



SCPN 

# The Scottish Cancer Prevention Network Newsletter

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## IN THIS ISSUE

**Stacking the odds  
towards cancer  
prevention**

PAGE 6



**Skiing &  
Sunburn!**

PAGE 2



**Fruit & veg  
- a value  
approach**

PAGE 11

# Welcome

In 2011, the Pub Med data base shows that there were 1303 papers published on obesity and cancer. Our guess is that there will be more publications this year as the research community gets to grips with describing the size, shape, complexity of the problem and the challenges of finding effective solutions. One example of a recent publication [http://info.cancerresearchuk.org/groups/cr\\_common/@nre/@new/@pre/documents/generalcontent/cr\\_080626.pdf](http://info.cancerresearchuk.org/groups/cr_common/@nre/@new/@pre/documents/generalcontent/cr_080626.pdf) in this area is from a large epidemiological study funded by CRUK which estimated that in UK women 10, 800 cases of cancer were linked to overweight and obesity. When the epidemiological lens is moved to breast cancer, nearly a 10th of the risk comes from excess body weight, outweighing the impact of whether or not women breast feed or drink alcohol (which will contribute to further risk). In Scotland (where obesity levels exceed those of England), 60.3% of women are either overweight or obese, indeed at age 55 to 64, 75% of women (and 81% of men) are in high weight categories.

It is not difficult to find research that tells us about the statistics of the problem but is harder to find research on the statistics of the solutions. For example, whilst we see a range of government effort being made to change Scottish eating and activity behaviours, what is the magnitude of change that might be achieved (and is actually being achieved) by these initiatives and at what cost? In a similar way what is the health/disease cost (or obesity costs) of retail promotions for cheap energy dense foods and drinks? Why is it that expert researchers <http://bmjopen.bmj.com/content/1/1/e000263.full.pdf+html> south of the border can highlight the burden of the Scottish diet reporting that “ If Scots achieved an average diet equivalent in nutritional quality to the average diet in England then 40% of the excess cardiovascular and cancer mortality would be removed”, but we can't draw on research about effective ways to change diet? Knowledge, nudge and nagging all have a part to play in motivation and trying to gain support for regulation but as the recent select committee on behaviour change (<http://www.publications.parliament.uk/pa/ld201012/ldselect/ldsctech/179/179.pdf>) has commented “non-regulatory measures used in isolation, including “nudges”, are less likely to be effective. Effective policies often use a range of interventions”.

We need to think about much bigger levers for helping folks change. Portfolios for action around obesity might well include financial incentives (balancing the books from reduced health care costs) or disincentives (as in tobacco pricing) but it seems like the time has come to develop a body of research beyond the epidemiology.

As researchers, we welcome scientific endeavour but investment in “applied research at a population level” (including regulatory action) which can inform evidence based policy implementation with a significant impact on obesity is long overdue.

Professor Annie S. Anderson  
Professor Bob Steele

# Contents

2. Skiing & Sunburn!  
Questions about cancer
3. Work and Wider Environmental Cancer Prevention  
Alcohol sales in Scotland
4. Fast food labelling
5. Alcohol and cancer, raising awareness
6. Stacking the odds towards cancer prevention
7. Obesity Policy Review
8. Protecting people from tobacco smoke
9. Bowel cancer rates fall among affluent men only  
Breast cancer and the environment
10. Stacking the odds conference  
Health charities team up to convince men waist size matters
11. Fruit and veg- a value approach

Many thanks to all our contributors. We welcome any news items, research reports or comments. Please send an email to [a.s.anderson@dundee.ac.uk](mailto:a.s.anderson@dundee.ac.uk)





# Skiing & Sunburn!

By YN Lau, CJ Fleming.

In recent years, skiing has been increasingly popular as a winter sport. As the memories of summer fade away, most people don't think to use sun protection during their winter holidays in ski resorts. However, epidemiological studies have shown skiers to be at increased risk for the development of squamous cell carcinoma and indirectly at possible increased risk of melanoma (1)(2).

There is no doubt that UV radiation is an important risk factor for both melanoma and non melanoma

skin cancers. At typical alpine skiing elevations ambient UV irradiance increases approximately 2% to 3% for each 100 m of altitude, and irradiance may be further increased by up to 40% due reflection from snow (3).

The reason for this is that the higher the altitude, there is less atmosphere to filter UV rays so skiers at high altitudes are exposed to higher UV radiation than at ground level. Apart from the higher UV radiation found at skiing altitudes, snow reflects 85% of UV rays off the

ground back to skiers. Areas like under the nose or chin which is not usually exposed to sun becomes vulnerable to UV radiation and therefore should be adequately sun protected.

A recent study from the US (4) has reported that the strongest predictors of UV were temporal proximity to noon, deviation from winter solstice, and clear skies. By contrast, altitude and latitude had more modest associations with UV- but all of these are important factors to consider.

