Beat the Heat: Controlling Heat Hazards in the Workplace

Safety Meeting Topic
What is Heat Stress?

Total heat load on the body, including:

- Heat generated by the body
- Air temperature and humidity
- Radiant heat (sun, machines, warm rock surfaces)
- Clothing and PPE
How Serious is it?

Heat illnesses include:

• Heat rash
• Sunburn
• Heat cramps
• Fainting
• Heat exhaustion
• Heat stroke

*Fatalities due to heat stress have occurred!*
<table>
<thead>
<tr>
<th>Heat Rash</th>
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</thead>
<tbody>
<tr>
<td><strong>Cause</strong></td>
</tr>
<tr>
<td>• Hot, humid environment</td>
</tr>
<tr>
<td>• Plugged sweat glands</td>
</tr>
<tr>
<td><strong>Symptoms</strong></td>
</tr>
<tr>
<td>• Red, bumpy rash with severe itching</td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
</tr>
<tr>
<td>• Leave the hot environment</td>
</tr>
<tr>
<td>• Shower or rinse skin with cold water</td>
</tr>
<tr>
<td>• Change into dry clothes</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Sunburn</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cause</strong></td>
</tr>
<tr>
<td>• Over-exposure to sunshine</td>
</tr>
<tr>
<td>• Effects the body’s ability to sweat effectively</td>
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<tr>
<td><strong>Symptoms</strong></td>
</tr>
<tr>
<td>• Skin becomes red, painful, blistered, peeling</td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
</tr>
<tr>
<td>• Leave the sunny environment</td>
</tr>
<tr>
<td>• Get medical help for blisters</td>
</tr>
<tr>
<td>• Apply lotion</td>
</tr>
<tr>
<td>Heat Cramps</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td><strong>Cause</strong></td>
</tr>
</tbody>
</table>
| **Symptoms** | • Painful cramps in arms, legs, stomach  
• May occur at work or later at home |
| **Treatment** | • Move to cool area  
• Loosen clothing  
• Drink cool water  
• Seek medical aid for severe cramps |

<table>
<thead>
<tr>
<th>Fainting</th>
<th></th>
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<tbody>
<tr>
<td><strong>Cause</strong></td>
<td>• Reduced flow of blood to the brain</td>
</tr>
<tr>
<td><strong>Symptoms</strong></td>
<td>• Sudden fainting; weak pulse</td>
</tr>
</tbody>
</table>
| **Treatment** | • Remove from hot location  
• Get medical aid; assess need for CPR  
• Give cool water if conscious |
# Heat Exhaustion

**Cause**
- Body cooling system begins to break down due to excessive heat
- Body’s water and salt depleted

**Symptoms**
- Heavy sweating; cool moist skin
- Body temperature above 38 C
- Weak pulse, normal or low blood pressure
- Feel tired, weak, clumsy, confused, thirsty
- Rapid breathing
- Blurred vision

**Treatment**
- Summon medical aid
- Move to cool, shaded area
- Loosen or remove excess clothing
- Give cool water to drink
- Fan and spray with cool water
### Heat Stroke

<table>
<thead>
<tr>
<th>Cause</th>
<th>All body’s available water and salt used up – sweating stops, causing body temperature to rise</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Symptoms</strong></td>
<td></td>
</tr>
</tbody>
</table>
| • High body temperature (may be more than 41 C)  
• Feeling weak, confused, upset  
• Acting strangely  
• Hot, dry, red skin  
• Fast pulse  
• Headache or dizziness  
• May faint  
• May convulse | |
| **Treatment** | | |
| • Get medical aid immediately  
• Remove from heat or sun  
• Remove excess clothing  
• Fan and spray with cool water  
• If conscious give sips of water | |
What you can do to protect yourself:

- Stay fit
- When possible, avoid working in hot areas and in full sun
- Take frequent breaks
- Use sun block with at least 15 SPF and re-apply every two hours
- Cover up with long-sleeve shirt, hat
- *Increase fluid intake*
- Avoid alcohol and excessive caffeine
- Reduce activity when exposed to heat
- Use buddy system to watch for symptoms
- Increase salt intake (if doctor approves)
What employers can do to protect workers:

• Train workers in heat stress awareness and first aid
• Provide drinking water
• Provide rest breaks and air conditioned rest areas
• Encourage workers to stay fit; to drink water
• Indoors, provide fans for air movement
• Use machines to reduce physical demands of work
• Schedule most strenuous work to cooler times of the day
• Be aware of daily Humidex ratings
1 888 730 7821 (Toll free Ontario)
workplacesafetynorth.ca

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