

# Patricia Wong's Winter 2010 Newsletter

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## Bedtime Stories and Snacks



**Cimex lectularius (juvenile form)**



**Cimex lectularius (adult form)**

Have you ever had the feeling you are not alone in bed? Have you ever woken up the next morning and seen bug bites on your body but you don't recall being bitten or seeing any bugs? You may have been bitten by *Cimex lectularius*, the common bed bug. The reddish brown insect is wingless and measures up to 5/8" in length. It hides in cracks and mattress springs in beds, wooden furniture, behind wooden picture frames near beds, floors, walls, lighting fixtures, and loosened wallpaper during the day and emerges at night to feed on humans, their preferred host. Bed bugs can also live off of mice, birds, cats, dogs and guinea pigs. The good news is there is no evidence bed bugs transmit disease, the bad news is they are time consuming to eliminate.

The bites are extremely itchy. Rarely, a person can have a severe allergic reaction from the bites and develop asthma and anaphylaxis. An infestation may be recognized by a red or brown stain or flecks of black, which are the bug's excrement on sheets or mattress seams. When large numbers of bed bugs are present, a sweet musty odor can be detected. Bedbugs emit pheromones to attract other bedbugs. They can also sneak into your luggage at the hotel and return home with you.

### What to do if you have or suspect you have bedbugs:

1. Hire a professional exterminator.
2. Reduce clutter in your rooms to decrease hiding places for the insect.
3. Thoroughly clean. Scrub infested surfaces with stiff brush to dislodge eggs.
4. Use a vacuum cleaner with HEPA filter on maximum suction setting to remove bugs from crevices, mattress seam, bed boards, etc.
5. Clean all luggage.
6. Seek dermatologic treatment for the bites. Not getting the itching treated can lead to uncontrollable scratching leading to infection and or scarring.
7. The bug will die at temperatures of 45° Celsius and above. Wrap items in plastic and place outside in the sun for 2 weeks. You may want to put a thermometer in the bag to insure the temperature has been reached.
8. Do not discard furniture. It can be treated by heat or steam professionally.



### To avoid bed bug infestation:

1. Examine luggage carefully during travel.

2. **Do not buy used or refurbished mattresses. Do not buy the floor model mattress in the store even if it is an amazing buy.**
3. **When purchasing antique wooden furniture, check for bugs. Cimex lectularius can comfortably live for 1 year without food.**
4. **When buying used clothing, bedding, etc. dry clean or wash in hot water before using or wearing items.**
5. **Do not place your suitcase or clothing on the hotel floor. Use the luggage caddy or the dressers.**
6. **Wear pajamas to bed**
7. **Silverfish droppings and termite droppings may be confused with bed bug scybala. Inspect ceilings and walls and seal if necessary with latex caulk.**

Do not scratch the bites. They may become secondarily infected and scar. See Dr. Wong. She can prescribe appropriate therapy to clear the bites quickly and relieve itching.

## A Tan to Die For



The World Health Organization has released an official report based on research by 20 scientists that UV emitting tanning devices unequivocally cause melanoma of the skin and eye. The risk of melanoma increases by 75% when tanning usage begins before age 35. There is currently an increase in the incidence of melanoma in women ages 15-39, which is most likely attributable to the popularity of tanning booths among young women. These findings substantiate current animal model studies that show a substitution of cytidine by thymidine in DNA after ultraviolet A radiation exposure. This same mutation is found in human skin cancers and human skin precancers in the tumor suppressor gene known as P53. Tanning beds can now officially join the infamous group of known carcinogens such as cigarettes and alcohol that are also prevalent in our culture.

### **If You Feel You Must Be Tan**

I am frequently asked by patients if it is safe to go to the tanning booth "just a couple of times" to get a "healthy glow" or to "prepare" their skin for sunbathing when they go to Hawaii. This is akin to asking how many cigarettes a day it is safe to smoke, which I have also been asked by patients. This is my answer. If you feel you must damage your skin in order to "look tan and healthy," actually going to the beach for an afternoon is less damaging than going to a tanning booth for 20 minutes. One tanning session exposes your skin to UVA levels that are equivalent to approximately 2 weeks of lying on the beach in the summer.

