



Newsletter

Scottish Cancer Prevention Network - Evidence to Practice and Policy

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What must we do to achieve a tobacco-free generation by 2034?

Sheila Duffy, Chief Executive ASH Scotland

The Scottish Government will shortly begin developing a new tobacco strategy, setting out the next steps towards the target of Scotland being tobacco-free by 2034

This is defined as an adult smoking rate of 5% or less and therefore focuses on culture change, not prohibition. ASH Scotland has articulated the target as limiting smoking to the small number of informed adults who actively choose to do so – a positive, fair-minded and socially-inclusive vision we are very happy to support.

We talk of the target in terms of creating a tobacco-free generation in Scotland, which nicely illustrates this positive aspiration for our children. And it builds on the successes we have achieved. The youth smoking rate has plummeted since the mid-1990s, down from 30% to 7% amongst 15 year olds.

Yet putting the emphasis on the next generation risks neglecting the importance of engaging existing adult smokers, without whom the 2034 goal will not be achieved.

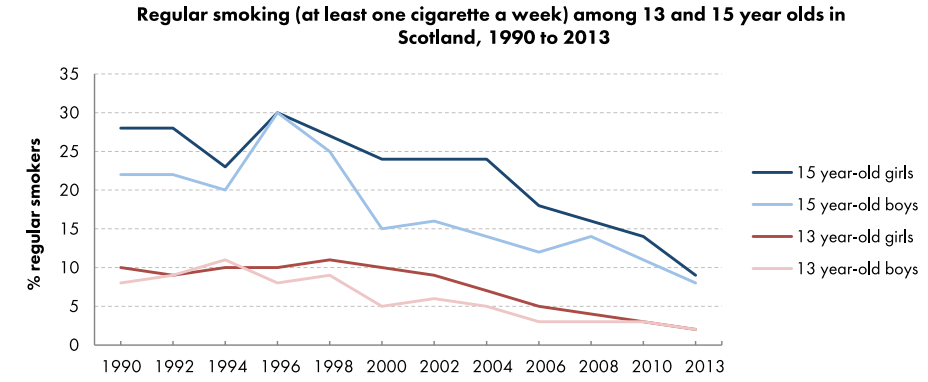
the target is much higher in more disadvantaged areas.

With 2034 being just 17 years away, most of the people currently in the peak smoking years of the 20s, 30s and 40s will still be around. From this we can see that while the 2034 target may often be framed in terms of the next generation, it will stand or fall on whether existing adult smokers continue to smoke.

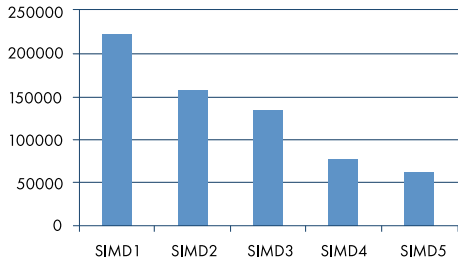
ASH Scotland concludes that the largest part of achieving a 5% smoking rate by 2034 must come from increasing quit rates amongst existing adult smokers in disadvantaged communities. While it is important to raise the next generation free from tobacco, this is too slow a process to deliver a 5% smoking rate in 17 years' time.

Such a substantial shift in quit rates is compatible with culture shift, rather than prohibition, because a consistent two thirds of smokers say that they want to stop. This suggests that a 21% adult smoking rate masks an underlying "willing smokers" rate of only 7% of the population. On these figures nearly 90% of the shift to a 5% smoking rate comes solely from supporting smokers who wish to stop to succeed in their aim.

The challenge which the next Scottish Government tobacco strategy must address is to identify, develop and support the interventions which can do that.



Reduction in smoker numbers required to meet the 2034 target for each SIMD group



As smoking is the greatest preventable cause of cancer, achieving the tobacco-free goal would deliver a significant decrease in future cancer rates.

The adult smoking rate has declined at a fairly steady 0.7% per year since the Scottish Parliament was established in 1999. Extrapolating that trend to 2034 comes close to the 5% figure, which could be taken to suggest that we can just continue as we are in order to achieve the 2034 target. However this does make the crucial assumption that the proportion of smokers who quit increases every year.

It also neglects the fact that smoking rates are much higher in disadvantaged communities, so that the reduction in smoker numbers needed to reach

NHS inform website redesign

The SCPN signed up as a stakeholder to the NHS inform website redesign and we are happy to share with you their new Communications Toolkit and Digital Assets <https://www.nhsinform.scot/about-nhs-inform#spread>.

The website www.nhsinform.scot has been fully redesigned bringing a range of new content and features to help people manage their own health and wellbeing.

Accordingly, a new Communications Toolkit and Digital Assets have been created to support the promotion of the redesigned service. Within the documents you will find:

- content for newsletters
- social media messages using hashtag #nhsinform
- samples of images

Can you or your organisation use these to help support the promotion of the NHS inform service over the next few months, particularly in any communications aimed at the general public e.g. newsletters, blogs, events, posters etc.? If you would like any resources/ images for your service, please do not hesitate to get in contact. Email HISPartnership&EngagementTeam@nhs24.scot.nhs.uk.

