

PHARMACY PHILE

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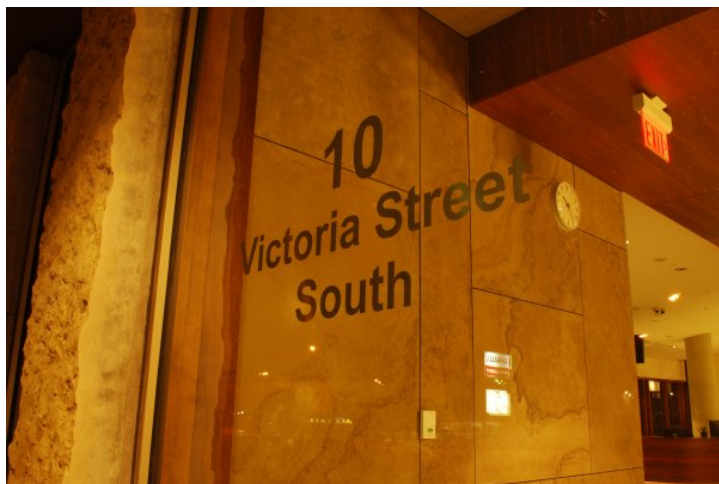
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Sun Protection

We are done!

Hope everyone had fun last term



It's newsletter time again! After all the sleepless nights studying for exams and the anxiety of waiting for rankings in Jobmine, this semester is finally over! As advice from a second year to first years, enjoy your work term! You may not have landed your ideal placement, but you will be surprised at what you will learn if you just open your mind.

Before we take a look at what we have in store for you in this newsletter, I would like to announce the formation of a communication committee which includes Josh Brady, Calvin Poon, Justin Shea, Deepti D'Souza, Julie Hill, Carmen Louck and Mandip Khela. I would like to thank everyone for putting this and the housing newsletter together!

The profession of pharmacy was

heavily impacted by the recent passing of Bill 16. Despite the tremendous efforts of the coalition, the Bill passed relatively unscathed. Despite the many uncertainties in our profession's future, many pharmacists and students alike gathered in Niagara Fall for the OPA conference. Read more about this in page (2).

Also in this issue, Pumkin brought us another delicious dish from the east; Jason has a prize for the one who finishes his tricky crossword first and many more!

Before I let you go, please take some time to vote for a SOPhS logo! Remember, this will be the face of your student society!

Enjoy,

Boris Tong

Communication Director

CONFERENCE 2010



In light of the recent changes to pharmacy practice and funding in Ontario, this year's OPA Conference was full of energy. Over 400 delegates from across the province gathered at the beautiful Fallsview Casino Resort in Niagara Falls June 17 to 19 for three days of education, networking, and social events. About 50 students, equally distributed between both schools, were in attendance representing perhaps the largest percentage of student delegates in history.

The conference began with OPA's Annual General Meeting (AGM). The voting rights of the student representa-

tive on the OPA Board of Directors were passed from the 2009-10 UofT



representative, Taj Dhinsa, to our very own Stacey D'Angelo. The new UofT student observer will be Zenah Surani, who can be contacted at studentobserver@opatoday.com. She is a great resource as a UofT contact for OPA-related or pharmacy advocacy efforts

between the two schools.

Following the AGM was a special members-only session on drug system reform. The meeting was interactive as delegates posed questions, shared opinions and got answers on regulatory changes and next steps. During the session, OPA unveiled its draft proposal for the Fee Guide for Uninsured Pharmacy Services. The guide will serve as a valuable tool and resource for pharmacy service reimbursement in Ontario. Members were encouraged to provide feedback to their district representative.