Studies have shown that skiers knew little about the risk of sun exposure and often took no precautions at all, especially in cold and cloudy weather (4)(5). Good sun protection should include protective clothing with long sleeved jackets, long trousers, hats, gloves, wrap around sunglasses and regular application of sunscreen of at least SPF 30 to all exposed skin. So, to all our potential skiers, take note and remember your sun protection this winter!

1. Rosso S, et al (1999) Risk of basal and squamous cell carcinomas of the skin in Sion, Switzerland: a case-control study. *Tumori* 1999;85: 435-42.
2. Zanetti R et al (1988). A case-control study of melanoma of the skin in the province of Torino, Italy. *Rev Epidemiol Sante Publique.* ;36:309-317.
3. Rigel DS, et al (1999). Effects of altitude and latitude on ambient UVB radiation. *J Am Acad Dermatol.* 40:114-116.
4. A Andersen PA, et al (2010) Environmental cues to UV radiation and personal sun protection in outdoor winter recreation. *Arch Dermatol.* 146(11):1241-7.
5. Buller DB, et al (1998) Sun safety behaviours of alpine skiers and snowboarders in the western United States. *Cancer Prev Control* ;2:133-9.

## Questions about cancer – dealing with misinformation

It is recognised that one of the challenges of education about cancer prevention is how evidence based communication compete with the misinformation or mistaken beliefs. The Australian Cancer Council recently highlighted confusion about cancer messages highlighting that three quarters (76%) of Australians mistakenly believe that measures such as drinking plenty of water (50%), getting enough sleep (47%) and positive thinking (43%) reduces their risk of cancer.

Paradoxically, however they also reported that there was limited awareness of the link between cancer and factors known to increase risk, such as processed meat (31%), alcohol (47%) and being overweight (53%). Dealing with myths and confusions is not easy but in an effort to combat the misconceptions, Cancer Council has launched a new website [www.iheard.com.au](http://www.iheard.com.au). The site is an excellent plain language chance to read common queries and evidence based answers.



# Work and Wider Environmental Cancer Prevention: UK perspectives

By Professor Andrew Watterson, University of Stirling

There is still considerable debate about the fractions of cancer mortality due to 'environmental' factors. Related morbidity tends to be ignored. Doll and Peto's 1981 best estimate for occupational cancer deaths was 4% and for pollution and geographical factors, another 5%: a 9% total in the UK. This is a significant yet often neglected public health burden especially when each UK occupational cancer case costs an estimated £2.46 million.

The 1981 figure produces more occupational cancer deaths in Scotland each year than murders and road traffic fatalities combined. A 12% figure would mean more such deaths than murders, road traffic fatalities and suicides combined (1). Recent UK occupational cancer best

estimates run at around 5% but still under-estimate the problem due to under-reporting. European Agency staff estimate 13.6% for males and 2.1% for females. Wider environmental cancer estimates are hazier except for radon-related lung cancer deaths which affect Scottish populations and some environmental asbestos-related cancer deaths but IARC estimates 7-19% of cancers worldwide are due to toxic environmental exposures (2,3).

In Scotland, occupational cancer mortality disproportionately hits de-industrialised and vulnerable communities and primarily unskilled, semi-skilled and skilled workers. Towns along the Clyde have an epidemic of asbestos-related cancers. Yet estimates of those

exposed to carcinogens in 2000 still ran to around a fifth of the UK workforce mainly manual workers. Double jeopardy also occurs with 'direct' carcinogens such as night work also increasing obesity, another cancer risk factor.

Removing carcinogens or reducing exposures is the way forward. US states have successful toxics use reduction programmes that cut carcinogen usage (4). France has an active national occupational cancer prevention strategy but the UK lacks both. Media coverage of cancer prevention still focuses on individual lifestyles rather than life circumstance analyses that emphasise upstream approaches and includes work and wider environmental factors (5).

1. Watterson A et al (2008) Occupational cancer prevention in Scotland: a missing public health priority. *Eur J Oncol*. 13(3): 161-169.
2. Global health risks: mortality and burden of disease attributable to selected major risks. Geneva: World Health Organization, 2009.
3. Straif K. The burden of occupational cancer. *Occup Environ Med* 2008;65:787-788
4. International Conference on Occupational and Environmental Carcinogen. Papers at <http://www.nmh.stir.ac.uk/research/occupational-environmental-cancer.php>
5. Parkin D et al. The Fraction of Cancer Attributable to Lifestyle and Environmental Factors in the UK in 2010 *British Journal of Cancer* (2011) 105, Si

## Alcohol sales in Scotland

A recent report from NHS Health Scotland shows that sales of alcohol averaged 22.8 units (11.8 Litres of pure alcohol) per adult per week- more than a fifth higher than sales in England and Wales. It is estimated that about 65% of alcohol sold in Scotland is bought from supermarkets/shops and this

has increased by 52% in the past 16 years. Vodka explained 38% of the difference in shop sales; per adult, sales of vodka in Scotland were almost 2.5 times higher than in England & Wales.