Watermelon and Tomato Breakfast Salad

Kellie Anderson, MSc kelliesfoodtoglow.com



Serves 4

- 2 tbsp olive oil
- 2 x 10cm sprigs of fresh rosemary
- 250g-285g best Greek yogurt*
- 1 tbsp best honey (we like acacia)
- 160-200g of best cherry tomatoes, washed and halved
- 160-200g ripe seedless watermelon, rind removed and flesh cubed OR scooped with a small melon baller

- 1 tbsp fresh lemon juice
 - Flaky salt, optional
- *vegans of course use a non-dairy yogurt, but coconut won't really suit in this instance.

Method:

1. Heat the oil in a small saucepan over a medium flame and add the rosemary sprigs. Sizzle gently until lightly browned (about 30 seconds) – do not take your eye off of the pan. Remove the sprigs to a paper towel and save the oil to use in a sec.
2. Stir the honey and yogurt together in a small bowl; spread it over a wide, shallow bowl or divide between individual bowls.
3. Combine the watermelon, tomatoes and lemon juice in a bowl and add to the yogurt. Drizzle with the rosemary oil, crumble over rosemary and sprinkle over with a little salt, if desired. Serve.

Scottish fruits and vegetables – summer

In terms of cancer, plant foods are more protective than animal foods and data suggest that bioactive components in berries may be important in cancer prevention.

One important compound found in (red) raspberries, strawberries and brambles is the tannin called ellagic acid (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4069806/>). This is a phenolic compound with potent antioxidant properties. Laboratory experiments report that rodents fed ellagic acid before, and during, exposure to carcinogens develop less liver, lung and oesophageal cancers than rats fed a normal diet **but** no reliable data is available on the impact of human exposure. The mechanisms of ellagic acid are probably related to detoxification

enzymes in the liver which enhance the removal of dangerous harmful substances from the body <https://www.msccc.org/cancer-care/integrative-medicine/herbs/ellagic-acid>. Whilst ellagic acid is available as a supplement it is not recommended (several trials of nutrient supplements have shown dangerous effects).

However, including berries as a regular part of Five A Day when in season seems a great idea for Scots. The Berry Scotland programme <http://www.berryscotland.com/About%20berry%20scotland.htm> was initiated almost 20 years ago to promote the production and consumption of Scottish berries by people in Scotland. Whilst the group members no longer meet we can see a lasting impact of the initiative

on the current marketing and availability of soft fruit. The group even had some success in getting local berries into school meals, showing an increase in school meal uptake on days that berries were served <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-277X.2004.00513.x/full>.

What to do with berries

- Raw and naked! Add fresh berries to porridge or other cereals
- Gently cook raspberries with cinnamon and a pinch of sugar - serve with natural or vanilla yogurt
- Freeze raspberries or blackcurrants in ice cube trays and add to sparking water with strawberry and orange slices
- Berry lunch deal - mix baby spinach, rocket, goats cheese, flaked almonds with strawberries with balsamic dressing
- Scottish salmon with berry salsa (cover and chill chopped cucumber, spring onion, coriander, yellow pepper, vinegar for one hour and chopped strawberries before serving with grilled salmon)



ActWELL update

Amy Hickman, Volunteer Service Co-ordinator, Breast Cancer Now

As part of the Scottish Government cancer strategy, a team of researchers are now working with Breast Cancer Now on a trial of a lifestyle intervention programme (ActWELL) introduced to women at breast cancer screening and delivered by Breast Cancer Now volunteer coaches. If you would like more information about the study please visit actwellstudy.org when it goes live in August.

Breast Cancer Now has had a fantastic response to recruitment for ActWELL volunteer lifestyle coaches. In total they received 102 applications, from which 52 applicants were invited to an information and selection session. Following this, 26 volunteers were invited to the first ActWELL training, which took place over two days in June.

The training was delivered by a fabulous team made up of staff from the University of Dundee, the University of Edinburgh and Breast Cancer Now. Participants were welcomed by Baroness Delyth Morgan, CEO of Breast Cancer Now, who highlighted the charity's commitment to achieving 'A future where everybody who develops breast cancer lives – and lives well'.

Breast Cancer Now's team of lifestyle coaches bring with them a wide range of skills and experiences. Many come from a health professional background, including nurses, GPs and dietitians while others work as fitness instructors, counsellors, and teachers or in the voluntary sector. These lifestyle coaches will offer one-to-one support around sustainable lifestyle changes, focussing on physical activity (principally walking), diet and body weight, to participants recruited to the trial.

<https://news.gov.scot/news/reducing-breast-cancer-risk>

Watch this space for more updates once the trial is underway.



Reducing obesity from childhood to later life

Anna Gryka, Obesity action Scotland

Editor: Ageing is associated with an increased cancer risk. Around 60% of people who have cancer are 65 or older. So are 60% of cancer survivors. But the origins of many diseases start in early life, especially in relation to nutrition and growth rates in infancy and childhood. A poor lifestyle in childhood does not mean that lifestyle in adulthood is too late to reduce risk of cancer (or heart disease) but rather that it does present another opportunity to stack the odds against cancer occurrence. So for the sake of our children and grandchildren optimising nutrition, physical activity and avoiding excess weight is the best start in life for many healthy years ahead. The factors that influence childhood obesity also influence adult obesity so any policy action that can impact on people across the lifespan stands to achieve most health gain.

Our environment does not promote healthy weight. Children are bombarded by advertising of junk food and sugary drinks and spend hours on sofas staring at screens resulting in 28% of children in Scotland being heavier than they should be.

