyable outing, and going home cold.