



PREVENTION OPPORTUNITIES UNDER THE BIG SKY

Dangers of Tanning Beds and Other Artificial Light Tanning Sources

Ultraviolet light, from the sun or artificial light sources, is a form of radiation that penetrates the surface of the skin and causes cell damage. Tanning is visible evidence of this damage. The consequences include premature aging of the skin and increased risk of skin cancer and malignant melanoma.¹ Recent research also implicates exposure to ultraviolet radiation (UVR) in the development of cataracts and other damage to the eyes, and to disruption of immune system function.¹ The light sources from indoor tanning units use UVR identical to the components of natural sunlight that are responsible for tanning, burning, and the other forms of skin damage that increase the risk of skin cancers and malignant melanoma.

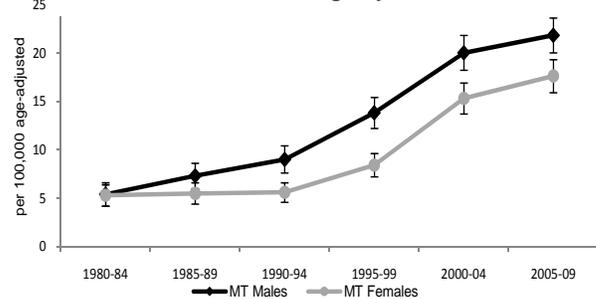
Malignant melanoma in Montana. The age-adjusted incidence of malignant melanoma in Montana has increased dramatically since 1980 (Figure). Some of this increase is no doubt due to increased ascertainment and reporting, but changes in age and stage at diagnosis suggest that there is also a true increase in incidence. Incidence is consistently higher in males than females, possibly because of greater occupational and recreational exposure to the sun.

Risks for developing skin cancer. The risk for developing skin cancer of all types, including the very aggressive and often fatal form, malignant melanoma, begins early in life. The effects of exposure to UVR are cumulative. Therefore, children should be protected from the sun from an early age, and protective measures should continue throughout the teen and adult years. The National Cancer Institute, the American Cancer Society, the American Medical Association, the American Academy of Pediatrics, and the American Academy of Dermatology all endorse preventive measures to avoid exposure to UVR, including avoiding deliberate tanning in tanning beds and other artificial light tanning sources. The American Academy of Pediatrics, the American Medical Association, and the American Academy of Dermatology endorse policies preventing the use of artificial tanning sources by children under the age of 18 years.¹

Artificial tanning, a growth industry. Teens and adults make frequent use of artificial tanning, as shown by the rapid growth of the tanning industry in the US.² Recent national surveys find that older white girls from more affluent families used artificial tanning more than other groups.³⁻⁶ Teens are more likely to use artificial tanning if their parents do so, if their parents believe

people with tans are more attractive, if their friends use artificial tanning, and if they themselves believe that people with tans are more attractive. Teens tan in spite of their parents' and their own awareness that indoor tanning increases the risk of skin cancer.

Figure. Incidence of Malignant Melanoma in Montana Residents, Montana Central Tumor Registry, 1980-2009



Tanning Bed Use Restrictions for Minors. By 2011, 32 states had enacted restrictions on the use of artificial tanning for minors.⁷ Restrictions range from bans for young teens (generally younger than 14 or 16 years) to requirements for written permission from parents for minors under the age of 16 or 18 years. Nine of these states have proposed even greater restrictions for young teens. Eleven other states proposed restrictive legislation for minors in 2010. Montana considered a bill requiring written parental permission for teens younger than 16 years in 2009, but it did not pass.

Recommendations for health care providers

- Health care providers should incorporate advice about avoiding UVR exposure into routine health visits.
- Parents should be counseled on appropriate protection for infants and young children.
- Older children and teens should be counseled on natural and artificial UVR avoidance.
- Advice should include consideration of individual risk factors such as light skin tone, nevi, and freckling, and family risk factors such as family history of malignant melanoma.
- Clinicians should counsel teens and adults about the dangers of UVR including artificial light sources for tanning; these sources are equally as dangerous as natural sunlight.

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References:

1. Balk SJ, et al. Ultraviolet radiation: a hazard to children and adolescents (Technical report). *Pediatrics* 2011; 127:e791-e817.
2. Council on Environmental Health and Section on Dermatology. Ultraviolet radiation: a hazard to children and adolescents (Policy statement). *Pediatrics* 2011; 127:588-597.
3. Levine JA et al. The indoor UV tanning industry: a review of skin cancer risk, health benefit claims, and regulation. *J Am Acad Dermatol* 2005; 53:1038-1044.
4. Cokkonides VE, et al. Use of indoor tanning sunlamps by US youth, ages 11-18 years, and by their parents or guardian caregivers: prevalence and correlates. *Pediatrics* 2002; 109:1124-1130.
5. Demko CA, et al. Use of indoor tanning facilities by white adolescents in the United States. *Arch Pediatr Adolesc Med* 2003; 157: 854-860.
6. Mayer J, et al. Adolescents' use of indoor tanning: a large-scale evaluation of psychosocial, environmental, and policy-level correlates. *AJPH* 2011; published on line ahead of print March 18, 2011.
7. *National Conference of State Legislatures. Tanning restriction for minors: a state by state comparison.* <http://www.ncsl.org/default.aspx?tabid=14394> updated September, 2010.

2,275 copies of this public document were published at an estimated cost of \$0.67 per copy, for a total cost of \$1524.25, which includes \$ 518.49 for printing and \$1005.76 for distribution.



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