FROM THE MOUNT SINAL DEPARTMENT OF DERMATOLOGY SPRING/SUMMER 012

The Making of a Mount Sinai Dermatologist

By Jacob Levitt, MD

The Department of Dermatology takes pride in the expert care our faculty give to the most complicated skin conditions. And equally important, we recognize our responsibility to pass along our knowledge to the next generation of doctors.

In our education program, we have 12 resident physicians fulfilling their 3-year training requirement, a group of trainees in our subspecialty fellowship programs, several international fellows, and many medical students and young physicians who rotate through our department.

Training programs in our specialty are among the most selective in all of



Dr. Levitt (second from left) with resident physicians Dr. Ahmed Hadi and Dr. Elie Lowenstein and medical student Brieze Keeley

medicine. As the Dermatology Residency Program Director, I am charged with making sure our young doctors maintain the highest standards in patient care and in their academic requirements. Learning good communications skills and maintaining patient satisfaction – arguably the most crucial goals of our residents' education – are greatly enhanced by their primary work, which is to provide facultysupervised outpatient care to a multilingual, culturally diverse patient population in our dermatology clinics.

Our residency program also teaches mastery of a vast number of skin diseases: how to diagnose and prevent skin disorders, and how continued on page 3

Sunscreens: Questions & Answers



Susan V. Bershad, MD

Q. What are the best ways to protect infants and children from the sun?

A. Great question! It's worrisome to see young patients with sunburns or extensive freckles, because these are signs of ultraviolet damage that can lead to skin cancer. My advice is to protect infants with clothing when possible and to apply sun-filtering products with zinc oxide or titanium dioxide to exposed areas. Standard chemical sunscreens are safe and convenient for toddlers and children. Choose a waterresistant product with a sun protection factor (SPF) of 50+, stay indoors or in a shady spot from 10 to 3, and make use of hats, sunglasses, beach umbrellas, and canopies on baby strollers. And finally, don't count on sunlight as your child's source of vitamin D – ask your pediatrician how to provide it through diet and supplements.

Dr. Bershad is an Associate Clinical Professor of Dermatology; Director of Pediatric and Adolescent Dermatology; and a member of the Faculty Practice Associates (www.mssm.edu/bershad).

Q. Does sunscreen use increase an adult's risk of vitamin D deficiency?

A. If individuals were to rely solely on sun exposure to satisfy their vitamin D requirements, then the answer is probably yes. But you can protect yourself from ultraviolet-induced skin cancer by using sunscreens and also get plenty of vitamin D for healthy bones. There are three sources of vitamin D: first, the skin makes it in response to unprotected sunlight; second, it's found in your diet, especially dairy products, vitamin-D-added beverages, and fish oils; and third, it's found in dietary supplements that are easy to take. Because you can't depend on sun exposure during winter months, I advise my patients to take a 1,000 IU capsule of vitamin D daily.



James Spencer, MD

Dr. Spencer is Clinical Professor of Dermatology and Voluntary Faculty member of the Department (www.mssm.edu/spencer). continued on page 3

In This Issue

TATTOOS: ART & SCIENCE Norman Goldstein, MD Page 2

LASER TATTOO REMOVAL Faculty Experts Page 3

MORE SUNSCREEN Q&As Francesca Fusco, MD Gary Goldenberg, MD Page 3

NEW SKIN CANCER DRUG Mark G. Lebwohl, MD Page 4

DEFINING OUR SPECIALTY Patricia Wexler, MD Page 5

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www.MountSinai Dermatology.com



LASTING IMPRESSIONS: The Art and Science of Tattoos

By Norman Goldstein, MD

As the summer months bring out skimpier clothing, many of the estimated 35 million Americans with tattoos will have their body art on display.

Tattoos have been around for at least 10,000 years. In prior centuries, tattoos were applied by hand with sharpened sticks, bones, or bamboo. Even now, amateur tattooing can be performed manually, but this practice is dangerous and likely to yield poor results.

