


SEEING THE LIGHT

*Arm yourself with sunscreen - and protection know-how - this season
/ by Jillian Vieira*

We've all heard the alarming stats: skin cancer accounts for an estimated one-third of all new cases of cancer in Canada and its incidence rates continue to rise. And yet we're still having to convince teens (by banning them) that their tanning bed visits measure up to a long line of health issues waiting to happen. But our younger counterparts aren't the only ones who need a suncare education overhaul (we're looking at you, SPF 8-users.) From cracking the sunscreen label code to debunking tanning myths, we've got you covered (like a shot glass' worth of sunscreen) with our comprehensive guide to all things sun protection. 

COPPERTONE: THE ORIGIN STORY

Ever wonder how an invention as ingenious as sunscreen comes to be? For the creator of Coppertone, a brand synonymous with suncare, it started in the kitchen, oddly enough. "Coppertone first emerged during the Second World War, when American aviator, and future pharmacist, Benjamin Green collaborated on developing a product to protect soldiers from the sun," says Julie Charlton, associate brand manager at Coppertone Canada. "In 1944, by concocting a unique mixture of cocoa butter on the stove, which he tested on his own bald head, Coppertone, the first commercial sunscreen product, was born." What's more, the sunscreen came with a beachy fragrance that has remained mostly unchanged since its inception. And while the iconic note specifics are kept under lock and key, that intoxicating coconut scent will always remind us of summer (and sun protection, of course!).



Unlike today, bathing beauties of yesteryear had nary a worry about the sun

WE ANSWER YOUR BURNING QUESTIONS ABOUT SUNSCREEN:

Q

What's the difference between physical and chemical sunscreens?

A: You might be surprised to learn that while most sunscreens are created equally, they react differently to the sun. Case in point: chemical versus physical sunscreens. "Chemical sunscreens are made with

compounds that absorb UV rays and convert them to harmless, lower-energy wavelengths, typically heat," says Dr. Sonya Cook, a dermatologist at Compass Dermatology in Toronto. In contrast, "a physical sunscreen typically uses zinc oxide, or titanium dioxide, or both, to reflect or scatter UV radiation off of the skin," says Dr. Paul Cohen, a dermatologist at Rosedale Dermatology in Toronto. The choice between the two is yours (natural sunscreens usually fall into the physical category), but keep your skin type in mind when selecting a formulation. "Chemical formulations tend to have a higher level of alcohol, which are better suited to oily skin," advises Dr. Cohen. The major limitation to physical sunscreen is its chalky, white appearance on the skin (although, improvements in micronized formulations are less opaque), "but they are better tolerated on sensitive skin," he says.

Q: Given that the skin on the face is more delicate and sensitive, should I be applying a higher SPF compared to my body?

A: It's no coincidence that the evidence of a sunny afternoon often becomes most apparent on our noses, cheeks and foreheads. "Our faces really do receive more exposure to the sun," says Dr. Cohen. Everyday incidental exposure, like walking to your car or grabbing a coffee, also ups the cumulative susceptibility, explains Dr. Cohen, who recommends a higher SPF of 30 for the face. Another reason to increase protection on the face? It tends to show age sooner than the rest of the body. "Photodamage, like wrinkling and uneven pigmentation, is most commonly seen on the face and neck, among other areas," says Dr. Cook. Make an SPF-infused moisturizer your first line of defence, but up the ante with a straight facial sunscreen of SPF 30, too. "Many

READ BETWEEN THE LINES

Ever feel like sunscreen labels require their own user's manual? Between SPF, broad-spectrum and photostability, protecting yourself has become more complicated than ever. With the U.S. adopting more rigorous regulations for sunscreen labeling last summer, including skin cancer alerts on bottles with low SPF, Canada is following suit in tweaking the current system. One of the most controversial proposed changes would be to re-name sunscreens over SPF 50 to "50+" - a motion that suggests there isn't enough data to support that SPF over 50 is offering any extra protection. The entire list of amendments must be reviewed by Health Canada and other consultants, lending to the undetermined timeline before they are implemented. Until then, we've enlisted Dr. Anatoli Freiman, chair of the Canadian Dermatology Sun Protection Program and medical director of the Toronto Dermatology Centre, to decode the lingo on that elusive bottle of sunscreen.

SUN PROTECTION FACTOR (SPF)

"This indicates the sunscreen's effectiveness against UVB rays only. The higher the SPF value, the more protection it offers from sunburn. Dermatologists typically recommend using a sunscreen with an SPF of at least 30, which blocks 97% of UVB rays."