The education sessions began Friday morning with a panel discussion on the





controversial article "Are pharmacists the ultimate barrier to pharmacy practice change?" Moderated by the article's co-author, Zubin Austin, and featuring three Ontario pharmacists at different stages of their career, this session provided insight into the culture of pharmacy and how our profession is seen from the inside and by the public. Students may recognize this article from Barry Power's class panel discussion, or Zubin Austin as he has guest lectured at UW on topics relating to pharmacy culture. Saturday morning's keynote speaker, Joe Flower, was a highlight of the Conference, providing an interesting look at the current state of healthcare in Canada and the United States. In addition to these engaging keynote speakers, delegates benefitted from outstanding presenters at each of the 24 education sessions. UW's own faculty graced the stage for some riveting topics: Jeff Nagge presented "Patient Care 101" and Lisa Craig presented "Strategies to Manage Chronic Illness in your Clinical Practice Setting". Both topics generated good discussion afterwards and from pharmacists.

The social events were highlights of the conference. Friday evening's Exhibit Hall wine and cheese featured more than 60 exhibitors showcasing new



products and services. Directly following was a World Cup soccer-themed Social, sponsored by Apotex Inc. It was a fun evening featuring an international buffet and many soccer-themed games. The foosball tournament was a highlight of the event with 16 teams battling to become OPA's first ever foosball cup winner. Shout outs go to UW students Nick Malian and Caitlin Meyer who gave an outstanding performance, losing by a hair in the semi-finals. The Saturday evening Gala Awards Banquet, sponsored by TEVA, provided an opportunity to honour our profession and those members who have made significant contributions to pharmacy. Congratulations go to James Morrison of UofT, this year's winner of

the Student of Distinction Award. The Gala provided a great photo-op for all students with our own Director, Jake Thiessen, and UofT Dean, Henry Mann.

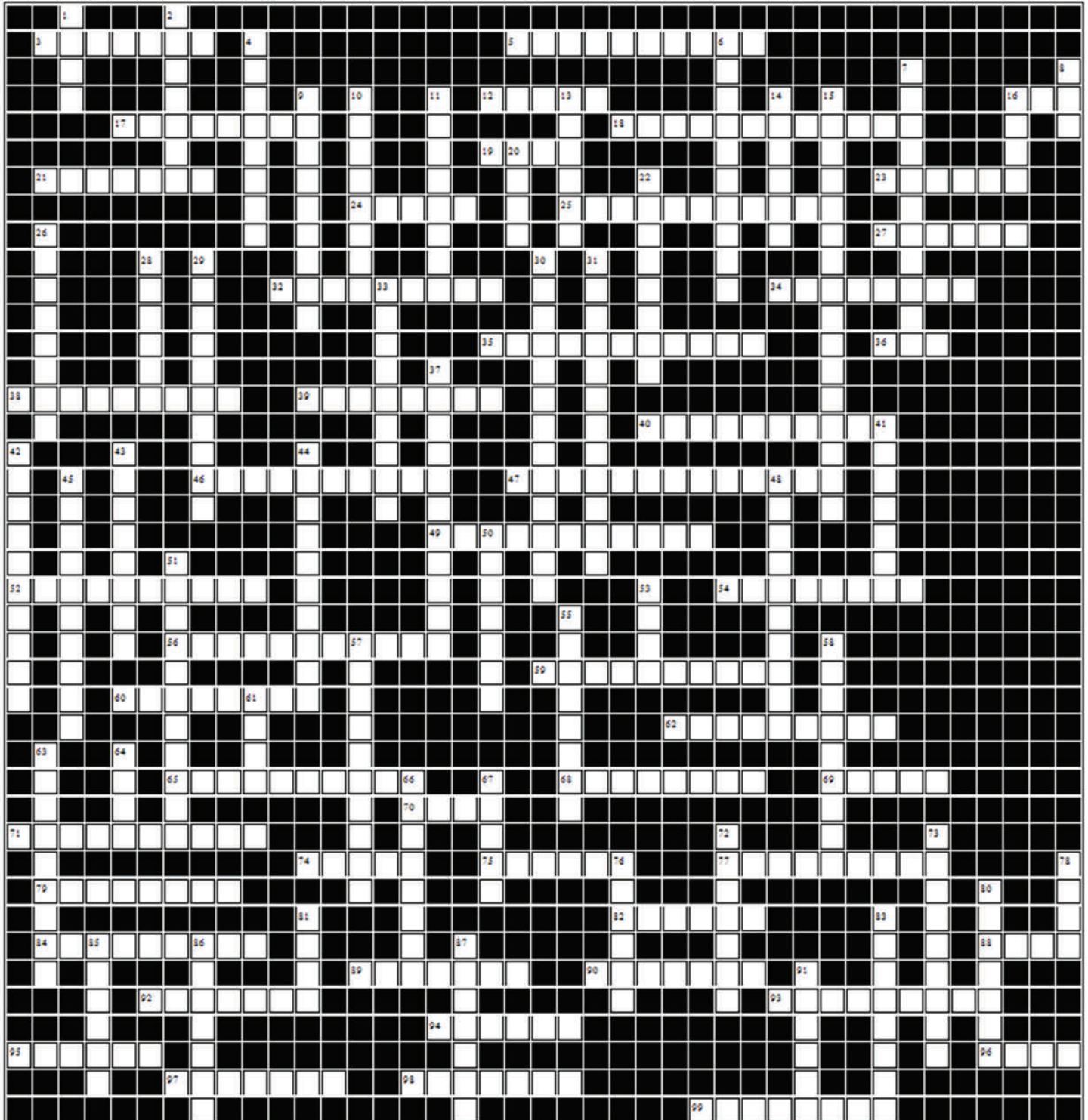
In this dynamic time in pharmacy, delegates left the OPA Conference with inspiration to take changes in a positive light and look forward to arising opportunities. The education sessions provided knowledge needed to take on new endeavours; networking opportunities generated lasting links which will serve students well as they forge forward in their careers; and social events fostered camaraderie within the pharmacy community. I invite all students to mark your calendar for next year's OPA Conference at Deerhurst Resort, Huntsville from June 9 to 11, 2011.