1. Robinson et al (2011) Monitoring and Evaluatiing Scotland's Alcohol Strategy: An update of alcohol sales and band price analysis. Edinburgh NHS Health Scotland <http://www.healthscotland.com/uploads/documents/16664-completeReportMESASAugust2011.pdf>





## Fast food labelling

In England, the government's Public Health responsibility deal is encouraging fast food restaurants to provide (voluntary) calorie information to try and help consumers become more aware of the energy values of common food stuffs. The approach has been questioned because people may not bother to look at these values, although US research suggests people who use the information eat around 100 calories less than someone who doesn't use the information (1).

In this article [Lyndal Wellard and Kathy Chapman from the Cancer Council NSW, Australia](#) provide some perspectives on calorie labelling.

A survey of 222 outlets of the five largest fast food chains in Australia (McDonald's, KFC, Hungry Jacks, Red Rooster and Subway) was conducted in five Australian states to investigate whether nutrition information was available in-store.

Overall, 66% of all outlets

surveyed had some nutrition information available in-store. However, availability varied between chains from 33% (Hungry Jack's) to 95% (Subway). Cancer Council found no information was available in 75 outlets. Interestingly, significantly more information was available in low and medium income areas than in high income areas.

The nutrition information provided was often incomplete. Only one outlet provided information for all its menu items, and there was rarely information available for meal deals. Outlet staff did not always know there was information available or that they could give it to customers. In addition, some of the nutrition information was up to five years old. At times, different nutrient values were provided in different outlets of the same chain.


### Why is this important?

Although most outlets had some

nutrition information available, it was generally incomplete, meaning that consumers would be unable to use it as a basis for their purchases. Although information for most menu items is available online, most people would not access it while they are making purchasing decisions. To allow consumers to make informed choices, chains should ensure the nutrition information they provide in-store is comprehensive, current and complete for all menu items.

The Australian government is considering implementing mandatory energy labelling on fast food menus. In the meantime, several states are either considering or have introduced their own approaches. Although mandatory energy labelling would be an improvement on existing practices, consumers would also benefit from estimating the fat, saturated fat and sodium contents of fast foods.(2-4) Therefore including additional nutrients on menu boards is recommended.

1. Tandon PS, Wright J, Zhou C, Rogers CB, Christakis DA. Nutrition menu labeling may lead to lower-calorie restaurant meal choices for children. *Pediatrics* 2010; 125(2):244-248.
2. Burton S, Creyer EH, Kees J, Huggins K. Attacking the obesity epidemic: The potential health benefits of providing nutrition information in restaurants. *American Journal of Public Health* 2006; 96(9):1669-1675.
3. Pulos E, Leng K. Evaluation of a voluntary menu-labelling program in full-service restaurants. *Am J Public Health* 2010; 100(6):1035-1039.
4. Burton S, Howlett E, Tangari AH. Food for thought: How will the nutrition labeling of quick service restaurant menu items influence consumers' product evaluations, purchase intentions and choices? *Journal of Retailing* 2009; 85(3):258-273.

A photograph of a person's hands adjusting a scale. The person is wearing a purple top. The scale is white and black. The background is a plain, light-colored wall.

# Stacking the odds towards cancer prevention

By Vicky Crichton

Decades of research have aimed to discover the causes of cancer, and what affects the risk. We know that people's cancer risk depends on a combination of our genes, environments and lifestyles, but how big an effect do these things actually have? A recently published study by Professor Max Parkin, Cancer Research UK epidemiologist based at Queen Mary, University of London, outlined the latest evidence on the preventable causes of cancer and how many cancers in the UK each is responsible for.

These latest calculations, based on predicted cases for 2010, show that smoking, diet, alcohol and obesity are behind more than 100,000 cancers. This is equivalent to one third of all cancers diagnosed in the UK each year. And when a full range of 14 lifestyle and environmental factors was considered, over 4 out of 10 cancers were theoretically preventable.

Smoking is far and away the most important lifestyle factor, causing 23 per cent of cancers in men and 15.6 per cent in women – that's nearly one in five cancers overall.

Every two minutes someone in the UK is diagnosed with cancer, and each of them have a unique set of circumstances that led to their cancer. There are many things that together affect a person's chances of developing cancer – some of them can be controlled, some can't.

Leading a healthy lifestyle is not a cast-iron

guarantee against cancer. But it reduces the risk of the disease. If you think about cancer risk like a hand of cards, some people are dealt a worse hand because of their genes, some people a better one. But in both cases, people can do things to reduce the risk of cancer. So this type of information is crucial in equipping people with the information they need to stack the odds in their favour.

Such information is also crucial to guide policymakers in planning public health interventions. For instance, decades of work documenting the risks of smoking tobacco and the benefits of giving up – much of it by our scientists – has contributed to increased acceptance of tobacco as a major health hazard and led to many successful tobacco control measures.