BROAD-SPECTRUM

"This denotes that the sunscreen offers protection against both UVA and UVB rays and thus, should optimally be used."

PHOTOSTABILITY

"This refers to the stability [of protective properties] upon exposure to sunlight."

WATER RESISTANT

"The sunscreen maintains its SPF protection level after 40 or 80 minutes of water immersion as determined by testing."

CATCHING SOME RAYS

They travel nearly 150 million kilometres from their source and reach us at lightspeed, but what exactly makes up the sun's rays? *Cosmetics* turned to Montreal-based Sarah Gora, medical and scientific relations leader for Vichy Laboratories, who broke down the differences between UVA and UVB rays.

	UVB	UVA
Total UV radiation on Earth	5%	95%
Penetration of rays	Partially reflected and absorbed by clouds; blocked by glass	Penetrates through both clouds and glass
Maximum penetration	During summer; max reached between 10am to 2pm	Throughout the year; constant from sunrise to sunset
Action on the skin	70% reflected while 30% penetrates the skin	80% penetrates the skin, 20% of which reaches the deeper dermis
Harmful effects on the skin	Sunburn, epidermal cell lesions, tanning, skin cancers	Accelerating skin aging, skin disorders/allergies, skin cancer in the long term

cosmetics products only offer UVB protection," warns Dr. Cook. "Sunscreens specifically designed for the face often have a light, non-greasy texture." A pair of radiation-protective sunglasses and a wide-brimmed hat also offer that extra bit of coverage on a clear day.

Q: What's the deal with spray sunscreens? Are they as safe as their lotion equivalents?

A: In addition to making out-of-reach spots accessible, spray formulations have made sun protection unbelievably convenient (hello, non-sticky hands!). But some skeptics are drawing attention to the potentially-harmful airborne particles. This isn't the most pronounced worry for Dr. Cook. "There is some concern that spray sunscreens are more difficult to apply evenly," she says. "I often recommend application of a lotion or cream sunscreen as a first layer, with use of a spray sunscreen for reapplication following two hours of exposure if it's more convenient."

Q: If SPF only tells us about UVB protection, how do we know how much UVA protection we're getting with a broad-spectrum label?

A: You responsibly sought out a broad-spectrum label, but the UVA protection indicator is nowhere to be found. What gives? "The issue is, we don't specifically know how much UVA protection we are getting with broad-spectrum," says Dr. Cohen. "Right now, in Canada, we have no way of quantifying

exactly how much UVA protection is in a sunscreen." Across the world, however, methods of measuring UVA protection have been developed. "The U.S. Food and Drug Administration has recently adopted a method to ensure that all broad-spectrum sunscreens provide protection throughout the entire UVA and UVB spectrum," says Dr. Cook. "Essentially, this ensures that if the SPF of sunscreen is increased by the addition of a UVB filter, then there must be a corresponding increase in UVA protection." Both of our experts note that most major sunscreen brands available in Canada meet this requirement, but always double-check that your bottle bears the broad-spectrum seal of approval.

Q: Is it true that getting a "base tan" will protect you from the sun?

A: You know the old adage: One good tan after a sunless winter and you'll be protected from any future burning. In fact, this philosophy is as ridiculous as it sounds. "A tan is simply an indicator of UV damage," says Dr. Cook. "There is no such thing as a safe tan." Derms see the negative effects of following such a hazardous belief on the regular. "My patients' medical concerns centre on the treatment of precancerous and cancerous lesions of the skin." But, of course, "as the saying goes, an ounce of prevention is worth a pound of cure, so sun protection is key," says Dr. Cook. ☺

Play it safe

SUN PROTECTION ESSENTIALS SO YOU'LL NEVER MISS A BEAT



FOR CHAPPED, SUN-EXPOSED LIPS

Carmex Moisture Plus SPF 15, \$5

FOR THE LITTLE ONES

Clarins SPF 50 Sunscreen Care Milk For Children, \$35

Vichy Capital Soleil SPF 60 Ultra Protection Stick for Sensitive Zones, \$19

FOR THE SENSITIVE, SUN DAMAGE-PRONE EYE AREA

FOR SWIMMERS AND PERSPIRERS ALIKE

Neutrogena Beach Defense Adult SPF 30 Lotion, \$16

FOR LIGHT-AS-CAN-BE FACE PROTECTION

Ombrelle Ultra-Fluid SPF 60 Lotion, \$17