

Sun Awareness – Become Sun-Wise

Welcome to the City of Quincy's Sun Awareness page with facts and tips on how to Become Sun -Wise! The City of Quincy, with its nearly 27 miles of coastline is host to a plethora of seaside activities, particularly in the summer months. The Quincy Health Department, with funding from the Massachusetts Department of Public Health's Cancer Prevention and Control Program and the Massachusetts Melanoma Foundation, is seeking to increase sun protection awareness among the City's residential population and in particular to the youth of our community.



Sun exposure causes approximately 90% of all skin cancers and 70-80 % of sun exposure occurs before the age of 18. Skin cancer is the most common of all cancers. Melanoma, the deadliest form of skin cancer is the fastest increasing cancer in Massachusetts. One in four Americans develops some form of skin cancer at some point in life. Even though skin cancer is highly curable if caught in it's earliest stages, sun exposure protective behaviors implemented at an early age can **prevent** sun damage and skin cancer in later years.

Ultraviolet (UV) Radiation is one type of energy that is generated by the Sun. There are three types or bands of UV radiation. They have been classified as Ultraviolet A (UVA), Ultraviolet B (UVB) and Ultraviolet C (UVC). UVC radiation is extremely hazardous to the skin, but is completely absorbed by oxygen and ozone in the atmosphere, and therefore does not penetrate through to the Earth's surface. UVB (short wave solar waves of 290 – 320 nanometers in length) are only partially absorbed by the ozone layer. UVA (long wave solar waves of 320 – 400 nanometers length) are not absorbed by the ozone layer. Both UVA and UVB can penetrate the skin and cause serious health effects including skin cancer and other skin disorders, cataracts and other eye damage and immune suppression. UVA rays penetrate deeply into the skin and contribute to premature aging, damage to connective tissue and increases a person's chance for skin cancer. UVB rays primarily impact the surface of the skin and are responsible for causing sunburns. UV levels vary and intensities are dependent upon a number of factors. They include:

Time of Day: The sun is at its highest point in the sky around Noon. The sun's rays have the least distance to travel through the atmosphere. Levels of UVB are also at their highest. In the early morning or later afternoon, the sun's rays are angled, thereby reducing the intensity of UVB.

Time of Year: The sun's angle varies with the seasons, causing the intensity of UV rays to vary.

Latitude: The sun's rays are also strongest at the equator since the sun is directly overhead and the UV rays must travel the least distance. Stratospheric ozone is naturally thinner in the tropics so more UV radiation passes through the atmosphere.

Altitude: UV intensity increases with altitude because there is less atmosphere to absorb the radiation.

Weather Conditions: Clouds can reduce UV levels, but not completely. UV penetration is dependent upon the thickness of the cloud cover. The thinner the clouds, the more ultraviolet radiation that can get through.

The Ultraviolet (UV) Index is a forecasting tool developed by the National Weather Service and the Environmental Protection Agency. The index provides a way to assess the expected risk of overexposure to the sun and indicates the degree of caution one should take when participating in activities out-of-doors. The index predicts risk on a scale of 0 to 10+, where 0 indicates minimal risk of overexposure and 10+ indicates a very high risk of overexposure.

An UV index value of 0 – 2 indicates minimal risk; 3 – 4 reflects low risk; 5 – 6 indicates moderate risk; 7 – 9 is high risk and 10+ very high risk.

Get into the habit of checking on the UV Index for the following day, and to plan your activities and wardrobe accordingly.

To find out the UV Index for your area: use the following link:

<http://www.epa.gov/epahome/commsearch.htm> and enter in your Zip Code. Then click on the UV Index, and then click on Submit. The UV index will then be displayed.

For a map of the UV index throughout the US, use the following link:

<http://www.epa.gov/sunwise/uvindexmap.html>

Sun Protection Tips:

Wear Sunglasses: Wear sunglasses that block 99-100% of both the UVA and UVB radiation. Wrap-around sunglasses are best, since they protect more of the sensitive eye area. This sun wise habit will greatly reduce the sun exposure that can lead to cataract and other eye damage.

Use Sunscreen: Sunscreens by themselves cannot provide 100% protection from the harmful effects of UV radiation. Sunscreens work by absorbing and/or reflecting UVA and UVB rays. The FDA requires that all sunscreens contain a Sun Protection Factor (SPF) label. The SPF reveals the relative amount of sunburn protection (caused by UVB) that a sunscreen can provide an average user. To develop a SPF, the length of time a product protects against skin reddening from UVB is measured and compared to how long the skin will redden without protection. If skin would normally redden after 10 minutes in the sun, a sunscreen with an SPF of 15 would provide 15 times the protection – or 150 minutes of protection. Most dermatologists (skin doctors) recommend SPF's of at least 15, which block 93% of UVB rays. Realize that a SPF of 30 does not provide twice the protection of a SPF of 15. Also check labels for a sunscreen that is "broad-spectrum". This means the sunscreen contains ingredients that will also block some UVA rays. And don't forget that certain prescription medications as well as many common over-the-counter medications can cause extra sensitivity to the sun. Be sure to discuss this with your physician and/or pharmacist and carefully read product labels.

Use sunscreen each day. Sunscreen with a SPF factor of at least 15 will block out most of the harmful UV radiation. Apply the sunscreen 15 to 30 minutes before going outside, apply it liberally and reapply every couple of hours, especially after swimming or strenuous activity. Even apply it on cloudy days since the clouds cannot screen out all of the harmful UV radiation

For more sunscreen facts and details, check out the EPA's brochure, "Sunscreen, The Burning Facts" online at <http://www.epa.gov/sunwise/doc/sunscreen.pdf>

Wear Sun- Protective Clothing: Clothing can block out the sun's harmful rays and should be one of the first lines of defense against sun exposure. Style and fabric type affect the level of protection one may obtain from clothing. Tightly woven clothing with long sleeves and collars and long pants can protect the skin during prolonged periods in the sun. When its not practical to wear long sleeves and long pants, make sure to combine sunscreen use with clothing choices for maximum protection. Loosely fitting clothing is usually more comfortable since it allows air to flow through and cool the skin. Although lighter colors feel cooler, darker colors actually absorb UV light better. Realize that a typical T-shirt has a SPF of only 6 – 8.

Wear Sun Protective Hats: Hats are the best method of protecting the face, head, ears and neck. Different styles of hats provide varying levels of protection. A hat with a wide brim (of at least 3 to 4 inches) will offer the best protection. Legionnaire-style hats provide excellent protection for the neck and ears. Baseball caps provide some protection for the face but don't protect the sensitive skin of the ears and neck. Visors provide only limited protection to the face and no protection at all to the head, ears or neck. As with clothing, tightly woven materials offer the best protection.

Limit Exposure Time: Avoid the mid-day sun as much as possible. Limit outdoor activities between 10 a.m. and 4 p.m.; that's the time that the sun's rays are the strongest. Although avoiding outdoor activities during the mid-day is not always practical, if you must be outdoors – seek shade: under a tree, under an umbrella, or beneath a canopy or tent.

Sun Protective Links

Massachusetts Department of Public Health – Comprehensive Cancer Prevention and Control:

<http://www.state.ma.us/dph/cancerct/home.htm>

American Cancer Society: <http://www.cancer.org/>

U.S. National Cancer Institute: <http://www.nci.nih.gov/>