Special Summer Fun Issue 11: Blurbs on Herbs Crossword Puzzle

With exams soon approaching and the hot days of summer here, I thought I'd give all my readers something fun to do... take this fun crossword puzzle to the cottage, beach, camping, or on a road trip. Tackle it for a study break or during your lunch break on your co-op work term. Either way, I encourage you all to give it a try because the first person to hand me a completed and correct puzzle (in person or via UW-ACE) will receive a great prize! Some of the answers can be found in earlier issues of Blurbs on Herbs, while others are based on common knowledge or can be found using the internet. Have fun!

Jason Budzinski (Pharm 2011)



ACROSS

- 3. Source of natto and nattokinase
- 5. Flower with anticancer compounds (hint - it adorns our building)
- 12. Cordyceps and Reishi Kingdom
- 16. International standard for the production and manufacturing of NHPs (abbrev.)
- 17. Indian natural medicine
- 18. Root popular for Old West beverages (like rootbeer)
- 19. Saint for which a popular herb is named
- 21. Kelp and bladderwrack for one
- 23. Traditional healer in many cultures
- 24. Herb used for a commercial product for constipation (common with opioid therapy)
- 25. NHP (chemical) for cartilage support
- 27. "A Modern Herbal" author
- 32. UTI sufferer's fruit of choice
- 34. Asian stimulant beverage (2 words)
- 35. Medicinal property of some plants - tummy soothing
- 36. Herbs from China (abbrev.)
- 38. Yellow antimicrobial compound from goldenseal
- 39. Medicinal property of some plants - zzz
- 40. Vitex Agnus-castus (2 words)
- 46. Medicinal property of some plants - dries or shrinks tissue
- 47. _____ of the People's Republic of China (TCM book)
- 49. Adverse NHP-drug _____
- 52. Discipline of herbal medicine of German origin
- 54. Insomniac's herbal choice
- 56. Red seeded fruit popular as an antioxidant and juice
- 59. Juice of this fruit interferes with the metabolism of many drugs
- 60. Vaccinium myrtillus
- 62. Equine-named herb containing toxic pyrrolizidine alkaloids
- 65. Antifungal liquid from Melaleuca (3 words)
- 68. Name for tinctures with big empty promises - reptilian ori-

gin?

