



## How New Vitamin D Research Has Vindicated Smart Tanning: The Indoor Tanning Community's Balanced Perspective

International Smart Tan Network, Jackson, Mich.<sup>1</sup>

Vitamin D production is one of the benefits that has been associated with human exposure to ultraviolet-B (UVB) emitted in sunlight and by an estimated 90 percent of commercial indoor tanning equipment.<sup>3</sup> While the North American indoor tanning community conducts indoor tanning as a cosmetic service, an undeniable physiological side-effect of this service is that indoor tanning enthusiasts manufacture sufficient levels of vitamin D as a result of indoor tanning sessions.<sup>3</sup>

Because there is mounting evidence that vitamin D deficiency is prevalent in North American society (a majority of Americans, up to 97 percent of Canadians and more than 1 billion people worldwide are vitamin D deficient at some point in the year<sup>2,5</sup>), and because society spends more time indoors away from sunlight today than at any point in human history, compromising the body's natural and intended vitamin D pathway, the vitamin D-related side-effect from cosmetic tanning deserves due consideration.

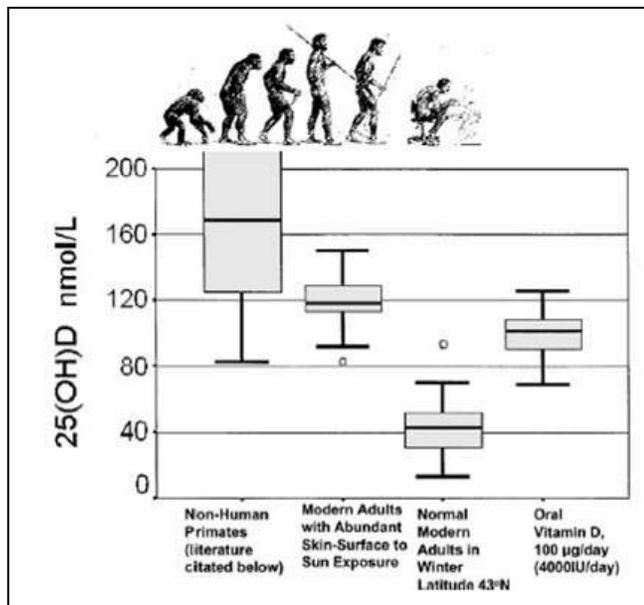
Breakthrough research in 2007 on the positive effects vitamin D, most naturally, reliably and efficiently derived from sun exposure,<sup>3</sup> has totally changed what can and should be said about ultraviolet light exposure – a development that fully supports the practical and responsible positions promoted by the professional indoor tanning industry for more than a decade. Consider:

1. Regular exposure to sunlight is the body's natural, intended and by far most efficient and reliable source of vitamin D. (Vitamin D is the only "vitamin" that humans produce naturally without dietary supplementation.) Humans get an estimated 90 percent of their vitamin D from exposure to ultraviolet light in sunshine – UVB light, in particular.<sup>4</sup>
2. Hundreds of clinical and observational studies, including breakthrough clinical research in 2007<sup>5</sup>, have unlocked a new understanding about vitamin D. We now know that "the sunshine vitamin" not only is critical for bone health, but also regulates normal cell growth throughout the entire body. This recently unlocked mechanism explains why healthy vitamin D levels are associated with significantly lower risks of most forms of cancer, as well as heart disease, autoimmune diseases and infectious diseases.<sup>6</sup> (The paper cited here lists 126 research citations.)

3. It is now widely recognized that current daily vitamin D recommendations – established in the early 1900s solely to eradicate the bone disorder rickets and ranging from 200-600 international units (IU) daily – are woefully inadequate.<sup>7,8</sup> In light of overwhelming research linking vitamin D with lower cancer and other disease risks:

- The Canadian Cancer Society now recommends 1,000 IU of vitamin D daily for all Canadian citizens.
- The Canadian Paediatric Society now recommends 2,000 IU daily for pregnant and nursing women – levels necessary to raise a nursing mother’s vitamin D levels high enough
- Because daily vitamin D intake/production is only a precursor to maintaining adequate vitamin D levels in the bloodstream, the Vitamin D Council, a leading vitamin D advocacy group, now recommends target vitamin D blood levels of 50 nanograms/milliliter (ng/mL) or 125 nanomoles/liter (nm/L).<sup>9</sup>

4. The higher vitamin D levels now being recommended by vitamin D experts and other public health groups are only naturally consistent with vitamin D levels one would receive by getting regular exposure to UVB in sunlight.<sup>10</sup> As Vitamin D expert Dr. Reinhold Vieth says, “For most vitamins, dietary intakes offer a reasonable reference point for how much people might be need. For Vitamin D, we cannot use dietary intake as a guide, because except for fish, our diets do not provide enough to prevent rickets or osteomalacia. We must take a unique approach to determine a Vitamin D requirement.... We need to return to an earlier concept, and think of Vitamin D as “the sunshine vitamin.”



