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SUMMER 2022 - NEWSLETTER

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Summer Sun Exposure and Sunscreens 2022

Skin cancer is the most common type of cancer in our country. As summer arrives, we spend more time outdoors exposing ourselves to sunlight and potential danger. Sunscreens were designed to protect our skin from the damage of the sun from both the UVB rays and the UVA rays which age our skin prematurely. There are numerous sunscreens on the market, so we are faced with many choices. Any sunscreen is better than no sunscreen at all. Consumer Reports does an annual evaluation of sunscreens on the market and their research and data is far more detailed than the FDA (Food and Drug Administration) evaluation of products.

This year's review points out that we should avoid the sun and stay in the shade during the peak hours of 10 a.m. to 4 p.m. They suggest purchasing and wearing a wide brim hat to shield your face from the sun's rays. They also suggest purchasing lightweight tight woven long sleeve clothing that limits the sun that gets through. If you have a question about how effective the shirt is, then hold it up to the light and see how much gets through.

If you have sunscreen sitting around in your medicine cabinet or pantry, please know that sunscreens effectiveness diminishes with time. There should be an expiration date on your sunscreen product so please check it.

There are basically two types of sunscreens, one being chemical and the other the more natural sun blockers or mineral products containing zinc oxide and titanium oxide. The mineral products do not get absorbed into the body and were not banned in areas with coral reefs that were being damaged by the chemicals in sunscreen. However, the mineral products are not as effective as the chemical sunscreens.

Chemical sunscreens came into question when a research paper found that the chemicals in the sunscreen were absorbed through the skin and were detectable in our blood. This is particularly troublesome in young developing children because the FDA admits there is no research about whether long term exposure is harmful. They believe these chemicals are safe but have no data to back that up. A more recent red flag involved a voluntary recall of sunscreens by an online retailer who found benzene, a known carcinogen, in those products. In their review, Consumer Reports tested for benzene and found none in the products it reviewed and recommended.

When looking for sunscreen know what the data on the bottle means. SPF tells us how well a sunscreen protects against sunburn primarily from UVB rays. If you normally burn in 20 minutes in noon day sun and apply an SPF 30 sunscreen you should be protected for 30 x 20 or 600 minutes. If you go swimming or sweat excessively you need to reapply sunscreen immediately. If you stay dry, the sunscreens start to

break down after application and should be reapplied every two hours. You should put on your initial coat of sunscreen 15–20 minutes before sun exposure. Consumer

Reports suggests shaking up the product bottle before applying it even if the bottle says not to. They recommend applying the equivalent of one teaspoon of sunscreen per body part. For the average person wearing a bathing suit, they believe you can be covered with "a shot glass full" of sunscreen.

Consumer Reports did not test or recommend any sunscreens with less than SPF 30. Their favorite chemical lotion this year is Walmart's Equate SPF 50 which they say should sell for \$5. I could not find it for less than \$9.94 locally. Trader Joe's Spray SPF 50 was their highest recommended chemical spray. The mineral sunblock products were more expensive and lower rated with the top two being Badger Active Mineral Cream SPF 30 and Alba Botanical Sorts Mineral Lotion SPF45.

Enjoy the summer but be smart and protect yourself from sun damage.

Tick and Insect Repellents for Summer Outdoor Protection

As we spend more time outdoors in the summer, and wearing clothing covering less of our body, we are exposed to mosquitoes and ticks in increasing numbers. Diseases such as Chikingunya fever, Dengue Fever and Zika are transmitted by mosquitoes. Tick-borne illnesses including Lyme's Disease, Powassan Virus and red meat allergy are now common as well. Researchers have found that products that deter mosquitoes tend to deter ticks as well.

Consumer Reports does an annual review of insect repellants which is always thorough and accurate. Their first message is that natural repellents such as citronella just <u>do not work</u>. They prefer products with up to 30% Deet or up to 30% Picardin, a synthetic product. Read labels and be assured you do not need or want products with a higher concentration of DEET or Picardin than 30%. If you are looking for something more natural Oil of Lemon Eucalyptus, with up to 30% concentration, is highly effective as well.

The company test products by spraying a repellent on an exposed area of arm skin and then volunteers insert their arm into a cage of 500 disease free mosquitoes for a five-minute period. They repeat this process hourly for up to eight hours. Based on this test process, they recommend the following products:

- 1. Ben's Tick and Insect Repellent Wipes. The main ingredient is DEET at 30% concentration.
- 2. Ben's Tick and Insect Repellent Wilderness Formula Pump. It uses a 30 % DEET concentration preparation. Be advised, both of **Ben's products may stain clothing**.
- 3. Deep Woods Off Sportsmen which also uses 30% DEET.
- 4. Repel Lemon Eucalyptus Insect Repellent which uses a natural lemon oil Eucalyptus product at 30% concentration. It's a great product to use on young children but my wife hates the smell.

