

Sunscreen Use and Sunburn among Vermont Youth

Youth Risk Behavior Survey (2013 and 2015) Data Brief

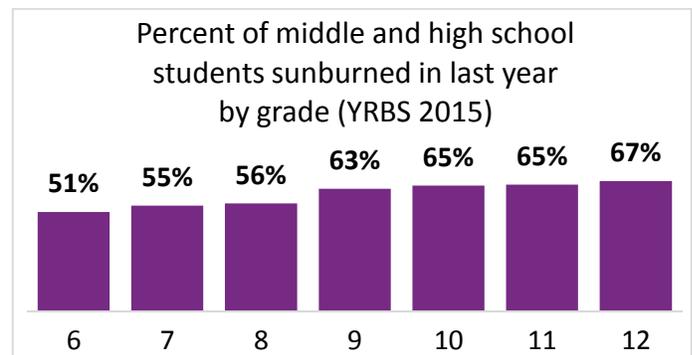
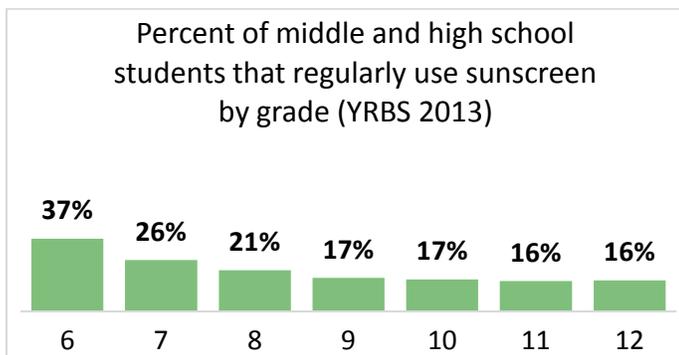
Background

Skin cancer is the most common form of cancer in the U.S. and Vermont. Melanoma is the least common, but most serious, form of skin cancer. Vermont has one of the highest rates of melanoma incidence in the U.S. Most cases of skin cancer, including melanoma, are associated with exposure to ultraviolet (UV) radiation from the sun, sunlamps and tanning beds. Sunburns, especially during childhood, significantly increase melanoma risk.

Low rates of sunscreen use and high sunburn rates among young Vermonters

Only 16% percent of Vermont high school students, and 27% of Vermont middle school students, reported regularly using sunscreen¹ in the past year (Youth Risk Behavior Survey – YRBS, 2013). Regular sunscreen use decreased significantly, from 37% among sixth graders to 17% among ninth graders. However, from grades nine through twelve sunscreen use decreased very little, from 17% among ninth graders to 16% among twelfth graders.

Sixty-five percent of Vermont high school students, and 54% of Vermont middle school students, reported having had at least one sunburn² in the past year (YRBS 2015). Of those who were sunburned, half of high schoolers, and over 40% of middle schoolers had three or more sunburns. Sunburn rates increased significantly from 51% among sixth graders to 63% among ninth graders. In high school, sunburn rates also increased with grade, but not as dramatically, from 63% in ninth grade to 67% in twelfth grade.