**SUNLIGHT v. SUPPLEMENTS:** Outdoor-living equatorial primates have much higher levels of vitamin D than modern humans – many of whom are unable to attain “natural” vitamin D levels even when consuming 4,000 IU of vitamin D in the form of oral supplements, a level that exceeds current upper safety limits for supplements. The Vitamin D Council now recommends 125 nm/L as the ideal target for vitamin D blood levels – consistent only with levels attained by outdoor workers and equatorial primates, but not reliably through vitamin D supplements alone. (Graph source: Dr. Reinhold Vieth.<sup>8</sup>)

## The Tanning Community's Position on Vitamin D

Because it is clear that regular exposure to UVB and sunlight are natural and intended for human health, and because it is also clear that a majority of modern humans in North America, living in non-equatorial climates, do not get enough regular sun exposure to manufacture natural levels of vitamin D, due consideration should be given to any regimen of regular, non-burning UV exposure.

Professional indoor tanning facilities today are in the business of providing cosmetic tans. However, tanning lamps that emit some UVB light, and most of them do, have been shown by peer-reviewed research to stimulate vitamin D production in the skin and elevate blood levels of vitamin D in the body. While it may not be necessary to develop a tan to produce sufficient amounts of vitamin D, and while dietary supplements are an alternative, sun exposure is the body's natural way to produce vitamin D and indoor tanning clients have 90 percent higher vitamin D levels as compared to non-tanners.

Sources of Vitamin D	Vitamin D Content
UVB exposure from sunlight*	10,000 – 20,000 IU
Cod Liver Oil (1 tsp.)	400 – 1,000 IU
Salmon (fresh, wild, 3.5 oz.)	600 – 1,000 IU
Salmon (farmed, 3.5 oz.)	100-250 IU
Fortified Milk (8 oz.)	100 IU
Fortified orange juice (8 oz.)	100 IU

*\* A full-body suntan without a sunburn. Variables include age, amount of skin exposed to sunlight. A dark-skinned individual may need 5-10 times more sun exposure to make the same amount of vitamin D as a fair-skinned person.  
Source: Dr. Michael Holick*

The International Smart Tan Network believes that, for those individuals who can develop tans, the cosmetic and vitamin D-related benefits of non-burning exposure to ultraviolet light in appropriate moderation outweigh the easily manageable risks associated with overexposure and sunburn.

---

## The Tanning Community's Base Belief

The professional indoor tanning community's scientifically supported position is summed up in this declaration: Moderate tanning, for individuals who can develop a tan, is the smartest way to maximize the potential benefits of sun exposure while minimizing the potential risks associated with either too much or too little sunlight.

This position is founded on the following tenets:

1. Ultraviolet light exposure from the sun or from an indoor tanning unit is essential for human health, and getting it in a non-burning fashion is the smartest way.
2. The professional indoor tanning industry promotes and teaches what we refer to as The Golden Rule of Smart Tanning: Don't ever sunburn.

3. For the past decade, the indoor tanning industry has been more effective at teaching sunburn prevention than those who promote complete sun avoidance. Since the mid-1990s, tanning industry research suggests that non-tanners sunburn outdoors more often than people who tan indoors. The professional indoor tanning salon industry is part of the solution in the ongoing battle against sunburn and in teaching people how to identify a proper and practical life-long skin care regimen.
  4. A tan is the body's natural protection against sunburn. Your skin is designed to tan as a natural body function, and the body is designed to repair sun damage as a natural process.
  5. Every year, millions of North American indoor tanners successfully develop "base tans" before embarking on sunny vacations – tans that, combined with the proper use of sunscreen outdoors, help them prevent sunburn.
  6. There are known physiological and psychological benefits associated with sunlight exposure and there are many other potential benefits that appear linked to sun exposure, but need further research. The potential upside of these benefits is considerable and deserves further consideration.
  7. The body produces Vitamin D naturally when the skin is exposed to sunlight. Vitamin D deficiency has become a recognized epidemic in North America and overzealous sun protection practices likely have contributed to this.
  8. The risks associated with UV overexposure are manageable for anyone who has the ability to develop a tan.
- 

### ■ Why Is Indoor Tanning “Smart Tanning?”

Indoor tanning, if you can develop a tan, is an intelligent way to minimize the risk of sunburn while maximizing the enjoyment and benefit of having a tan. We call this “smart tanning” because tanners are taught by trained tanning facility personnel how their skin type reacts to sunlight and how to avoid sunburn outdoors, as well as in a salon.

