



**SCPN** 

# Newsletter

**Scottish Cancer Prevention Network** - Evidence to Practice and Policy

**VOL 9. ISSUE 1**



The SCPN are committed to getting the word about cancer prevention out to individuals, health professionals, policy makers and government.

We want to let everyone know what they can do to stack the odds against developing cancer through lifestyle choices. It's not enough for individuals to attempt to change. Health professionals, cancer charities and other agencies with an

interest in this field want to be informed about the latest research on how to support that change. Policy makers and government also have a role to play in ensuring our environment and legislative structures enable change rather than inhibit it.

We promote action for cancer prevention by disseminating news on recent research, initiatives and events through our website, newsletters and social media platforms.

## SCPN Student Bursary



The health professionals of tomorrow are the future in cancer prevention. The SCPN would like to help students to learn more about cancer prevention and how to translate that knowledge to their practice in the future. We would like to offer a £300 bursary to support

any piece of non-core curriculum work in the area of cancer prevention which can include an SSC, BMedSci project, an elective, summer experience or work in your own time. Students from all year groups are welcome to apply by:

- **Becoming a member of our student chapter. If you are not already – please sign up here.**
- **Writing a short account (up to 400 words) on how your work will offer an opportunity to explore cancer prevention and/or screening behaviours**

The successful applicant will be expected to write a short (1500 words) report, on completion of your work, to demonstrate increased understanding of the challenges and opportunities for promoting cancer prevention and/or screening behaviours (drawing on the evidence base from The European Code Against Cancer ([cancercode.eu](http://cancercode.eu)))

Closing date for applications is January 31st, 2018. An online application form is available from [thescpn.org/student-bursary](http://thescpn.org/student-bursary)

## Have you seen our blogs?

Leading up to Christmas we wrote a series of blogs about alternative Christmas giving ideas to the calorie laden treats that many of us give especially to neighbours, colleagues and carers at this time of year. We also asked friends of the SCPN

to recommend their 'Paper of the Year' and what a response we got! Some really interesting papers on a broad range of topics. Our January social media campaign is encouraging us to eat more vegetables #SuperFreshStart. We have all the recipes up on our blog – go on, try one

of them this weekend and boost your 5 a day. <https://scpnblog.wordpress.com/>



## Time is running out...

From May 2018 we are required under new legislation to be able to show that you have given

your informed consent for us to contact you with, for example, our newsletter emails and E-updates. If you have not already done so, please take a moment to

confirm you want to continue to receive our newsletters and emails by visiting our website: [thescpn.org/manage-subscription](http://thescpn.org/manage-subscription)

## What did our survey tell us?

You rated our newsletter on average

**75/100**



About **a third** of respondents also engage with us on Twitter, but only 8% on Instagram.



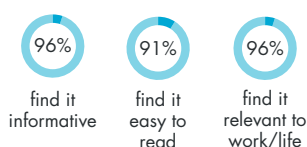
65% of respondents did not know there is an

**SCPN Blog!**

Follow us at

[scpnblog.wordpress.com](http://scpnblog.wordpress.com)

What our members think about the newsletter



The SCPN has:

- ✓ Helped increase your **support** for public health action around cancer prevention  
88% agree/strongly agree
- ✓ Increased your **knowledge** of research on lifestyle and cancer risk  
91% agree/strongly agree
- ✓ Encouraged you to **take action** professionally / personally to reduce behaviours which impact cancer risk  
86% agree/strongly agree



1 in 3

respondents have used our Healthy Meetings Initiative or seen it in use



**What could we do better?**

More images and fewer articles, plus more science and examples of good practice



Thank you for your **many ideas** for improving our outputs - we're on it!

## Join our network

[thescpn.org/join-scpn](http://thescpn.org/join-scpn)

## SCPN STUDENTS

[thescpn.org/scpnstudents](http://thescpn.org/scpnstudents)

## Follow us on Social Media



@thescpn

## Healthy Meetings

[thescpn.org/healthy-meetings](http://thescpn.org/healthy-meetings)



## Booking is now closed for the SCPN conference, We Can I Can 2018



See you all on Monday 5th February!

[thescpn.org/scpn2018](http://thescpn.org/scpn2018)

## Editorial

It's never too late to care about excess body weight.... even over the age of 50. The last Scottish Health Survey reported that 65% of Scots were overweight (of these 29% were obese) and in men aged 65 to 74 this figure rose to 85% (with 41% obese). There are many good reasons why all of us should be interested in addressing body weight including type 2 diabetes, heart disease and 13 types of cancer. More importantly, we now have a growing body of evidence to show that weight management can prevent/delay type 2 diabetes presenting in the first place and that effective weight loss programmes can reverse the disease. Modest, intentional weight loss has also been shown to decrease risk of breast cancer (even after the age of 50) and the more severe treatment of bariatric surgery has been demonstrated to reduce cancers by 33% (with highest reductions in post-menopausal breast, colon, endometrial and pancreatic cancers).

