UV Tanning Advertisements in High School Newspapers

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Objective: To examine the increasing use of UV tanning parlors by adolescents, despite the World Health Organization recommendation that no one under the age of 18 years use UV tanning devices.

Design: We examined tanning advertisements in a sample of public high school newspapers published between 2001 and 2005 in 3 Colorado counties encompassing the Denver metropolitan area.

Results: Tanning advertisements appeared in newspapers from 11 (48%) of 23 schools. Newspaper issues (N=131) contained 40 advertisements placed by 18 tanning parlors. Advertisements commonly offered discounts (19 of 40) including unlimited tanning offers (15 of 40). Thirteen advertisements featured non-UV tanning treatments, and 2 advertisements mentioned parental consent or accompaniment for UV tanning.

Conclusions: UV radiation, a classified carcinogen, is commonly and specifically marketed to adolescents through high school newspaper advertising. Public health skin cancer prevention policies should include the prohibition of UV tanning advertising to minors.

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Newspapers received were published between 2001 and 2005 and were most commonly published in 2004 (available in an online eFigure [http://www.archdermatol.com]). Newspapers received were most commonly published in the months of May and September (n = 19) and least commonly published in the month of July (n = 0). At least 1 issue of newspapers from 11 schools contained UV tanning advertising (Table). Eighteen unique establishments placed the 40 tanning advertisements found. The highest density of advertisements was found in newspapers published during the spring (spring [0.47] advertisements per number of newspapers published vs winter [0.20], summer [0.25], and fall [0.23]), particularly during the month of April (0.58). Up to 3 advertisements were found in a single newspaper, the largest being one-half page (20 × 26 cm) and the smallest, 8 × 10 cm (mean, 11 × 13.5 cm). Tanning salon advertisements commonly promoted unlimited tanning offers (15 of 40) for periods of up to 4 months. Discounts, often requiring student identification or described as “prom specials,” were mentioned in 19 (48%) of 40 advertisements and included 50%-off promotions and monthly unlimited tanning for as little as $19.99.

Thirteen advertisements (33%) featured non-UV tanning treatments. Two advertisements (5%) mentioned parental guidance: parental consent and accompaniment was required for those younger than 16 years at one establishment, and parental consent was required for those younger than 18 years at the other establishment. One advertisement included the restriction that no one 14 years and younger was permitted to tan.

This study documents abundant UV tanning advertising in public high school newspapers in Denver, a metropolitan area without indoor UV tanning youth access restrictions. The study has several limitations: (1) results were not derived from a complete or a randomly selected sample of newspapers, and (2) the data set is too limited to present time trend analysis for particular advertisement subgroups. Similar to a previous study of indoor tanning advertisements in 24 San Diego, Calif, commercial newspapers, we also found that “unlimited” tanning packages were common.

The escalating cost of treating skin cancers mandates a public health policy response. Both meta-analysis and case-control data exist, linking UV radiation from tanning beds and sunlamps to melanoma and nonmelanoma skin cancers. UV-free tanning options, especially the use of spray-on application systems of dihydroxyacetone-containing tanning solutions, offer teenagers and tanning salons an alternative to UV tanning. Interestingly, a recent study suggests that, like smoking, tanning may be addictive. The banning of youth-directed advertising of other carcinogens, namely tobacco, provides a model for public policy response. The UV radiation emitted from sunlamps and sun beds is classified as a group 2A carcinogenic agent by the International Agency for Research on Cancer. Further advocacy of legislative restrictions on tanning marketing to adolescents should be adopted.

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Author Contributions: Study concept and design: Dellavalle, Francis, and Freeman. Acquisition of data: Freeman, Lundahl, Francis, and Bowland. Analysis and interpretation of data: Freeman and Dellavalle. Drafting of the manuscript: Freeman, Francis, and Dellavalle. Revision of the manuscript for important intellectual content: Freeman and Dellavalle. Statistical analysis: Freeman and Dellavalle. Study supervision: Dellavalle. Dr Dellavalle, as the principal investigator of this study, had complete ac-
cess to the data and takes responsibility for the integrity of the data and the accuracy of the data analysis.