Tanning in a professional facility today minimizes risk because, thanks to standards established by the industry in conjunction with government authorities in the United States and Canada, exposure times for every tanning session are established by a schedule present on every piece of equipment that takes into account the tanner's skin type and the intensity of the equipment. That enables a trained operator to deliver a dosage of sunlight designed to induce a suntan while minimizing the risk of sunburn. The schedule, as regulated by the U.S. Food and Drug Administration and Health Canada, also takes into account how long an individual has been tanning, increasing exposure times gradually to minimize the possibility of burning. That kind of control is impossible outdoors, where variables including seasonality, time of day, weather conditions, reflective surfaces and altitude all make outdoor tanning a random act and sunburn prevention more difficult.

## ■ How Do Indoor Tanning Salons Teach Sunburn Prevention?

The indoor tanning industry is at the forefront in educating people how to successfully avoid sunburn over the course of one's life.

- Studies of indoor tanners have shown consistently that indoor tanning customers once they begin tanning in a professional salon, are less likely to sunburn than they were before they started tanning.
- Studies have also shown that indoor tanners are less likely to sunburn outdoors than are non-tanners.

Consider, in recent years sunburn incidence in the general population has been steadily increasing while sunscreen usage has been declining. And according to the American Academy of Dermatology, the sub-group most likely to sunburn is older men. In contrast, sunscreen usage outdoors among indoor tanners is increasing.

We believe that teaching people strictly to avoid the sun may be making them more likely to sunburn when they do go outside for summer activities – and everyone does go outdoors at some point. Consider:

1. Tanning is your body's natural defense mechanism against sunburn, and indoor tanners have activated this defense against burning; non-tanners are more vulnerable when they inevitably do go outdoors.
2. Indoor tanners are educated at professional tanning facilities how to avoid sunburn outdoors, how to use sunscreens appropriately and how to properly moisturize their skin.

When you also consider that the majority of people who sunburn are male, according to the AAD, and that 65-70 percent of indoor tanning customers are female, clearly, it is non-tanners who are doing most of the burning outdoors.

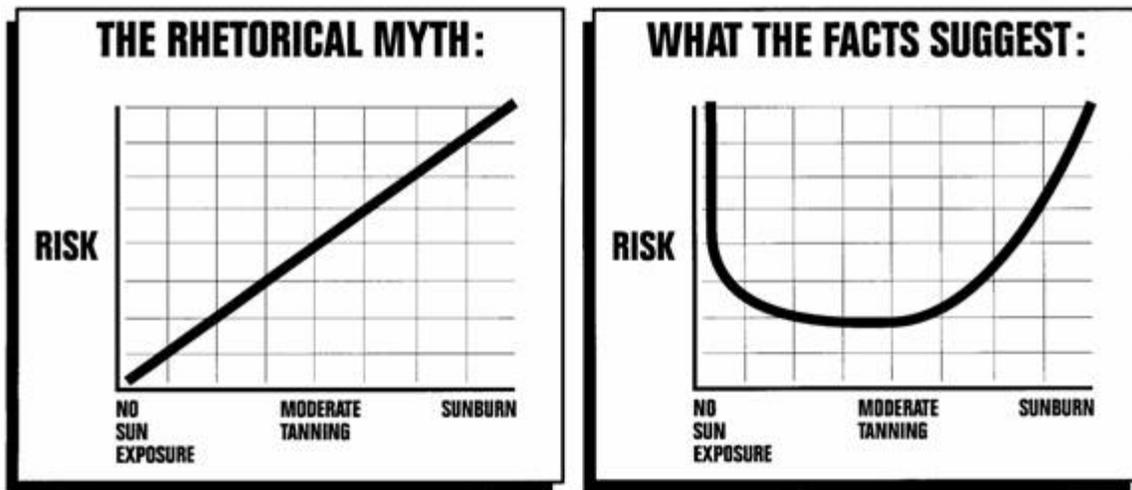
In the war against sunburn, tanning salons are part of the solution. Those who abstain from sun exposure completely are more likely to sunburn when they inevitably do go outdoors, even if they attempt to wear sunscreen.

## ■ Why We Promote Indoor Tanning As “Smart Tanning”

The professional indoor tanning industry promotes responsible indoor tanning and sunburn prevention as “smart.” We choose not to use the word “safe.” Here is why:

The word “safe” implies that one can recklessly abuse something without any fear of causing harm. And reckless abandon certainly is not the behavior the professional indoor tanning industry is teaching. In fact, we are playing a key role in successfully preventing that kind of reckless abuse. By teaching a “smart” approach to sunburn prevention that recognizes that people do perceive different benefits from being in the sun, we are able to teach sunburn prevention in a practical way that respects both the potential benefits and the risks of sun exposure.

For example, previous generations believed that sunburn was an inconvenient but necessary precursor to developing a tan. Today we know better, and we are teaching a new generation of tanners how to avoid sunburn at all costs. Again, our position: Moderate tanning is the best way to maximize the potential benefits of sun exposure while minimizing the potential risks of either too much or too little exposure.



