

Study finds photographs of UV exposure can impact sunburns in preteens

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Researchers from Boston University School of Medicine (BUSM) have found that among preteens, the use of photographs to measure ultraviolet (UV) exposure, could motivate them to improve sun protection practices and limit number of sunburns. These findings appear in the April 2009 issue of the *Journal of the Dermatology Nurses' Association*.

Skin cancer is the most common cancer in our society, and overexposure to UV light in childhood is a major risk factor. Individuals with light eyes, pale skin, history of sunburns, freckling tendency, multiple nevi, or family histories of [skin cancer](#) are at greatest risk.

The BUSM researchers collaborated with the Children's [Melanoma Prevention Foundation](#) (<http://www.melanomaprevention.org/>) to design an intervention program in the Northeast. They recruited middle-school students (aged 11-13 years) from Quincy, Massachusetts, a community with a melanoma rate higher than expected from 1999-2003. Of the 111 students who completed the study, 83 received the intervention and 28 were in the control group. All students received a sun protection lecture. Those in the intervention group also received a UV photograph of their face, (that shows pigment changes from chronic [sun exposure](#)), along with detailed explanations of their findings on the UV photographs at baseline. Follow-up surveys at two and six months were also obtained. Responses from both groups were analyzed with regard to attitudes and behaviors relating to sun protection practices.

According to the researchers there were fewer (36 percent) reported

sunburns in the intervention group at two months follow-up, as compared with the control group (57 percent). This difference was smaller at six months follow-up with 51 percent of intervention group reporting a sunburn compared to 64 percent of the control group. The researchers then examined the relationship between preteens who were "planning to tan" at baseline and reports of sunburn at two and six months follow-up and found sunburn rates were again lower among the students in the intervention group compared to the control group.

Students generally reported that the UV photograph was a helpful tool in teaching risk factors for skin cancer and the majority had kept them. Those preteens with the highest risk factors for melanoma, such as numerous facial freckles, were greater impacted and were significantly less likely to report sunburn at two months and again in six months.

"Despite public health recommendations to protect children and preteens from sun damage, studies indicate that we can be quite ineffective in this regard," said lead author Marie-France Demierre, a professor of dermatology and medicine at BUSM. "Studies have reported that children experience at least one annual sunburn, and more than a third have three or more per year. This greatly increases their chances of melanoma. The UV photographs appear to be a helpful tool to allow a child to recognize the risk for skin cancer and potentially reduce their chance of sunburn," added Demierre.

Demierre added, "The UV photograph represents an immediate "picture" of sun damage that can impact impressionable teens. By providing coping information, for example, information on how to protect oneself, sun protection information, one can facilitate positive health behaviors potentially preventing sunburn."

Demierre also commented on the feasibility of such a study within a public school system. The researchers had a close collaboration with the

Quincy school superintendent, teachers and nurses who allowed this important research to take place. "The potential of UV photographs in improving [sun protection](#) behavior among children and preteens, especially those most at risk for melanoma, is enormous. Every teen should get an ultraviolet photograph of his/her face in school along with routine vaccinations," she added.

Source: Boston University

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