Consumer Reports also offers the following list of suggestions to prevent mosquito or tick bites:

- 1. Apply repellent to exposed skin or on clothing. Never apply it under clothing.
- 2. Cover the area with the minimal amount. Heavier doses do not work more effectively.
- 3. Do not apply insect repellents over cuts, wounds or irritated skin.
- 4. Do not allow young children to apply repellent themselves.
- 5. Avoid applying repellent near food or drinks.
- 6. Wash your hands with soap and water after applying and wash yourself with soap and water at the end of the day.

- 7. Wear light colored clothing so you can visualize ticks.
- 8. Tuck your shirt into your pants. Tuck your pants into your socks.
- 9. When you get home, throw your exposed clothing into a dryer on high for about ten minutes to kill any ticks on the clothing.
- 10. Inspect your skin especially behind your ears, hairlines, behind your knees and under your arms.
- 11. Ticks may walk around on your skin for thirty minutes before attaching. Once attached they may not transmit disease for the first 30 minutes.
- 12. Remove ticks with a small straight tweezer pulling directly up.

All the articles I reviewed for this topic talked about the explosion of tick-borne diseases and tick populations outside the traditional areas they were believed to live. They all stressed how little financing for research on reducing the tick population is occurring and even less on prevention and treatment of tick-borne diseases.

Heat Related Illness

It is summertime and the heat and humidity are higher than at any other time of the year, making us more susceptible to heat related illness. Heat related illness occurs when your body cannot keep itself cool. As the air temperature rises, your body cools off by sweating. Sweating occurs when liquid on your skin surface evaporates. On hot humid days, the evaporation of moisture is slowed down by the increased moisture in the air. When sweating cannot cool you down your body temperature rises, and you may become ill.

Some people are at greater risk to develop heat related illness than others. This includes people 65 years of age or older, people with mental illness taking medications and the physically ill; especially those with heart disease, high blood pressure and lung disease. Individuals who have suffered from heat exhaustion or heat stroke in the past have an increased risk of developing recurrent heat illnesses.

When your body overheats due to very hot weather and or exercise in the heat, you are susceptible to heat exhaustion. Patients experience heavy sweating, non-specific weakness and or confusion, dizziness, nausea, headache, rapid heartbeat and dark very concentrated urine.

If you experience these symptoms in the heat, you need to get out of the heat quickly. Find an air-conditioned building and rest in it. If you cannot find an air-conditioned building, then get into the shade and out of the sun. Start drinking cool liquids (avoid caffeine and alcohol which exacerbate fluid loss and heat related disease). Take a cool shower or bath or apply cool water to your skin. Remove any tight constricting clothing. If you do not feel better within 30 minutes you must contact your physician or seek emergency help.

Untreated or inadequately treated heat exhaustion can progress to heatstroke. Heatstroke occurs when the internal body temperature rises to 104 degrees Fahrenheit or higher. Heatstroke is far more serious than heat exhaustion. It can cause damage to your internal organs and brain, and it can kill you. Patients with heatstroke are running a fever of 104 degrees or higher. They complain of severe headaches with a dizzy or lightheaded feeling. Their skin is flushed or red in appearance and they are NOT sweating. Many will be experiencing severe and painful muscle cramps accompanied by nausea and vomiting. Their heartbeats are rapid, their blood pressure low. They may be agitated, anxious and disoriented with some experiencing epileptic type seizures.

Heatstroke is a medical emergency, and you must call 911 immediately. While you are waiting for help to arrive remove their clothing after taking the patient to an air conditioned or shady place. Wet the skin with water and fan the skin if possible. If you have access to ice or ice packs place them on the patient's neck, back, groin and armpits while waiting for help.

Heat illness is preventable. When the heat index is over 90 and you must go outside wear lightweight, light-colored, loose-fitting clothing. Wear a hat or use an umbrella. Apply sunscreen SPF 30 or greater 15-20 minutes BEFORE going outside. Drink plenty of water before you go out and 2-4 glasses of cool water each hour you are outside working in the heat. Avoid alcohol and caffeine including soda with caffeine. Take frequent breaks every 20 minutes and drink water or sports drink even if you do not feel thirsty. Try to schedule your outside work for before 10 a.m. or after 6 p.m. to avoid peak sun exposure.

If you are being treated for chronic medical conditions, ask your doctor how to prevent heat illness. Antihistamines, some blood pressure medications (beta-blockers and vasoconstrictors), diet pills, antidepressants and antipsychotics impair your ability to control your internal body temperature. Water pills to prevent excessive fluid lead to dehydration. Anti-epilepsy and anti-seizure medicines impair your body's ability to regulate internal temperatures as well.

The Heat Index

The heat index combines humidity with the temperature. When you are standing in the sun the heat index is even higher. A heat index of 90 or greater is considered dangerous.

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