These graphs illustrate our point. The left graph shows the conventional thinking about sunlight: that totally eliminating sun exposure eliminates risks. That oversimplification is why the \$30 billion sun-care industry tells us to wear sunscreen 365 days a year, no matter where we live. But the right graph is a more accurate, albeit more complicated, description of the risk function.

The one thing we do know for certain about sunlight is that zero exposure does NOT equal zero risk; in fact, the risks of zero exposure would be deadly. So the risk function must be curved. The vertex of that curve — where risk is minimized — is different for every person and cannot be randomly defined. What’s more, this graph does not even take into account the balance between benefits and risks. That has to be part of the equation if any campaign is going to be effective.

Human life is totally reliant on sun exposure, and the life-giving effects of ultraviolet light. The question for each of us – a question that nobody knows the exact answer to – is how much sun exposure is appropriate, and how much is too much.

Basing the answer to that question on the belief that any exposure increases one's risk of skin damage, a belief that is not categorically supported in the medical literature, fails to recognize the positive influence ultraviolet light and sunlight have on our lives.

New research on breast cancer, prostate cancer, ovarian cancer, colon cancer and other deadly diseases — research that shows that regular sun exposure may play a key part in preventing the onset or retarding the growth of these deadly diseases — supports our position that moderate sun exposure, for those of us who can develop a tan, is the best way to maximize the potential benefits of sun exposure while minimizing the potential risks of either too much or too little exposure.

---

### ■ Why Don't We Hear More About Smart Tanning Then?

As we mentioned, the truth about sun exposure is abstract and complicated — the right level of exposure for one person may not be right for another person. Heredity, skin type, and many other factors make it a different equation for everyone.

It is a lot easier just to tell people to avoid sunshine than teach them how to enjoy it responsibly and appropriately, so most of our public health advisories today attempt to oversimplify the message and few take into account any potential for positive effects of sunlight. Instead of teaching you how to maximize the benefits and minimize the risks, many reports simply oversimplify the scenario and mislead you into believing that any exposure is bad for you.

You should also be aware of the fact that many industries benefit from scaring you about any sun exposure – twisting a proper message of sunburn prevention into an unwarranted message of total sun avoidance. This profit-based science has created what we believe is a total misuse of sunscreens.

**“People who practice proper sun protection and are concerned that they are not getting enough vitamin D should either take a multivitamin or drink a few glasses of vitamin D fortified milk every day...Dietary intake of vitamin D can completely and easily fulfill our needs.”**

*- Dr. Raymond L. Cornelison Jr., then-president of the American Academy of Dermatology, in a July 3, 2003 AAD press release entitled, “Vitamin D + Sunshine = Bad Medicine.”*

## ■ What Do We Mean When We Say “Misuse of Sunscreens?”

Make no mistake: Sunscreen is a good product with an intelligent usage: the prevention of sunburn. But it is not necessary to wear this product daily most of the year in most climates to prevent sunburn. Yet many in the \$35 billion sun-care industry encourage everyone to wear products with sunscreen 365 days a year — no matter where they live. This is misuse of the product and may in fact cause more harm than good in the long run. Please consider:

1. Sun exposure to the skin is the body’s natural way to produce Vitamin D – it is the way you are intended to get it. An estimated 90 percent of the vitamin D in our systems comes from sun exposure. In fact, according to accepted anthropologic evolutionary theory, that’s why fair-skinned cultures developed fair skin: To better produce vitamin D from sunlight.
2. Vitamin D is very rare in foods and the form of vitamin D you get from foods and dietary supplements is not the same as Vitamin D produced naturally from sun exposure to the skin.
3. Wearing sunscreen in northern climates most of the year totally blocks your body’s ability to produce vitamin D. An SPF 8 blocks 92.5 percent of vitamin D production; and SPF 15 blocks 99 percent of vitamin D production.<sup>6</sup>
4. Women’s cosmetics today almost always contain sunscreen. It is very difficult for women to find products that do not block UV exposure. Again, while sunscreen is an excellent product that has an intelligent usage in the fight against sunburn, overuse of the product may have serious consequences as well. Because most women wear foundation products daily, their make-up may be preventing them from producing vitamin D much of the year. And because women are more likely than men to develop osteoporosis, making up 18 million of the 25 million Americans afflicted with the disease, they would stand to benefit even more from an increase in vitamin D production.

---

## ■ What Is The Appropriate Usage of Sunscreen?

Simply stated, sunscreen should be used as a tool to prevent sunburn whenever sunburn is a possibility. It should not be used on a daily basis in climates and seasons when sunburn is not possible. While the tanning community does support the use of sunscreens as a tool to prevent sunburn outdoors, we do not believe it is proper to teach people to wear this product during times of the year when one would not be able to sunburn outdoors. That is misbranding the product.

That is why the professional indoor tanning community teaches proper sunscreen usage more effectively than those who simply tell the public to wear the product 365 days a year: The tanning industry’s approach is more credible and practical.

