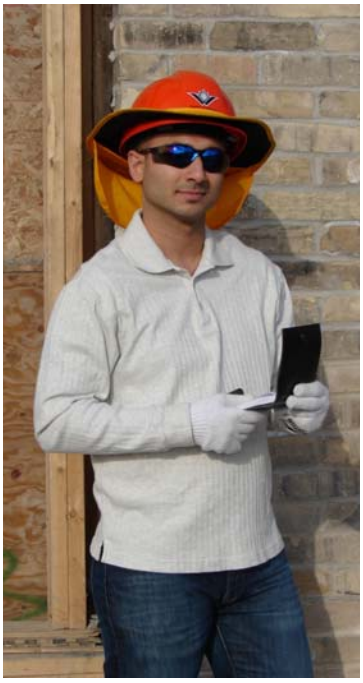
Sun Protection and Outdoor Workers

Background Information



Understanding the health effects from ultraviolet radiation (UVR) exposure

The health effects of over-exposure to ultraviolet radiation (UVR) from the sun include sunburns, eye damage, cataracts, weakening of the immune system, skin aging and skin cancer.[1] Skin cancer is a disease of skin cells and is a result of damage to the skin cells. This damage has a cumulative effect and will get worse with each exposure which can lead to skin cancer.[2]

Skin cancer is the most common form of cancer in Canada, accounting for one-third of all new cancer diagnoses.[3] As the ozone layer becomes thinner, there is more exposure to UVR from the sun which increases the risk of getting skin cancer. Today, that risk is greater than it was 20 years ago and it is continuing to increase.[4]

Protection from the sun

Considering it is the most common form of cancer, it is an easily preventable cancer when protective strategies are used. [5]

These strategies include:

- limiting sun exposure (especially during peak UVR periods when the sun's rays are at its strongest which is typically April-September, 11 a.m. to 4 p.m.)
- seeking shade during peak UVR periods
- using protective equipment in all seasons including:
    - wide brimmed hats and neck protectors
    - clothing with ultraviolet protection factor (UPF)
    - wrap around sunglasses with UVA/UVB protection
    - using a broad spectrum sunscreen and lip balm of SPF 30 or higher
    - vehicles with UVA/UVB protection laminated windshield and side windows

Workers who are at more risk for skin cancer

This group of employees are primarily made up of outdoor workers. Outdoor workers include drivers and employees who are outdoors for two hours or more during any season.

Outdoor workers have a high risk for developing skin cancer due to being regularly exposed to the sun for long periods of time.[5] Adding to the danger for outdoor workers is the fact that they are often in the sun:

- during those times in the day when the sun's ultraviolet radiation is at its strongest (peak UVR periods)
    - Peak UVR periods in Southern Ontario are 11 am – 4 pm and from April to September, with the highest levels being in May thru August.[6]
- close to reflective surfaces such as snow, water, concrete, glass, and metals which intensify the amount of UVR exposure the worker receives
    - Different surfaces have different reflectivity and can increase exposure. Snow reflects 80%–90% of UV radiation, sand 20%–30%, and water 5%–7%. Man-

made surfaces can also have increased reflectivity. Concrete has been measured to reflect 14%–15% of UV rays, whereas grass only reflects about 1%–2% of UV rays. When near highly reflective surfaces, extra care should be taken to protect from UV exposure.[7]

Some interesting facts about outdoor workers:

- on the job, 73% of male and 38% of female outdoor workers in Ontario spend at least two hours per day in the sun during peak UVR hours[8]
- young male outdoor workers aged 16 to 24 are more likely to spend at least four work hours in the sun per day than outdoor workers aged 45 to 64 or female outdoor workers of any age[8]
- during both work and leisure time, outdoor workers in Ontario have much greater sun exposure than the average Ontario adult aged 16-64 years[8]

Young males are heavily represented among outdoor workers and present special challenges when promoting sun safety in the workplace as they are the least likely to protect themselves from the sun while working.[8]

To protect employees, and in particular outdoor workers, work site interventions, including supportive environments, safety policies and exposure guidelines should be developed and incorporated into existing occupational health and safety programs. The Ontario Ministry of Labour provides guidelines in the document "Ultraviolet Radiation in the Workplace" and should be applied in the policies and guidelines development.

MAKING THE BUSINESS CASE

Once an employee has been diagnosed with skin cancer, they can be off of work on an average of 28 days.[9] Time away from work can be due to appointments, biopsies, surgery and recovery, treatments, and stress. This will result in loss in productivity as well as costs to the health benefits programs.[5]
Providing a workplace environment that decreases workplace exposure to UVR can provide benefits both to the employee and the employer.

Program Planning Goals

1. To promote awareness of the health risks associated with UVR exposure.
2. To provide education about protective practices to reduce UVR exposure from the sun.
3. To create a supportive environment that enables employees to practice sun protective behaviours.

Applying a Comprehensive Workplace Health Promotion Approach

Awareness Raising

- Utilize bulletin boards and displays featuring sun safety in high traffic areas, at wellness events, or during health and safety training sessions
- Dedicate an accessible area to display pamphlets and resources
- Include short articles in an internal newsletter, staff emails or pay cheque inserts (check websites and local newspaper for relevant articles)
- Post Ministry of Labour workplace guidelines (i.e. "Ultraviolet Radiation in the Workplace")

Skill Building

- Provide continuing education for management and employees about implementing and enforcing sun protection guidelines, including risks, workplace policies and worker responsibility
- Provide orientation to new workers and seasonal employees regarding:
    - sun protection policies/guidelines
    - early detection of skin cancer
- Distribute risk assessment surveys to outdoor workers to determine: level of exposure, use of avoidance and protective behaviours, and need for education and support

TIP

Burn the Midnight Oil
During high UV Index days, reschedule outdoor work to occur at night or at times when the sun's rays are not as strong.