We're now starting to see the effects of these policies in reduced lung cancer rates amongst UK men. But there's more work still to do.

We know from previous studies that many people believe their chance of getting cancer is mainly down to fate. So it's really important for people to understand that long term changes to their lifestyles really can reduce their cancer risk, and for policymakers to play their part in promoting and supporting healthy lifestyles.

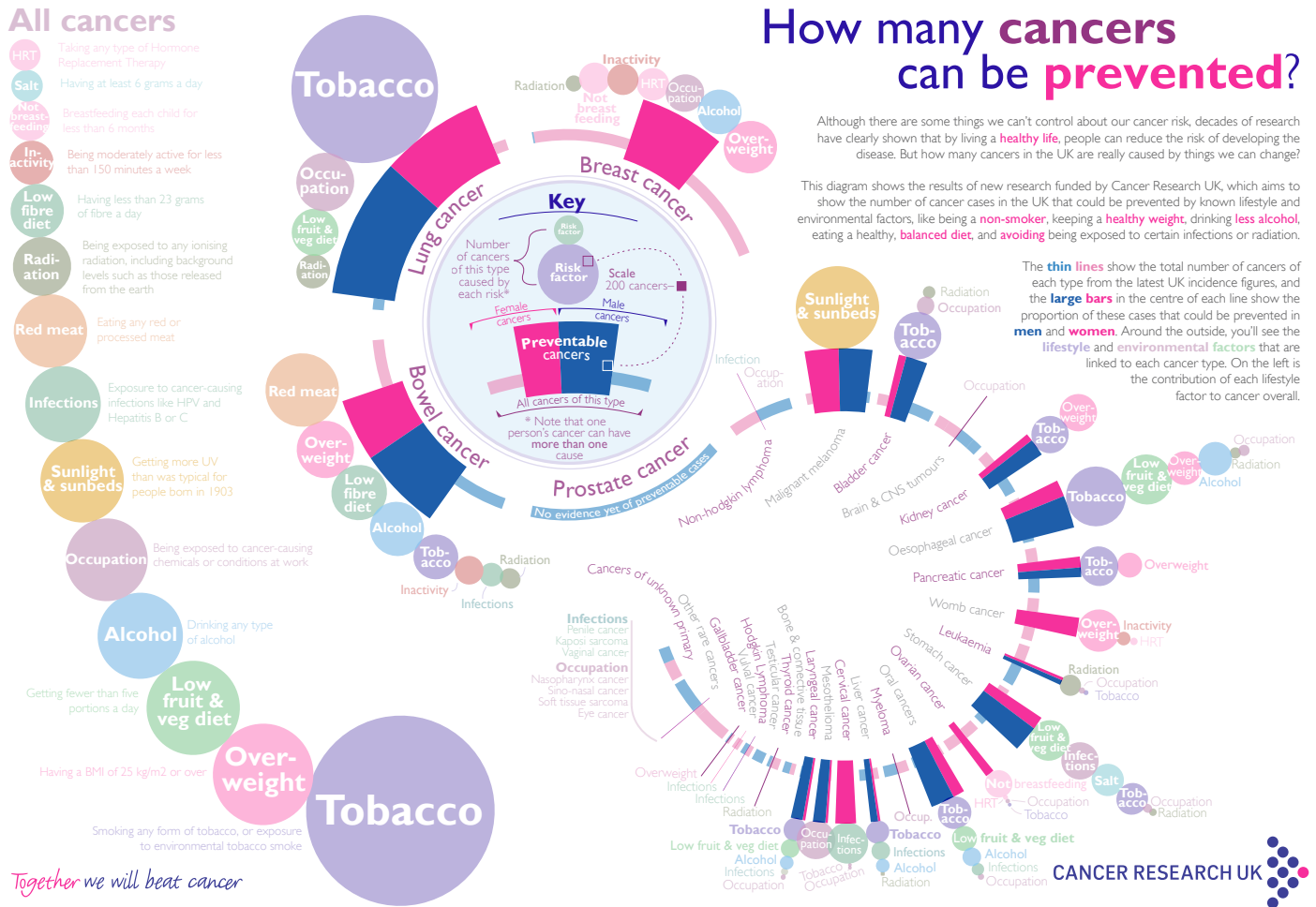
See Also: <http://info.cancerresearchuk.org/cancerstats/causes/comparing-causes-of-cancer/>

SEE CRUK diagram on cancer prevention page 06.

# How many cancers can be prevented?

Although there are some things we can't control about our cancer risk, decades of research have clearly shown that by living a **healthy life**, people can reduce the risk of developing the disease. But how many cancers in the UK are really caused by things we can change?

This diagram shows the results of new research funded by Cancer Research UK, which aims to show the number of cancer cases in the UK that could be prevented by known lifestyle and environmental factors, like being a **non-smoker**, keeping a **healthy weight**, drinking **less alcohol**, eating a healthy, **balanced diet**, and **avoiding** being exposed to certain infections or radiation.