Recently, the WHO Commission on Ending Childhood Obesity (ECHO) developed a set of recommendations including:

1. Provide guidance on, as support for, healthy diet, sleep and physical activity in early childhood
2. Implement comprehensive programmes that promote healthy school environments, health and nutrition literacy and physical activity among school-age children and adolescents
3. Provide family-based, multicomponent, lifestyle weight management services for children and young people who are obese

Strategies most likely to prevent childhood obesity require government leadership, including legislation to create a healthier environment, and the delivery of targeted programmes.

The UK Government's Plan for Action on Childhood Obesity challenged the food and drinks industry to remove 20% of sugar from products that children eat most often by 2020, including a 5% reduction in year one, either through reduction of sugar in products or reducing portion size. Public Health England will monitor this change and publish interim reports 6 monthly.

The first report highlighting 2015 baseline levels, progress to date and technical guidance for the industry came out in March this year.

Food Standards Scotland has recently announced recommendations for regulation of the food environment and a strategy to make food eaten outside of the home healthier. This included calls for an increase in healthy options, calorie labelling on menus, reductions in portion sizes and regulation of the promotion of unhealthy foods and drinks.

On the 1st of July, the Committee on Advertising Practice introduced new rules banning adverts for food and drinks high in fat, salt or sugar (HFSS) in children's non-broadcast media. The changes mean that media such as print, cinema, online and social media have now been brought into line with television. It is a step in the right direction.

Changing the environment for our children, changes it for everyone - excellent news because what we ultimately want is healthy weight for all and a reduction in related diseases, such as cancer or diabetes.

Find out more from Obesity Action Scotland's new briefing www.obesityactionscotland.org

The Golden Games: it's all about what you can do

Aberdeen's award winning Golden Games is leading the way in the integration of physical activity and preventative and rehabilitative health management.

Developed in 2011, the free physical activity festival for older adults this year saw over 500 participants take part in a range of exercise classes and activities. The innovative programme is delivered by the Active Aberdeen Partnership, a body comprising 10 leading organisations committed to making Aberdeen the most active city in Scotland by 2020.

The Golden Games is a positive response to an ageing population, which typically experiences more complex care needs including cancer and dementia. Studies have consistently demonstrated the positive impact of a healthy, active lifestyle on the physical and mental wellbeing of participants. At the heart of this initiative is a focus on what people can do, rather than what they can't.

The Games have grown from 5 activities delivered over 2 days with 80 participants taking part in 2011, to 84 activities delivered over 7 days, with over 1,800 bookings in 2017. The range of activities are designed to be accessible to everyone, including seated exercise classes, learn to dive sessions, footgolf, table tennis and the Care Home Pentathlon.

After seven years, the Golden Games have significantly raised the profile of 'active ageing' in Aberdeen and has led to the creation of extensive physical activity programmes; all of which are based upon feedback from older adults living in Aberdeen and recognise the multitude of benefits that physical activity can bring to someone's physical health, mental health and overall wellbeing.

The Golden Games also tackle the stigma of ageing. This is important as it helps to give older people a positive image of

themselves, helping to build confidence and encourage others to take part.

"The Golden Games really is a great initiative. It provides a great introduction to activities and venues that you may never have tried before and everyone is extremely friendly. I'd encourage anyone who has never taken part before to come along to the Golden Games next year" said one participant.



Keep your eyes on the prize of improved health

Lorraine Tulloch, Programme Lead, Obesity Action Scotland

So we have emerged from the general election campaign and now we are into the start of the Brexit process. A changing political landscape and lots of uncertainty makes it easy for public health challenges to slip down the agenda. But now, more than ever, we must continue to keep our eyes on the prize. The prize of improved health if we improve the diet and weight of the nation. The prize of a reduction in lifestyle cancers by tackling unhealthy weight.

The Scottish Government has committed to a Diet and Obesity Strategy in 2017 and we are expecting a consultation launch in the coming months. We must ensure that the consultation includes the bold and ambitious action we need to change the food environment around us. An environment that currently uses price promotions, marketing and the bargain of a bigger portion size to push us towards unhealthy food choices.

Tackling those issues are important and urgent first steps in changing the balance of food that goes in our shopping baskets and Obesity Action Scotland is calling on Scottish Government to ensure that it restricts price promotions on unhealthy food, restricts the advertising and marketing of unhealthy food that surrounds us every day and brings

consistency and action to tackle growing portion sizes.

But this will only be the start. Tackling obesity requires more than one or two individual measures. We require a whole package of systemic change.

Over the last few months Obesity Action Scotland has been gathering learning from around the world to consider what other things have been done successfully in other countries.

In Amsterdam they have seen a reduction in levels of childhood overweight and obesity across all the socio-economic groups. This is the first area in the world to show such positive progress. What is the key to their success? Significant investment, political buy-in, collective responsibility, clear targets and focused, geographically targeted interventions. What struck us most though was the pride and ownership from everyone we met in the programme. From the school head teacher to the local fishmonger there was a level of understanding and dedication to do something and make a difference.

Heading slightly further north, over the past 10 years the Nordic governments have collectively taken a new approach that seeks to change the food culture and consumption

patterns of their people. Government policies promoted a new and more sustainable Nordic cuisine to international fame but others also played their part including world renowned chefs and the private sector.