- 69. Medicinal property of some plants - restorative agent or influence
- 70. Mucilaginous seaweed boiled to form gels
- 71. Source of atropine (deadly nightshade)
- 74. Vehicle for decoctions and teas
- 75. Cactus source of mescaline
- 77. Purple coneflower - popular for flu season
- 79. Alcoholic herbal extract
- 82. Metabolism essential - CYP3A4 for one
- 84. Irritant compound from the oil of hot peppers
- 88. Regulates herbal products in Canada (abbrev.)
- 89. Arctium lappa
- 90. Popular Asian herb for general health and stress (an adaptogen)
- 92. Socrates last drink
- 93. Published and authoritative summary for a NHP (e.g. from Health Canada)
- 94. Medicinal root popular for beverages (ale, beer)
- 95. Salicylic acid tree source
- 96. Aerial plant part
- 97. Water, methanol, ether, ethyl alcohol for example
- 98. Bearberry (2 words)
- 99. Namesake of 'Twizzlers'?

DOWN

1. Floral pale-ale requirement
2. Dried herbal extract 'container'
4. Herbal remedy for migraine sufferers
6. Drug naturally produced by oyster mushrooms
7. Medicinal property of some plants - induces sweating
8. DIN for NHPs (abbrev.)
9. Leaves of this red-fruited plant are often used to induce labour (parturition)
10. Plant extract derived from soaking or steeping
11. Odiferous floral English garden herb
13. Herb traditionally used to improve memory and cognitive function
14. Has purported anti-vampiric properties
15. Director General of the Natural Health Products Directorate (2 words)
16. Popular online database for plant taxonomy and Latin binomial nomenclature (abbrev.)
20. Capsule route of administration
22. Scutellaria species
26. Famous 17th century botanist, herbalist, physician, and astrologer
28. Colourful aerial plant part
29. Hydrastis canadensis
30. Pharmacy Phile column (3 words)
31. Proper name for a 1:1 alcoholic herbal tincture
33. International Herb Association's herb of 2009 (2 words)
37. Thorny herb known for hepatoprotective properties (2 words)
41. Ma Huang plant
42. Hamemalis water plant source (2 words)
43. Absinthe source
44. "Lay down the boogie and play that funky music till you die" artist (2 words)
45. Health practitioner knowledgeable of drugs and NHPs
48. Oil of this plant common in topical compounds (koala delicacy)
50. Leather-curing polyphenols found in many herbs
51. American tree used to treat benign prostatic hyperplasia (2 words)
53. Topical skin soothing herb
55. Annual summer festival near Ottawa
57. Herbal doctor with a ND degree
58. Simmered or boiled plant extract
61. Subterranean plant part
63. 19th century US herbal scholars & medicinal practitioners (Remington, Felton, Lloyd, for example)
64. Piper methysticum
66. Tea variety native to North America and popular aboriginal traditional medicine
67. Traditional herbal water for colicky infants
72. Commission E Monographs country
73. Considered 'medicinal' by some
76. Medicinal property of some plants - induces vomiting
78. Popular online herbal information resource for pharmacists (abbrev.)
80. Pungent mint oil compound in many topicals
81. Stripped from some plants for medicinal preparations
83. Source of digoxin
85. Grinding tool for dried plant material
86. Pungent Cinnamomum oil compound in many topicals
87. Poultice route of administration
91. Grinding bowl for dried plant material



Pumkin's Cooking Corner: A Bit O' Better Butter Chicken

So, a few years ago I was at a potluck lunch in honour of my supervisor's birthday. I honestly cannot remember what kind of cheap, poorly nutritional food I brought on my behalf (probably something from Pumkin's Cooking Corner). Anyways, what I do remember was the

