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2020 Update on sunscreen compliance with American Academy of Dermatology recommendations



To the Editor: In 2014 and 2017, Yazdani Abyaneh et al¹ and Eber et al² published studies that detailed the proportion of sunscreens distributed by the largest United States retailer (Walmart, Bentonville, AR) and pharmacy (Walgreens, Deerfield, IL) that met American Academy of Dermatology (AAD) recommendations: sun protection factor (SPF) 30, broad-spectrum coverage, and water resistant for 40 to 80 minutes.³ In 2017, Eber et al² reported that 65.3% of sunscreens sold at Walmart and 72.9% of sunscreens sold at Walgreens met all AAD recommendations, a significant improvement from when AAD recommendations were first released in 2011. Yet sunscreens labeled as tanning and bronzing products fell far behind with only 19% and 20% compliance. In 2019, the US Food and Drug Administration (FDA) advanced new proposed regulations to the labeling of sunscreens to further ensure the safety and efficacy of over the counter sunscreen products.⁴ Our study is a follow-up study

to assess if these recent changes lead to significant improvement on sunscreen compliance with AAD recommendations.

We collected data from both the Walmart and Walgreens websites on June 27, 2020, and the study methods detailed by Yazdani Abyaneh et al¹ were followed for consistency: Walmart > “pharmacy, health & beauty” > “skin care” > “sun care”; Walgreens > “beauty” > “sun care” > “shop all sun care.” Items with no SPF value labeled, or no image of primary display panel (main packaging label) were excluded along with products that are labeled as “lip balm,” “lotion,” or “moisturizer.” The primary display panel of all remaining products were reviewed for SPF of ≥ 30 , water resistance of 40 to 80 minutes, broad-spectrum labeling compliance with requirements by the FDA, and advertising for bronzing or tanning.

A total of 545 results from Walmart and 307 results from Walgreens were reviewed. Of these, 285 and 152 unique, evaluable sunscreen products were included in the study (Table I). Most sunscreens available on the Walmart and Walgreens websites have an SPF ≥ 30 (93.7% and 90.7%, respectively), and nearly all have broad-spectrum coverage (97.9% and 100%) and water resistance (96.8% and 99.3%). Of the total sunscreens examined, 91.2% of those distributed by Walmart and 92.1% of those distributed by Walgreens met all 3 AAD recommendations. Of the products advertised for bronzing and tanning, 20% and 57.1% met all 3 AAD recommendations.

Our study shows significant improvement in adherence to AAD recommendations for sunscreen distributed by major distributors in 2020 after FDA labeling regulations updates ($P < .01$ and $P = .025$). This improvement is reflective of increased AAD recommendation adherence in sunscreens that are not labeled for bronzing/tanning ($P < .01$ and $P = .033$), but there remains a significant gap in

Table I. Proportion of sunscreen products meeting AAD recommendations in 2020

Products	Walmart, n (%)	Walgreens, n (%)	P value Walmart (2020 vs 2017)	P value Walgreens (2020 vs 2017)
Total search hits	545	307		
Products evaluated	284	151		
Products with SPF ≥ 30	266 (93.6)	137 (90.7)	0.18	.64
Products with broad-spectrum coverage	278 (97.9)	151 (100.0)	0.63	.68
Products with water resistance (40-80 min)	275 (96.8)	150 (99.9)	0.01*	.06
Products meeting all 3 AAD recommendations	259 (91.1)	139 (92.1)	<0.01*	.02*

AAD, American Academy of Dermatology; SPF, sun protection factor.

*Signifies statistically significant increase in sunscreens available in 2020 compared with 2017. Statistical significance determined as $P < .05$ with the χ^2 test.

Table II. Comparison of sunscreens with and without tanning and bronzing advertised in compliance with AAD recommendations

Category	Sunscreens with tanning or bronzing on primary display, (%)	Sunscreens without tanning or bronzing on primary display, (%)	P value
Walmart	Products with SPF \geq 30	20	<.01*
	Products with broad-spectrum coverage	80	.062
	Products with water resistance (40-80 min)	90	.471
	Products meeting all 3 AAD recommendations	20	<.01*
	P value (sunscreens meeting all 3 AAD recommendations in 2020 compared with 2017)	.818	.003*
Walgreens	Products with SPF \geq 30	28.6	<.01*
	Products with broad-spectrum coverage	100	1
	Products with water resistance (40-80 min)	100	.943
	Products meeting all 3 AAD recommendations	57.1	<.01*
	P value (sunscreens meeting all 3 AAD recommendations in 2020 compared with 2017)	<.01*	.033*

AAD, American Academy of Dermatology; SPF, sun protection factor.

*Signifies statistically significant increase in sunscreens available in 2020 compared with 2017. Statistical significance determined as $P < .05$ with the χ^2 test.

adherence for bronzing and tanning products, which showed no consistent improvement in adherence since 2017 (Table II). This is because of significantly less product labeling of SPF compared with non-bronzing products ($P < .01$ and $P < .01$). Patients should be advised that sunscreens with tanning or bronzing features are significantly less likely to meet AAD recommendations and therefore may not provide adequate photoprotection.

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Conflicts of interest

None disclosed.

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Adverse effects of low-dose oral minoxidil for androgenetic alopecia in 435 patients



To the Editor: There is a growing interest in using low-dose oral minoxidil (LDM) for the treatment of androgenetic alopecia (AGA). Nevertheless, tolerability and adverse effects (AEs) are still a concern.^{1,2} We evaluated the AEs of LDM (≤ 5 mg/d) in AGA treatment and correlated them to the dose, weight, sex, and skin color.

We reviewed all patients who were prescribed LDM for AGA from January 2017 to May 2020 at 3 hair clinics in Brazil. Of 669 patients who were invited to participate, 435 (65%) completed a telephone interview regarding possible AEs (Supplemental Methods, available via Mendeley at <https://data.mendeley.com/datasets/zhd6nrx92m/1>).