

*Human Resources*

**ULTRA VIOLET RADIATION FROM THE SUN SAFETY GUIDELINES**

<p><b>OVERVIEW</b></p>	<p>This guideline is intended to provide City of Hamilton employees with general practical information pertaining to ultraviolet radiation from the sun. Staff must also follow any departmental policies, procedures and guidelines pertaining to ultraviolet radiation (UVR).</p> <p>Individuals who work outdoors should avoid prolonged exposure to the sun because of the damaging effects of UVR. Exposure to UVR (without proper protection) can cause:</p> <ul style="list-style-type: none"> <li>• sun burn</li> <li>• heat stroke</li> <li>• skin cancer</li> <li>• eye damage</li> <li>• premature aging of the skin (wrinkles)</li> </ul>
<p><b>DEFINITIONS</b></p> <p><b>Acclimatization</b></p> <p><b>Broad Spectrum Sunscreen</b></p> <p><b>Heat Stroke</b></p> <p><b>Sunburn</b></p> <p><b>Ultraviolet Radiation (UV)</b></p>	<p>The following terms referenced in this guideline are defined as:</p> <p>Adapting to changes in the environment such as a new temperature.</p> <p>Sunscreen that protects against UVA and UVB rays.</p> <p>A core body temperature that rises above 104 F (40 C) accompanied by hot, dry skin and central nervous system abnormalities that may include delirium, convulsions, or coma.</p> <p>Red, painful and/or blistering and peeling of the skin after exposure to the sun.</p> <p>A small part of the electromagnetic radiation spectrum from the sun. It is divided into three types – UVA, UVB and UVC</p>
<p><b>GUIDELINES</b></p> <p>Ultraviolet Radiation Exposure</p>	<p>In order to reduce staff exposure to the UVR, the following guidelines are recommended:</p> <ul style="list-style-type: none"> <li>• Plan necessary outside work activities for early morning or late afternoon</li> <li>• Limit the amount of time working outdoors in the sun between 11 a.m. and 4 p.m.</li> <li>• Seek shade as much as possible during breaks. Consider using a shade structure.</li> <li>• Wear a wide brimmed hat (8 cm or more); attach a back flap and visor to hard hats to protect your ears and neck.</li> <li>• Wear tightly woven clothing covering as much of the body as is possible (e.g. long sleeved shirt, long pants).</li> <li>• Apply a broad spectrum sunscreen with a Sun Protection Factor (SPF) of 30 or higher on exposed skin 20 minutes before going out in the sun. Reapply throughout the day and more often if perspiring heavily.</li> <li>• Apply a broad spectrum lip balm with SPF 30 or higher throughout the day.</li> <li>• Wear eyeglasses or safety glasses that effectively filter the UVR.</li> </ul>

	<ul style="list-style-type: none"> <li>• Pay attention to the UV index during the day. The higher the UV index, the stronger the sun's rays and the greater need to take precautions. A description of the UV index and recommended actions are available in Appendix A.</li> <li>• Review Human Resources Guideline "Hot Weather Safety" as needed.</li> </ul>
<b>CONTENT UPDATED</b>	2013-04-17
<b>HISTORY</b>	<p>The following guidelines were reviewed for this guideline:</p> <p>Corporate Safety Guideline – Ultraviolet Radiation from the Sun (March, 1994)</p> <p>Corporate Safety Guideline – Heat Stress (Revised March 22, 2005)</p>
<b>OTHER DOCUMENTS</b>	<p>HOT WEATHER SAFETY GUIDELINES (Updated April 17, 2013)</p> <p>CORPORATE SMOG RESPONSE PLAN (2012)</p>

## Appendix A

UV Index	Description	Sun Protection Actions
0 - 2	Low	<ul style="list-style-type: none"> <li>Minimal sun protection required for normal activity</li> <li>Wear sunglasses on bright days. If outside for more than one hour, cover up and use sunscreen</li> <li>Reflection off snow can nearly double UV strength. Wear sunglasses and apply sunscreen</li> </ul>
3 - 5	Moderate	<ul style="list-style-type: none"> <li>Take precautions – cover up, wear a hat, sunglasses and sunscreen - especially if you will be outside for 30 minutes or more</li> <li>Look for shade near midday when the sun is strongest</li> </ul>
6 - 7	High	<ul style="list-style-type: none"> <li>Protection required – UV damages the skin and can cause sunburn</li> <li>Reduce time in the sun between 11 a.m. and 4 p.m. and take full precautions – seek shade, cover up, wear a hat, sunglasses and sunscreen</li> </ul>
8 - 10	Very High	<ul style="list-style-type: none"> <li>Extra precautions required – unprotected skin will be damaged and can burn quickly</li> <li>Avoid the sun between 11 a.m. and 4 p.m. and take full precautions – seek shade, cover up, wear a hat, sunglasses and sunscreen</li> </ul>
11 +	Extreme	<ul style="list-style-type: none"> <li>Values of 11 or more are very rare in Canada. However, the UV Index can reach 14 or more in the tropics and southern U.S.</li> <li>Take full precautions. Unprotected skin will be damaged and can burn in minutes. Avoid the sun between 11 a.m. and 4 p.m., cover up, wear a hat, sunglasses and sunscreen</li> <li>White sand and other bright surfaces reflect UV and increase UV exposure</li> </ul>

Source: Environment Canada (2011)

## References

Canadian Dermatology Association (2007). Sun safety for outdoor workers: a skin cancer prevention program for outdoor workers. Author.

Environment Canada (2010). Sun protection message. Retrieved from <http://www.ec.gc.ca/uv/default.asp?lang=En&n=DCF1C20A-1>

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Ontario Ministry of Labour (2012). Heat stress. Retrieved from [http://www.labour.gov.on.ca/english/hs/pubs/gl\\_heat.php](http://www.labour.gov.on.ca/english/hs/pubs/gl_heat.php)