

Preventing Heat Illnesses

By Jim Carrabba

Now that we are in the mid-point of summer, it is important to review the causes of heat illness and what steps can be taken to prevent heat illnesses. During these hot summer months, farm workers are always at risk of heat-related illnesses, especially those workers who must wear protective gear for applying pesticides during hot conditions. The most serious forms of heat illness are heat stroke and heat exhaustion. Heat illnesses are brought on when our bodies build up more heat than we can handle and our bodies cooling mechanisms become overwhelmed.

Heat exhaustion is caused when the body's cooling systems are overtaxed but have not completely shut down. With heat exhaustion, the surface blood vessels and capillaries that enlarge to cool the body become collapsed due to lack of body fluids. This condition is caused when the body is sweating away more fluids than it has taken in. Symptoms include the following headache, profuse sweating, intense thirst, nausea, dizziness, fatigue, cool moist skin, weak and rapid pulse, and low to normal blood pressure. To treat heat exhaustion, move the person to the shade or ideally to an air-conditioned building. Lie the person down and slightly elevate their feet. Loosen their clothing and apply cool wet clothes or fan them. Have them drink water or electrolyte drinks. Medical personnel should examine the person. Make sure the person avoids heavy activities for at least 24 hours, and they should continue to drink water during this time period.

Heat stroke is the most serious form of heat illness. This is a life threatening condition that requires immediate treatment. Heat stroke is caused by the body being depleted of water and salt causing the person's temperature to rise to dangerous levels. The symptoms of heat stroke include very high body temperature (103° or greater), absence of sweating, hot red or flushed dry skin, rapid pulse, difficulty breathing, pinpoint pupils, and any or all of the symptoms of heat exhaustion. More advanced symptoms could include convulsions, collapse, unconsciousness and a body temperature over 108°. It is important to note that the symptoms of heat stroke are very similar to those of pesticide poisoning. In any case, call 911 immediately. Treatment for this condition consists of lowering the victim's body temperature. While waiting for emergency services to arrive, move the victim to the shade or a cool area, remove any clothing or protective equipment that might be making them hot (use gloves if protective gear is contaminated with pesticides), pour water on the person, fan them or apply cold packs.

As with any safety issue, the best solution is prevention of the problem in the first place. Here are some steps that can be taken to prevent heat illnesses:

- Take time to adjust to working in hot temperatures.
- Hydrate, hydrate, hydrate! Drink lots of water before, during and after work.
- Wear light weight, light colored clothes, use a wide brimmed hat.
- When possible, avoid working outside during the hottest part of the day (10:00 AM until 3:00 PM).
- Take breaks in the shade or other cool areas; drink water during these breaks.

- If you have to wear protective gear during hot weather, take frequent breaks. When the temperature is over 80° and you are wearing chemical resistant garments, it can be dangerous to work more than a half-hour without taking rest and water breaks. Consider using cooling vests underneath chemical resistant garments.

Making these precautionary steps will help reduce the chance of a heat illness striking you or your workers. If you would like more information, or training on heat illnesses, please give us a call at 800-343-7527, ext 239 or e-mail me at jcarrabba@nycamh.com. The New York Center for Agricultural Medicine & Health (NYCAMH) offers on-farm safety surveys and worker safety trainings at no cost through a grant from the New York State Department of Labor Hazard Abatement Board. NYCAMH, a program of Bassett Healthcare Network, is enhancing agricultural and rural health by preventing and treating occupational injury and illness.