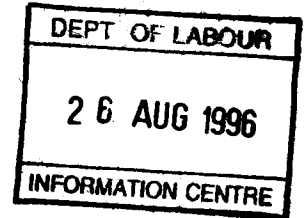


FORESTRY BULLETIN



Dehydration: The Dry Horrors

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Dehydration is very much a forestry worker's concern, especially in summer. Considering that 62% of you is actually water, it's pretty important that you get it right. Water has no calories and, therefore, it isn't a nutrient. It provides the body with no energy, and yet water is probably the single most important element in a person's diet. Why? Because water is the medium in which all the body's metabolic actions take place. Water regulates the body's temperature, transports fuel and removes waste. All the other nutrients you eat or drink need to be mixed with water in the body so they can be converted to useful energy. If a person's body loses too much water and it is not replaced, the person is at risk of becoming dehydrated.

Not replacing lost water can cause more severe health problems as dehydration is linked to the development of heat exhaustion and potentially fatal "heat stroke". There are three recognised levels of dehydration that you should be aware of:

- Mild:** Dry-feeling mouth, normal pulse, darkened urine, thirst.
- Moderate:** Extremely dry-feeling mouth, rapid weak pulse, very dark urine, severe thirst.
- Severe:** Extremely dry-feeling mouth, feeling drowsy/disorientated/irritated, no urine, rapid weak pulse, rapid breathing, pale skin.

In order to help reduce the impact of dehydration you should tackle the day in the following three stages:

Before Work

Most people don't drink enough in a normal day and are often mildly dehydrated. So start the day off correctly and drink a large amount of water. You cannot drink too much water!! Your kidneys will simply get rid of what you don't need. This will place your body's water balance in the positive instead of the usual negative.

While Working

During a normal day an office worker sitting at their desk would lose, on average, three to six litres of water per day through sweating and breathing. A logger in a clearfell gang is likely to lose approximately 10 to 15 litres of water through sweating and a further seven litres of water through respiration (breathing). A grand total of up to 22 litres or more if working conditions are really hot.

Since the body's core temperature rises with increasing levels of exercise, cooler drinks have a positive and refreshing effect on the body. Losing as small an amount as three percent of your body's weight through sweating can lead to a rapid rise in core temperature and a decrease in performance.

The temperature of the fluid you are drinking is an important consideration. Hot drinks do not leave the stomach as quickly as do cooler drinks. This means that they are not as readily available for the important cooling jobs of sweating and respiration. Very sweet drinks, if not diluted, will draw water from the body, making the dehydration worse.

Don't drink only when you are thirsty. By that time your body could be already dehydrated. A better method is to drink at regular intervals, gauging the amount by how much you are sweating. Many forest harvesting jobs provide the perfect opportunity for this method. For example, when refuelling your chainsaw, stop for a second and have a drink, whether you are thirsty or not. Refuel the body as well as the saw, for one cannot work effectively if the other doesn't. If you lose, and don't replace, just 1.5 litres of water, your endurance could be reduced by up to 22%. When you lose three or four litres, endurance can drop by up to 50%.

Mental performance and concentration all start to decrease with increasing temperature and dehydration. Poor and/or reduced performance not only affects production, but also safety. Someone who is tired, hot and bothered is more

likely to have a greater chance of an accident than someone who is feeling fine. By regularly stopping for a second or two and having a quick drink, you can maintain your performance and look after yourself at the same time.

End of the Day

After a hard day in the bush, no matter how much fluid you've tried to drink, there will be some sign of dehydration in your body. As much as six or seven litres of water may be required to reach your pre-work state. The best way to approach this is to drink slowly over a period of several hours so that your body will fully rehydrate and be all set for the next day. Unfortunately, the alcohol in a nice cold beer makes your kidneys actually remove more water from your body than you put in it. So, while one or two beers may make your thirst feel good, it won't do too much for your poor old dehydrated body!!

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Patrick Kirk, Researcher

Duties of Employers Under the Health and Safety in Employment Act 1992

(Contributed by Andrea Eng—Senior Occupational Health Scientist (Hygiene))

It is the duty of employers to provide and maintain a safe working environment. Employees should have instruction on the causes and recognition of the symptoms of heat disorders, heat acclimatisation and water and salt replacement. Have a buddy system in place where early signs of heat intolerance such as weakness, unsteady gait, irritability, disorientation, changes in skin colour or general illness can be picked up.

The following points should be considered when looking at overall heat stress in forestry work.

- Provide sufficient fluids to prevent dehydration of workers.

- Consider altering the work schedule so that heavier work is done during cooler periods.
- Reduce the radiant heat load by providing shade for outdoor work where practicable.
- Allow rest breaks to be taken in cooler areas.
- Ensure that workers are fit and not taking medication (alcohol, prescription and non-prescription drugs—including blood pressure tablets and water pills) that will impair their ability to cope with heat stress.
- Allow self-regulation of work if fatigue, discomfort or other symptoms occur.
- Replacement of salt is best done by taking salt with meals rather than salt tablet supplements.