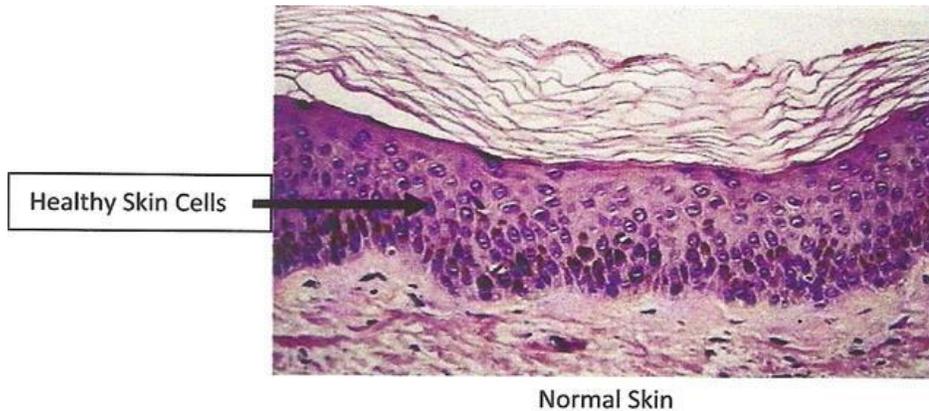
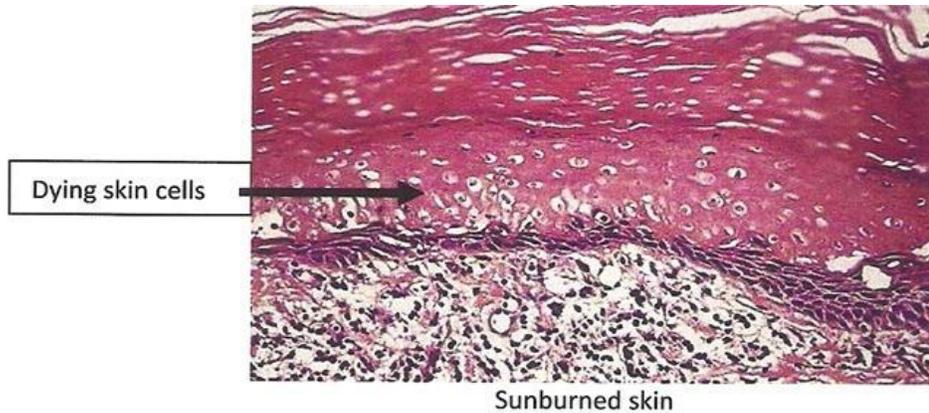
### **Tanning Salons are Not Required by Law to Adhere to Any Safety Standards**

The FDA does not regulate tanning parlors, thus they are not required to adhere to any safety standards. Tanning parlors do not routinely measure the output of UVA from their units (if ever). This should be done weekly and the light panels replaced as indicated by properly performed photometric readings. The FDA has established doses that are supposed to be the maximum exposure of UV radiation an individual has in 1 session. Technically, this dose is known as the minimal erythema dose (MED), which is the lowest dose of radiation needed to make your skin turn red or pink. This may range from 10-30 minutes depending on the amount of UV emitted. In the first week of tanning, sessions are supposed to be limited to 0.75 MEDs per exposure. However, this is only a recommendation by the FDA and is not enforced. Some tanning salons do not increase the MEDs gradually and some sell additional minutes of tanning beyond the MED. In fact, many tanning salons sell unlimited tanning plans. This means that if you choose, you can damage your skin with multiple visits to the salon on the same day. Some salons have installed hotter or high pressure light bulbs than the systems have been approved to have, making the posted maximum time limits invalid.