Weight loss can be tricky, but it can be achieved – interventions developed by university teams in Scotland such as Football Fans in Training, BeWEL and the ActWELL programme (which is currently being offered in breast screening clinics) have demonstrated that, with the right approach, the over 50s can lose weight, but support is needed. Whether it's family, peers or other football fans the more support the better because we have to run the gauntlet of our obesogenic environment. Food and sweetened drinks (and memorable promotions) from garages, vending, worksite cafes, local cafes, corner shops, colleagues, and canteens are there to taunt. The Scottish Government consultation on obesity is open until the end of January – we all need to be thinking how we can support our community – both adults and children to stand up to obesity. Let Scottish Government hear what you think <https://consult.gov.scot/health-and-social-care/a-healthier-future/>

**Professor Annie S. Anderson**

@anniescotta

**Professor Bob Steele**

@BobSteele6

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## THE TEAM

**Dr Maureen Macleod** - SCPN Fellow

**Jill Hampton** - Network Administrator

**Bryan Christie** - Journalist

**Eoin McCann** - Lead Designer

**Connor Finlayson** - Design Assistant

**Katie Lindsay** - R+D officer



## Savoury No-Grain Granola

Kellie Anderson, MSc – Cancer health educator and healthy recipe creator at [kelliesfoodtoglow.com](http://kelliesfoodtoglow.com)

A faintly sweet, very savoury crunchy sprinkle for salads, soups, yogurt, cottage cheese, or just to nibble on its own. Keep this mix in an airtight jar for easy and visible access.



- 85g (1 cup) walnuts, pecans, cashews or almonds
- 130g (1 cup) pumpkin and sunflower seeds
- 2 tsp olive oil
- Pinch of cayenne pepper
- Zest of one orange or two clementines
- 1 tbsp ground turmeric
- 1 tsp freshly ground black pepper
- 2 tbsp shelled hemp seeds
- 2 tbsp sesame seeds
- 1 egg white, beaten until foamy
- 1 tbsp maple syrup or honey

Preheat oven to 180°C/350°F. Line a baking tray with parchment paper. Toss all of the ingredients together and pour onto the tray. Bake for 25-30 minutes. Cool completely before decanting into an airtight container.

## Drink less, feel better this year

Alison Douglas, Chief Executive, Alcohol Focus Scotland, [www.alcohol-focus-scotland.org.uk](http://www.alcohol-focus-scotland.org.uk), @AlcoholFocus

January is traditionally the time we all count the cost of the excesses of the festive season. But a new year also provides the perfect opportunity for fresh starts and forming healthier habits around eating, drinking and physical activity.

Taking part in a campaign like Dry January is a good way to take a break from alcohol and reassess how much we're drinking. Research has indicated that a month off alcohol can lower liver fat, blood glucose and blood cholesterol. Other short term benefits of cutting down or not drinking at all include no hangovers, better sleep, losing weight and saving money. Last year my partner and I combined it with an Active January (though he was bit more successful than me – running 5km every day!).

Making a short-term change can help change our drinking habits for the longer-term too, bringing more significant health benefits. Regularly drinking

more than the Chief Medical Officers' low-risk guidelines of 14 units per week can have serious long-term implications for health, with increased risk of breast, bowel and oral cancers, liver disease, stroke and mental health problems (the increased risk for breast cancer start at just one drink per day!).

Alcohol is a causal factor in seven types of cancer and is responsible for around 4% of cancers in the UK every year. This evidence is well-established, yet most of us – and even health professionals – are not aware of this.

In obvious parallels with the tobacco industry, alcohol industry groups have been accused of misleading the public by downplaying and misrepresenting the link between alcohol and cancer, particularly breast cancer.

Warnings on how alcohol affects health are being drowned out by alcohol brands'

repeated positive messages that frequent drinking is normal, fun, and completely risk-free.

We all have a right to know that alcohol is a carcinogenic substance and cutting down on it is likely to reduce cancer risk. This is why we need mandatory labelling of alcoholic drinks,

including health warnings such as "alcohol causes cancer". We also need high profile social marketing campaigns backed by government, not the alcohol industry.

We can all benefit from drinking less, not just for the month of January, but all year round.

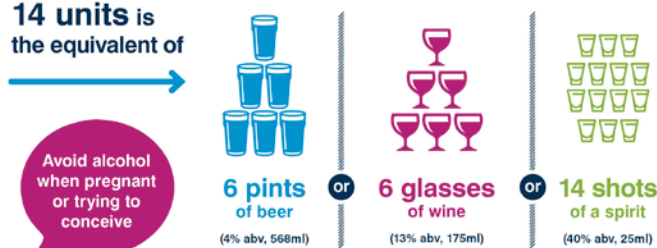
### Low-risk drinking guidelines



Men and women should not regularly drink more than 14 units per week



14 units is the equivalent of



It's best to spread this evenly across the week rather than drinking all at once. Having several alcohol-free days each week is a good way to cut down.

Reducing harm caused by alcohol  
[www.alcohol-focus-scotland.org.uk](http://www.alcohol-focus-scotland.org.uk)



## The Scottish Collaboration for Public Health Research and Policy

Hannah Biggs, Scottish Collaboration for Public Health Research and Policy (SCPHRP)

The Scottish Collaboration for Public Health Research and Policy (SCPHRP) was established in 2008. It is co-funded by The Medical Research Council (MRC) and the Chief Scientist Office (CSO), and based within the University of Edinburgh.

SCPHRP's work spans across a wide breadth of public health topics such as physical activity, diet and mental health and explores health across the life course. We disseminate our findings in a variety of ways, tailoring outputs for target audiences and utilising creatively and social media to engage with a diverse audience.

One of the ways that SCPHRP

disseminates information about the work it undertakes is by creating short videos. Recent videos include a pilot project called Stand Up for Health. Stand Up for Health is a complex health intervention aimed at reducing sedentary behaviour in call centres. The Stand Up for Health intervention has been developed and tested within the Ipsos MORI call centre in Leith. SCPHRP conducted qualitative focus groups and facilitated a workshop to understand the needs and context of the call centre. Based on the qualitative data, activities to reduce sedentary behaviour were developed to target four levels on the call centre: individual, social/cultural, environmental, and organisational levels. Examples of these

activities included personal goal setting, healthy competitions, implementation of equipment (standing desks, treadmill desks, stair stepper, etc.), and the creation of a wellness committee to organise and administer activities once the researchers had left. The project was a great success with many employees seeing a very positive impact on their life. See a short inspirational video about the project at <http://www.scphrp.ac.uk/stand-up-for-health/>

You can find out more about the work SCPHRP undertakes by visiting their website (<http://www.scphrp.ac.uk/>) and by signing up to their [monthly e-bulletin](#).