Professional tattoo artists today use an electric tattooing machine with one or multiple needles that insert permanent pigments, such as carbon black, titanium dioxide, iron oxides, azo dyes, and phthalocyanine, into the dermis of the skin. Located directly beneath the thin epidermis, the skin's dermal layer has many nerves and blood vessels, which



A common reason to remove or modify a tattoo: it bears the name of a former sweetheart.



A young man is pleased that his tattoo camouflages a post-surgical scar.

account for the pain and bleeding that usually occur. Cells within the dermis called phagocytes trap the pigments and prevent them from spreading elsewhere in the body but don't prevent the downward migration of pigment that causes tattoos to fade over time.

Cleanliness and safety precautions are essential to prevent wound infections and blood-borne diseases such as hepatitis B, hepatitis C, and HIV *(see box: A License to Tattoo).* In the US, individual states and local jurisdictions are responsible for regulating tattoo parlors. At least 39 states have laws regulating or prohibiting the tattooing of minors. Some states like California require that tattooists provide customers with a list of inserted pigments – a good idea, because of occasional allergic reactions to tattoos.

There are several reasons to avoid getting

A LICENSE TO TATTOO

In the City of New York, there are about 2,000 licensed tattoo artists who have completed a required infection-control course. Licenses are not issued for tattoo establishments, which are inspected only after a complaint. The Department of Health and Mental Hygiene has established these safety rules for tattoo artists:

- The work area must be kept clean and hygienic.
- Needles and other objects for penetrating the skin must be sterile.
- Tattoo artists must wear clean clothes and not have any exposed wounds.
- Objects that have touched blood or body fluids must be disposed of properly.
- Please note: The editors of Skin Health also recommend that tattoo artists wear single-use medical gloves to protect themselves and their clients.

tattooed while under the influence of drugs or alcohol, but the main one is buyer's remorse. Anyone contemplating a tattoo should be aware that tattoo removal is more costly and time consuming than getting one.

Removing tattoos has been accomplished in the past by excision, dermabrasion, acids, and salt abrasion, but today's procedural dermatologists consider laser surgery to be the most effective method *(see page 3: How to undo a tattoo).*

Dr. Goldstein is a Senior Faculty member of the Department of Dermatology and a member of the Faculty Practice Associates, Mount Sinai School of Medicine (www.mssm.edu/ngoldstein).

Skin Health

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The Editors thank Mount Sinai Printing Services.

The experts discuss how to undo a tattoo...

At the Mount Sinai Faculty Practice, we remove all sizes and colors of tattoos, old or new, including tattoo dots after radiation treatment for breast, lung, or prostate cancer. One of my specialties is to remove eyeliner and lip-liner tattoos. Mount Sinai offers several different laser devices that enable us to remove various ink colors.

Ellen S. Marmur, MD

Vice Chair, Cosmetic and Dermatologic Surgery; Program Director, Procedural Dermatology; Co-Director, Cosmetic Dermatology Fellowship (www.mssm.edu/marmur)

A tattoo before (*left*), and after only two treatments with the Q-S Nd:YAG laser (*right*). Photos courtesy of Dr. Ellen Marmur, Mr. Edgar Echavaria (CMA, Dermatologic Surgery), and their patient. While laser removal is effective, patients are often frustrated by how much longer and more painful it is to remove a tattoo than to get one. Several years ago, a new ink was developed called Freedom Ink[®], which was removable in one treatment. It never took off – probably because individuals getting tattooed aren't thinking about removing them.

Heidi Waldorf, MD

Director, Laser and Cosmetic Dermatology (www.mssm.edu/waldorf)



In my experience, it's more difficult to remove tattoos from areas with poor blood flow, such as the lower legs, than to remove tattoos from sites with good blood flow, for example, the face. Initially I treat with the Q-switched Nd:YAG and Ruby lasers. After 90% of a tattoo has been removed, for the last 10%, I use either the TotalFX[®] CO₂ laser or the Fraxel[®] laser.