### **How to Develop a Melanoma Faster**

Salons also sell "tanning accelerators" or "tan enhancers," which make your skin more sensitive to UV light and markedly increase the absorption of UV radiation. These products used in conjunction with the tanning beds will greatly increase your risk of developing skin cancer. You may be thrilled to be tanning faster, just be aware you will also be accelerating your development for melanoma. I urge you to do a self-skin examination every 2 weeks if you are frequenting tanning salons. UV radiation damages the

DNA in skin cells and DNA repair enzymes. In addition, UV radiation suppresses the immune system so cancerous cells can freely grow without your immune system detecting and eliminating them. You can easily expose yourself to lethal doses of UVA radiation and have no symptoms. There is no redness or burning sensation of the skin with this type of ultraviolet radiation damage. There is no signal to alert you that your skin has had enough damage. When you are on the beach, most people will retreat when they notice a sunburn. This is a sign of cell death from UVB overexposure. If you examine sunburned skin under the microscope, the cells are necrotic. They have lost their cellular structure and appear as pink amorphous blobs of disorganized, dying protein structures.



### **Everyone is at Risk**

The October 2009 issue of Cosmopolitan reports a tragic account of a 27 y.o. woman who died from melanoma. She had been a regular tanning bed customer. She writes about her experience as she is dying from the melanoma. Anyone can develop melanoma. It is not a cancer that occurs only in the elderly. It can be unpredictably aggressive. If you notice a mole changing or a new mole, you should not delay seeing a dermatologist. The thinner the melanoma is, the better your chances of survival. Thin melanomas have a greater than or equal to 95% 10-year survival. Thick melanomas are associated with a poorer survival, with an overall survival of 45% for 1 year, 25% for 2 years, and 11% for 5 years (this is assuming the melanoma has spread to lymph nodes and other organs such as lung, brain, bone, etc.)

### **Be Smart About Tanning**

The smartest way to get a tan is to use a sunscreen that contains a peptide that stimulates production of your own melanin in lieu of sun damage being the trigger for melanin production. Our office has this sunscreen available and it offers the best UVA protection (better than Mexoryl or Helioplex). I am also an advocate of the spray tan salons and self-applied bronzers containing dihydroxyacetone. This 3-carbon compound binds to the amino acids in the stratum corneum (the top layer of skin). It stains the skin a brown color, the intensity of which depends on the concentration of DHA in the product, typically 2.5%- 10%. This product is not photoprotective and needs to be used with sunscreen when you are outside.

A melanoma may present as a pre-existing mole that starts to enlarge, change shape, size, color or begins to bleed or itch without any apparent cause. Approximately 70% of melanomas develop on the skin where there is no pre-existing mole. Dr. Patricia Wong recommends annual full body skin exams for adults. If you have 40 or more moles or have had a history of cancer or precancers, you should be examined more frequently for potential cancerous changes in your skin.

## SETTLING THE SCORE BETWEEN SUNSCREEN PROTECTION AND VITAMIN D

A number of you have mentioned to me that the reason you do not use sunscreen is because you do not want to block vitamin D production in your skin. In fact, if you expose your skin to 20-30 minutes of sunshine 3 times a week, this is more than enough sun exposure to provide adequate vitamin D levels. Also, the surface area of skin that needs to be exposed to the sun to provide an adequate vitamin D supply does not need to be much larger than the surface area of your forearms. Therefore, it is irrational to remove most of your clothing and lie in the sun for several hours to stimulate vitamin D synthesis. Cutaneous vitamin D production is limited to 10-20% of the original epidermal 7-dehydrocholesterol (pre-vitamin D3) concentration. Additional UVB transforms skin pre-vitamin D3 into inactive metabolites; namely tachysterol and lumisterol. However, UV damage of skin cells increases linearly with continued exposure.

It does not make good sense to engage in a behavior that will potentiate the development skin cancer and rationalize that it will be good for your bones. Would you start smoking so you can stay thin?

Studies have shown that vitamin D supplements are perfectly acceptable solution to maintaining healthy vitamin D levels. Current recommended doses are 400-2000 international units per day, depending on one's age and skin type. Dietary sources of vitamin D include milk, salmon, tuna, sardines, mackerel, and fortified orange juice. To fulfill a daily requirement of vitamin D 1000 IU, you need to drink 10 eight oz. glasses of milk or eat 3 servings of salmon daily. Your vitamin D level can be measured by blood test, to determine if you need to take supplementation.