Through public-private partnerships, product innovations and reformulation these new ideas are being incorporated in everyday life in the Nordic countries. What does it mean? The Senior Adviser on Food to the Nordic Council of Ministers, described how food had changed. If you visited a friend in the Nordics ten years ago you would most likely be served spag bol for dinner. Today, you would likely be given fresh, seasonal, locally sourced produce.

What can we learn from this approach? That the regulation we need to improve the food environment must be accompanied with a positive and engaging approach to promote wholesome healthy Scottish produce such as vegetables, wholegrains and fish.

There is lots of work to do to tackle the challenge we face, with 2 in every 3 adults being overweight or obese, and that work needs to start now. The Scottish Government's commitment to a new diet and obesity strategy must be met. The health of our nation is at stake.

Improving the reach of Scotland’s cancer screening programmes

Nuala Healy, Organisational Lead - Screening and Immunisation, NHS Health Scotland

There is increasing recognition of the inequalities which exist in cancer screening uptake (bowel, breast and cervical), with lower participation in the most deprived areas of Scotland. The 2016 Scottish Cancer Plan Beating Cancer: Ambition and Actions sets out a clear commitment to reduce inequalities in cancer screening and has committed £5 million to initiatives that could help address barriers and issues for those less likely to engage. Recently, NHS Health Scotland also hosted a learning event for NHS Boards

on inequalities in screening uptake. This event, chaired by Professor Bob Steele, UK National Screening Committee chair, showcased national and local approaches to reducing inequalities and considered the current evidence base of approaches that are most likely to have impact on this issue. To download the conference report visit: <http://www.healthscotland.scot/publications/screening-and-inequalities-event-brochure>

An inequalities sensitive approach is central to the development of all cancer screening

information produced by NHS Health Scotland. With the introduction of an easier bowel screening test this November, NHS Health Scotland is developing information materials to support the new test in a range of formats that are accurate, accessible and easy to understand. NHS Health Scotland has also produced a cervical screening toolkit to support the role of primary care in optimising uptake of smear tests – please visit: <http://www.healthscotland.com/topics/health-topics/screening/cervicaltoolkit1.aspx>

The Global Cancer Burden: Necessity is the Mother of Prevention’

On Monday 10th July, Dr Christopher P. Wild, Director of the International Agency for Research on Cancer (IARC), Lyon, France, delivered the SCF/ Cruden Foundation lecture at the Royal Society, Edinburgh. Entitled ‘The Global Cancer Burden: Necessity is the Mother of Prevention’, Dr Wild argued that an adjustment in attitudes and priorities towards cancer prevention is required:

‘No country can afford to treat its way out of the cancer problem: a balanced, integrated approach to prevention, early detection and treatment is required.’

Highlighting the European Code Against Cancer, (<https://cancer-code-europe.iarc.fr/index.php/en/>), Dr Wild suggested that it is important to adapt prevention strategies to the

national or regional situation and that these strategies may be hard to implement, require persistent personal behaviour changes and be hard to measure the success of due to the length of time they may take to bear fruit. Governments are often looking more to short term goals so may be difficult to persuade of the benefits in cancer prevention. With time, vision and leadership however, prevention strategies can be implemented and form part of an integrated approach along with early detection, and treatment, including palliative care.

A full report is available at <https://www.rse.org.uk/wp-content/uploads/2017/07/The-Global-Cancer-Burden.pdf>.

Have you seen this campaign?

Every day a Dane dies of skin cancer or melanoma so earlier this year this campaign reached out to friends of Danes in holiday destinations across the world and asked them to help a Dane. If they saw a Dane in the sun without protection could they help by providing sunscreen, a hat, an umbrella etc. to

protect hapless Danes in the sun? The response they had was staggering! Thousands signed up to help a Dane. Could you help a Dane, or a Scot, or any other fair skinned person who is risking skin cancer or melanoma by not taking sufficient precaution in the sun? <https://www.helpadane.com>



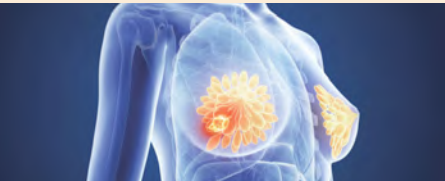
Community gardens



Being active can make a real difference to our health. The World Cancer Research Fund has found strong evidence that ‘we could prevent about one in eight cases of bowel and breast cancers, and one in ten cases of womb cancer in the UK by being active for 30 minutes a day at least five times a week’. All over Scotland there are community gardens bursting with home grown fruit and vegetables, laden with blooms and providing peaceful havens for members of the public to catch a bit of quiet time in. Volunteering in these gardens is a great way to keep physically active and eat well while being part of a social network. No expertise is needed – you just learn from those around you – although those with expertise in all sorts of fields are welcomed (marketing, events, finance, design, IT etc. etc!) to help grow the project. And for any group starting out FCFEG Scotland (an umbrella group supporting and representing City Farms and Community Gardens) are piloting a mentoring scheme funded by the Big Lottery to provide expertise where needed. Find a garden near you at <https://www.farmgarden.org.uk/your-area/scotland> and get active today...and every day!

Have you seen this paper?

World Cancer Research Fund International/American Institute for Cancer Research.



