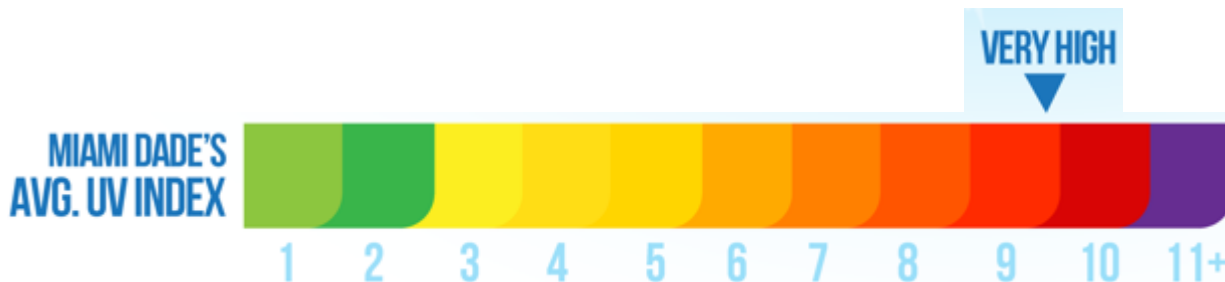


Skin Cancer is a Public Health Epidemic in Miami Beach & Florida

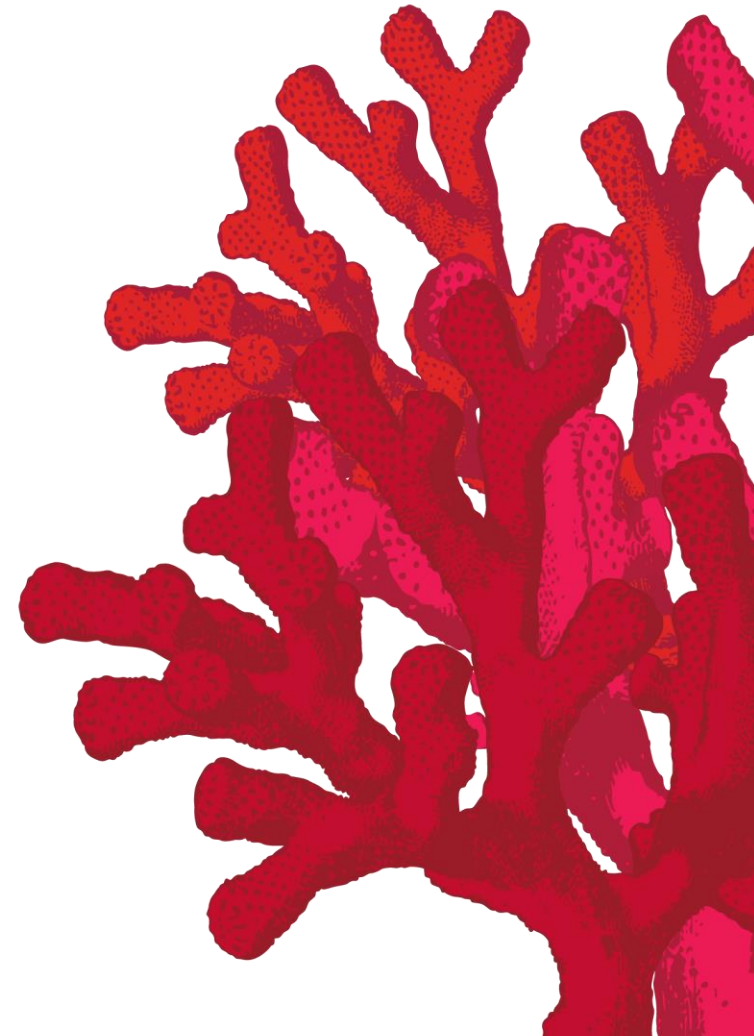
- Florida has one of the highest skin cancer rates in the country
- Miami-Dade county has the 4th highest number of melanoma cancer deaths in the state (between 2011-2015)
- 1,559 new cases of melanoma in the county (between 2011-2016)
- 210 deaths reported due to melanoma in the county (between 2011-2015)



In Miami-Dade
1,559
NEW CASES OF
MELANOMA
Have Been Diagnosed
Between 2011-2016

Science Does Not Support Oxybenzone as a Cause of Coral Reef Bleaching

- The recent ban on oxybenzone in Key West is based on two studies that are hampered by major methodological problems.
- These studies cannot be extrapolated to reflect the true natural complexity and ecosystem of a coral reef
- These two studies have not been replicated or validated by more recent and better controlled studies.
- There are no published studies showing oxybenzone is a stressor to corals in the Keys.



