



Ultraviolet radiation (UVR) protection Policy Statement

Skin cancer is a significant public health issue for New Zealand, but it is largely preventable by reducing excessive exposure to ultraviolet radiation. The Public Health Association supports interventions that protect New Zealanders from UVR exposure in schools, workplaces and other outdoor settings and urges central and local government to promote, fund and implement these.

Overview

In New Zealand (NZ), skin cancer is by far the most common cancer type.¹ Annually, nearly 500 New Zealanders die² and more than 90,000 are diagnosed with a skin cancer.³ Excessive exposure to ultraviolet radiation (UVR), whether from sunlight or from artificial sources, such as sunbeds, causes skin cancer.⁴ NZ has the world's highest mortality and incidence rates for cutaneous malignant melanoma (melanoma), the most deadly of the skin cancers.⁵ Treating skin cancer places a considerable burden on the NZ health system with a conservative estimate (based on 2006 data) of \$57 million annually in direct costs to the public health system.¹ The risk of developing skin cancer can be mitigated by minimising exposure to UVR, with more than 90% of skin cancers considered preventable by reducing excessive exposure to UVR throughout the life cycle.⁶

Increasing sun protective policies and practices could contribute to the priority population health objectives of the NZ Health Strategy of illness prevention.⁷ The NZ Skin Cancer Primary Prevention and Early Detection Strategy 2017 to 2022, identifies five pathways for reducing skin cancer incidence and impact: primary prevention; early detection; diagnosis and treatment; rehabilitation, support and palliative care; and research, evaluation and surveillance.⁸

Comprehensive sun protection policies and practices are not consistently implemented in schools, workplaces and outdoor recreational settings. There has not been a national media campaign on the primary prevention of skin cancer for almost 10 years. The Health (Protection) Amendment Act restricts access to sunbeds to those aged 18 years or older, but the scientific evidence clearly shows that there is no safe level of sunbed use for individuals of any age^{9,10}.

Prevention

Over 90% of skin cancers are considered preventable by following the Sunsmart guidelines of:

1. Covering up with appropriate protective clothing
2. Using a broad brimmed hat or other suitably sun protective headwear that shades the face, ears and neck

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3. Wearing sunglasses that meet the Australian/NZ standard (AS/NZS 1067.1:2016)
4. Seeking shade
5. Whenever possible, rescheduling outdoor tasks to times outside the high UVR period of September to April from 10am to 4pm.
6. Before going outdoors, applying broad spectrum SPF30+ sunscreen to areas of exposed skin and then reapplying at recommended intervals
7. Never using a sunbed

In addition as a community, we need to reinforce and complement personal sun protective strategies with environmental change and supportive public policies, including for many outdoor areas and facilities administered by territorial local authorities.

Sun exposure and health issues for Māori and Pacific Peoples

In New Zealand, 99% of melanomas occur among Europeans.¹¹ Melanoma is less common in Māori and Pacific people, accounting for less than 1% of diagnoses.¹² The probable mechanism for this is that darker skin filters UVR, preventing it from reaching and damaging the deeper levels of the skin.¹³ Despite being less common, melanomas in Māori tend to be significantly thicker, making them more difficult to treat and with a poorer prognosis.¹² Unlike non-Māori, Māori women are much more likely to develop melanoma than Māori men.¹² Māori are also more likely to present with more advanced melanoma, which may reflect barriers to detection such as lower awareness of melanoma due to low rates; melanoma being more difficult to detect in people with darker skin; and reduced access to health care.¹²

Treaty of Waitangi Implications

Māori as tangata whenua and treaty partners have the right to the highest attainable standard of physical health and equitable access to services. The Government has legal and ethical obligations to uphold these rights¹⁴ in relation to melanoma prevention, detection and treatment. Poorer outcomes for Māori and lack of access to surveillance and treatment services should be considered in Government decision making regarding skin cancer control.

Priorities for action

Government organisations

The imagery used in all government publications that shows people outdoors should always use appropriate SunSmart imagery – e.g. appropriate sun protective hats or hard helmets with flaps rather than caps which do not provide adequate protection from UVR¹⁵, in particular, for the ears and neck.

Local government

The Local Government Act highlights the need for a healthy and safe environment. Territorial authorities have responsibilities for public spaces, recreational areas, sports facilities (including swimming pools), outdoor staff, community events and the granting of planning and building approvals, thereby shaping the social and physical environments in which we live. They are in a unique position to ensure that public places provide sun protection options to the public, particularly with respect to shade.