## ■ Tanning is a Natural Body Process – It is Not Damage

Tanning is your body's natural protection against sunburn — it is what your body is designed to do. Dermatology industry representatives myopically have referred to this process as “damage” to your skin, but calling a tan “damage” is a dangerous oversimplification. Here is why:

Calling a tan damage to your skin is like calling exercise damage to your muscles. Consider, when one exercises you are actually tearing tiny muscle fibers in your body. On the surface, examined at the micro-level, that could be called “damage.” But that damage on the micro-level is your body's natural way on the macro-level of building stronger muscle tissue. So to call exercise “damaging” to muscles would be terribly deceiving.

The same can be said of sun exposure: Your body is designed to repair any damage to the skin caused by ultraviolet light exposure. Developing a tan is its natural way to protect against the dangers of sunburn and further exposure.

Saying that any ultraviolet light exposure causes skin damage and therefore should be avoided is misleading and inaccurate. It would be like saying that since water causes drowning, humans should avoid all water. Yes, water causes drowning, but our bodies also need water. Regular daily exposure to water is not dangerous – indeed, we would die without it. Similarly, we need sun exposure; we would die without it.

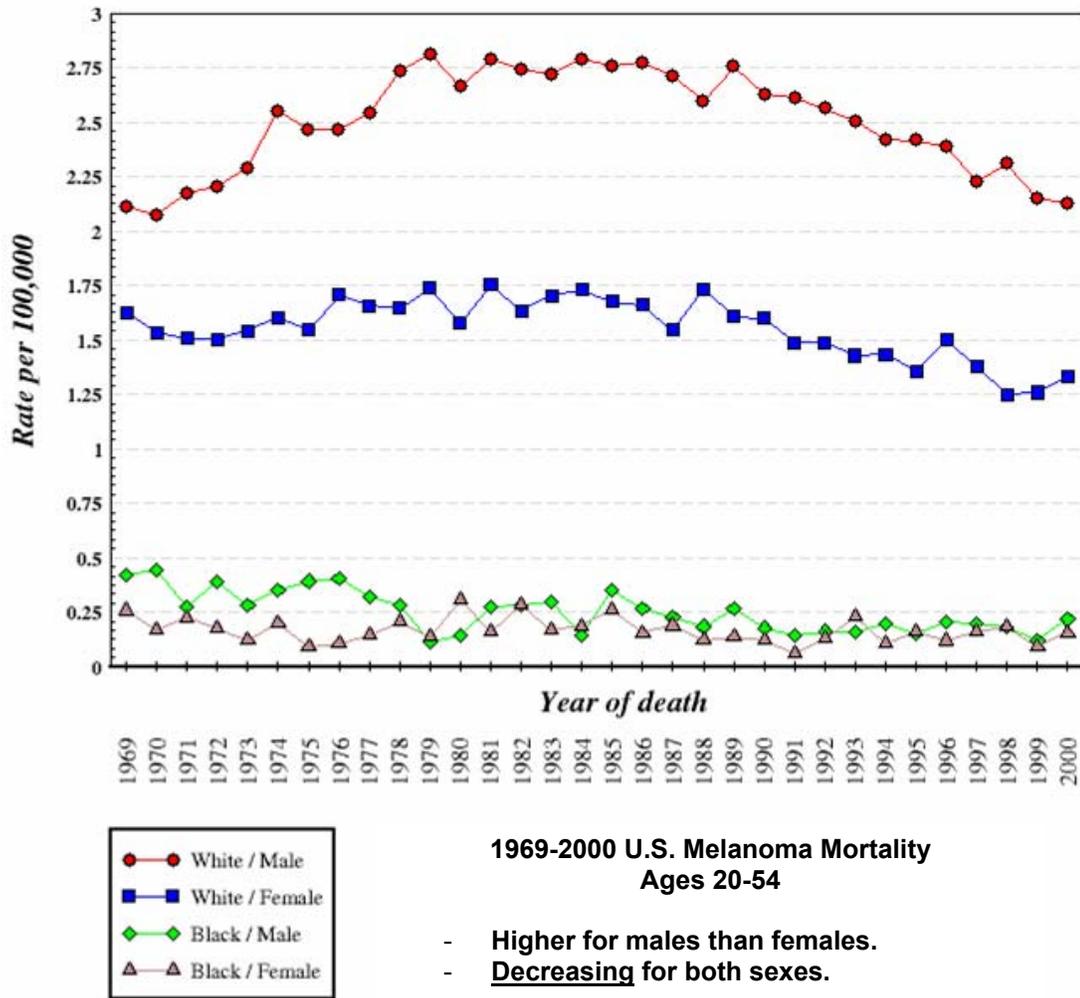
It is the professional indoor tanning industry's position that sunburn prevention is a more effective message than total abstinence, which ultimately encourages abuse. It is a responsible, honest approach to the issue.