1. ParkinDM (2011) Br J Can (sup)

## Alcohol & Cancer, Raising Awareness: A SHAAP Expert Workshop

by SHAAP (Scottish Health Action on Alcohol Problems)

SHAAP aims to provide an authoritative medical voice on the impact of alcohol on the health of the people of Scotland and to campaign for action to reduce this harm.

In early December 2011, SHAAP convened an expert workshop of clinicians, epidemiologists, public health officials and voluntary agencies to examine the growing body of evidence that consumption of alcohol, even at levels considered by many as “moderate consumption”, increases the risks of cancers of the oral cavity, upper aero-digestive tract and the female breast. Consumption of alcohol at levels considered to be “harmful” or “hazardous” consumption are also

related to bowel and liver cancer.

The workshop participants discussed the challenges that many within the health professions encounter in promoting or participating in interventions that support health behaviour change and reviewed examples of current methods used in primary care to support changes in lifestyle and reduced alcohol consumption.

The workshop recognised that SHAAP has an important role in the future dissemination of clear information that appropriately targets the “alcohol and cancer incidence” message to specific groups of health professionals.

These actions will, in the longer term, improve the public’s awareness of the link between cancer risk and drinking alcohol. Further updates on the Workshop will be presented on the SHAAP website <http://www.shaap.org.uk/>





# Obesity Policy Review - An Analysis for Scotland

Scottish Collaboration for Public Health Research and Policy (SCPHRP)  
By John Mooney MFPH

Following on from the publication of the Foresight Report [1] by the previous UK Government, there is now a broad recognition that the obesity epidemic is largely driven by changes in modern advanced economies with high levels of motorised transport and the easy availability of cheap high energy foods, which are skilfully marketed to encourage ever greater consumption. The Foresight report also presented a highly elaborate 'systems map' which visually depicts obesity as a complex systems problem with multiple 'malfunctions' in many different individual and societal domains. Once obesity is viewed as a complex system, thoroughly embedded in many aspects of modern living, the likely futility of single component interventions or exhortations around personal behaviour change is easy to appreciate.

In our recently published policy review of environmental and policy interventions that may help to address the obesity problem in Scotland [2], we sought to acknowledge from the outset the need for a multi-component approach that addresses societies major obesity drivers and at the same time make

the best and most appropriate use of the voluminous and rapidly expanding research literature on the topic. Using Swinburn and colleagues' Analysis Grid for Environments linked to Obesity (ANGELO), we were able to devise a purposive sampling method that was comprehensive without being exhaustive. Identified policy interventions were categorised across four domains (Physical, Economic, Legislative and Socio-cultural) and their respective strength of supporting scientific evidence cross tabulated against potential population impact. It was then possible to construct a 'portfolio matrix' of policy options for each of the four domains, setting out the degree of promise afforded by each intervention. In this way, relatively well proven highly targeted investment programmes could be seen to be balanced against larger population scale interventions with correspondingly higher risks and potential benefits. Table 1 shows the results such of a portfolio matrix breakdown for two of the four ANGELO domains combined (Economic and Legislative). One of only two policy interventions which scored the highest degree of likely promise was the addition of a sales tax on sugar-sweetened

beverages. These drinks have one of the highest consumer price sensitivities of major food and drink items and account for a significant proportion of 'empty calories' (i.e. with no nutritional benefit) [3]. An effective tax which reduces consumption therefore has the clear potential to help address one route of excess energy consumption and there is good evidence to support a potentially greater impact in groups most at risk of obesity and related ill-health [4].

Highlighting specific interventions as having greater promise than others however, should not detract from the need for a multi-component approach which should always be a guiding principle in dealing with complex public health problems such as population obesity [5]. Nevertheless, statutory and environmental measures, which require no effort on behalf of the consumer or target group are always likely to represent the strongest levers for effective change and should therefore be central to any strategy aimed at the control and prevention of population obesity and overweight [6].

To obtain a free hard copy of the policy review, please send your address and contact details to Renee Ingram at SCPHRP: [Renee.ingram@scphrp.ac.uk](mailto:Renee.ingram@scphrp.ac.uk)

Potential policy impact			
Certainty of effectiveness	Low	Moderate	High
High	Local price incentives	Trade restrictions/tariffs	Sugared beverage tax
Moderate	Financial incentives for physical activity	Food labeling (e.g. leading to reformulation)	Agricultural frameworks/ CAP Reform
Low	Self-regulation by food industry	Food labeling (as a means of consumer behaviour change)	Subsidised public transport

Key: Most promising, Highly promising, Promising, Less promising, Least Promising

1. Foresight: Tackling Obesity: Future Choices. Second edition. London: Government Office for Science; 2009.
2. Mooney JD, Frank J, Haw S: Policy Interventions to Tackle the Obesogenic Environment - Focusing on adults of working age in Scotland. (Scottish Collaboration for Public Health Research and Policy ed. Edinburgh: CSO/MRC; 2011.
3. Kim D, Kawachi I: Food taxation and pricing strategies to "thin out" the obesity epidemic. Am J Prev Med 2006, 30:430-437.
4. Sturm R, Datar A: Body mass index in elementary school children, metropolitan area food prices and food outlet density. Public Health 2005, 119:1059-1068.
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# Protecting people from tobacco smoke

Sheila Duffy  
Chief Executive  
ASH Scotland



How best to protect people from second-hand tobacco smoke and whether to legislate on smoking in vehicles seems likely to remain a key conversation in 2012.