Hooman Khorasani, MD Chief, Division of Mohs, Reconstructive and Cosmetic Surgery (www.mssm.edu/khorasani)



The Making of a Dermatologist continued from page 1

to treat patients with prescription and nonprescription drugs, injection and infusion therapy, skin surgery, lasers and other devices, and cosmetic procedures. Every dermatologist also studies dermatopathology, which involves looking through the microscope at skin growths and diseases. Residents and fellows represent the future of dermatology. We're grateful to our patients who recognize this vital aspect of our mission and extend themselves to provide learning experiences that will help our trainees become the excellent doctors who are the legacy of Mount Sinai Dermatology.

Dr. Levitt is Associate Professor and Vice Chair of the Department of Dermatology; Dermatology Residency Program Director; and a member of the Faculty Practice Associates (www.mssm.edu/levitt).

Sunscreens: Questions & Answers (continued from page 1)



Francesca Fusco, MD

Q. Should acne patients use sunscreens, and if so, what should they look for on the label?

A. Sunscreens should be worn by everyone, especially individuals with acne, because many medications used to treat acne can increase the risk of burning. These include oral antibiotics; an oral vitamin-A derivative called isotretinoin; and topical retinoids, which include tretinoin, adapalene, and tazarotene. Look for a sunscreen labeled *Oil-free* or *Non-Comedogenic*, which indicates that a product has been laboratory tested and found to be non-pore-clogging. I advise my patients to apply sunscreens with SPF 30 or higher every morning and to reapply them after extended sun exposure, swimming, toweling off, or sweating.

Dr. Fusco is an Assistant Clinical Professor of Dermatology and a member of the Voluntary Faculty of the Department (www.mssm.edu/fusco).

Q. What do the new FDA sunscreen regulations mean to my family and me?

A. The rules going into effect this summer mean that sunscreens will be safer and more effective than ever before. In order for products to claim protection against skin cancer and early aging, the FDA will now require them to have an SPF of 15 or higher and have *Broad Spectrum* coverage, meaning that products must protect against both ultraviolet A rays (UVA), which play a role in skin cancer and aging, and also ultraviolet B (UVB), the main cause of sunburns. The word *Sunblock* can no longer be used, because it gives a false sense of protection. The words *Waterproof* and *Sweat Proof* are no longer allowed, but manufacturers may claim *Water Resistance* for either 40 or 80 minutes.



Gary Goldenberg, MD

Dr. Goldenberg is Assistant Professor of Dermatology & Pathology and Medical Director of Dermatology Faculty Practice Associates (www.mssm.edu/goldenberg).

RESEARCH NEWS: Skin Cancer Breakthrough



By Mark G. Lebwohl, MD

In the early 1990's, a leading skin cancer surgeon referred a patient to our department with a history of many cancerous growths called basal cell carcinomas, including one that was invasive and inoperable. The physician suggested treatment with acitretin, an oral psoriasis drug, which also has the ability to shrink tumors. We successfully treated the patient with acitretin, but he continued to develop new lesions, and the invasive one had spread to his lungs, requiring surgery.

Most cases of basal cell carcinoma (BCC), the most common form of skin cancer, are easily cured with surgery, but some individuals develop hundreds of BCCs due to genetics or excessive sun exposure, and very rarely BCCs do metastasize, meaning they spread within the body. Twelve years ago, Mount Sinai dermatologists discovered that a wart treatment called imiquimod harnesses the immune system to attack malignant cells, leading to its FDA approval to treat precancerous keratoses and certain types of BCC. Using this drug, we were able to help our patient who had many BCCs.

In 2010, we heard that an experimental drug called vismodegib might be effective for advanced BCC. Although the drug has side effects, it was worth trying, because there was no effective alternative.

We treated our patient successfully with vismodegib and studied the drug's impact on inoperable or widespread BCCs in several other patients. They, too, responded with partial or complete remissions. Earlier this year, the FDA approved the breakthrough drug to treat metastatic basal cell carcinoma.

Dr. Mark G. Lebwohl is Professor and Chair, Department of Dermatology, and a member of the Faculty Practice Associates (www.mssm.edu/lebwohl).