---

## ■ But What About Skin Cancer?

There arguably is more misinformation about skin cancer than any other form of cancer, and most of it involves distorting the nature of skin cancer's complex relationship with sun exposure. Consider:

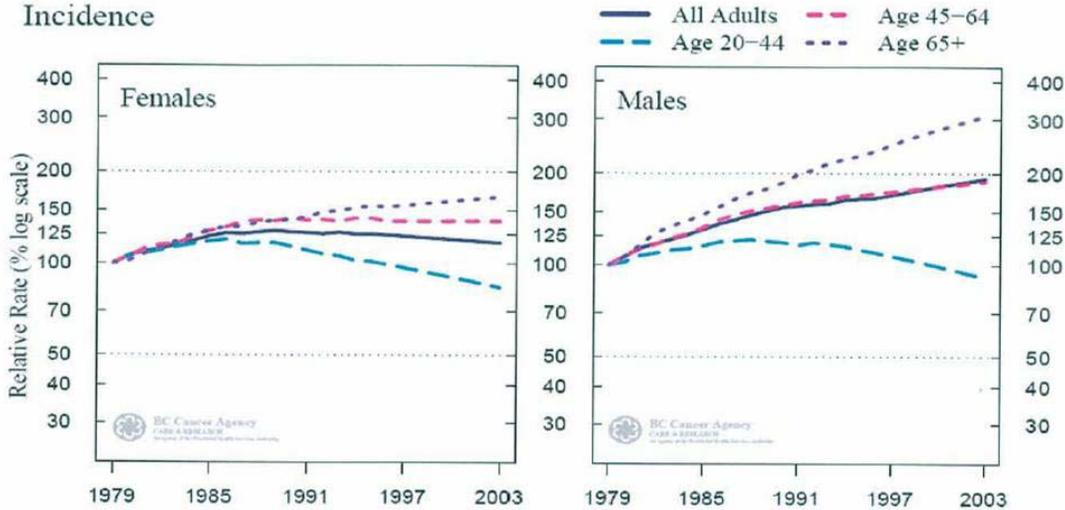
1. Melanoma skin cancer is most common in people who work indoors – not in those who work outdoors. Further, melanoma skin cancer occurs most often on parts of the body that are not regularly exposed to the sun.
2. Consider, 18 of 22 studies examining melanoma and indoor tanning have shown no statistically significant association, including the most recent and largest study. The four studies that alleged a connection did not adequately control for important confounding variables such as the subjects' outdoor exposure to sunlight, childhood sunburns, type of tanning equipment utilized and duration and quantity of exposures.



- Melanoma mortality rates are not rising among young women, but are increasing dramatically among older men. Yet the majority of the marketing message about this disease is directed at young women, who are the highest consumers of dermatological services and the biggest consumers of skin care products.
- The photobiology research community has determined that melanoma is most likely related to a strong pattern of burning and intermittent sun exposure in those people who are genetically predisposed to skin cancer and not simply to cumulative exposure. That suggests that a pattern of repeated sunburning is what we need to prevent. And that kind of prevention is exactly what the indoor tanning industry is doing effectively.
- Skin cancer generally has a 20- to 30-year latency period. The rates of skin cancer we are seeing today in older individuals mostly are a function of the ignorant misbehavior of the 1970s and early 1980s.

Smoothed Age-Standardized Rates Relative to 1979

**Melanoma Incidence**



**MELANOMA DECREASE:** For More than 20 years, melanoma incidence and mortality have been declining in British Columbia, according to the BC Cancer Agency. The largest decrease is in females 20-44 years old. Incidence is actually increasing significantly in older men – a group that purchases few skin care products and conspicuously ignored by melanoma education campaigns.

**MALE v. FEMALE:** Melanoma mortality rates are significantly higher in males than in females – more than twice as common. Yet melanoma public health campaigns continue to be directed at women – young women in particular – who do not account for an increase in the disease. While it is important for people of all ages to practice sunburn prevention and smart sun care habits, it is conspicuous that more public health campaigns are not directed at older men, the group most affected by this disease.

**2007 U.S. Melanoma Mortality Rates by Sex and Race – All Ages Combined**

Ethnicity	Male	Female
All Races	3.9 per 100,000 men	1.7 per 100,000 women
White	<b>4.3 per 100,000 men</b>	2.0 per 100,000 women
Black	0.5 per 100,000 men	0.4 per 100,000 women
Asian	0.4 per 100,000 men	0.3 per 100,000 women
American Indian/ Alaska Native	1.3 per 100,000 men	0.7 per 100,000 women
Hispanic	0.9 per 100,000 men	0.6 per 100,000 women

*Source: National Cancer Institute*

The indoor tanning community believes that our role in teaching sunburn prevention will help to reverse the increases that largely are a result of misbehavior that took place years ago before the professional tanning industry existed and before we were organized to teach sunburn prevention.

