Beat heat before illnesses hit

**NURSE MURF**
BY HELEN MURPHY

I was mid-May and about 78 degrees in Walla Walla. A 35-year-old worker started his job at 9 a.m. By early afternoon, he complained of feeling tired. As he went to lie down, he collapsed, became delirious and had a seizure. His recorded body temperature in the emergency room was 111 degrees.

He died of heat stroke.

Two Washington state farm-workers have died in the past decade. Of the industries with heat-related workers’ compensation claims, agriculture ranks third.

More chances of surviving a heat-related illness are good if your body temperature is lowered to at least 102 degrees within 30 to 60 minutes. However, many cases of heat illness are misdiagnosed.

By the time workers reach an emergency room, their temperature may fall enough that heat illness isn’t suspected. Symptoms may be misclassified as a heart attack. Less severe cases may never get reported because workers don’t recognize heat-related illnesses or don’t want to leave work.

Heat stress is a buildup of heat from the body's own work plus external (environmental) sources. If more heat is generated than can be released, you become heat-stressed.

A heat-related illness results when the body can no longer return to the heart. The body’s physical and mental functions break down. The heart responds to a rise in body salt tablets by pumping more blood to peripheral vessels, which enlarge or dilate to release heat. If that isn’t enough, a person will start sweating to cool down by evaporation.

Three environmental conditions can lead to problems: temperature, humidity and the absence of air movement. Machinery can add to the sun’s heat.

Four common illnesses

The following are four common illnesses of overheating:

1. **Heat cramps:**
   - Athletes are familiar with this syndrome caused by salt depletion.
   - It is easily treated with rest and electrolyte-balanced fluids such as sports drinks. Drink plain water and eat salty chips or nuts. Avoid salt tablets due to the risks of overloading.

2. **Heat syncope:**
   - Fainting happens when blood pools in the legs, often after standing too long. It is temporary; being horizontal usually brings a return to consciousness.

3. **Heat exhaustion:**
   - This condition is serious and is caused by severe dehydration. Symptoms can include fatigue, dizziness, nausea and vomiting, plus early neurological signs such as headache, impaired judgment and anxiety.
   - Exhauation causes profuse sweating and cool, clammy skin. Move the person out of the heat, provide fluids as tolerated, strip off extra clothing, and cool them by wetting clothing and fanning. Have them medically evaluated.

4. **Heat stroke:**
   - This is a medical emergency. It can look like exhaustion except the body temperature is 104 degrees F or higher, and the brain is seriously affected.
   - Neurological effects can include confusion, irrational or aggressive behavior, incoherent speech, collapse, convulsion, and coma.
   - When the body’s heat-coping mechanisms have failed, sweating stops and the skin becomes red, dry and hot to the touch. Call 911 and quickly lower the body temperature.

**Handling the heat**

To handle the heat better, remember these seven factors to help prevent a heat-related illness.

1. **Risk assessment:**
   - Educate yourself on the risk factors to be ready when the heat index is high. Any illness or medications that dehydrate can aggravate heat illness. Be aware of the drugs, diet, medications and illnesses that can make you susceptible. Check elderly workers on hot days.

2. **Acclimatization:**
   - When the heat index is high, shift work hours to the cooler times of day.

3. **Fluid intake:**
   - Good hydration is key to prevention. Workers may not want to stop work for water or toilet breaks because they are working piecemeal or do not want to let their co-workers down.
   - Remember the half-hour rule: 1/2 liter or 1/2 quart (that’s 1 pint) every half hour. Your fluid intake is inadequate if you stop urinating or your urine is dark.

4. **Rest:**
   - Good managers should insist on breaks in the shade to cool down and encourage a culture of hydration and toilet use.

5. **Proper clothing:**
   - Wear lightweight, breathable clothing and hats. Some workers may wear excess clothing to protect themselves from the sun.
   - During summer 2004, a hops worker found dead from heat stroke was wearing a dark leather jacket over multiple layers of clothing. Changing dress codes will cut exposure.

6. **Illness recognition:**
   - Learn to recognize heat-related illnesses. Identifying and responding to early symptoms can save lives. Encourage a buddy system for remote work locations.

7. **Work environment:**
   - Identify potentially hazardous conditions such as pesticides and other job safety, and the relationship between pesticides and cancer.