## More Peas Please!

Celia Nyssens, Policy Officer, Nourish Scotland

There is some evidence that eating vegetables could reduce the risk of mouth, upper throat, and larynx cancers. In addition vegetables are a very good source of natural fibre and there is strong evidence that eating foods high in fibre reduces the risk of bowel cancer. It is estimated that 34% of cancers of the mouth, pharynx, and larynx could be prevented by eating a diet rich in non-starchy vegetables and 12% of bowel cancers could be prevented by eating sufficient fibre (the recommendation is 30g per day).

Diets that are low in veg are associated with more than 20,000 premature deaths across the UK each year (not just cancer). This was one of the headlines of the Vegetable Summit organised in Edinburgh on 24th October by [Nourish Scotland](#) as part of the Peas Please initiative. "5-a-day hasn't worked. It is one of the best recognised consumer-facing campaigns, 86% people in UK have heard of it, but consumption numbers haven't shifted since it's been introduced", explained Nourish Director Pete Ritchie at the opening of the

Summit. "If we rely on messaging to get people to eat more veg, it's not going to happen."

So instead, Peas Please, a UK-wide project led [in Scotland](#) by Nourish, seeks to work with the food industry (in production, manufacturing, catering and retail) and the public sector to transform our food environments to make it easier for everyone to eat more veg. We want to make veg convenient, tasty, affordable, and above all, normal.

On 24th October, [40 pledges from industry, cities across the UK, and Scottish Government](#) were announced at parallel Veg Summits in London and Cardiff.

Over the next few years, we will add more pledges to the board and monitor progress. In Scotland, we need to get rid of our prejudice against veg, improve skills in households and in professional kitchens, and ensure good quality fresh and frozen veg is available and affordable to all. We're going to need all hands on deck to make progress, if you would like to support or get involved with this initiative, please

get in touch with [Celia](#) at Nourish.

*Note from the Editor: The SCPN pledges to run our January 2018 social media campaign around increasing vegetable intake in our diet – look out for #SouperFreshStart soup recipes on [scpnblog.wordpress.com](http://scpnblog.wordpress.com)*



## ActWELL volunteer lifestyle coaches

Breast Cancer Now are looking for volunteers to train as lifestyle coaches, to help support the delivery of the ActWELL research trial.

ActWELL, a study led by The University of Dundee, seeks to reduce women's risk of developing breast cancer by helping them make sustainable lifestyle changes, focusing on their physical activity, diet and body weight. Breast Cancer Now lifestyle coaches deliver 1 to 1 advice and provide support on lifestyle change to women over 50.

Amy Hickman, ActWELL Project Officer at Breast Cancer Now, said: "ActWELL is a fantastic opportunity for volunteers to get involved in a trial that has the potential to have a significant impact on reducing the risk of breast cancer in Scottish women.

Recruiting lifestyle coaches is integral to the success of ActWELL. We're looking

for people from Aberdeen, Dundee, Edinburgh and Glasgow. We would love to hear from anyone who has an interest in health and lifestyle choices and would like to make a difference to women's lives."

We are looking for individuals who:

- share Breast Cancer Now's ambition 'A future where everybody who develops breast cancer lives – and lives well'
- have excellent interpersonal skills and the ability to motivate others
- have experience of counselling, coaching or a health background

Volunteers will receive full training and successful applicants must be available for training sessions on 27th and 28th February 2018 in Dundee.

Closing date for applications is Friday 26th January.

You can find more information on Breast Cancer Now's website <http://breastcancernow.org/get-involved/volunteer-with-us/actwell-volunteer-lifestyle-coaches>. If you have any questions, please email [volunteerscot@breastcancernow.org](mailto:volunteerscot@breastcancernow.org) or contact Amy Hickman on 0131 240 285.



## Actions and Ambitions on Diet, Activity and Healthy Weight – response to Scottish Government consultation - SCPN highlights

### Transforming the food environment

Our food environment tempts us at every turn to eat more and more of the food and drinks that we should be eating less and less of. See our article for more illustrations <https://www.cancerpreventionscotland.org.uk/unhealthy-marketing/>

We are mindful that restrictions should include

- Price marked promotions (price printed on packaging to attract attention).
- Meal deals which include confectionary.
- Product placement: prominence of chocolate and other discretionary foods in shops.

It is important that promotions in the catering sector (not only retail sector) are included. These have particular significance for workplace and commuter health. See <https://www.cancerpreventionscotland.org.uk/newsletter/unhealthy-working-lives/>

### Living healthier and more active lives

We agree that supported weight management services should be implemented for people with (or at high risk of) type 2 diabetes, but we need to look beyond traditional health service delivery programmes to develop community based support with third sector involvement. The ActWELL programme <http://actwellstudy.org/> is a good example of this type of approach.

It is also important to note that obese people who are diagnosed with breast, colon and other obesity related cancers fare worse than the non-obese. Oncologists and other health professionals recognise this challenge and also note the lack of access to support for obese cancer patients. Therefore, we recommend that greater priority should be given to provide weight management services to obese cancer patients (or those at higher risk of cancer).

Whilst the daily mile initiative is a good start in schools, we would like to see this supported across the wider community, including workplaces and NHS sites. We need to think well beyond children and develop a portfolio of techniques for engaging adults that are not based on "sports and exercise".