## ■ How Do You Define Moderate Tanning?

The term “moderate tanning” means something different for every different individual, and that is an important point. The bottom line is what we call “The Golden Rule of Smart Tanning” – Don’t EVER sunburn. A fair-skinned, red-headed, green-eyed person may not have the ability to develop a tan without sunburning. This person should not attempt to tan then. On the other hand, most of us have the ability to develop a tan, and the majority of us tan very easily. Moderation, in our view, means avoiding sunburn at all costs. Going about that agenda will mean something different to every different person.

---

## ■ Smart Tan Uses The Term ‘Sun Scare.’ What Does That Mean?

Smart Tan coined the term “sun scare” in 1996 to differentiate those who were distorting the truth about sunshine’s complex relationship with human health in order to scare you out of the sun – usually with some sort of profit-based motive for doing or with a lack of understanding in what the research really says on this topic.

The anti-tanning “sun scare” lobby, in an effort to rightfully increase awareness about sun care, often says the wrong thing the wrong way for the right reasons. The fact that the intention – to reduce skin damage – is right does not give them a free pass to obscure the facts and ignore conflicting data, as they often do. For example:

**“I can remember as a youth when I was growing up I had gone to movies to see that the population was living underground because of severe solar energy and the lack of protection. In some vision as I grow older I see us moving to more shelters and perhaps underground living because of these hazards.”**

*- Dr. Wilma Bergfeld, then-president  
of the American Academy of Dermatology at the  
AAD’s 1996 annual media day, Nov. 13, 1996.*

Many dermatology industry leaders still maintain that there are no known health benefits of regular sun exposure. This position is totally non-defendable. There is plenty of well-researched material documenting the positive physiological and psychological effects of UV exposure.<sup>11</sup> They are in full denial.

Some dermatology industry leaders, in efforts to increase awareness about sun care, have clearly overstated the risks associated with UV exposure. For example, dermatology industry leaders have gone on record advocating daily use of sunscreen 365 days a year in all climates. This is clearly misbranding the product in seasons and climates where sunburn is not a possibility. Further, as vitamin D expert Dr. Michael Holick has demonstrated, this over-use of sunscreen completely prevents the body from naturally manufacturing vitamin D. And vitamin D deficiency in our society appears to be epidemic.

Dermatology industry leaders have maintained that an indoor tan does not protect against sunburn outdoors. This contention is laughable, as there are millions of individuals who every year tan indoors prior to sunny vacations or summertime activities to develop base tans. Combined with the proper use of sunscreen outdoors, these base tans help to prevent sunburn. Denying this is ignoring millions of case studies.

Dermatology industry leaders, in attempts to scare people out of the sun, often have compared tanning to smoking, making the statement that indoor tanning is like a cigarette for your skin. This hyperbole alone calls into question the credibility of overzealous anti-tanning lobbyists.

On one level, comparing the numbers is ridiculous. Smoking is related to 20 percent of all deaths in the United States and 30 percent of all cancer deaths, according to the American Cancer Society. What's more, lung cancer rates are 22 times higher for current male smokers and 12 times higher for current female smokers. In contrast, 18 of 22 studies ever conducted on indoor tanning and melanoma have shown no connection at all, and the four that have alleged small increases in risk have all contained unexplained statistical anomalies.

On another level, smoking introduces substances into your body that your body is not designed to process. In contrast, your body *is* designed to process UV light, and in fact is reliant on UV exposure for natural body functions.

The public and the press look up to medical professionals as objective sources of public health information. But when dermatology industry lobbyists obscure the facts and distort the picture to attempt to influence health policy, that creates an abrogation of trust that is unfortunate for all parties involved, and the consumer suffers.

---

## ■ What About Teenage Tanning?

In the past few years the dermatology industry's lobbyists have argued that teenagers should be totally prohibited from tanning in salons despite having no solid evidence that tanning in a non-burning fashion results in any significant risk. In fact, such prohibitions would likely do more harm than good. Consider:

- Studies have shown that teens who tan in salons are less likely to sunburn outdoors compared to non-tanners.
  - 83 percent of teenagers who tan indoors prior to taking sunny vacations report that their indoor tan, combined with the proper use of sunscreen, helped them to prevent sunburn.
  - Further, 72 percent of teenagers who currently tan indoors say they would simply tan more aggressively outdoors or purchase home tanning units – both of which are more likely to produce sunburns – if they were unable to utilize indoor tanning salons. If teenagers are unable to tan in salons, sunburn incidence actually will increase, and it is likely that total UV exposure in this age group will increase. This would be hurting people, not helping them.
  - There is no data to suggest that tanning is more dangerous for any specific age group. Photobiology suggests that burning (not tanning) at an early age could increase risk later in life. As we just discussed, indoor tanners sunburn less than non-tanners, including teen-agers who tan outdoors.
  - Indoor tanning facilities today are at the forefront in teaching teenagers outdoor sunburn prevention, including the proper use of sunscreens to prevent sunburn outdoors. If teenagers are denied access to indoor tanning, sunburn incidence will increase.
  - The tanning industry supports existing laws requiring parental consent for minors who wish to tan in salons, and would support constructive efforts to bolster enforcement of this standard.
- 

