

A DAY IN THE SUN

**What shapes whether sun
protection fits into a day
outdoors?**

An MFA thesis investigation into sunlight, sunscreen use, and everyday outdoor experience.



A population-level starting point. An everyday design question.

7,599
U.S. adults surveyed

Existing dataset: CDC/NCHS Rapid Surveys System, Round 1. Collected in August 2023 through two probability-based online panels.

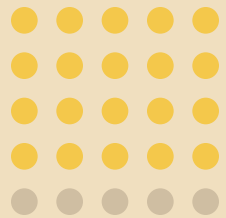
WHY THIS DATASET?

It brings beliefs, reported use, and sunscreen purchase considerations into the same survey.

These patterns help frame a thesis question about making sun protection fit into enjoyable outdoor experiences.

Percentages use WEIGHT_M1 and valid responses for each analysis. The survey was not limited to beachgoers.

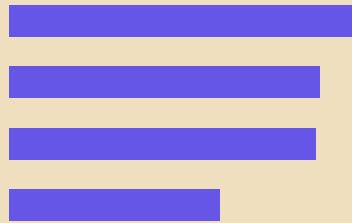
Three ways to make the data readable.



82%

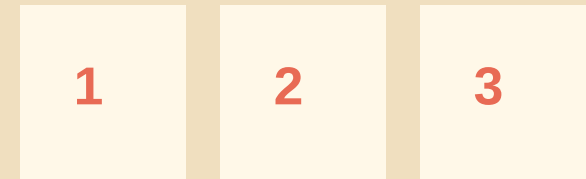
100-mark array

Chosen for part-to-whole reading. Exact labels preserve precision while icons are rounded. Each population gets a new array.



Horizontal bars

Chosen for comparisons on a shared baseline. Pie charts were rejected: independently rated priorities do not sum to 100%.



Illustrated sequence

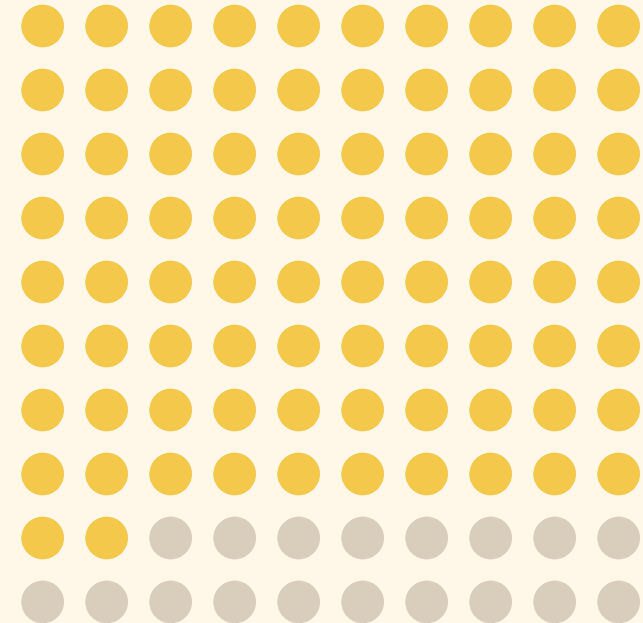
Chosen to connect findings to a research question. A funnel was rejected because the survey does not follow people over time.

Form exploration for this revision. The beach creates narrative context; the charts alone encode the survey estimates.

Most adults recognize the long-term harm of sunburn.

82.0%

Disagree that sunburn is not really harmful in the long run.



Base: all valid SUN_NOHARM responses (codes 1-4), n = 7,510. Selected: strongly or somewhat disagree (1-2).

Each mark is approximately one percentage point, not one respondent. 82 colored marks represent a rounded estimate.

Recognizing harm does not mean frequent sunscreen use.

NEW BASE: ADULTS WHO RECOGNIZE THE LONG-TERM HARM OF SUNBURN

Face



Other exposed skin



0% 50% 100%

Frequent use means
most of the time
or always.

Face n = 6,276; other exposed skin n = 6,273. Valid use responses within SUN_NOHARM 1-2.

Use refers to being outdoors in the sun in warm weather. Face use excludes makeup or moisturizer containing sunscreen.

Reapplication can feel like a hassle.