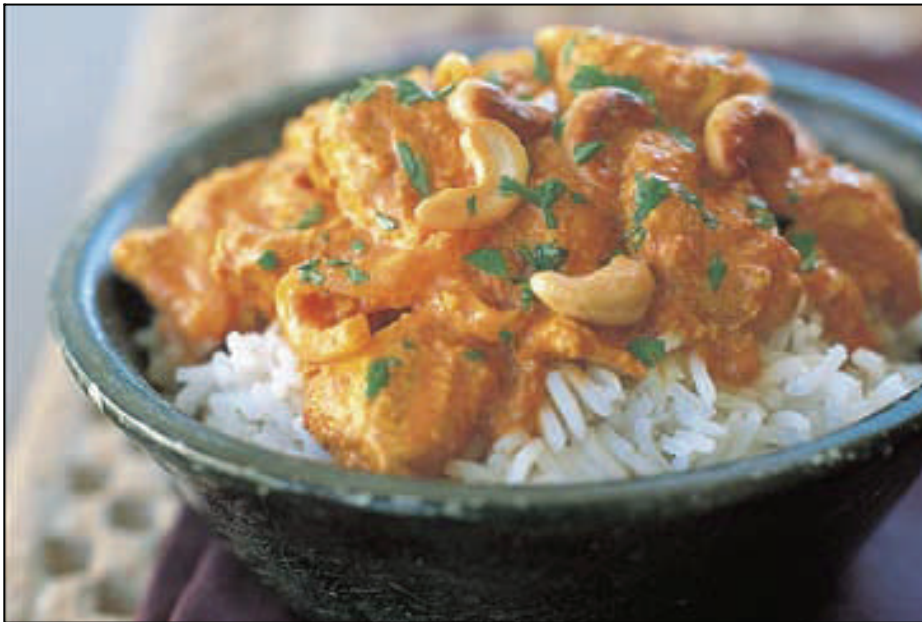
delicious Butter Chicken my friend made. I turned to her and said: You gotta give me this recipe! She obliged. My friend happens to be from India, I think this may partially explain why her recipe was so good (she knew what she was doing)! I think it also had to do with the simple fact that she was an excellent cook.

I have since lost that delicious recipe and have replaced it with another crappier one. Don't worry, it's still very good, it just lacks a certain zip. Actually, I was never quite able to duplicate the deliciousness that my friend's Butter Chicken had so I guess losing that recipe makes less of a difference. What's great about the recipe below is how much easier it is to make than my friend's recipe.

Here we go!

Ingredients

- Onion
- Black pepper
- Red chili flakes
- Rice
- 1 jar of butter chicken sauce
- Chicken
- Naan bread



To my surprise, Naan bread and the Butter Chicken sauce were quite easy to find at my local grocery store. I have previously had to make it a special trip to an Indian food store in order to prepare the lost recipe.

Protocol

1. Get the rice cooker going. Make as much or a little as you like!
2. Get your chicken cooking.
3. Fry up the onion in olive oil and add ½ tsp black pepper and ½ tsp red chili flakes to the onion once it's sufficiently sautéed.
4. Once the chicken is cooked, cube it and add it to the frying pan with onion(s).
5. Add the entire jar of butter chicken sauce to the frying pan and cook for approximately 15 minutes or whatever the jar says.
6. Zap the Naan bread in the microwave for approx. 12 seconds.
7. Enjoy your delicious Butter Chicken!



Important Dates

Rx2012

August 12th – Due date for parking lottery

August 27th – CECS Evaluation Form

Aug 30th – promissory note payment

Sept 2nd – PLOT due date

Sept 8th – payment in full

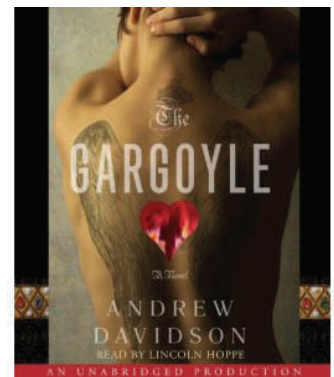


Required Reading

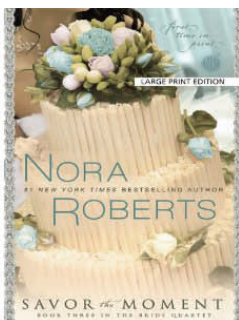
Happy end of term everyone!