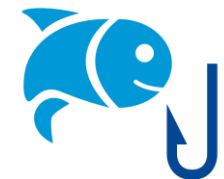
Robust Studies Show Global Warming as Key Factor in Coral Decline

- Respected studies provide conclusive evidence of the link between global warming and coral bleaching
 - A peer-reviewed study published in 2017 showed that the patterns of coral bleaching prevalence and mortality in the 4 sectors in Hanauma Bay Nature Preserve in Hawaii are linked to localized heating, due to circulation patterns
 - An Australian study showed that the warmest sea surface temperatures (SSTs) along the Great Barrier Reef on record correlated to a mass coral bleaching event in the Great Barrier Reef Marine Park
- According to National Oceanic and Atmospheric Administration (NOAA) and other global institutions, the cause of coral reef bleaching and degradation is due to global climate change, ocean acidification, and unsustainable fishing practices

Johan David Martin, A Climate Services Perspective on Two Significant Climate and Weather Events in Australia, BoM, Docklands, Australia;

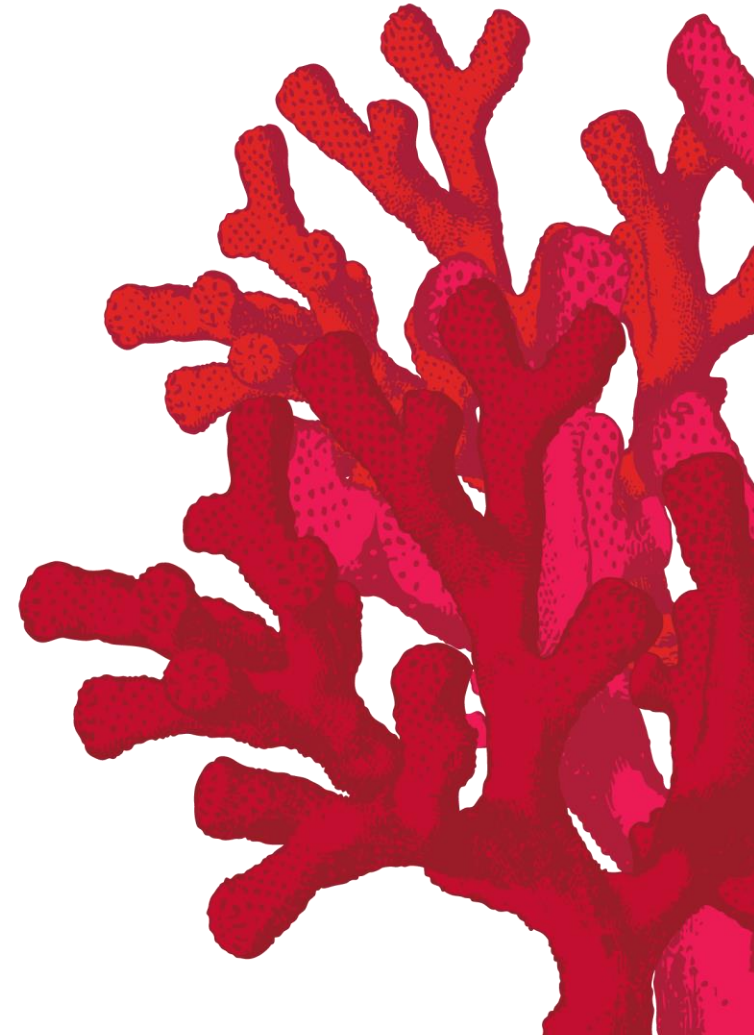
American Meteorological Society Meeting 2017

Rodgers et al. Patterns of bleaching and mortality following widespread warming events in 2014 and 2015 at the Hanauma Bay Nature Preserve, Hawai'i. PeerJ, 2017;5:e3355; DOI 10.7717/peerj.3355



Local Factors Causing Coral Decline

- Stony Coral Tissue Loss disease (SCTLD)
- Sedimentation from dredging
- Shipping (ballast water discharge spreads disease & invasive species)
- Local boating (anchor damage)
- Careless divers (damage, spread disease)
- Overfishing
- Invasive species
- Agricultural and urban storm run-off and WWT effluent (septic)



More Research is Needed ... and is Underway

Sunscreen Wash-Off Study

Starts: April 1, 2019 | Completed: August 31, 2019

This study will quantify the amount of sunscreen actives that get washed off from 3 different sunscreen formulations. Using a porcine skin model, this study will mimic people swimming in the ocean. This model study will analyze several sunscreen filters used in typical sunscreen products.

Coral Tox Study

Starts: April 1, 2019 | Completed: August 31, 2019

This study, in combination with the wash-off study and previously published environmental monitoring data, will provide the most accurate-to-date environmental risk assessment of sunscreen use. This study will use a hard coral species and measure acute and chronic toxicity, making it far more realistic assessment of true environmental conditions than the Downs study, which relies primarily on cell culture studies. Previous coral toxicity studies on oxybenzone and octinoxate have not been designed with the rigor needed by regulatory agencies for environmental risk assessments.