60.6%

**Agree that reapplying
sunscreen is a hassle.**

WHAT THIS OPENS UP

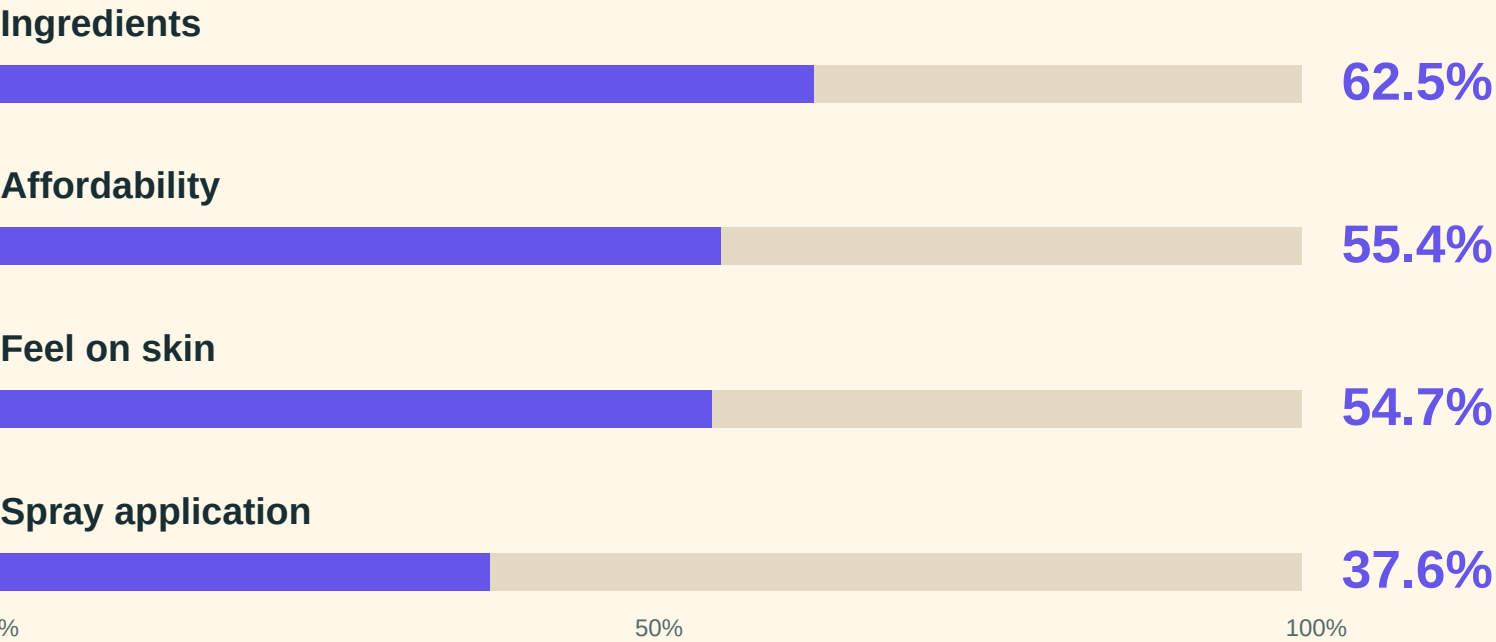
**Which moments make
protection difficult to fit into a
day outdoors?**

A question for primary research. The survey does not identify the circumstances behind the hassle.

Base: valid SUN_REAPPLY 1-4, n = 7,479. Selected: somewhat or strongly agree (3-4).

The bar uses a 0-100% scale. This attitude is not a measured count of reapplications.

What matters when choosing sunscreen?



Moderately or very important

Each feature was rated independently.

Spray application means the importance of being able to spray sunscreen onto the skin. It is not a use rate.

Valid n: ingredients 7,477; affordability 7,502; feel 7,479; spray 7,472. Selected: codes 2-3, among valid 0-3.

Ingredient priorities are associated with reported use.

FREQUENT FACE USE, BY INGREDIENT IMPORTANCE

Not or slightly important



Moderately or very important



64.9%
of the higher-importance group use face sunscreen never, rarely, or sometimes.

Valid n: lower importance 2,696; higher importance 4,759. Bars share a 0-40% scale. No significance test is reported.
Ingredient importance is not product quality or satisfaction. This descriptive association does not establish causation.

From survey patterns to lived outdoor experience.

PRIMARY RESEARCH QUESTION

How do adults who enjoy outdoor activities and have experienced sunburn decide whether and how to protect themselves from sun exposure?

Design aim to explore

Support enjoyable outdoor experiences while reducing the risk of sunburn.

Sunburn history and outdoor enjoyment were not measured in this survey. This is a proposed focus for primary research.



What each number represents.

Weighted percentage = selected-response weights / valid-response weights × 100. All n values are unweighted valid counts. Invalid responses (-6, -7, -8, -9) are excluded.

MEASURE	ESTIMATE	VALID n	RECODE (SUN_ PREFIX)
Recognizes harm	82.0%	7,510	NOHARM 1-2 / valid 1-4
Frequent face use, recognizes harm	31.1%	6,276	USEFACE 3-4; NOHARM 1-2
Frequent other-skin use, recognizes harm	27.6%	6,273	USESKin 3-4; NOHARM 1-2
Reapplication is a hassle	60.6%	7,479	REAPPLY 3-4 / valid 1-4
Ingredients important	62.5%	7,477	INGRED 2-3 / valid 0-3
Affordability important	55.4%	7,502	AFFORD 2-3 / valid 0-3
Feel important	54.7%	7,479	FEEL 2-3 / valid 0-3
Spray application important	37.6%	7,472	SPRAY 2-3 / valid 0-3
Frequent face use, lower ingredient importance	19.3%	2,696	USEFACE 3-4; INGRED 0-1
Frequent face use, higher ingredient importance	35.1%	4,759	USEFACE 3-4; INGRED 2-3

Frequent use: valid codes 0-4, selected 3-4. Subgroup rows additionally require the stated valid subgroup codes.
No confidence intervals or tests are shown; comparisons are descriptive. Cross-sectional self-report cannot establish causation.

Sources, scope, and illustration.

Public-use dataset

https://www.cdc.gov/nchs/data/rss/rss1_puf_t1.csv

Codebook: item wording and response codes

<https://www.cdc.gov/nchs/data/rss/codebook.pdf>

Survey description: sampling and weights

<https://www.cdc.gov/nchs/data/rss/survey-description.pdf>

Technical notes: sunscreen measures

<https://www.cdc.gov/nchs/data/rss/technical-notes.pdf>

CDC/NCHS Round 1 sunscreen overview

<https://www.cdc.gov/nchs/rss/round1/sunscreen.html>

Interpretation limits

Coverage and nonresponse bias may remain after weighting. The survey does not establish causal effects, actual sunburn occurrence, or product effectiveness.

Illustration credit

AI-generated for this project using user-supplied visual references. Beach characters are decorative, not respondents.

Local source files retained from October 1, 2026. All 10 displayed estimates and valid n values were recalculated for this revision.

The presentation documents an interactive web visualization. Source links are clickable.