Continuous Update Project Report: Diet, Nutrition, Physical Activity and Breast Cancer 2017 -

<http://www.wcrf.org/int/research-we-fund/continuous-update-project-findings-reports/breast-cancer>

Breast cancer is the most common cancer in women in the UK and worldwide. Breast cancer is a group of diseases with different aetiologies and modifiable risk factors and so the evidence is presented according to whether the breast cancer diagnosis is pre or post-menopausal and may differ according to its hormone receptor status e.g. oestrogen receptor ER+ve or ER-ve/ progesterone receptor PR+ve or -ve. Breast cancer risk doubles each decade until the menopause, after which the increase slows but there is strong evidence that

your risk can be reduced by adhering to WCRF recommendations to be within the healthy weight category, physically active (especially vigorous for premenopausal breast cancer) and by limiting alcohol consumption to not more than one drink a day (if at all). In addition greater weight gain in adulthood increases the risk of postmenopausal breast cancer. Breast feeding also reduces risk in both pre and post menopausal breast cancer. There is limited evidence that eating certain foods

may reduce the risk too e.g. non-starchy vegetables (ER-ve only), carotenoids, dairy foods and a high calcium diet.

This is the most comprehensive and up to date report on lifestyle and breast cancer risk which also reviews existing data on possible mechanisms of how lifestyle factors may impact on breast tissue.

This CUP report on breast cancer includes new evidence published since the Second Expert Report (Section 7.10) and the 2010 CUP Breast Cancer Report.

2017	DIET, NUTRITION, PHYSICAL ACTIVITY AND POSTMENOPAUSAL BREAST CANCER	
	DECREASES RISK	INCREASES RISK
	CONVINCING	ALCOHOLIC DRINKS ¹ BODY FATNESS ² ADULT WEIGHT GAIN ADULT ATTAINED HEIGHT ³
STRONG EVIDENCE	PROBABLE	PHYSICAL ACTIVITY ⁴ BODY FATNESS IN YOUNG ADULTHOOD ⁵ LACTATION ⁶
	LIMITED – SUGGESTIVE	NON-STARCHY VEGETABLES (ER- breast cancers only) ⁷ FOODS CONTAINING CAROTENOIDS ⁸ DIETS HIGH IN CALCIUM
LIMITED EVIDENCE	LIMITED – NO CONCLUSION	CEREALS (GRAINS) AND THEIR PRODUCTS; DIETARY FIBRE; POTATOES; NON-STARCHY VEGETABLES (ER+ breast cancers); FRUITS; PULSES (LEGUMES); SOYA AND SOYA PRODUCTS; RED AND PROCESSED MEAT; POULTRY; FISH; EGGS; DAIRY PRODUCTS; FATS AND OILS; TOTAL FAT; VEGETABLE FAT; FATTY ACID COMPOSITION; SATURATED FATTY ACIDS; MONO-UNSATURATED FATTY ACIDS; POLYUNSATURATED FATTY ACIDS; TRANS-FATTY ACIDS; CHOLESTEROL; SUGAR (SUCROSE); OTHER SUGARS; SUGARY FOODS AND DRINKS; COFFEE; TEA; CARBOHYDRATE; STARCH; GLYCAEMIC INDEX; GLYCAEMIC LOAD; PROTEIN; VITAMIN K; RIBOFLAVIN; VITAMIN B6; FOLATE; VITAMIN B12; VITAMIN C; VITAMIN D; VITAMIN E; CALCIUM SUPPLEMENTS; IRON; SELENIUM; PHYTOESTROGENS; ISOFLAVONES; DICHLORODIPHENYLDICHLOROETHYLENE; DICHLORODIPHENYLTRICHLOROETHANE; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; TRANS-NONACHLOR; POLYCHLORINATED BIPHENYLS; ACRYLAMIDE; DIETARY PATTERNS; CULTURALLY DEFINED DIETS; SEDENTARY BEHAVIOUR; ENERGY INTAKE

2017	DIET, NUTRITION, PHYSICAL ACTIVITY AND PREMENOPAUSAL BREAST CANCER	
	DECREASES RISK	INCREASES RISK
	CONVINCING	ADULT ATTAINED HEIGHT ¹
STRONG EVIDENCE	PROBABLE	VIGOROUS PHYSICAL ACTIVITY ² BODY FATNESS ³ LACTATION ⁴
	LIMITED – SUGGESTIVE	NON-STARCHY VEGETABLES (ER- breast cancers only) ⁵ DAIRY PRODUCTS FOODS CONTAINING CAROTENOIDS ⁶ DIETS HIGH IN CALCIUM PHYSICAL ACTIVITY ⁷
LIMITED EVIDENCE	LIMITED – NO CONCLUSION	CEREALS (GRAINS) AND THEIR PRODUCTS; DIETARY FIBRE; POTATOES; NON-STARCHY VEGETABLES (ER+ breast cancers); FRUITS; PULSES (LEGUMES); SOYA AND SOYA PRODUCTS; RED AND PROCESSED MEAT; POULTRY; FISH; EGGS; FATS AND OILS; TOTAL FAT; VEGETABLE FAT; FATTY ACID COMPOSITION; SATURATED FATTY ACIDS; MONO-UNSATURATED FATTY ACIDS; POLYUNSATURATED FATTY ACIDS; TRANS-FATTY ACIDS; CHOLESTEROL; SUGAR (SUCROSE); OTHER SUGARS; SUGARY FOODS AND DRINKS; COFFEE; TEA; CARBOHYDRATE; STARCH; GLYCAEMIC INDEX; GLYCAEMIC LOAD; PROTEIN; VITAMIN K; RIBOFLAVIN; VITAMIN B6; FOLATE; VITAMIN B12; VITAMIN C; VITAMIN D; VITAMIN E; CALCIUM SUPPLEMENTS; IRON; SELENIUM; PHYTOESTROGENS; ISOFLAVONES; DICHLORODIPHENYLDICHLOROETHYLENE; DICHLORODIPHENYLTRICHLOROETHANE; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; TRANS-NONACHLOR; POLYCHLORINATED BIPHENYLS; ACRYLAMIDE; DIETARY PATTERNS; CULTURALLY DEFINED DIETS; SEDENTARY BEHAVIOUR; ADULT WEIGHT GAIN; ENERGY INTAKE