## ■ Are All Dermatologists Against Tanning?

While most of the dermatology profession has an inexplicably myopic view about tanning, many enlightened dermatologists have broken ranks with their peers in recent years, urging their profession to re-think its one-sided dogma about sun exposure. Two of the most recent:

- Research dermatologist Dr. Sam Shuster, professor emeritus to the Department of Dermatology at Newcastle University in northern England, challenged his peers to quantify the alleged increase in skin cancer incidence, which is not based on actual numbers but only estimates. In the book, “Panic Nation: Unpicking the Myths We’re Told About Food and Health” Shuster calls his peers to acknowledge that a tan is the body’s natural protection against sunburn – a reality that has been all but stamped under the establishment’s rhetoric. “Unfortunately our attitude to sun and ultra-violet (UV) light is subject to much perverse and dubious technical 'advice', which society has passively accepted without questioning its provenance,” Shuster writes.
- Boston University Professor of Dermatology Dr. Michael Holick – the scientist who discovered the active form of vitamin D in the early 1970s – wrote the book “The UV Advantage” in 2004, urging people to embrace moderate exposure to ultraviolet light as the body’s natural way to produce vitamin D. Holick is widely considered the world’s leading authority on vitamin D production. “Since some exposure to sunlight is beneficial to your health, it is reasonable that if you wish to be exposed to sunlight, that you can do so with relative safety if you make sure that you do not receive a sunburn,” Holick says.

Shortly after publishing “The UV Advantage” in 2004 Holick was asked to resign his dermatology professorship at Boston University by department chair Dr. Barbara Gilchrest, who called his assertions about the positive effects of UV light “schlock science.” Since that time all of Holick’s work has been supported by hundreds of independent studies conducted by the vitamin D research community.

---

<sup>1</sup> International Smart Tan Network is the educational institute for the North American indoor tanning community, serving as the primary source of professional training and continuing education for the owners and operators of more than 20,000 professional indoor tanning facilities.

<sup>2</sup> Rucker D, Allen JA, Fick GH, Hanley DA. Vitamin D insufficiency in a population of healthy western Canadians. *Can Med Asn J* 2002;166(12):1517-24

<sup>3</sup> Tangpricha V, Turner A, Spina C, Decastro S, Chen TC, Holick MF. Tanning is associated with optimal vitamin D status (serum 25-hydroxyvitaminDconcentration) and higher bone mineral density. *AmJ Clin Nutr* 2004;80:1645–9.

<sup>4</sup> Reinhold Vieth, Heike Bischoff-Ferrari, Barbara J Boucher, Bess Dawson-Hughes, Cedric F Garland, Robert P Heaney, Michael F Holick, Bruce W Hollis, Christel Lamberg-Allardt, John J McGrath, Anthony

---

W Norman, Robert Scragg, Susan J Whiting, Walter C Willett, and Armin Zittermann. The Urgent Need to Recommend an Intake of Vitamin D That is Effective. *Am J Clin Nutr* 2007;85:649–50

<sup>5</sup> Joan M Lappe, Dianne Travers-Gustafson, K Michael Davies, Robert R Recker, and Robert P Heaney. Vitamin D and calcium supplementation reduces cancer risk: results of a randomized trial. *Am J Clin Nutr* 2007;85:1586–91.

<sup>6</sup> Holick MF. Vitamin D Deficiency. *N Engl J Med* 2007; 357:266-81

<sup>7</sup> Holick MF. High prevalence of vitamin D inadequacy and implications for health. *Mayo Clin Proc.* 2006;81:353-373

<sup>8</sup> Heike A Bischoff-Ferrari, Edward Giovannucci, Walter C Willett, Thomas Dietrich, and Bess Dawson-Hughes. Estimation of optimal serum concentrations of 25-hydroxyvitamin D for multiple health outcomes. *Am J Clin Nutr* 2006;84:18–28.

<sup>9</sup> Vitamin D Council recommendations published on [www.vitaminDcouncil.org](http://www.vitaminDcouncil.org).

<sup>10</sup> Vieth, R. Why the optimal requirement for Vitamin D3 is probably much higher than what is officially recommended for adults. *Journal of Steroid Biochemistry & Molecular Biology* 89–90 (2004) 575–579

<sup>11</sup> Sorenson M. *Solar Power for Optimal Health: Sunlight and Vitamin D May Save Your Life*. 2006. ISBN 1-4243-1387-2.