The public debate on legislation as reflected in media reports splits along predictable lines. On the one hand, concerns are expressed about the toxic nature of tobacco smoke, its high concentration in enclosed spaces, and the particular vulnerability of some people due to their age, pregnancy, or medical conditions. On the other hand there are concerns about regulating private spaces, and about how such legislation might be enforced.

Amongst health charities with an interest in tobacco while there is a general consensus about the need to protect people from breathing in tobacco smoke, there is also a range of views about how best to achieve this. The British Medical Association has called for a ban on smoking in vehicles. The British Lung Foundation has campaigned throughout 2011 for legislation to end smoking in cars with children present. ASH Scotland has called for public awareness raising and education about the health impacts of tobacco smoke, and also for a consultation on legislative options for vehicles.

But while the debate on possible

legislation has been heated, real concerns remain about exposure to tobacco smoke in the home, particularly for very young children. This is an area where no-one is proposing legislation but it is likely to be the most substantial source of exposure.

At this year's Scottish Smoking Cessation Conference on 22 November, key findings from the REFRESH project were launched by ASH Scotland and our REFRESH project partners the Universities of Aberdeen and Edinburgh. This project was funded by the Big Lottery Fund, allowing us to explore with researchers a promising new approach to reducing the harm from tobacco smoke in people's homes.

At the invitation of mothers who smoked and had children under the age of five, we took air quality monitoring equipment into their homes. Over a period of 24 hours we measured the changes to fine particulate matter in the indoor air, which peaked whenever tobacco was smoked. We then discussed the findings with them. The main focus of the work was not to challenge parents to quit smoking, but to explore with them through the use of the air quality information from their home, how they could reduce the harmful impacts of tobacco smoke and increase protection for their families.

Our findings were encouraging. Many participants expressed surprise at the high levels of tobacco smoke that were recorded and at how long the harmful fine particles lingered in the air after a cigarette was extinguished and the visible smoke had cleared. There was also surprise at how rapidly tobacco smoke drifts through a home. In some cases, parents had taken steps that they believed would protect their children, such as smoking in a different room or opening a door or window, but they learned from the readings that the actual protection given was far less than they had assumed. We supported parents in the study to think about the practical changes they were willing to make and could make to reduce tobacco smoke in their homes and vehicles.

We need to make this kind of information more available to smokers so they can work with the facts about tobacco smoke. This will give them the freedom to manage their own smoking and choose effective ways to protect their families' health better, even if they are not ready or able to quit smoking. And at a national level we need to debate and weigh up all the arguments and options for reducing the harm from tobacco smoke, including awareness raising, smoke-free homes initiatives, and legislative options on smoking in vehicles.

## Bowel cancer rates fall among affluent men only

Contact: [raymondoliphant@nhs.net](mailto:raymondoliphant@nhs.net)

A recent paper from Glasgow academics reported that men living in deprived areas suffer from higher levels of bowel cancer than those living in more affluent areas. Research published in the British Journal of Cancer shows that bowel cancer rates are falling among men from the most affluent area in the West of Scotland but have remained steady among the more deprived and in women.

According to Mr Raymond Oliphant, a Clinical Research Fellow at the West of Scotland Cancer Surveillance Unit (WoSCSU) at Glasgow University, there is a large and widening gap in bowel cancer rates between rich and poor men. Mr Oliphant, a surgical registrar in the West of Scotland, worked alongside Dr David Morrison, Director of WoSCSU and Dr David Brewster of the Scottish Cancer Registry.

The academics found that between

2005 and 2007, in the most affluent areas of the West of Scotland, 57 in every 100,000 men were diagnosed with bowel cancer compared to 69 in every 100,000 in the most deprived areas: a difference of almost 20 per cent. It is estimated that if all men were had the rates of those from the most affluent areas, 75 cases of bowel cancer could be prevented every year in the West of Scotland alone.

Mr Oliphant said: "The fall in bowel cancer among certain groups may indicate that where people are making changes to their lifestyle – losing weight, taking more exercise, eating more healthily and stopping smoking – it really does cut their risk of developing bowel cancer."