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DEFINING OUR SPECIALTY

What Dermatologists Offer to You & Your Family

Editor's note: One of the greatest rewards of teaching is to see our Mount Sinai graduates venture out and become recognized leaders in the field. Dr. Patricia Wexler is a perfect example – an international trailblazer in cosmetic and surgical dermatology who helped develop many dramatic ways to improve appearance, including botulinum toxin injections, liposuction, wrinkle fillers, skin implants, and lasers. We are honored to present Dr. Wexler's special article. – SVB



By Patricia Wexler, MD

If you're wondering where to begin your search for beautiful and healthy skin, my advice is to find a qualified dermatologist.

Board-certified dermatologists are physicians who have completed four years of medical school, followed by one or more years of primary-care training and at least three years of dermatology training. After this, the American Board of Dermatology requires that we pass an examination demonstrating our knowledge of all the conditions affecting human skin, hair, and nails. Dermatologists help care for patients with many types of problems, from everyday rashes to skin cancer. A good dermatologist will screen you annually for dangerous growths and keep track of the shape, size and color of your moles. This can actually save your life by detecting precancerous growths and early-stage melanomas.

Every dermatologist is qualified to treat patients of all ages, but there is also a board-certified subspecialty of pediatric and adolescent dermatology. Other areas of expertise are cosmetic dermatology, which offers patients many ways to address appearance and aging, and Mohs surgery, a special technique for removing skin cancer *(see page 6: Dermatology and its Subspecialties)*.

When looking for a dermatologist, don't be afraid to ask

A good dermatologist will screen you annually for dangerous growths and keep track of the shape, size, and color of your moles. questions. You are entitled to know your doctor's credentials. Some of the qualities that make a dermatologist great are dedication to patient care and participation in medical education, both as a teacher affiliated with a medical school and also as a participant at medical conferences. Look for a doctor who networks with the top specialists in related fields, such as Mohs surgery, dermatopathology,

reconstructive surgery, genetics, allergy and immunology, endocrinology, nutrition, and infectious diseases, in case you should ever need any of these services.

As people live longer, we can help you look and feel youthful by protecting your most visible body part – your skin.

Dr. Wexler is an Associate Clinical Professor of Dermatology and a member of the Voluntary Faculty of the Department (www.mssm.edu/wexler).

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Skin Health SPRING/SUMMER 2012

DERMATOLOGY AND ITS SUBSPECIALTIES

Many dermatologists fit into more than one category, and all dermatologists are qualified skin surgeons:

General Dermatologists treat every condition of the skin, hair, and nails in all age groups. Some examples are eczema, psoriasis, drug reactions, poison ivy, acne, rosacea, dandruff, insect bites, STDs, blistering diseases, sun sensitivity, skin aging, benign and precancerous growths, skin cancer, pigment disorders, hair loss, and nail problems.

Pediatric and Adolescent Dermatologists treat patients from birth through college age for conditions such as birthmarks, moles, hemangiomas, atopic dermatitis (eczema), diaper dermatitis, rashes, molluscum contagiosum, warts, keratosis pilaris, acne, vitiligo, hair loss, and nail problems.

Cosmetic Dermatologists and **Procedural Dermatologists** perform skin surgery and use devices such as lasers, filler substances, neurotoxins, and liposuction to treat all ages for conditions that include scars, pigment disorders, hemangiomas, skin aging, precancerous keratoses, skin cancer, unwanted tattoos, excess hair, and fat deposits.

Skin Surgeons and **Mohs Surgeons** treat all ages for problems that require complex skin surgery, for example, large growths or skin cancers that require microscopically controlled removal (Mohs surgery). Mohs surgeons also specialize in skin cancer prevention and detection.

The Mount Sinai Dermatology Faculty Practice Associates has over a dozen dermatologists who accept private patients. For an appointment, please call (212) 241-9728 or book online at www.MountSinaiDermatology.com. F.Y.I. (FOR YOU INSIDE)



TATTOOS: art, safety, removal, and more