The SCPN response to the consultation is on our website: <https://www.cancerpreventionscotland.org.uk/a-healthier-future-action-and-ambitions-on-diet-activity-and-healthy-weight/>





## Now is the time!

Lorraine Tulloch, Programme Lead - Obesity Action Scotland, Royal College of Physicians and Surgeons of Glasgow

It is finally here. The Scottish Government launched the consultation document "A Healthier Future – Action and Ambition on Diet, Activity and Healthy Weight" at the end of October. The consultation is open until the end of January 2018 and responses from the cancer prevention community are extremely important.

The document provides challenge and ambitious leadership. It identifies a wide variety of actions to transform the food environment, to live healthier and more active lives and to provide leadership and exemplary practice.

Obesity Action Scotland is particularly interested in the proposals to change the food environment as it is here we would like to see urgent action that has effect across the population.

Obesity can be described as a normal response to an abnormal environment. At the moment we live in an environment that encourages us to overconsume; an environment where it is easy, quick and rewarding to eat calorie laden, large portions of food; an environment where taking your child clothes shopping involves standing in a queue beside shelves of cartoon emblazoned sweets. It is hard to do the right thing in the wrong environment.

We must transform that environment. The change starts with support for the actions outlined in the consultation document and ensuring that changes are enshrined in a regulatory framework and then implemented in full. The consultation identifies actions that will change the food environment through restrictions on price promotions, action on

advertising, and improvements in the places where we eat out.

It is also clear from the consultation document that the government recognises the role that a wide variety of professionals have in tackling the obesity challenge. We all must create a food environment, and a wider physical environment where we can make healthy food choices and be active, where we value and celebrate healthy choices. We all have a role to play in bringing about change either within our own families, our work colleagues or with the people we meet in our professional roles.

Obesity Action Scotland's response to the consultation is available on our website (<http://www.obesityactionsotland.org/our-response-to-a-healthier-future/>).

Please use it to inform your own response. The consultation has 14 questions, however responses to only chosen questions are invited as well.

Now is the time for a transformed food environment and the Scottish Government consultation is the first step.



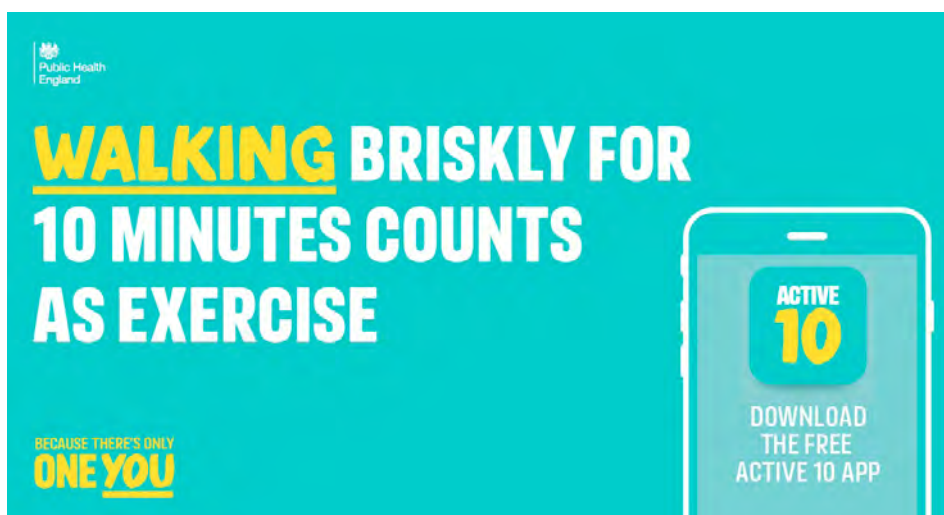
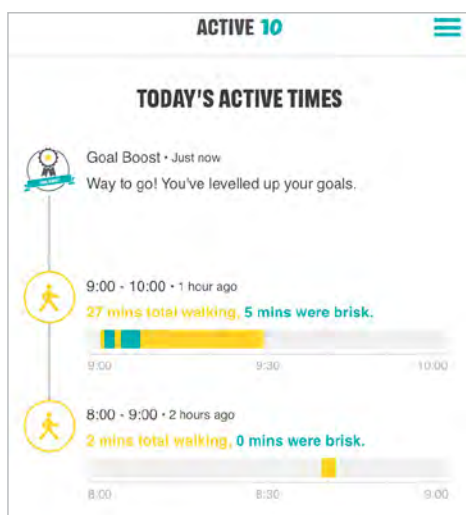
## Let's move more!

There is very strong evidence that not being sufficiently active in your everyday life increases your risk of colon, breast and womb cancer. Recommendations are to aim for at least 30 minutes of activity a day – at a level that raises your heart rate and makes you feel warm. This activity can be done in one go or broken down into chunks of at least 10 minutes. Another goal is to achieve at least 10,000 steps a day.

No matter how active we are we can always improve and at this time of year many of us often resolve to do better! Sometimes however we need a little help to improve our physical activity levels. Public Health England (PHE) have released a free app, 'Active 10', to encourage people to take small steps towards improving their physical activity levels. An 'Active 10' is a 10 minute period of brisk walking. You set

your goal and then just pop your phone in your pocket and see how many 'Active 10' periods you achieve in a day (up to 3). There are various levels of reward stickers to encourage success – for instance 'Walking Warrior' bronze, silver and gold for achieving your daily goal for a week, 2 weeks and 3 weeks respectively.

PHE proclaim, "It's easier than you think to fit [exercise] in your day".



## Updated UK-wide resources launched to support teaching of physical activity interventions for undergraduate health care students

Ann Gates, Founder and CEO of Exercise Works!