Creating Supportive Environments

- Alert outdoor workers on days where the UV Index is projected to be high as well as the protective precautions they are to take
- Display the Environment Canada's UV Index table that lists what sun protection precautions are needed on bulletin boards or through posters
- Where possible, plan for outside work around peak UVR periods (when the sun's rays are at its strongest) is April-September, 11:00 a.m. – 4:00 p.m. to limit UVR exposure
- Rotate workers and their shifts to reduce each worker's total UVR exposure
- Move jobs indoors, into shaded areas (i.e. shade casting from a building or under trees), or create shade (i.e. tents, umbrellas, and portable canopies) in order to limit exposure
- Cover reflective surfaces to reduce workers' UVR exposure
- Provide personal protective equipment such as:
    - head and neck protection such as wide-brimmed hats, pith helmets with neck protectors, etc.
    - clothing with an ultraviolet protection factor (UPF)
    - UVA/UVB sunglasses that wrap around
    - broad spectrum (UVA/UVB) SPF 30 (or higher) sunscreen and lip balm - consider providing water resistant sunscreens which provide better protection to workers for when they sweat or may be exposed to water. Consider providing wet wipes to remove dust/debris so workers can reapply the sunscreen.
    - vehicles with UVA/UVB protection laminated windows
- Where there are outdoor break areas, provide shade over the site furnishings (e.g. picnic tables, benches, etc.)
- Workers are encouraged and permitted to seek shade during break periods when working outdoors
- When having special events outdoors:
    - plan around peak UVR periods
    - provide shaded areas
    - provide sunscreen for participants and staff to use
    - provide information and reminders to participants and event staff to plan for their personal sun protection prior to the event (clothing, hats and glasses, and sunscreen)

Creating Healthy Workplace Policy

- Develop and implement a sun protection policy. Considerations may be for outdoor workers, drivers, as well as work-related outdoor employee events (please contact Project Health staff for more information)
- Outline training and education requirements

For more information or consultation,

519-575-4400 (TTY 519-575-4608)
projecthealth@regionofwaterloo.ca
www.projecthealth.ca

Region of Waterloo Public Health Resources

Project Health has a number of resources available for planning, implementing and evaluating your workplace wellness activities. As well, we have a number of links to external resources that you may find helpful. Please see www.projecthealth.ca for further resources on this topics area.

Also, the Public Health Resource Centre has a number of displays, educational kits, DVDs, posters, books, and pamphlets relevant to workplace health. Search for resources using the online catalogue. Or simply contact Resource Centre staff with your topic and they will suggest resources for you. Note that resources may be booked in advance.

For more information about additional resources, click here http://tinyurl.com/ctkyu7u

Phone: 519-575-4400

Email: phrc@regionofwaterloo.ca

References

[1] World Health Organization: The known health effects of UV [Internet]. [place unknown]: World Health Organization; 2013 [cited 2013 Jun 27]. Available from: http://www.who.int/uv/faq/uvhealtfac/en/

[2] Health Effects of UV Radiation [Internet]. St. Carton (AU): Cancer Council Victoria-Sunsmart. [cited 2013 Jun 27]. Available from: http://www.sunsmart.com.au/ultraviolet_radiation/the_health_risks

[3] Facts on cancer in Ontario - Skin cancer and ultraviolet radiation: Focus on artificial tanning [Internet]. Toronto (ON): Canadian Cancer Society; 2007 [cited 2013 Jun 27]. Available from: http://www.uvnetwork.ca/img/InsightFS_SkinCancer07.pdf

[4] Canadian Cancer Society: About UV rays [Internet]. [place unknown]: Canadian Cancer Society; [cited 2013 Jun 27]. Available from: http://www.cancer.ca/en/prevention-and-screening/live-well/sun-and-uv/?region=on

[5] Outdoor Workers Program [Internet]. [place unknown]: Canadian Dermatology Association; [cited 2013 Jun 27]. Available from: http://www.dermatology.ca/programs-resources/resources/sun-safety/#!/programs-resources/resources/sun-safety/outdoor-workers/

[6] Shade Guidelines [Internet]. Toronto (ON): Toronto Cancer Prevention Coalition; 2010 [cited 2013 Jun 27]. Available from: http://www1.toronto.ca/city_of_toronto/toronto_public_health/healthy_public_policy/tcpc/files/pdf/shade_guidelines.pdf

[7] The Surgeon General's Call to Action to Prevent Skin Cancer [Internet]. Washington (DC): U.S. Department of Health and Human Services, Office of the Surgeon General; 2014 [cited 2015 Jul 28]. Available from: http://www.surgeongeneral.gov

[8] Insight on cancer: Sun exposure and protective behaviours in Ontario [Internet]. Toronto (ON): Cancer Care Ontario; 2010 Nov [cited 2013 Jun 27]. Available from: https://www.cancercare.on.ca/common/pages/UserFile.aspx?fileId=87528

[9] The Economic Burden of Skin Cancer in Canada: Current and Projected [Internet]. [place unknown]: Canadian Partnership Against Cancer ; 2010 Feb [cited 2014 July 28]. Available from http://www.cancercare.ns.ca/site-cc/media/cancercare/Economic%20Burden%20of%20Skin%20Cancer%20in%20Canada%20Report.pdf