Worksafe

Mitigation of sun exposure as an environmental hazard has been a requirement under the 1992 Health and Safety in Employment ACT. Under the 1994 Occupational Safety and Health guidelines, protection

from solar UVR is required. However, more than 20 years later, practices are not being routinely monitored. The addition of UVR to workplace hazard registers should be required and enforced.

The Ministry of Health

The Ministry of Health should commit sufficient funding for the effective promotion of SunSmart activities by the Health Promotion Agency. For example, it is almost ten years since there was a national summer media campaign reminding the public to be SunSafe. District Health Boards should include sun protection strategies as a priority area in their strategic plans. Despite the substantial numbers of skin cancers diagnosed and their potential preventability, the HPA budget has been more than halved in this area over recent years.

Any UVR protection messages must explicitly target Māori women given the higher incidence of melanoma in this group compared with Māori men.

The Ministry of Education

The Ministry of Education should follow the World Health Organization recommendation for best practice sun protection in schools. This is a comprehensive approach that includes policy and practices, the physical environment, teaching as part of the curriculum, and the education of parents and caregivers. Government should commit adequate funding to provide appropriate shade in all schools (including built structures for sun protection from UVR).

Educational facilities (early childhood centres, primary and secondary schools)

Childhood and adolescence are important exposure periods and also times for developing lifetime sun protective practices. All schools and early childhood centres should implement a comprehensive sun protection policy which encompasses the SunSmart guidelines and signals the intent of the Board of Trustees that the school will provide an environment where staff and students can be safe in the sun. Schools with a sun-protective policy report better sun protection practices than those without such a policy.¹⁶

Workplaces

Outdoor workers have a significantly increased risk of some types of skin cancers, particularly squamous cell carcinomas.¹⁷ As non-melanoma skin cancers are not currently routinely recorded in the NZ Cancer Registry it is difficult to measure the size of the problem, but in Australia, where there are comparable UVR levels to those experienced in NZ, \$38.4 million in compensation payments has been paid out to 1,360 workers with occupational sun-related disease over a 10 year period.¹⁸ Skin cancers caused by high occupational UVR exposure should be classified as an occupational disease and exposure to UVR added to workplace hazard registers.¹⁹

It is important that workplaces provide policy and practical support for sun protection. Perceived workplace support²⁰, protective equipment provision and sun-protective workplace culture²¹ are significantly positively associated with workers' sun protective practices. Based on a systematic review by an international team, the US Community Services Task Force *'recommends interventions in outdoor occupational settings to prevent skin cancer based on strong evidence of effectiveness in increasing outdoor workers' ultraviolet protective behaviours'*.²²

Outdoor sporting facilities and organisations

Participation in outdoor sport and other outdoor recreational activities may lead to high UVR exposure and, consequently, a greater risk of developing skin cancer. This may be particularly true for individuals who participate in these activities during the summer months when UVR can reach 'extreme' levels according to WHO criteria. Many summer sports (e.g. cricket, surf lifesaving) are conducted over

extended periods of time which often encompass the peak UVR hours around solar noon. Coaches, officials and spectators may also be at increased risk of excessive UVR exposure.

Although UVR levels during the summer months are higher than winter months, there are risks of excessive UVR exposure in some winter sports or recreational activities (such as skiing or snowboarding) where the sport is either conducted at high altitudes or where the surfaces are highly reflective. Sports organisations should include sun protective policies in their health and safety documentation which stipulate that clothing worn and sporting event practices follow SunSmart guidelines. Based on a systematic review by an international team, the US Community Services Task Force *'recommends interventions in outdoor recreational settings to prevent skin cancer based on strong evidence of effectiveness in increasing ultraviolet protective behaviours'*.²³

PHA actions to support this policy

The Public Health Association, including its branches, will:

- Keep members informed of relevant research, key policy/legislative developments and consultations on UVR protection issues
- Influence local and central government policy-making on issues relevant to UVR protection through submissions and participation in policy development forums
- Adopt and promote Sunsmart actions during relevant PHA events, and promoting leadership by example to Ministry and DHBs
- Continue to advocate for a total sunbed ban and safe removal of these from our community

The PHA would like to acknowledge and support the leadership of the Cancer Society in the role they have played in primary prevention of skin cancer in New Zealand. This has included initiating and delivering the SunSmart schools programme, which supports schools in policy development, information on sunsmart clothing, environmental shade planning, and provides curriculum resources. The SunSmart Schools accreditation gives recognition to a school that they have achieved SunSmart School status.