*From the Editor: Low levels of physical activity is linked to an increased risk of three cancers, namely bowel, breast and endometrium (womb) (<https://www.wcrfuk.org/uk/preventing-cancer/what-can-increase-your-risk-cancer/being-inactive-and-cancer-risk>). In addition being physically active can help us maintain a healthy body weight (BMI 18.5 – 24.9) which is very important given that obesity is linked with 13 cancers (<http://www.nejm.org/doi/pdf/10.1056/NEJMs1606602>). Being physically active is also important for people who have received a cancer diagnosis to reduce cancer-related fatigue during and after cancer treatment (<https://thescpn.org/2iVXuOT>). It makes sense therefore that health professionals know about physical activity interventions and indeed every patient contact should advocate a physically active lifestyle which could make a real difference.*

New resources have been released to support the teaching of exercise medicine for the prevention and treatment of disease in undergraduate health and medicine programmes. Working with universities

across the UK, Exercise Works! have updated the [#MovementforMovement resources for 2017](#) to include information on physical activity during pregnancy, exercise for children with chronic diseases and physical activity and chronic kidney disease.

Ann Gates, Founder and CEO of Exercise Works!, said: "These resources are designed to fit all aspects of undergraduate curricula to enable tomorrow's health care professionals to deliver safe and effective exercise advice to improve health and wellbeing. The growth of the Movement for Movement community among educators and healthcare professionals reflects the importance of putting physical activity at the heart of a preventative health care model". "The resources on cancer and physical activity have been updated and peer reviewed and we are delighted that [recent evidence](#) supports the context of making every contact count for cancer". The resources, which were endorsed by the Council of Deans of Health in

2015, have been used by over 10,000 healthcare students worldwide and are designed to support the Chief Medical Officers guidance on physical activity and the NICE guidance for chronic disease management implementation.

Dr Sarah Hanson, Lecturer in Nursing Sciences at the University of East Anglia, who has conducted [research on the impact of walking in preventing cancer and chronic diseases](#), said: "It is critical that health staff are trained and feel confident in promoting activity to their patients. As well as prevention, this could include building fitness in preparation for surgery and treatments such as chemotherapy; utilising activity to aid post-treatment quality of life and recovery time; preventing de-conditioning for those who are chronically unwell and improving the psychological health of those with mental health problems. The #movementformovement resources are excellent. They are evidence based and have been peer reviewed. They are a great aid to HEIs who are adding physical activity to their curriculum".

**" A qualified doctor, nurse, midwife or allied health professional may see half a million patients during their professional career: this has enormous potential for advocacy and the promotion of physical activity "**

Ann Gates 2015

Royal College of Surgeons Edinburgh, Round Table meeting "Great Strides" June, 2015.





# The European Code Against Cancer turns 30: Awareness of cancer prevention is growing ... yet more needs to be done!

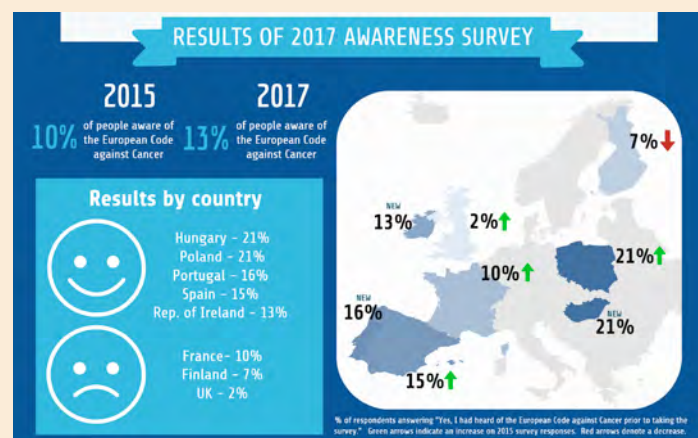
The 30th anniversary of the first edition of the European Code Against Cancer (ECAC) is celebrated today with encouraging news that awareness of cancer prevention is on the rise. According to a recent online survey by the Association of the European Cancer Leagues (ECL), 82% of people understand that they can reduce their risk of getting cancer in the future by making changes to their lifestyle. This is an increase on the result of the previous survey (performed in 2015\*) when 78% of people believed cancer could be prevented through making lifestyle changes.

The survey, based on a total sample of 8,171 people (aged 18+) in Finland, France, Hungary, Portugal, Republic of Ireland, Spain, and the United Kingdom, reported that 13% of people had previously heard of ECAC. The response to the same question 2015 had

been 10%, demonstrating that progress is being made in promoting ECAC.

Examining the picture at the national level reveals a mixed picture: 21% of people in Hungary and Poland are aware of the European Code against Cancer, whilst just 2% of people in the UK stated that they had heard of ECAC prior to the survey. Awareness of ECAC also varies according to age with 17% of 18-34 year olds reporting that they are aware of ECAC. Almost one in three 18-24 year olds in Spain (30%), and near to one in three 25-34 year olds in Poland (30%), responded that they had heard of the European Code against Cancer.

Almost two-thirds of people (64%) think that they are likely to make changes to their lifestyle after reading ECAC, which is an increase on the 2015



survey (52%). Amongst people who had previously heard of the European Code against Cancer, four in five (79%) are likely to make changes to their lifestyle to reduce their risk of cancer.

To celebrate the 30th anniversary, ECL's Youth Ambassador group have posted a video with 12 messages of the ECAC recited in the 12 different languages of the

ambassadors involved. The video is freely available to share on social media, so please share and support the promotion of the European Code against Cancer!

The video is available on ECL's Facebook page: <https://www.facebook.com/CancerLeagues>; and Vimeo page: <https://tinyurl.com/y76nyx7r>

N.B. All figures, unless otherwise stated, are from YouGov Plc.

