18701

Sunscreen attitudes and usage: Consumer insights from a large study in United States

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Sunscreen, when used properly, can help prevent skin cancer and delay skin aging caused by UV exposure. While many people use sunscreen to protect their skin, proper compliance is driven by an accurate understanding of how sunscreens function. In this study, we sought to understand more about consumers' motivation for using sunscreen. Data were obtained from a large consumer study assessing attitudes to and usage of sunscreen across the US. A total of 2046 respondents purchased sunscreen during the test period. Approximately a third of the respondents self-reported having sensitive skin and 47% of respondents claimed to burn but eventually tan. When queried about the primary occasion they have used sunscreen on their face, 33% of respondents used it daily, while 37% claimed to use it when planning to spend time outdoors all year round. When asked about body usage, 17% used sunscreen daily; 41% used it when they planned to spend time outdoors all year round. While 75% of respondents claimed to reapply sunscreen, those who did not either claimed to forget or felt they did not spend enough time in the sun. Only 52% of respondents understand reapplication instructions. The most striking learnings from this research were that only half of the respondents felt they were very aware of the skin damage caused by the sun, and that less than half felt they acted responsibly regarding sun exposure. The results of this study highlight the need for public education on the potential danger of unprotected sun exposure.

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18708

Comparative pharmacokinetic evaluation of delivery of three different vitamin C molecules in target tissues: Ascorbyl glucoside, nanoencapsulated vitamin C, and acid ascorbic

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Background: Ascorbyl glucoside is a vitamin C precursor. It is an ascorbic acid (AA) molecule with an additional C2-glucose, more chemically stable, metabolized into AA by alpha-glucosidase in dermis and epidermis, with a considerable reservoir effect, and associated with gradual delivery.

Methods: Ex vivo test on human skin explant was performed with 2 mg/cm^2 of the products containing ascorbyl glucoside, nanoencapsulated vitamin C, or 15% AA. Comparative analysis of the viability and transcutaneous absorption of AA between the 3 different vitamin C molecules was evaluated, and the kinetics of AA release by ascorbyl glucoside was measured for 24 hours. The stability of the formulations and their concentrations was performed, measured 1× per week for 4 weeks.

Results: Ascorbyl glucoside demonstrated effective delivery of AA to target tissues, being 10× higher compared with nanoencapsulated vitamin C and 20% higher then 15% AA, proving that its AA delivery mechanism occurs in target tissues. AA delivery occurs gradually and continuously for 24 hours. Ascorbyl glucoside remains stable in the formulation, whereas 15% AA degrades even under storage conditions, losing 21% of its nominal concentration within 4 weeks.

Conclusions: Ascorbyl glucoside is a stabilized form of vitamin C precursor that acts as a reservoir of AA in the stratum corneum, and its release occurs in target tissues gradually and under physiologic demand over a period of 24 hours, ensuring a more effective and optimized delivery compared with the nanoencapsulated and AA at 15%.

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18709

Cannabis use among general dermatology patients

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Background: Recent interest in therapeutic cutaneous effects of cannabis/cannabinoids has surged due to their purported immunosuppressive, anti-inflammatory and anti-pruritic properties. However, there is a lack of knowledge of real-world use patterns of these products among dermatology patients.

Objective: We investigated the prevalence and methods of cannabis/cannabinoid use among dermatology patients, self-reported effect on their skin condition, and perceptions of these products in a state with legalized cannabis.

Methods: We conducted an anonymous survey of adult dermatology patients at 2 academic dermatology clinics in Seattle, Washington, from June to August 2019.

Results: In total, 210 patients completed the survey. 38.2% reported using cannabis or cannabinoid products, but only 10.6% of respondents had used these to treat their skin condition. Of these patients, the most commonly treated conditions were atopic dermatitis (6), contact dermatitis (4), and hidradenitis suppurativa (4). Cannabis and cannabinoid creams/oils were the most common forms of cannabis used specifically for skin disease. The majority of these patients reported at least some improvement in their skin condition with cannabis/cannabinoid use. Most expressed interest in learning more about cannabis and skin conditions (90%) and would be most likely to go to a dermatologist for this information (47.6%).

Limitations: Small sample size is a limitation.

Conclusions: There is a subset of patients using cannabis or cannabinoids to treat their skin condition, most commonly for conditions with inflammatory and pruritic components. Dermatologists should consider regularly inquiring about cannabis use and future studies should be conducted to determine safety and efficacy of cannabis/cannabinoids in dermatologic conditions.

Commercial disclosure: None identified.

18719

Assessment of the level of UVA Protection Factor provided by various sunscreens marketed in the US

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Exposure to ultraviolet A (UVA) and B (UVB) radiation damages skin, causing premature aging and increased skin cancer risk. Although UVB (290-320 nm) is predominantly responsible for sunburn and DNA damage, UVA (320-400 nm) penetrates deeper into the skin, damaging underlying tissue, resulting in the appearance of premature aging. Broad secondspectrum sunscreens provide protection against both types of UV rays and are generally recommended by dermatologists for effective skin protection. However, not all sunscreens formulated as broad spectrum provide the same level of protection against UVA light, even at the same labeled Sun Protection Factor (SPF). The objective was to evaluate the UVA Protection Factor (UVAPF) of commercially available sunscreens and correlate with type of active ingredient and SPF level. Thirty-two products were selected and categorized as mineral, mineral/chemical hybrid, or chemical sunscreens. Sunscreens ranged from SPF 20 to SPF 50+, with an even distribution of products below and above SPF 50. UVAPF of each sunscreen was determined according to in vitro method (ISO24443:2012). Sunscreens with the same SPF across all active ingredient categories showed variability in UVAPF, supporting the fact that the formulation is critical to protective efficacy. Pure mineral and mineral/chemical hybrid sunscreens were determined to exhibit high UVAPF variability, while chemical sunscreens showed results with lower variability within both SPF 20 to SPF 50+ and above SPF 50 products. All chemical sunscreens utilizing the ingredient avobenzone scored high in this assessment and may be the most appropriate choice for patients seeking the highest level of UVA protection.

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