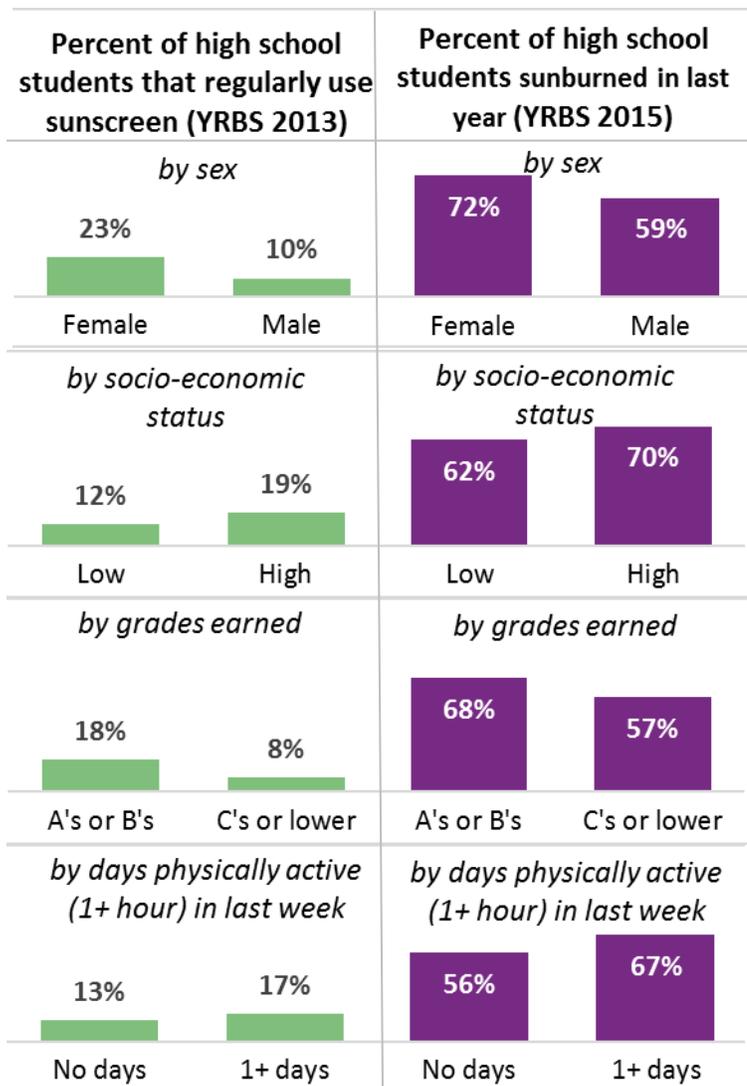
Sunscreen use and sunburn rates by student demographics, achievement, and health behaviors: students traditionally considered low risk³ have higher sunburn rates

The following groups were more likely to report regular sunscreen use and more likely to report having had a sunburn than their peers:

- Female students
- Students of higher socio-economic status (as approximated using mother's education)^{4,5}
- Students that identified as non-Hispanic white
- Students who participated in at least 60 minutes of physical activity on at least one day in the last week
- Students who perform well academically (mostly earn A's or B's)⁵

Multiple strategies needed to reduce sunburn rates

Researchers have found that those who use sunscreen may spend more time in the sun, reduce use of other forms UV protection (e.g. seek shade, long clothing, hats), and not apply adequate amounts of sunscreen – or reapply as necessary. Some studies have shown high rates of sunburn among those who report frequent sunscreen use. Therefore, sunscreen is recommended as a secondary form of sun protection.⁶



Because the sunburn history and sunscreen questions were asked in different years of the YRBS (sunscreen use in 2013 and sunburn history in 2015) it is not possible to look at the association between an individual's use of sunscreen and the number of sunburns they experienced in the past year. However, the patterns seen in the Vermont YRBS data match those of other studies which indicate that regular sunscreen use is not necessarily associated with lack of sunburn.

The data presented here indicate that strategies to reduce sunburn rates need to be targeted both at youth traditionally classified as being at low risk³ of engaging in negative health behaviors, as well as at youth traditionally classified as high risk. Additionally, interventions to prevent sunburn need to include more effective methods such as seeking shade, avoiding peak UV exposure (between 10 am and 4 pm) and wearing long sleeves, rather than focusing on sunscreen use alone.

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¹ Regular sunscreen use is defined as always, or most of the time, wearing a sunscreen with SPF of 15 or higher when outside for more than an hour on a sunny day.

² Sunburn is defined as any time even a small part of your skin turned red or hurt for 12 hours or more after being outside in the sun or after using a sunlamp or other indoor tanning device.

³ E.g. those with high academic achievement, who participate in regular physical activity or other extracurricular activities, or come from higher socio-economic backgrounds.

⁴ Note: many students were unsure of their mothers' education level and were therefore not included in this measure.

⁵ Data not available for middle school students.

⁶ Saraiya, Mona, et al. "Interventions to prevent skin cancer by reducing exposure to ultraviolet radiation: a systematic review." *American journal of preventive medicine* 27.5 (2004): 422-466.