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Previous Presentation: This study was presented at the Society of Investigative Dermatology Annual Meeting; May 4-8, 2005; St Louis, Mo.

Additional Resources: The online-only eBox and eFigure are available at http://www.archdermatol.com.

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REFERENCES


ARCHIVES Web Quiz Winner

Congratulations to the winner of our January quiz, Vincent Descamps, MD, PhD, Department of Dermatology, Bichat Claude Bernard Hospital, AP-HP, Paris, France. The correct answer to our January challenge was filiform hyperkeratosis. For a complete discussion of this case, see the Off-Center Fold section in the February ARCHIVES (Blanes M, Carnicer F, Botella R, Pastor N, Peiro FM. Filiform horny projections on the palms of a 69-year-old man. Arch Dermatol. 2006;142:233-240).

Be sure to visit the Archives of Dermatology Web site (http://www.archdermatol.com) to try your hand at the interactive quiz. We invite visitors to make a diagnosis based on selected information from a case report or other feature scheduled to be published in the following month’s print edition of the ARCHIVES. The first visitor to e-mail our Web editors with the correct answer will be recognized in the print journal and on our Web site and will also receive a free copy of The Art of JAMA II.
### Denver-Area Public High Schools, Colorado

**Arapahoe County**
- Cherry Creek High School
- Heritage High School
- Arapahoe High School
- Aurora Central High School
- Gateway High School
- Rangeview High School
- Englewood High School
- Grandview High School
- Hartenbach High School
- Hinkley High School
- Joliet High School
- Overland High School
- Smoky Hill High School
- William Smith High School
- Byers Junior-Senior High School
- Eaglecrest High School
- Deer Trail Junior-Senior High School
- Sheridan High School
- Colorado's Finest Alternative High School
- Littleton High School
- Ridge View Academy Charter School

**Jefferson County**
- Wheat Ridge High School
- Standley Lake High School
- Conifer High School
- Ralston Valley High School
- Chatfield Senior High School
- Bear Creek High School
- Jefferson High School
- Dakota Ridge High School
- Arvada High School
- Lakewood High School
- Alameda High School
- Arvada West High School
- Columbine High School
- D’Evelyn High School
- Evergreen High School
- Golden High School
- Green Mountain School
- Jefferson County Open High School
- McLain High School
- Pamona High School
- Sobesky Academy High School

**Denver County**
- South High School
- Thomas Jefferson High School
- JFK High School
- West High School
- East High School
- Denver School of the Arts
- Abraham Lincoln High School
- Arts and Cultural Studies Academy at Manual
- Colorado High School
- Contemporary Learning Academy High School
- Emerson Street School
- Emily Griffith Opportunity School
- Expeditionary Learning School
- Florence Crittenton High School
- Fred N. Thomas Career Education Center
- George Washington High School
- Leadership Academy at Manual
- Millennium Quest Science Academy at Manual
- Montbello High School
- North High School
- PS 1 Charter High School

**Web Sites Used**
- Jefferson County public high schools: [http://jeffcoweb.jeffco.k12.co.us/school/](http://jeffcoweb.jeffco.k12.co.us/school/)
- Denver County public high schools: [http://www.publicschoolreview.com/county_public_schools/stateid/co/county/8031](http://www.publicschoolreview.com/county_public_schools/stateid/co/county/8031)
- High school telephone numbers: [http://www.dexonline.com](http://www.dexonline.com)
**eFigure.** Newspapers collected by year.
Yones and Palmer. Drafting of the manuscript: Yones and Palmer. Critical revision of the manuscript for important intellectual content: Yones, Palmer, Garibaldinos, and Hawk.

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REFERENCES


Correction

Error in Figure. In the Study by Freeman et al titled “UV Tanning Advertisements in High School Newspapers,” published in the April issue of the ARCHIVES (2006;142:460-462), an editorial error was introduced by the journal in the Figure on page 461. In the Figure, the third box down should have read “37 With Newspapers” instead of “3 With Newspapers.” The corrected Figure is reproduced herein.

Figure. High school newspaper collection.

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