

Some sunscreens useless, experts say

By Sharon Kirkey

Citizen medical writer

Many sunscreens on the market provide little protection and may even contribute to skin cancer, medical experts at a symposium on diseases related to ultra-violet radiation said Wednesday.

And the concerns they raised have prompted the federal government to consider tougher regulations.

Dr. David McLean, a University of British Columbia dermatologist, says lotions with a sun protection factor (SPF) of less than 15 shouldn't be allowed on the market because they're not providing sufficient protection.

The SPF numbers on sunscreens indicate how effectively the product prevents sunburn. The higher the number, the better the protection.

Sunscreens with numbers less than 15 provide some protection against ultraviolet B radiation, which causes sunburn and skin cancer. But they provide virtually no protection against ultraviolet A. New evidence shows ultraviolet A rays penetrate deeper layers of skin, making it leathery and wrinkled, and may interfere with the ability of skin cells to repair damage.

So while you may not be burning, you're on your way to becoming a "California raisin," McLean says. "What you end up with is a 30-year-



-Citizen photo

Effective: Photoplex and Ombrelle

old with 90-year old skin."

Some products claim to provide complete blocking for both types of solar radiation. But McLean says he knows of only two sun-screens with an SPF of 15 that provide effective ultraviolet-A blocking - Ombrelle and Photoplex.

Health and Welfare Canada is reviewing a proposal to classify cosmetic sunscreens as non-prescription drugs. That means lotions would be subject to the same quality checks required for all prescription and over-the-counter drugs.

Health Minister Benoit Bouchard says regulating sunscreens is a priority.

"I don't have the intention to permit the use of any products that could harm the health of people," Bouchard told reporters after addressing participants in the three-day symposium. However, Bouchard said tests must be done before he pulls any products off the market.

About 50 national and international experts have been meeting in Ottawa to assess the risk of exposure to ultraviolet radiation, and suggest ways to reduce the risk of such diseases as skin cancer.

Dr. Jason Rivers, a Vancouver dermatologist, says our love affair with the sun is costing taxpayers dearly. About 50,000 new cases of skin cancer will be diagnosed in Canada this year. Of the, 540 will die.

Rivers, chairman of the Canadian Dermatology Association's sun awareness campaign, estimates it will cost about \$50 million to treat those cancers.

Anyone — no matter how dark skinned - can develop skin cancer. McLean says no one should use a sunscreen with a SPF under 15. He recommends 30.

But he and others agree changes in behavior - not sunscreens - should be the first line of defense.

McLean says public education should be targeted at children. A blistering sunburn in childhood doubles a child's chance of developing skin cancer later in life.

Bad burns: Skin cancer's a killer

Skin cancer is a killer and it's increasing dramatically. One bad bum during childhood can double a child's risk of developing skin cancer later in life. An research shows 80 percent of a person's lifetime damage from ultraviolet rays from sun occurs before age 18.

The Canadian Dermatology Association offers the following advice to help protect your children.

Keep babies under 12 months out of direct sunlight. Newborns should be protected in a covered stroller, cradle or under a sun umbrella.

Toddlers and older children can play in the sun provided the following precautions are taken.

- * Apply a sunscreen with an SPF of 15 or higher to all exposed areas. Pay particular attention to, nose and upper foot area. Re-apply often, especially after swimming.
- * Cover your child with a sunhat, T-shirt and shorts, especially between 10 am. and 3 pm.
- * Be aware of reflected light particularly light reflected off water.
- * Cloudy days can often cause serious sunburns. Up to 80 percent of the sun's

harmful rays can penetrate haze, light clouds and fog.

- If your child is taking medication, check with your doctor before allowing her in the sun. Some medications react with sunlight producing a rash redness or swelling.
- Be especially vigilant if your child has fair skin and red or blonde hair. These children are most at risk for developing skin cancer as young adults.

Visible, UV-A light tied to skin cancer

Even with frequent applications of sunscreen the millions of people now enjoying their summer outdoors may be putting themselves at increased risk of melanoma, the most serious skin cancer.

Some visible light, as well as a wide range of ultraviolet (UV) light may fuel a sense of changes in skin cells, leading to melanoma says Richard B. Setlow, a biophysicist at Brookhaven National Laboratory in Upton

He and his colleagues use specially bred fish to study the effects of different types of light on cells that contain melanin the skin pigment that colors moles brown. These studies have provided concrete evidence that not only UV-B - the rays with wavelengths between 280 and 320 nanometers that cause sunburn - but also light with longer wavelengths can induce cancer, says Setlow.

The fish are a cross between a swordtail and a hybrid of a swordtail and the platyfish, two popular tropical aquarium pets.

When young these heavily pigmented fish fit easily into the thimble size glass tube of a spectrometer, which provides light of single wavelengths, and develop tumors after just one exposure to this light Setlow explains. The pigment cells of the platyfish, like those of people contain tumor-wing genes. Because the swordtail lacks such genes, some descendants of the cross possess just one tumor-m gene and consequently less cancer protection.

Scientists have linked melanoma to damaged DNA because people who inherit a defect in their ability to repair DNA are more than 1,000 times more susceptible than others to this cancer. Many researchers had assumed that because DNA absorbs only W-B energy, W-B light caused the damage, says Setlow. Some suspected UV-A but lacked hard evidence of its role, he adds.

Then the Brookhaven group noticed that exposure to a wavelength of 365 nanometers - the W-A used in black lights - resulted in tumors in 38 of the 85 fish tested. Furthermore, 30 of 124 fish not subjected to specific wavelengths but housed in a glass greenhouse as controls also developed melanoma, possibly due to sunlight, says Setlow.

Of 61 fish treated with violet light (405 nanometers), 18 developed melanoma. But only one of 20 control fish kept in subdued yellow light got cancer, they report in the July 15 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES.

Setlow says that melanin absorbs light, which sets off a chemical reaction producing compounds that then damage DNA. He urges that people protect themselves from all sunlight, something that sunscreens do not do.

-E. Pennisi