Total sample size in 2015 was 6,109 adults. Fieldwork was undertaken 21st October - 2nd November 2015. The survey was carried out online. Total sample size in 2017 was 8,171 adults. Fieldwork was undertaken 8th - 24th October 2017. The survey was carried out online.

## Have you seen this paper?

### Critical research gaps and recommendations to inform research prioritisation for more effective prevention and improved outcomes in colorectal cancer

Lawler M, Alsina D, Adams RA et al. *Gut* 2018;67:179-193 doi.org/10.1136/gutjnl-2017-315333

Colorectal cancer (CRC) is the third commonest cancer in Scotland with 3,671 cases in 2015. Incidence of CRC has decreased in both women (6%) and men (12%) since 2004 which might reflect the impact of the Scottish Bowel Screening Programme. Modifiable risk factors for colorectal cancer are thought to include diet, lack of physical activity and long-term smoking. This cancer therefore has significant impact on the health of the nation and has economic consequences both on a personal level and to the NHS and national economies through lost

days at work.

Considerable amounts of resource are spent annually on research into CRC so it would be prudent to target areas which would have the greatest impact in lessening the burden of CRC. This paper presents the findings of an exercise in which Bowel Cancer UK (BCUK), the UK National Cancer Research Institute (NCRI) Colorectal Cancer Clinical Studies Group and the Association of Coloproctology of Great Britain and Ireland (ACPGBI), drew together clinicians, scientists and CRC patients to identify gaps in CRC research to inform future research directions and priorities.

Fifteen critical research gaps were identified but from a cancer prevention perspective the most relevant were:

- Insufficient evidence on precise contributions of genetic/environmental/lifestyle factors to CRC risk

- Pressing need for prevention trials
- Lack of integration of different prevention approaches
- Lack of optimal strategies for CRC screening
- Lack of coordination of CRC research/funding
- Lack of effective communication between relevant stakeholders

The authors recognise that prevention research is under-represented in overall CRC research spending with only 3% of UK NCRI funding in 2015 spent on prevention. Recommendations have been made for addressing the critical gaps identified which the authors conclude 'if appropriately implemented would significantly impact on the prevention, early diagnosis, treatment and improved quality of life for people living with and beyond CRC'.

## Expert Insight



**Professor Malcolm Dunlop, MRC Human Genetics Unit, within the Institute of Genetics and Molecular Medicine, University of Edinburgh and a leading bowel cancer surgeon.**

Prof Dunlop's pioneering research is offering hope of finding new ways of preventing the disease and he was awarded this year's Scottish Cancer Foundation's prize which recognises excellence in cancer care and prevention.

### What is the importance of family history in bowel cancer risk?

The risk of cancer is widely misunderstood, especially since the media - and even some scientists - misrepresent what it means. For instance, doubling of your risk for a specific cancer type or disease sounds awful, but it is the absolute risk within a set time period that is more important. A family history of large bowel cancer is associated with an overall doubling of lifetime risk but to put this in perspective, only 1 person will develop large bowel cancer before the age of 64 years out of every 116 in the general Scottish population as a whole (males and females together). Therefore, only 2 in 116 people with a family history of one first degree relative will develop bowel cancer - despite the worrying statement of "twice the risk"! Our research is trying to identify and understand the common genetic variants that impart this overall risk.

Nonetheless, within this overall family history risk "package", there are also some families and individuals who have a VERY high risk of bowel cancer. These are what we

call mendelian genetic disorders. It is very important to identify these families because preventative measures can be put in place - such as intensive surveillance and even consideration about pre-emptive removal of the large bowel because the risk is so high. These families tend to have lots of people affected from generation to generation at an early age. They also have other features such as benign polyps in the bowel. These can be identified by tracing from a young affected case or multiply-affected families, or by detecting multiple polyps in the bowel or other characteristic features of some of these conditions. Sequencing of the genes has revolutionised the identification and management of the cancer risk.

### What about risk in people with a family history in second degree relatives?

There is a marginally increased risk in 2nd degree relatives but this is confounded by the fact that families with mutations in genes responsible for mendelian traits were included in all historical studies of the impact of family history on bowel cancer risk. However, a reasonable estimate is around a 30-50% increased risk over the general population risk. That is only a very small increase!

### To what extent can family history of bowel cancer be explained by genetic variance?

We can't answer this question at present. Part of the aggregation of cancer in families is due to shared environmental risk factors as well as shared genes - for example parents who smoke are more likely to have children who smoke. However, we are beginning to get to the point where we can estimate this. At present we can probably account for about a third of the excess familial risk from all of the genetic variants that we have identified to date. However, watch this space!

### Looking ten years into the future how do you think knowledge of genetic variance will be used?

The use of "NextGeneration" sequencing and genotyping arrays will become a core part of medical assessment. The use of this information will help stratify screening programmes so that those at highest genetic risk can be offered the appropriate level of surveillance to catch tumours at an early and curable stage. This is already feasible, and it is only the practicalities that are the current hurdle.

However, more exciting than that, I think that the next 10 years of genetic research will reveal new pathways that can be targeted for prevention. For instance, many of the common genetic variants that have been identified have powerful effects on gene expression. This we feel is the mechanism by which the gene variants exert their impact on bowel cancer risk. Hence each of these is then a target pathway for developing new drugs and nutraceuticals that could augment the normal function of that gene. I consider this to be the truly enormous potential of genetic research in the field of cancer prevention.