Expert Insight



Following the recent publication of the WCRF CUP report on ‘Diet, nutrition, physical activity and breast cancer’, we asked Susannah Brown, Senior Scientist, WCRF if she could respond to some questions for us.

What are the possible reasons for the link between alcohol intake and breast cancer?

The mechanisms for how alcohol acts to influence breast cancer risk in women are complex. Alcohol is metabolised principally by the liver, but also in breast tissue, to acetaldehyde, potentially producing reactive oxygen species associated with DNA damage and initiating the cancer cascade. Alcohol also acts as a solvent, potentially enhancing penetration of carcinogens into cells. Alcohol may have significant impacts upon endocrine and growth factor networks that affect breast carcinogenesis. For example, in some studies alcohol may increase circulating levels of oestrogen, which could affect susceptibility to

transformation or promote cancer growth. The risk of cancer for alcohol drinkers may be altered by genetic factors.

How relevant is alcohol consumption in early adulthood and breast cancer?

We did not have the data that would allow us to compare the effects on breast cancer risk of drinking alcohol in early adulthood with drinking later in life. However, alcohol consumption was strongly linked to an increased risk of breast cancer diagnosed in women both before and after the menopause. We also observed that the risk of breast cancer is greatest in those that drank the most alcohol across a number of years.

How do we juggle the evidence on alcohol benefits for heart disease compared to risk for breast cancer?

Research has shown that people who drink small amounts of alcohol may have lower risk of coronary heart disease (CHD) compared to non-drinkers. The protective effect is seen at very low levels of consumption (around one unit a day) and limited to specific population groups. Any benefit of drinking alcohol found for heart disease is negligible when you consider the significant increased risk

of several cancers, including breast cancer, from drinking alcohol. It is important that people understand that any type of alcohol, including red wine, which people typically think is a healthier choice, still increases cancer risk. This is because all alcohol types contain ethanol, which is the compound that increases the cancer risk.

Should women who have had a breast cancer diagnosis become teetotal?

For cancer prevention, we know that it is best to not drink any alcohol, so it would be sensible to consider that refraining from drinking after a cancer diagnosis would also be beneficial for cancer survival. In 2013, we analysed research on whether alcohol influenced the risk of surviving breast cancer. No significant results were found, although at that time there were only a limited number of studies available for review - more research is needed in this area.

World Cancer Research Fund’s report on breast cancer can be found here: <http://www.wcrf.org/int/research-we-fund/continuous-update-project-findings-reports/breast-cancer>

Have you seen these funded studies?

The Chief Scientist Office (CSO) provides funding opportunities for researchers in Scottish universities and health boards to undertake projects (up to £300k and three years) through two response mode research grant programmes covering the broad spectrum of applied health and care related research. Following the publication of the 2015 Scottish Government health and social care research strategy, CSO re-positioned its research grant programmes to place greater emphasis on relevance, importance, and potential impact on health in Scotland and the translation of research findings into policy practice either directly

or by laying the foundations for larger definitive studies that can be supported by other UK health research funders. To support this, CSO contributes financially to the National Institute of Health Research (NIHR) to allow researchers in Scotland to access the four major NIHR research programmes (EME, HS&DR, PHR and HTA), which have no funding threshold and therefore can fund large definitive studies.

The two CSO programmes are:

- 1. Translational clinical studies research programme - for research aimed at improving treatments and / or

diagnostic approaches for conditions of clinical importance to the population of Scotland.

- 2. Health improvement, protection and services research programme - for research aimed at improving or protecting population health or improving the quality, safety and/ or effectiveness of healthcare in Scotland.

For more information go to: <http://www.cso.scot.nhs.uk/funding-2/>

Cancer diagnosis as an opportunity for increasing uptake of smoking cessation services among families: an exploratory study of patients, family members and health professionals

Wells M, Harris F, Aitchison P et al.

Why is this paper important?

The time after a diagnosis of cancer may be a teachable moment for smoking cessation, especially if focused on the person's future health. In-depth interviews were conducted with 29 patients with smoking related cancers and 14 family members who were current or recent ex-smokers and 24 health professionals from cancer care, primary care and smoking cessation services. Most who had managed to give up smoking did so

without the support of cessation services which they viewed as irrelevant or time consuming. Those who continued to smoke did so due to the emotional stress of their cancer diagnosis and treatment, they did not want to be pressurised to quit, they felt their addiction was too strong or they did not link smoking with their diagnosis or treatment outcomes. Patients felt they would be more likely to use cessation services if they were located within the hospital. Although

patients and family members expected their smoking to be broached, health professionals were often reluctant to do so in case they appeared judgmental or made patients feel guilty. Health professionals were also not up to date with cessation services.

