

ABSTRACTS

SUNSCREENS AND PROTECTION AGAINST MELANOMA

Do sunscreens protect against melanoma? This is a recurrent question that has never really been answered. A review in a recent edition of the Canadian Medical Association Journal takes another look. The proportion of melanoma in Canada caused by sunlight exposure is estimated to be more than 90% and most Canadians are exposed to sunlight only for short periods each year. This makes it particularly difficult for their doctors to know exactly what to tell them about sunscreens. According to the authors modern sunscreens with a high sun protection factor (SPF) of 15 and above, do provide good protection against sunburn when properly applied. Sunburn is caused mainly by UVB radiation. However, there is some evidence that melanoma may be associated with UVA exposure, and sunscreen manufacturers have responded with broad-spectrum sunscreens that provide protection from UVA as well as from UVB.

However, there is apparently concern about these new agents. The results of a European trial of the use of unlabelled sunscreens of SPF 10 and 30 by people aged 18 - 24 showed that those using SPF 30 spent more time in the sun per day than those using SPF 10. This raises concerns about the long-term effects of increased exposure because DNA damage can occur long before sunburn starts. So, the evidence about the ability of high SPF, broad-spectrum sunscreens providing protection against sun exposure is equivocal.

However, it does appear that, when applied consistently, sunscreens can reduce the risk of squamous cell cancer, but they do not appear to have the same effect on basal cell cancers. Melanoma is another story, apparently. Most studies of the relation between sunscreen use and melanoma have not shown any protective effects and some have even shown an increased risk among those using sunscreens. However, there is a problem with the quality of the research conducted before the 1990s, which was designed to investigate the association between sun exposure, pigmentation characteristics and melanoma. This meant that the data collected on sunscreen use were generally inadequate. A major confounding factor is that sunscreens are used most by those with the highest risk of melanoma – fair-skinned people who burn easily. There is also plenty of evidence to show that the degree of sun exposure in childhood and adolescence may be particularly important in the later development of melanoma.

Given all these problems with available studies, the authors of this review say that it is clear that sunscreens cannot protect against all forms of skin cancer, so a rational strategy for skin cancer prevention must include protective clothing and sun avoidance.

Gallagher RP. *CMAJ* 2005; **173**: 244-245.

ASPIRIN, OTHER NSAIDs AND COLORECTAL CANCER

This paper in the *Journal of the American Medical Association* looks at the influence of aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs) in preventing colorectal cancer. As the authors point out, randomised trials of short-term aspirin use have provided compelling evidence of a causal relationship between use of aspirin and prevention of colorectal cancer. However, there are few data on the long-term risk of colorectal cancer and the dose, timing or duration of therapy with aspirin and other NSAIDs.

This study used data from 82 911 women who were enrolled in the Nurses' Health Study and followed up between 1980 and June 2000. Over a 20-year period the authors documented 962 cases of colorectal cancer. Those women who regularly used aspirin had a lower risk of colorectal cancer, but significant risk reduction was not seen until more than 10 years of use. The benefit also appeared to be related to dose. Women who used more than 14 aspirin per week had the lowest relative risk. A similar dose-response relationship was seen for other NSAIDs. However, the incidence of reported major gastrointestinal bleeding events also appeared to be dose related.

The conclusion was that regular, long-term aspirin use reduces the risk of colorectal cancer and that non-aspirin NSAIDs appear to have a similar effect. However, a significant benefit of aspirin is not seen until more than a decade of use and with the highest risk reduction at doses of aspirin that are substantially higher than those recommended for reducing the risk of cardiovascular disease, with a concomitantly increased risk of gastrointestinal bleeding.

Stick to high-fibre diets rather!

Chan A. *et al. JAMA* 2005; **294**: 914-923.

ACCELERATED MEASLES CONTROL IN THE WHO AFRICAN REGION

In 2000, the WHO African Region adopted a plan to accelerate efforts to lower measles mortality to near zero.

By June 2003, 19 African countries had completed measles supplemented immunisation activities (SIA) in children aged 9 months - 14 years. The public health impact of these control measures was measured by a team of epidemiologists and reported in *The Lancet*.

Measles is an important cause of death in sub-Saharan Africa. Estimates of the annual number of measles deaths show 445 000 in 1998, 482 000 in 1999, and 452 000 in 2000. In 2000 the WHO reported that sub-Saharan Africa had 58% of measles deaths worldwide. The authors of this paper calculated percentage decline in reported measles cases during the 1 - 2 years after SIA compared with the 6 years before SIA. They also examined data on routine and SIA measles vaccine coverage, measles case-based surveillance and suspected measles outbreaks.

Between 2000 and June 2003, 82.1 million children were targeted for vaccination during initial SIA in 12 countries and follow-up SIA in 7 countries. The average decline in the number of reported measles cases was 91%. In 17 of the 19 countries, measles transmission and so measles deaths had been reduced to very low rates. The total number of estimated deaths averted in 2003 was 90 043. Between 2000 and 2003 in the African Region, the authors estimated that the percentage decline in annual measles deaths was around 20%.

The conclusion is that it is possible to make a substantial impact on measles in sub-Saharan Africa provided strategies are appropriate and there are sufficient resources and personnel.

Otten M, *et al. Lancet* 2005; **366**: 832-839.

CELL PHONES AND CAR CRASHES

An alarming number of people in South Africa appear to be surgically attached to their cell phones and take no notice of legislation controlling cell phone use in cars. Increasing evidence is accumulating that shows that cell phones and cars do not mix, even when a hands-free set is used. This paper from the *British Medical Journal* adds to this. The authors set out to explore the effects of drivers' use of cell phones on road safety in Perth, Western Australia. They looked at 456 drivers, aged more than 17, who owned or used cell phones and had been involved in car crashes that required hospital attendance between April 2002 and July 2004.

It is well known through surveys that drivers often talk on cell phones. In the USA an observational survey of drivers showed that at any given time in the day 5% were talking on hand-held phones. Lower rates of use have been reported in other countries and drivers usually report using hand-held phones. (I can't believe that the figure in South Africa is as low as 5%!) Use of hand-held phones is illegal in most countries in the European Union, all Australian states, the Canadian provinces of Newfoundland and Labrador, and New York, New Jersey and the District of Columbia in the USA (and in South Africa!).


Studies of cell phone use have found that use impairs performance on simulated or instrumented driving tasks, using measures such as reaction time, variability of lane position and speed, following distance and awareness. The problem arises from cognitive distractions whether drivers are using hands-free or hand-held phones. However, there are still important questions to ask about the effects of cell phone use on the risk of a crash, such as whether use affects the risk of more serious crashes involving injury or whether the risk differs for hands-free versus hand-held phones.

The study found that a driver's use of a hand-held phone up to 10 minutes before a crash was associated with a fourfold increased likelihood of crashing. This risk was increased with both hands-free and hand-held phones. So, any use of a cell phone in a car increases the likelihood of a crash, whether or not a hands-free kit is used.

McEnvoy SP, *et al. BMJ* 2005; **331**: 428.

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