### What three key lifestyle messages do you think are important for people at increased genetic risk of bowel cancer?

1. Take exercise! - sufficiently vigorous to increase your heart rate to 80% of your max heart rate
2. Eat a healthy diet with plenty of vegetables
3. Keep your weight down - a BMI of <30 certainly and preferably <25

There is good evidence that aspirin prevents bowel cancer in one of the mendelian disorders (Lynch Syndrome). Anyone with a proven mutation should be taking at least 75mg of aspirin daily. There is likely sufficient evidence to recommend aspirin for all those with a 1st degree relative. However the effect size is small and so the absolute benefit is finely balanced. Hence I do not yet consider this something I would recommend.

## Research in progress in Scotland

### Improving bowel screening uptake: lessons from higher uptake of breast and cervical screening?

Katie Robb, Marie Kotzur, Christine Campbell, Emilia Crighton, Sara Macdonald, Robert Steele, David Weller, Sally Wyke, Colin McCowan. Patient and Public Involvement: Ann Muir and Tom Haswell

#### Why is this study important?

Screening can reduce deaths from cervical, bowel and breast cancer if the people invited participate. In Scotland, uptake among women is 73% for cervical, 71% for breast but only 60% for bowel, yet little research has examined why bowel screening fails to achieve the uptake rates of breast and cervical. Understanding why women – who are eligible for all three types of screening – choose to screen two parts of their body (breasts and

cervix) but not their bowel may offer insight into how bowel screening uptake can be increased. The aim of this research is to inform new approaches to increase uptake of bowel cancer screening by comparing facilitators and barriers across the breast, cervical and bowel screening programmes. In Scotland, women aged 50-60 are eligible for all three cancer screening programmes. With funding from the National Awareness and Early Diagnosis Initiative (<http://www.cancerresearchuk.org/health-professional/diagnosis/early-diagnosis-initiative>), Phase 1 of the research is examining demographic and medical factors associated with lower uptake of bowel screening relative to breast and cervical screening among women, using linked data from NHS Greater Glasgow and Clyde. In Phase 2 we have identified 60 women from

Phase 1 to interview to investigate why women choose to participate in none, some, or all screening programmes and examine unique barriers to bowel screening. In Phase 3 we are feeding back the results of Phases 1 and 2 to participants and discussing potential ideas for interventions with them.

We are now in the process of analysing this research and preparing the findings for publication. This research will provide the foundation for a subsequent grant application to develop and test interventions to improve uptake of bowel cancer screening.

#### Bottom line

Uptake of bowel screening remains suboptimal. Novel approaches to improve uptake are urgently needed to ensure the benefits of bowel screening can be fully realised.

## Deprivation and Cancer Survival in Scotland

Cheryl Denny<sup>1</sup>, Kelly Shiell-Davis<sup>2</sup>, Jo Mulligan<sup>1</sup>, David Brewster<sup>1</sup>, Judith Mabelis<sup>2</sup>, Helen Storkey<sup>1</sup>

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<sup>2</sup>Macmillan Cancer Support.

While many cancers survival rates are improving over time, a deprivation gap still exists. Overall, the age-standardised incidence rate of cancer is higher in those living in deprived communities than those living in the least deprived areas (758 per 100,000 compared with 595 per 100,000). Of all cancers diagnosed in the five year period 2011-2015, 21% were in the most deprived quintile, so slightly higher than might be expected. However, for the same period, the proportion of deaths for the most deprived quintile was 23%. This suggests people living in deprived communities are dying from cancer at a higher rate.

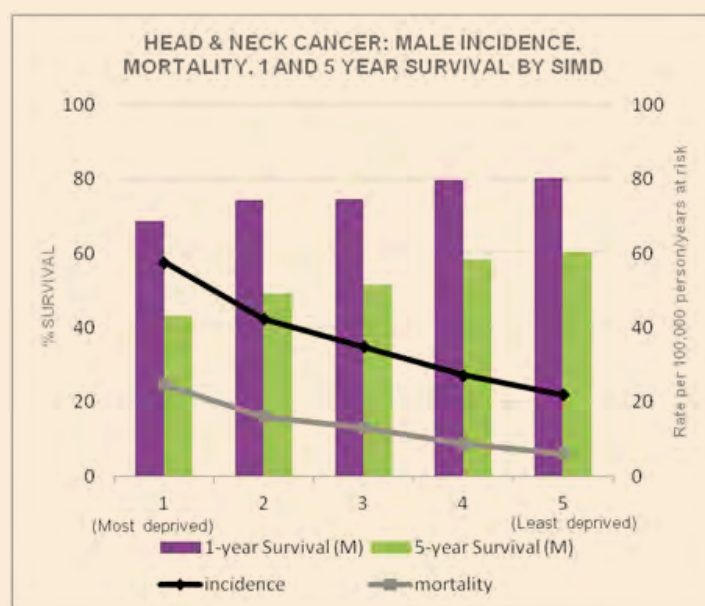
In February 2017 Macmillan and ISD published an age-standardised net survival analysis by deprivation quintile for the twenty most common cancers in Scotland and for seven of the most common cancers there appeared to be a difference in survival. These were: breast,

colorectal, head & neck, liver, lung, prostate and thyroid cancer.

Taking head & neck cancer in men as an example, the figure shown here demonstrates the trends in the relationship between survival, incidence, mortality and deprivation. Incidence and mortality increase with levels of deprivation while survival shows an inverse relationship. 69% of men from the most deprived group were estimated to be alive one year after diagnosis compared with 80% in the least deprived group (a difference of 11%). At five years this difference in net survival increases to 17% (43% in the most deprived compared to 60% in the least deprived group).

For each cancer investigated a baseline model was fitted to look at excess risk of death in the deprived compared to the least deprived group. For head & neck cancer this model suggested an excess risk of death in the most deprived group 61% higher than in the least deprived (CI: 1.34-1.88).