Bottom line

Staff training, support and tailored materials are required so that the guidance can be implemented within cancer care. (CZH/4/807)

TreatWELL – a feasibility study to assess the delivery of a lifestyle intervention for colorectal cancer patients undergoing potentially curative treatment

Anderson AS, Steele RJC, O'Carroll RE et al.

Why is this paper important?

Colorectal cancer (CRC) survival has improved, but in Scotland, survivors still have notable excess mortality within the first year post diagnosis compared to other European countries. In addition, survivors have high rates of co-morbidities. Evidence suggests that lifestyle improvements have considerable potential to impact on morbidity and recurrence. This study aimed to assess the feasibility of delivering an intervention programme (TreatWELL) for CRC patients undergoing potentially curative treatments. Delivered in 3 face to face

sessions (plus phone calls) by lifestyle counsellors over three phases (pre-habilitation, surgical recovery and post therapy recovery). Feasibility outcomes included recruitment rates, phase length, implementation ease, feasibility of study measurements, patient acceptability, adherence and retention. Of eligible participants, 26% were recruited and 18% completed the study. Acceptability of the intervention was rated highly. Although programme adherence was endorsed by many NHS staff, further support could have been provided. The feedback from participants suggests a

focus on physical activity (from diagnosis, through treatment and beyond) was highly acceptable and may be beneficial for both mental and physical health.

Bottom line

The practicalities of delivering and evaluating intervention programmes from diagnosis to treatment end in this client group need to take account of complex clinical pathways. Addressing problems of excess weight in patients with bowel cancer remains a challenge that requires further investigation. (CZH/4/939)

Cancer Incidence in Scotland

Andrew Deas and Greig Stanners, Information Services Division, NHS National Services Scotland

The Scottish Cancer Registry has collected data on cancer since 1958. The data are used for a wide variety of purposes including research and planning of cancer services. The data are also used in the annual publication of cancer incidence statistics for Scotland. This article summarises the key points of the April 2017 publication, which includes data on incidence to 2015.

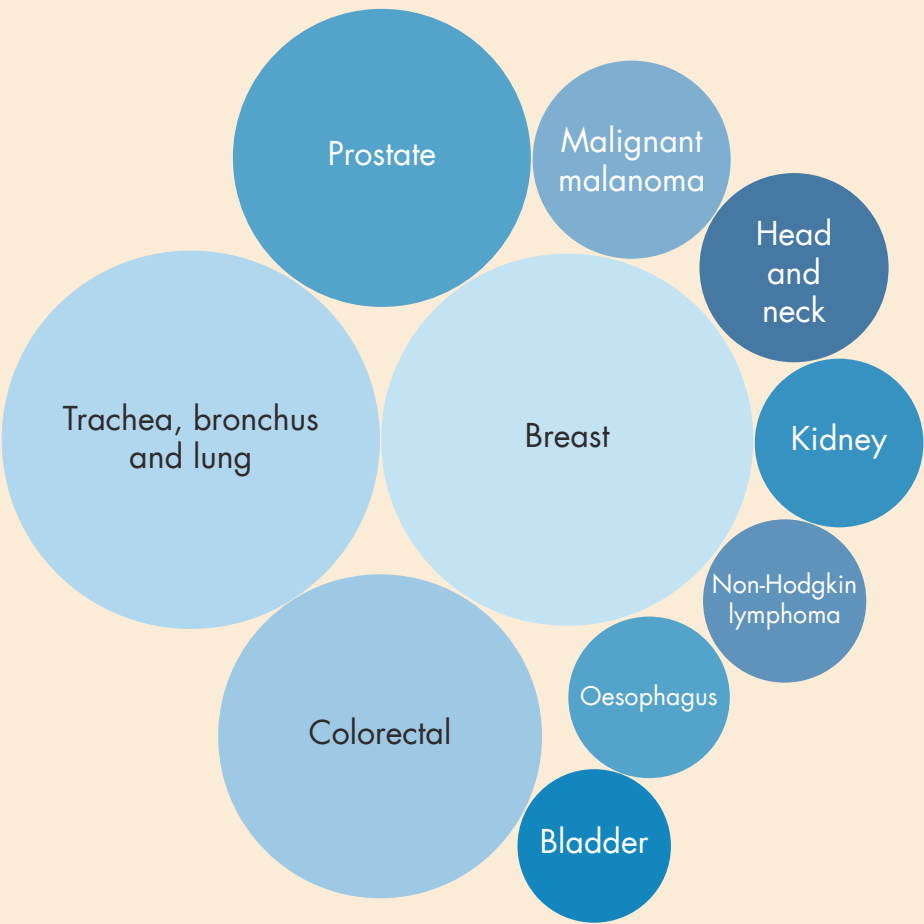
In 2015, 31,467 people were diagnosed with cancer (16,266 females and 15,201 males). This was an increase from 27,494 people ten years previously. Much of this increase can be explained by the ageing population of Scotland and the fact that most major types of cancer are more common in older people.