Anthropogenic Aquatic Stressor Study (sponsored by CHPA)

Starts: April 1, 2019 | Completed: May 31, 2019

An independent consultancy has been retained by the Consumer Healthcare Products Association (CHPA) to conduct an assessment of local human stressors on coral in the Florida Keys. Publicly available data sets and published literature will provide information specific to the Keys to model and quantify the relative impact of various stressors affecting coral reefs in the Florida Keys. If data is available, Miami waters will be included.

Other research groups in academia, government, independent research organizations, and industry are also conducting new research given the lack of reliable data.

Backup Info

Products That Market As “Reef Safe” May Compromise Consumer Protection

- Most sunscreen products that claim reef safe are mineral-only. Mineral-only formulas often:
 - on average, have lower PFA values (see chart below)
 - have more variability due to differences in mineral particle properties
 - typically are more expensive
 - have a white/chalky appearance, and can be more difficult to spread
- › Chemical sunscreens provide unique performance benefits:
 - offer 4x UVA protection
 - can deliver protection above SPF 60
 - provide the best protection with higher SPF
 - a better feeling sunscreen that spreads easily and is more appealing to users

PFA measures sunscreen protection from UVA rays.

Results are based on laboratory tests of leading brands.

Sunscreen Technology	PFA Average SPF 30	PFA Average SPF 50	PFA Average SPF 70	Overall Average
Mineral/Chemical Blend	3.3	6.9	NA	5.8
Mineral Blend (TiO ₂ +ZnO)	7.7	11.9	NA	9.3
Chemical Oxybenzone-Free	17.4	22.6	NA	20.6
Chemical with Oxybenzone	20.3	23.7	24.4	22.7

Reef-Safe Is Not a Regulated Category

- The Federal Trade Commission (FTC) requires that all claims in advertising be truthful and not misleading
 - Competent and reliable scientific evidence must support all claims
- Although the FTC developed “green guides” that include a series of environmental claims, “reef-safe” is not included and is not a regulated claim
- These terms are defined differently by each manufacturer that uses them, and are not supported by any credible science, creating confusion in the marketplace



There Are Only Nine Commonly Used FDA-Approved UV Filters

Active Ingredient / UV Filter Name	UVA	UVB	Photostable (Light proof)	Formulation (Easily Combined)	Organic (Chemical)	Mineral (Physical)	Skin Compatibility
Avobenzone	■		★	★	✘		★★
Ensulizole (Phenylbenzimidazole Sulfonic Acid)		■	★★	★★★★	✘		★★★★
Homosalate		■	★★	★★★★★	✘		★★★★
Octinoxate (Octyl Methoxycinnamate)		■	★★	★★★★	✘		★★★★
Octisalate (Octyl Salicylate)		■	★★	★★★★	✘		★★★★
Octocrylene		■	★★	★★★★★	✘		★★★★
Oxybenzone	■	■	★★★★★	★★★★★	✘		★★★★
Titanium dioxide		■	★★★★	★★★★		✘	★★★★★
Zinc oxide	■	■	★★★★	★★★★		✘	★★★★★

★ poor ★★ moderate ★★★ good ★★★★★ excellent

NOTE: Formulation rating is based on decades of J&J R&D experience; all other parameters are based on the scientific literature

Each UV Filter Plays a Unique Role in Sun Protection

- UV filters work in different ways, alone and in combination with other filters, to protect skin
 - Some predominantly protect against UVB rays, others predominantly protect against UVA rays, and some do both
- Formulating sunscreen is like baking a cake – scientists use different amounts and combinations of filters, choosing each for very specific reasons
 - UV filters are not interchangeable – just like a chef can't substitute water for cream in a recipe and expect the same results



Oxybenzone is Critical and Irreplaceable for Broad Spectrum (UVA/UVB) Sun Protection

- **Oxybenzone is unique:** one of two FDA-approved filters that provide protection from both UVA and UVB rays (broad spectrum)
- **Oxybenzone helps stabilize *other UV filters*** so they don't break down on exposure to the sun
- **Oxybenzone helps formulators** provide better aesthetics, so people are more likely to apply/re-apply for optimum protection
- **Oxybenzone is required for high SPF values (SPF 70+)**
 - SPF value in actual use is directly related to the density/amount of sunscreen applied – if 50% of the tested amount of SPF30 is applied, the actual SPF value is SPF15
 - Because most people under apply, high SPF provides a margin of safety in actual use
- **Oxybenzone is in 9 out of 10 of the sunscreens that consumers prefer and most often use, and in 70% of overall sunscreen products on the market**
 - Although there are other sunscreens without oxybenzone available at online retailers, none provide the same breadth and depth of UV protection as sunscreens with oxybenzone

Consumer Needs Are Personal

- Dermatologists agree the best sunscreen is the one you prefer to use
- People consider several factors in choosing a sunscreen including:
 - Formula sensitivities: how it feels on skin, fragrance or no-fragrance
 - SPF value
 - Product form, e.g. stick, lotion or spray
 - Special needs, e.g. sensitive or acne-prone skin, sports, wet skin
- A variety of choice in sunscreen is important to meeting consumer needs, and helping them to follow sun protection guidelines