To explore why a higher risk of death is observed further modelling took place including patient characteristics, tumour, health service and treatment



factors. For some cancers (lung and liver) the survival gap was explained by the factors investigated (so the effects of deprivation were most prominent in the modelled factors) whereas for others (breast, head & neck, colorectal and prostate cancers) the deprivation gap was only partially explained by the included factors and further work is warranted to understand the unexplained variation.

Through partnership working,

ISD and Macmillan are seeking to deliver insights in to Scottish cancer data to support improved models of care, and identify gaps and opportunities to deliver world class data collection and analysis and improve outcomes for people living with cancer. Further information on the collaboration and this deprivation work can be found on the [Macmillan website](#). Our publication uses data shared by patients and collected by the NHS as part of their care and support.

1. [https://www.isdscotland.org/Health-Topics/Cancer/Publications/2017-10-31/dim\\_cancer\\_all\\_types.xls](https://www.isdscotland.org/Health-Topics/Cancer/Publications/2017-10-31/dim_cancer_all_types.xls)



## Cancer and lifestyle – research round up

### **Bariatric Surgery and the Risk of Cancer in a Large Multisite Cohort**

Schauer DP et al. (2017) *Annals of Surgery* DOI: 10.1097/SLA.0000000000002525

There is convincing evidence that obesity increases the risk of 13 cancers and studies have shown that intentional weight loss reduces that risk. Few studies have to date examined the role that bariatric surgery plays in intentional weight loss and cancer risk.

This paper reports on a retrospective cohort study of 22,198 participants

who had undergone bariatric surgery in the US between 2005 and 2014 and matched non-bariatric patients of similar age, gender, BMI and comorbidity index (3:1). Mean follow up was for 3.5 years. Multivariable Cox proportional-hazards models were used to examine incident cancer up to 10 years after bariatric surgery compared to the matched nonsurgical patients.

During follow up 2543 incident cancers were recorded in participants. Surgical patients were a third less likely to develop any cancer compared to the matched nonsurgical patients (HR

0.67, 95%CI 0.60, 0.74,  $P < 0.001$ ). Results were stronger in cancers that obesity is known to be a risk factor e.g. postmenopausal breast cancer (HR 0.58, 95% CI 0.44, 0.77,  $P < 0.001$ ), colon cancer (HR 0.59, 95% CI 0.36, 0.97,  $P = 0.04$ ), endometrial cancer (HR 0.50, 95% CI 0.37, 0.67,  $P < 0.001$ ), and pancreatic cancer (HR 0.46, 95% CI 0.22, 0.97,  $P = 0.04$ ).

The authors acknowledge that more research is needed to identify the mechanisms through which bariatric surgery lowers cancer risk.

<https://thescpn.org/2msHJgH>

### **Proportion and number of cancer cases and deaths attributable to potentially modifiable risk factors in the United States**

Islami Fet al. (2017) *CA: Cancer J Clin*. DOI: 10.3322/caac.21440

This paper reports estimates of the proportion and number of invasive cancer cases and deaths attributable to known potentially modifiable lifestyle choices, in adults aged 30 years and older in the United States in 2014.

The exposures studies included smoking;

excess body weight; alcohol intake; consumption of red and processed meat; low consumption of fruits/vegetables, dietary fibre, and dietary calcium; physical inactivity; ultraviolet radiation; and 6 cancer-associated infections. Data on cancer cases and deaths were obtained from the Centres for Disease Control and Prevention (CDC) and the National Cancer Institute. Risk factor prevalence estimates were obtained from nationally representative surveys; and associated relative risks of cancer were obtained from published, large-scale pooled analyses or meta-analyses.

The authors estimated 42% of all incident cancers and 45% of cancer deaths were attributable to evaluated risk factors. Cigarette smoking accounted for the highest proportion of cancer cases and deaths (19% and 29% respectively), excess body weight (7.8% and 6.5%, respectively) and alcohol intake (5.6% and 4.0%, respectively). Lung cancer and colorectal cancer had the highest number of cancers attributable to evaluated risk factors.

<https://thescpn.org/2D31vKc>

### **Association between Coffee Intake after Diagnosis of Colorectal Cancer and Reduced mortality**

Hu Y et al. (2017) *Gastroenterology* DOI: 10.1053/j.gastro.2017.11.010

This paper reports on a prospective cohort study to investigate the association between coffee intake after a diagnosis of colorectal cancer (CRC) and mortality. Data from the Nurses' Health Study (1984-2012) and Health Professionals Follow-up Study (1986-2012) were used to identify those diagnosed with stage

1 or 2 CRC (questionnaire data and case note review). Coffee intake during the previous year was self-reported (semi-quantitative food frequency questionnaires (sFFQ)). Pre-diagnosis dietary intake was assessed using last sFFQ prior to diagnosis; post diagnosis intake was collected at least 6 months but not more than 4 years after diagnosis (median time from diagnosis to the dietary assessment, 2.2 years).

During follow up (median 7.8 years) 188 deaths due to CRC were recorded. In multivariable adjusted models, compared with nondrinkers, those

who drank at least 4 cups of coffee (caffeinated and decaffeinated) per day had a 52% lower risk of CRC-specific death (hazard ratio [HR] 0.48; 95% CI, 0.28-0.83;  $p = .003$ ) and 30% reduced risk of all-cause death (HR, 0.70; 95% CI, 0.54-0.91;  $p < .001$ ). Similar results were found for those who drank 2 or more cups/day.

Authors concluded an association between intake of caffeinated and decaffeinated coffee after diagnosis of CRC with a lower risk of CRC-specific death and overall death.

[www.thescpn.org/2CcgzAY](http://www.thescpn.org/2CcgzAY)