The age-adjusted incidence rate for cancer allows you to make a fairer comparison over time. The rate increased by 5% over the last ten years for females and decreased by 4% for males.

However, when looking at different types of cancer, there was considerable variation in incidence trends. For instance, over the last ten years, the incidence rate for malignant melanoma of the skin increased by 33% in males and 10% in females. In contrast, the rate for ovarian cancer decreased by 13% over the same period.

Lung cancer was the most common type of cancer diagnosed in Scotland, with 4,997 new cases in 2015. Other common cancers were breast cancer (4,762 cases), colorectal cancer (3,671 cases) and prostate cancer (3,091 cases). These four types of cancer accounted for over 50% of new cancers in Scotland in 2015.

It is also possible to estimate the number of people who have been diagnosed



Most common cancers in Scotland, 2015. All persons.

with cancer over the last 20 years and who were still alive at the end of 2015 (prevalence). For all cancers, the prevalence estimate was approximately 186,500 people or around 3% of the population of Scotland. This will include people who are currently being treated for cancer as well as people who were diagnosed many years ago and completed their treatment.

Finally, the lifetime risk of being diagnosed with cancer can be calculated. It is estimated that two in five people will be diagnosed with cancer during their lifetime. This will also include some cancers that may have no detrimental impact on life expectancy, such as slow-growing prostate tumours.

It is also important to bear in mind that the estimate is based on existing trends for the whole population. For individuals, the risk of developing cancer will be affected by lifestyle, genetics and environmental factors.

Further Information

The publication is available on the ISD website: <http://www.isdscotland.org/Health-Topics/Cancer/Publications>.

Acknowledgement

Our publication uses data shared by patients and collected by the NHS as part of their care and support.

Cancer and lifestyle – research round up

Mediterranean diet adherence and risk of postmenopausal breast cancer: results of a cohort study and meta-analysis

van den Brandt PA, Schulp M (2017) *Cancer Epidemiology* Vol 140, Issue 10, pages 2220–2231

<http://onlinelibrary.wiley.com/doi/10.1002/ijc.30654/abstract>

The Mediterranean Diet (MD), high in plant proteins, whole grains, fish and monounsaturated fat; moderate alcohol

intake; and low in refined grains, red meat and sweets is known to protect against cardiovascular disease. This study looked at the relationship between eating a MD and postmenopausal breast cancer risk. The Netherlands Cohort Study (n=62,573 women aged 55–69 years) provided information on dietary and lifestyle habits in 1986. A MD score measured adherence to the MD diet. Twenty years later, through record linkage, 2,321 participants with complete data on diet and potential confounders who had a breast cancer diagnosed were compared to 1,665 participants without breast cancer.

MD adherence showed a nonsignificant weak protection against ER positive (ER+) or total breast cancer risk but a statistically significant protective association for ER negative (ER–) breast cancer (HR 0.60, 95% Confidence Interval, 0.39–0.93) for high versus low MD adherence (ptrend=0.032).

This important finding suggests that 32.4% of ER– breast cancer, and 2.3% of total and ER+ breast cancer could be avoided if the population strongly adhered to a Mediterranean Diet.

How to Manage the Obese Patient With Cancer

Renahan AG et al. (2016) *J Clin Oncol* Dec 10;34(35):4284–4294.

<https://www.ncbi.nlm.nih.gov/pubmed/27903151>

Obesity is common in cancer patients and associated with 13 cancer types. Obesity is also socially patterned and more common in women from disadvantaged areas. This study involved

observational data and secondary analyses of trial data on how obesity affects the treatment offered to patients and levels of treatment-related toxicity.

There is a commonly held opinion that obesity is associated with greater toxicity from cytotoxic chemotherapy and according dosages are often reduced. This review found no evidence of greater toxicity and so recommends that dosages are calculated as per the general population. For those requiring surgery for malignancy, there is evidence

that a raised BMI is associated with increased perioperative mortality and increased rates of infection after surgery. This finding however does not persist for those undergoing surgery for benign indications.

The review concludes that current evidence is inconsistent and that more research is required before application to guideline formation.

The association of dietary quality with colorectal cancer among normal weight, overweight and obese men and women: a prospective longitudinal study in the USA

Torres Stone RA et al. (2017) *BMJ Open* Volume 7, Issue 6

<http://bmjopen.bmj.com/content/7/6/e015619>

This is the first study to examine the potential benefits of a healthy diet

in reducing colorectal cancer risk among men and women who are normal weight, overweight and obese. Data were obtained on 398,458 participants who were 50–71 years old in 1995–1996 and were followed up until 2006. Dietary quality was assessed according to adherence to a Mediterranean Diet, the Healthy Eating Index-2010 and the Dietary Approaches to Stop Hypertension score, and was stratified by BMI category. Over this period there were 6515 new diagnoses of CRC (1953 among the normal weight, 2924 among the overweight and 1638 among the obese; 4483

among men and 2032 among women). A strong dose–response pattern was found for normal weight and overweight men. An increasing dietary quality was associated with decreasing risk of CRC. This pattern was also observed for obese men but less consistently across the three measures of dietary quality. The findings were of smaller magnitude and less consistent for women but still suggesting associations of similar direction.

This paper concluded that a better diet was associated with a reduced risk of incident CRC up to 10 years later for men regardless of baseline weight category.