frequent occupational disease e.g. in agriculture and construction, as well as the most frequent occupational cancer of all branches. The magnitude of affected workers and recent dosimetric UVR measurements showing high annual exposures (>600 SED) are currently stimulating regulatory efforts for improved workplace prevention. The recognition of UVR induced skin cancer as an occupational disease, has proven to be pivotal to this approach.

1651d OCCUPATIONAL UV EXPOSURE AND THE EYE

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Ultraviolet (UV) and blue-light components of optical radiation can affect the eye with a photochemical mechanism; both acute and/or long term effects can be induced. By large, the most diffuse source of optical radiation is Solar Radiation (SR) that includes both components. Among factors influencing SR exposure one of the most important is outdoor work: only in Europe outdoor-workers (OWs) are about 15 million. Another factor specifically relevant to the eye is reflection as, for anatomical reasons, the eye is less protected from reflected rays. As a consequence the presence of highly reflecting surfaces, like fresh snow or water, can increase eye exposure. In OWs various adverse chronic eye effects, involving different structures of the eye, can be found, as pterygium, cataract and macular degeneration. We reviewed scientific studies on eye effects of optical radiation in OWs. The results confirm an increased risk of the abovementioned adverse effects, but knowledge on various aspects is largely insufficient. Among relevant aspects deserving further studies are the evaluation of lifetime ocular exposure to ultraviolet radiation and blue-light considering both occupational and leisure activities, and possibly integrating subjective questionnaires data with objective data, as UV effective irradiance, available through meteo-climatic databases or field measurements. Individual aspects to be adequately investigated must include among other, also the possible presence of reflection, protective habits as the use of hats (type, frequency, etc.) and of sunglasses (frequency, shape, UV/blue light filters, etc). These aspects are extremely important especially for the development of more adequate preventive measures.

1651e SOLAR ULTRAVIOLET EXPOSURE – A REVIEW OF RISKS AND PREVENTIVE STRATEGIES IN AUSTRALIAN WORKPLACES

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Introduction Ultraviolet(UV) radiation in the form of sunlight is Australia's most prevalent occupational carcinogen. It is estimated that 37% of the male working population and 8% of the female working population are significantly exposed to solar radiation at work.

Methods A review was performed of the current research literature, together with published national policies and best practice guidelines.

Results UV radiation exposure is the major cause of melanoma and non-melanoma skin cancer (NMSC). Australia has the highest incidence of melanoma in the world and skin cancer accounts for over 80% of all new cases of cancer diagnosed each year. Although sun protection is used by 95% of those exposed at work, only 9% are fully protected.

A 2015 study estimated that 7220 melanomas occurring in Australia in 2010 could be attributed to UV radiation exposure. The incidence of melanoma in those under the age of 25 is stable and is believed to be due to improved sun protection behaviours from education programs, although it may partly relate to the change in the population racial mix.

Evidence shows that a wide range of measures can be effective in reducing the impact of skin cancer. Australia now has extensive prevention programs and it has been estimated that the return on a national skin cancer prevention media campaign is approximately $2.32 for every dollar invested, through reduced healthcare costs.

Conclusion This review summarises the impact of UV exposure on skin cancer prevalence in Australia. The policy priorities include reducing UV exposures, education programs and early intervention. These strategies also have the potential for broader applicability in the prevention of other occupational risks.

1651f ILO ACTIVITIES FOR THE PREVENTION OF THE RISK RELATED TO OCCUPATIONAL EXPOSURE TO SOLAR UV

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Introduction Excessive exposure to solar UV radiation is a relevant risk factor for outdoor workers, inducing various acute and chronic adverse health effects. In particular chronic exposure can cause skin and eye cancer mainly by DNA mutations induction (e.g. in the p53 tumour suppressor gene and telomerase gene) and immunosuppression. The protection of the worker against sickness, disease and injury arising out of employment is one of the tasks assigned to the International Labour Organisation (ILO) in the Preamble of its Constitution: the protection against risks from UV exposure falls naturally within these tasks. The ILO uses various means of action to give governments and employers' and workers' organisations the necessary help in drawing up and implementing programmes for the control of workplace risk factors, including solar UV, as international standards in the form of legal instruments, codes of practice, practical manuals, training materials and education and training and technical cooperation. Examples are the Safety and Health in Agriculture Convention (No. 184) and Recommendation (No. 192), and the List of Occupational Diseases Recommendation (No. 194). Specific sections devoted to UV protection are included in the ILO codes of practice on Safety and Health in Agricultural Work, and on Ambient Factors in the Workplace. The ILO also produces guidance documents in collaboration with the ICNIRP and the WHO on workplace UV protection: they provide guidance on workplace safety and health measures and procedures that will lead to higher standards of safety for all personnel engaged in the operation which gives rise to occupational exposure to UV. Furthermore, the ILO collects information on good workplace practice on protection of workers against UV radiation and on the identification and recognition of diseases as