It is feared however that the differences in male bowel cancer rates between the rich and poor may also be set to increase due to socioeconomic variations in

bowel screening programmes. The Scottish Bowel Screening Programme was introduced in 2007 with the aim of detecting bowel cancer at an early stage, even as a pre-cancerous polyp. However, men from the most deprived areas are the least likely group to participate in bowel screening.

"In addition to higher rates of bowel cancer, lower awareness of the benefits of screening among men from the most deprived areas may lead to widening health inequalities in the years to come when the full benefits of the national screening programme are seen," added Mr Oliphant. "Therefore it is vital that men from all areas who are invited to take part in the bowel screening programme do so. Future trends of bowel cancer incidence should be monitored closely so that public health strategies to target high risk groups who have low screening participation rates can be adopted."

1. R Oliphant, D H Brewster, D S Morrison. "The changing association between socioeconomic circumstances and the incidence of colorectal cancer: a population-based study" British Journal of Cancer 104; 1791–1796 doi:10.1038/bjc.2011.149

## Breast cancer and the environment- a life course approach

This recently published review from the Institute of Medicine focuses on "the environment" (defined as non directly inherited factors associated with the development of breast cancer). These factors include how a woman grows and develops through the lifecourse, what she consumes (food and drink), physical activity as well as a range of chemical exposures and medical treatments.

The review highlights increased breast cancer risk with hormone therapy that combines oestrogen and progesterone, exposure to ionizing radiation, excess post menopausal weight and alcohol intake and decreased risk with greater levels of physical activity.

The evidence on smoking remains mixed, with some studies showing a causal link whilst others are less clear. However, the review committee noted that passive smoking may well be linked with increased risk. Other possible risks discussed include night time shift work (through disruption to circadian rhythms), exposure to the chemical benzene and ethylene oxide (e.g car fumes).

One other exposure that has shown biological plausibility in animals is the chemical bisphenol A (BPA) widely used in plastic containers and food packaging. The epidemiological evidence is weak (and would be extremely hard to capture). The work reviews many chemicals with oestrogen

activity and gaining greater insight to these is clearly on the research agenda.

Future research has been clearly set out highlighting the importance of a life course approach to exposures at critical periods such as in utero exposure, childhood, adolescence, young adulthood and at older age. The review moves well beyond personal action and provides extensive details on current research findings and postulated mechanisms on chemical agents with oestrogenic activity.

Ref Institute of Medicine (2011) Breast Cancer and the Environment [http://books.nap.edu/openbook.php?record\\_id=13263](http://books.nap.edu/openbook.php?record_id=13263) (free downloadable PDF)



# Stacking the odds against cancer occurrence and recurrence conference

Thank you to all the invited speakers and active participants who came to the Scottish Cancer Foundation supported SCPN conference in November. The discussion was every bit as informative and thought provoking as the formal presentations. The evidence on cancer mortality and survivorship in Scotland, the increasing evidence on the role of lifestyle in primary prevention and also in quality of life and other outcomes in patients who have been treated for cancer make a strong case for health professionals to engage with the practical promotion of lifestyle change. Clearly, we all have a lot to learn from the journey of patients, the current absence of preventative guidance and facilitation for patients (whether in primary or secondary care) and the opportunities to work together

for change. Insights as to how prevention activities can be developed within the breast and bowel cancer screening programmes were well described. Dr Aileen Keel (Chairperson, Scottish Cancer Taskforce) highlighted many government actions for lifestyle change and potential opportunities within the health promoting health service. We look to health professionals to lead the way in health matters but how to develop action in a time constrained health service needs strong leadership with SMART outputs.

Here are some comments from participants

- Security of evidence that diet/exercise interventions can influence risk of common cancer”

- It is important to have a united front in persuading public and policy makers to encourage lifestyle change”
- Need to involve patients and interested lay people in cancer prevention campaigns”
- “the challenge of engaging health professionals”
- “the need for key messages for health professionals”

Apologies to readers who were unable to get a place at the conference. Through the network the 50 places were allocated within days. We hope to run another meeting next November for a larger audience ... check with the website from details <http://www.cancerpreventionscotland.co.uk/>

Note all presentations from the November meeting will be available from the website from mid January

## Health charities team up to convince men waist size matters

Three leading health charities: the British Heart Foundation, Cancer Research UK and Diabetes UK, have banded together to raise awareness of the dangers of visceral fat – a major contributor towards heart disease, diabetes and cancer risk.

The main aim of the campaign is to get people to measure their waists, and research showed men were most at risk as they consistently underestimate their waist size and nearly nine out of ten are unaware of how

to measure their waist. A nationally representative survey of nearly 1,000 men found UK men are misjudging by inches when it comes to their waists. Their average estimated waist size was just 35.8 inches, 2.1 inches slimmer than the English average (37.9 inches) and 2.2 inches smaller than the Scottish average (38 inches). The survey also showed only 16 per cent of men admitted to a waist size of 40 inches or above, however this literally only tells half the story – the official figures

show nearly a third of English men and more than a third of Scottish men are in the high risk category!