Now that you'll have three weeks off before coop starts, it's time to catch up on your recreational reading!

My first recommendation is *The Gargoyle*, a debut novel by Andrew Davidson. After a coke-addicted pornographer drives his car off a mountain road, he begins his painful recovery from the horrific burns he suffers in the crash. With plans to end his life following his release from the hospital, he soon meets a schizophrenic patient named Marianne Engel who begins to visit him in the burn ward. She comes to describe her memories of their love affair in medieval Germany; initially, the narrator finds this preposterous but soon plays into her delusions. Marianne also specializes in creating sculptures, especially gargoyles.



The Gargoyle is about the journey to recovery, the love of art, and believing in the impossible. A little slow to start off perhaps, but by the end I had trouble putting this book down



For the females in the reading audience, I strongly recommend Nora Roberts's *Bride Quartet* series. Three of the four novels have been released, with the fourth being released this fall. The series revolves around four childhood friends who grow up and run a wedding business together. Over the course of four novels, each girl meets a guy and falls in love, all while planning and throwing elaborate weddings. I for one have never been a fan of Nora Roberts's novels; however, these are the exception. They are easy summer reads; take one to the beach or the cottage.

Enjoy!



Sunprotection | Sunscreens and Beyond!

You know it is summer when patients bombard you with questions regarding sun protection (specifically sunscreens). Upon reviewing the literature, I realized that recommending a sunscreen is not enough to protect patients from deleterious effects of sun exposure. This article will outline advances in sunscreen, other sunprotection measures, roles of antioxidants, and counseling points from a pharmacist perspective.

Sun Exposure | UVA, UVB, and UVC

Ultraviolet exposure from the sun and other sources has been linked to cause skin cancer (melanoma, squamous cell, and basal cell cancer) and photoaging (wrinkling, dryness, sagging, and pigmentation). The Ultraviolet spectrum can be divided into three parts: UVB (290-320 nm), UVA (320 to 400 nm), and UVC (100-280 nm). Of the three, UVB

causes sunburn and directly damages the cellular DNA leading to the formation of pyrimidine dimers. By contrast, UVA penetrates deeper into the skin and indirectly damages the DNA via the production of radical oxygen species. Nearly 100% of the UVC and 90% of the UVB rays are blocked by the ozone layer; whereas, UVA rays pene-

trate the ozone layer and reach the earth. During peak hours of the day (10am to 4pm) and throughout the summer season, there is an increase of UV transmission. On the other hand, weather factors such as fog, clouds, and pollution can decrease UV transmission by 10 to 90% (not an incentive to cause pollution!).

Sunscreens | Sun Protection Factor (SPF)

SPF measures the erythmal response (redness) of the skin when exposed to UV light. However, this mind-boggling definition is not patient-friendly when counseling. Alternatively the FDA definition of SPF is “the amount of UV radiation required to cause sunburn on skin with the sunscreen on, relative to the amount required without the sunscreen.” Most of the sunscreen products define SPF with respect to protection from UVB.

Indeed, a major problem facing sunscreens is that the SPF used to convey efficacy fails to represent the level of protection against UVA. The lack of a universally accepted system to assess UVA-blocking capacity has prompted the American Academy of Dermatology to create a criteria list to define “broad-spectrum” (covering UVA and UVB) sunscreens. Sunscreens with a SPF of 15 block 93% of UV transmission; whereas, SPF 30

and 45 sunscreens block 97% and 98%, respectively.