References

- 1 O'Dea D. The Costs of Skin Cancer to New Zealand. A Report to the The Cancer Society of New Zealand. In. Wellington: Department of Public Health, Wellington School of Medicine, University of Otago. 2009.
- 2 Ministry of Health. *CANCER: New Registrations and Deaths 2012*. Wellington: Ministry of Health. 2012.
- 3 Sneyd MJ, Gray A. Expected non-melanoma skin (keratinocytic) cancer incidence in New Zealand for 2018. In. Wellington: Health Promotion Agency. March 2018.
- 4 International Agency for Research on Cancer. Agents classified by the IARC Monographs. In, Vol. Volumes 1-105. Group 1. 2012.
- 5 Whiteman DC, Green AC, Olsen CM. The growing burden of invasive melanoma: Projections of incidence rates and numbers of new cases in six susceptible populations to 2031. *J. Invest. Dermatol.* 2016; **136**: 1161-71.
- 6 Armstrong B, Autier P, Bajdik CD *et al.* *Prevention of Skin Cancer*. Dordrecht: Kluwer Academic Publishers. 2004.
- 7 Minister of Health. New Zealand Health Strategy. Road map of actions 2016. In. Wellington: Ministry of Health. 2016.
- 8 Health Promotion Agency, Melnet. New Zealand Skin Cancer Primary Prevention and Early Detection Strategy 2017 to 2022. In. Wellington. March, 2017.
- 9 Boniol M, Autier P, Boyle P *et al.* Cutaneous melanoma attributable to sunbed use: Systematic review and meta-analysis. *BMJ* 2012; **345**: e4757.
- 10 Wehner MR, Shive ML, Chren M-M *et al.* Indoor tanning and non-melanoma skin cancer: Systematic review and meta-analysis. *BMJ* 2012; **345**: e5909.
- 11 Liang JC, Robinson E, Martin RCW. Cutaneous melanoma in New Zealand: 2000–2004. *ANZ J. Surg.* 2010; **80**: 312-6.
- 12 Hore S, Robinson E, Martin RCW. Malignant melanoma amongst Maori and New Zealand Europeans, 2000–2004. *World J. Surg.* 2010; **34**: 1788-92.
- 13 Kabigting FD, Nelson FP, Kauffman CL *et al.* Malignant melanoma in African-Americans. *Dermatol. Online J.* 2009; **15**: 3.
- 14 Orange C. *Illustrated history of the Treaty of Waitangi*. Wellington: Bridget Williams Books. 2001.
- 15 Gies P, Javorniczky J, Roy C *et al.* Measurements of the UVR protection provided by hats used at school. *Photochem. Photobiol.* 2006; **82**: 750-4.
- 16 Reeder AI, McNoe BM, Iosua EE. Sun protection practices in New Zealand secondary schools: A 2014 baseline study. *Preventive Medicine Reports* 2016; **3**: 257-63.
- 17 Schmitt J, Seidler A, Diepgen TL *et al.* Occupational ultraviolet light exposure increases the risk for the development of cutaneous squamous cell carcinoma: A systematic review and meta-analysis. *Br. J. Dermatol.* 2011; **164**: 291-307.
- 18 Cancer Council Western Australia. Occupational exposure to ultraviolet (UV) radiation: Workers' compensation claims paid in Australia 2000-2009. In. 2011; 1-21.
- 19 Schmitt J, Bauer A, Seidler A *et al.* Occupational UV-light exposure as a risk factor for non-melanocytic skin cancer - Epidemiological evidence concerning a new occupational disease [German]. *Dermatologie in Beruf und Umwelt* 2011; **59**: 50-4.
- 20 Hammond VA, Reeder AI, Gray A *et al.* Are workers or their workplaces the key to occupational sun protection? *Health Promot. J. Austr.* 2008; **19**: 97-101.

- 21 Reeder AI, Gray A, McCool JP. Occupational sun protection: Workplace culture, equipment provision and outdoor workers' characteristics. *J. Occup. Health* 2013; **55**: 84-97.
- 22 Community Preventive Services Task Force. Preventing skin cancer: interventions in outdoor occupational settings <http://www.thecommunityguide.org/cancer/skin/education-policy/outdooroccupations.html>. In. 2016.
- 23 The Guide to Community Preventive Services - The Community Guide. Preventing skin cancer: Interventions in outdoor recreational and tourist settings (<http://www.thecommunityguide.org/cancer/skin/education-policy/outdoorrecreation.html>). In. Accessed 2016.