Equally worryingly, not only did nearly nine out of ten men in the survey not know how to measure their waists, nearly half incorrectly believed they could get away with measuring just above their hips. Just one in eight knew the correct method, which involves measuring at the mid-point between their ribs and the top of the hips.

The charities said “we want men to know that a bulging waistline means much more than a few strained buttons. Fat cells around your middle are working hard to pump out hormones and chemicals that can cause disease.”

The BHF, Cancer Research UK and Diabetes UK are sharing their top tips on reducing your risk of disease on their joint campaign website. Find out how to measure your waist correctly and calculate your body mass index (BMI) at [activefat.org.uk](http://activefat.org.uk).

# Fruit and veg- a value approach

Dr Dionne Mackison, University of Dundee

High in energy, fat and salt and low in fruit and vegetables – the Scottish diet is notoriously poor. Only 22% of Scots meet the recommended daily intake of five portions of fruit or vegetables[1]. Furthermore, the average number of fruit and vegetable portions consumed (on a daily basis) is only 3.2 portions for Scottish adults[2]. Given the wealth of evidence demonstrating the health benefits of consuming a diet rich in fruit and vegetables (e.g. reduced risk of cardiovascular disease, hypertension type 2 diabetes, obesity and cancer), improving fruit and vegetable intake in the Scottish population remains a major public health issue.

The reasons for low fruit and vegetable intakes in Scotland have been widely speculated. Availability, produce quality, food handler skills and recipe knowledge have all been identified as barriers to consuming fruit and vegetables[3]. However for many consumers (particularly retired consumers and those from lower

socio-economic groups) the financial cost of purchasing fruit and vegetables have been highlighted as a key barrier to achieving the recommended five portions of fruit and vegetables a day.

With financial costs a very real obstacle for fruit and vegetable consumption, the WCRF3 conducted an investigation into the actual cost of purchasing fresh fruit and vegetables and reported that it was possible to buy your five portions of fruit and vegetables for as little as 42p.







Using the MySupermarket[4] website as a reference guide we looked at the cost of purchasing fruit and vegetables (i.e. those items purchased for less than 50p by the WCRF) and found similar results across three major supermarket chains (Tesco 37p, Sainsbury's 39p and Asda 39p). Sound like Good News all round, especially here in Scotland when we don't have easy access to produce markets but maybe not the entire story?

Whilst both investigations, highlighted that purchasing 5 portions of fruit and vegetables was possible for less than 50p, the products chosen were not necessarily those likely to be readily accessible (or selected) by the entire population. For example, the inclusion of red cabbage is unlikely to be available in many smaller or local convenience stores. In addition, stores own brand "low cost" ranges may not be available for many low income consumers who do not have access to larger supermarkets.

For fruit and vegetables to be considered truly accessible, we need to go further and help motivate people to improve their food knowledge and preparation skills and willingness to incorporate low cost fruit and vegetables into their diet. All in all, we need highlight value for money, health benefits and promotion of good quality fruits and vegetables for all consumers to move towards 5 a day every day.

1. Scottish Health Survey 2010. Available at: <http://www.scotland.gov.uk/Publications/2010/09/23154223/107>
2. Anderson et al 1994 Five a Day? Factors Affecting Fruit and Vegetable Consumption in Scotland. Nutrition & Food Science
3. WCRF (2011) 5 a day for under 50p. Available at: [http://www.wcrf-uk.org/audience/media/press\\_release.php?recid=150](http://www.wcrf-uk.org/audience/media/press_release.php?recid=150)
4. [www.mysupermarket.com](http://www.mysupermarket.com)

## What was the average cost of each item on Thursday the 5th of January 2012?

	Q1. Conference Pear	A) 38p	B) 24p	C) 11p
	Q2. Braeburn Apple	A) 41p	B) 37p	C) 23p
	Q3. Loose Banana	A) 10p	B) 20p	C) 30p
	Q4. Leek	A) 42p	B) 26p	C) 12p
	Q5. Red Pepper	A) 85p	B) 71p	C) 48p
	Q6. Cucumber	A) 80p	B) 52p	C) 37p

NB Prices have been calculated using the average price for 1 item. Average prices were calculated using [www.mysupermarket.co.uk](http://www.mysupermarket.co.uk) for the major retailers (Tesco, Sainsbury's and Asda)

Answers: 1b, 2c, 3a, 4b, 5b, 6a



# Thank You

To all our readers, we hope you have enjoyed the articles in this issue and we appreciate your continued interest.

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## Find out more on our website

If you would like to know a little more about the kind of work that we do you can visit our website at [www.cancerpreventionscotland.com](http://www.cancerpreventionscotland.com). Here you will be able to find up-to-date news, scheduled dates for your dairy, all previous newsletters available and information regarding how to sign up to the SCPN RSS feed for instant access to recent news.

## Contact us

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