Sunscreens | Organic and Inorganic

Generally speaking, sunscreens are divided into two categories: Organic and Inorganic. Inorganic sunscreens work by both scattering and absorbing UV rays. There are only two inorganic filters approved by FDA: Titanium Dioxide (TiO_2) and Zinc Oxide (ZnO). They offer three main advantages over the organic sunscreens:

- They are photostable and give predictable photoprotection after UV exposure.
- They have low allergenic potential and low rates of sensitization
- They offer protection from UV rays with wavelengths up to 380nm.

Despite the advantages, the public has not embraced inorganic sunscreens due to their unaesthetic appearance (white), their large reflective indices, and their gritty sensation. To counter the disadvantages, Manufacturers introduced sunscreens with nanoparticles of TiO_2 and ZnO . Their popularity increased dramatically; however, non-profit

organizations, government regulatory bodies, and certain scientific communities raised concern regarding safety issues relating to skin penetration and systemic toxicity. Numerous studies and extensive use in other countries have displayed low or no incidence of adverse skin or systemic effects. In fact, the European Commission has reviewed inorganic sunscreens and declared them as non-toxic, non-irritating, and non-sensitizing after topical application.

Organic sunscreens, on the other hand, include products containing organic filters that provide either UVA or UVB protection or both. Selected UVB filters in-

clude aminobenzoates, cinnamates, salicylates, and octocrylene. UVA filters include benzophenones, avobenzones, and ecamsule. One of the biggest concerns with organic filters is that they are photolabile and under certain conditions, the degradation process can be accelerated. Today, many of the organic sunscreens are specially formulated to prevent degradation and extend effectiveness. In addition there are special sunscreens targeted for different activities such as sports, swimming, and running.





Sunprotection | Clothes, Hats, Sunglasses



Clothing and hats are one of the two most important means for photoprotection. In fact, they provide a high level of protection against UVB and UVA as long as one remembers to wear them. They are cheaper, non-allergic, and do not require cumbersome “reapplying” to attain photoprotection as with sunscreens. Many studies have found that photoprotection in-

creases when clothes are made of fabric material (polyester, nylon), with tightly woven or thicker fabric, with darker colors, and when washed with UV absorbing agents (Tinosorb FD). On the other hand, UV exposure can also damage the cornea, conjunctiva lens, and retina, resulting in a number of eye conditions collectively known as “Ophthalmohelioses.” One should wear sunglasses with “UV protection” or “polarized” lenses that are wrapped closely to the eye in order to prevent oblique UV rays (also dangerous) from entering into the eyes. .

Antioxidants | Their roles

Some of the sunscreens and cosmetic products found today, contain antioxidants such as vitamin C, vitamin E, selenium, silymarin, and polyphenols to prevent skin damage from the radicals. Topical antioxidants exert their effect inside the cells and may remain active for several days. Usually, there are more than two antioxidants present in the formulation in

order to quench radicals of antioxidants. To date, no antioxidant has shown superior efficacy “in vitro” due to issues regarding stability, penetration, and irritation. However, it is common that most sunscreens will involve them in their formulation. Finally, there is scant evidence regarding oral antioxidants to prevent damage from UV exposure.

Counseling Points

1. Ask for length of the sun exposure, type of activities, and environment (gardening, sports, etc)
2. Gather details about allergies (emphasize on skin sensitivity/irritation), medications, and medical conditions (specifically skin conditions such as psoriasis, eczema, dermatitis)
3. Recommend sunscreen products that are broad spectrum and approved by the Canadian Dermatology Association (my two favourites: **Neutrogena**® and **Ombrelle**®, either SPF 30 or 45)
4. Inform patient how much and how often to apply. General rule of thumb: 20 minutes before sun exposure, and reapply every 2 hours (water resistant sunscreens: every 40 minutes, water proof sunscreens: every 80 minutes). One should apply sunscreen generously. In general, 2.5mL for each arm, head, neck, and face (avoid eyes). 5mL for each leg, back, and chest.
5. Educate patient to wear protective clothing, broad-brim hats, and sunglasses and use SPF 15 lip balm to provide additional protection.
6. Finally, advise patient to avoid outdoor activities between 10am to 4pm and a big NO to tanning beds!