ONE HUNDRED THINGS YOU MIGHT WANT TO KNOW ABOUT CANCER PREVENTION AND SURVIVORSHIP
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ALCOHOL

1. Alcohol consumption is associated with laryngeal, pharyngeal, oesophageal, liver, breast and colorectal cancers. (Parkin, 2011)

2. Alcohol is felt responsible for 6% of cancers per year. (Parkin, 2011)

3. One unit of alcohol per day is associated with a 15% increased risk of breast cancer. (Chen et al, 2011)

4. Two units of alcohol per day is associated with an overall increase in the risk of cancer and a greater risk in seven specific types of cancer. (Allen et al, 2009)

5. Three units of alcohol per day is associated with an 86% increased risk of mouth cancer. (Corrao et al, 2004).

6. One unit of alcohol a day can reduce the risk of heart disease by 14–25%. (Ronksley et al, 2011)

7. Non Hodgkin lymphoma (Chiu et al, 2002) and pancreatic cancer (Klein, 2012) have increased risks with alcohol consumption in familial cancers.

8. Alcohol can decrease the amount of folate in your body and lead to DNA damage, which can then cause cancer such as colorectal cancer. (Giovannucci, 2002)

9. Alcohol consumption can add calories to the diet, which can lead to obesity and can also be linked to hormonal changes in the types of oestrogen that lead to an increased risk of breast cancer. (Onland-Moret, et al 2005)

10. Can cause liver disease leading to cirrhosis and liver cancer, three units a day can increase the risk by 19%. (Corrao et al, 2004).

Summary advice

On average, a small amount of alcohol is probably good for your heart, but if you have a family history of cancer, it is best keep to seven units per weeks or less. Guidelines also suggest that it is good have two alcohol-free days in each week. Studies also suggest that taking small amounts of alcohol regularly carry less of a risk than saving all seven weekly units for one specific period of the week.

Moderation is the key. In the UK, the recommendation is no more than two to three units of alcohol a day for women and three to four units for men, with at least two or three alcohol-free days each week.

References


SMOKING

1. Tobacco is the most important avoidable cause of cancer and is responsible for 20% of all cancer. (Peto, 2011)

2. Smoking can increase the risk of lung, bladder, cervical, kidney, larynx, pharynx, nose, mouth, oesophagus, pancreas, stomach and liver cancers as well as some types of leukaemias. (Sasco et al, 2004)

3. Smoking just two cigarettes a day show increased risks of mouth and oesophageal cancers. (Polesel et al, 2008)

4. Smokers who smoke up to four cigarettes a day had much greater risks of dying from lung cancer than those that didn’t. (Doll et al, 2004)

5. Smoking has a higher impact on stomach cancer than alcohol consumption. (Tominaga et al 1991)

6. Smokeless or chewing tobacco can also cause oral and pancreatic cancers. (Cogliano et al, 2004)
7. Carriers of hMLH1 gene mutations have a 48% increased risk of colorectal cancer with smoking.

8. Toxic chemicals like nitrosamines, benzopyrenes, benzene, acrolein, cadmium and polonium-2 10 can accumulate in the body through smoking. These toxins can damage DNA and lead to cancer. (Denissenko et al, 1996)

9. Smokers with a familial history of pancreatic cancer are at 9x greater risk of the disease. (James et al, 2004)

**Summary advice**
The tobacco and the cocktail of toxic substances found in cigarettes can harm almost every organ in your body. Even occasional or very low frequency smokers are at a greater risk of cancer. Statistics show that around 50% of smokers die from their habit. In some familial cancers smoking can increase the risk of developing tumours; more importantly some studies show that smoking increases risk to the same extent in smokers and non smokers.

The age at which one starts to smoke, the period for which they smoke and the amount they smoke a day are all factors that increase the risks to their health. In general smoking is very harmful to the body, 20% of women and 28% of men in the UK have given up smoking (www.bbc.co.uk 2012). Many people fail at their initial attempts; however it is important to persist and ensure that you can beat the habit.

**References**


http://www.bbc.co.uk/radio1/advice/factfile_az/cigarettes_tobacco


**FRUIT AND VEGETABLES**

1. Around 7000 cancers could be prevented annually from eating fruit and vegetables. (Key, 2010)

2. Eating fruit and vegetables can probably reduce the risk of the oesophagus, stomach lung, colorectum, mouth, pharynx, larynx, kidney and urinary bladder, stomach, and ovary cancer. (Parkin and Boyd, 2011)

3. 7.1% of cancers are thought to be caused by a low intake of fruit and vegetables. (Parkin and Boyd, 2011)

4. Anthocyanidins found in pigments of fruits and vegetables have been shown to inhibit human tumor cells. (Zhang et al, 2005)

5. Eating fruit and vegetables is thought to protect against mouth, larynx, pharynx, oesophagus, stomach and lung cancer. (WHO, 2003)

6. Eating fruit and vegetables is thought to reduce the risk of cancer by 2.5%. (Key, 2010)

7. Antioxidants in fruit and vegetables have been shown to fight against bowel cancer. (Lim do et al, 2012)

**Summary advice**

Fruit and vegetables are very important parts of a health balanced diets, it is recommended that each person eats five portions of fruit and vegetables a day. Different types of fruit and vegetables can contain different chemicals that are useful for the body it is therefore good to contain a whole variety of different items in the diet.

**References**


**OBESITY**

1. Obesity and being overweight is linked to cancers of the colon, endometrium, kidney, oesophagus, pancreas, gall bladder, rectum and also postmenopausal breast cancer. (Parkin and Boyd, 2011)

2. Obesity and being overweight cause 17,000 cancers in the UK every year. (Parkin and Boyd, 2011)

3. Increased BMI and obesity are linked to increased chances of developing primary liver cancer. (Chen et al, 2012)

4. Obese individuals are at 140% increased risk of oesophageal cancer. (Parkin and Boyd 2011)

5. Oestrogen hormone levels are linked to cancer when found in excess, studies have shown that obese women have twice the amount of oestrogen and are therefore are higher risk of post menopausal breast cancer. (Huang et al, 1997)

6. Insulin is found at high levels in people with cancer, it is known that obese people have a higher level of insulin secreted and this may increase the risk of cancer. (Stolzenberg-Solomon et al, 2005)

7. An increase in weight of 25kg can increase the risk of breast cancer by 45%. (Eliassen et al, 2006).

8. Obesity can increase the risk of bowel cancer by 50% whereas familial bowel cancer risks in families with one affected individual are only 20%. (NHS)

9. A 5 kg/m2 increase in BMI in men and women increased the risk of renal cancer by 24% and 34% respectively. (Renehan et al, 2008)

10. A 10cm increase in waist size can increase colorectal cancer risk in men by 33% and in females by 16%. (Larsson and Wolk 2007)

11. Between ages of 20-50 the risk of cancer doubles with an increase in weight of 20kg. (Eliassen et al, 2006)

12. Being overweight can increase the risk of pancreatic cancer by 24%. (World Cancer Research Fund)
Summary advice
Obesity and being overweight are very dangerous as they are not easy to control. Lifestyle and stress can be huge factors that decide our eating habits. Eating smaller portions and exercising on a regular basis are of great importance. Quick fixes are not recommended as people can return to their bad eating habits and put their weight back on. Ensuring that high calorie food is replaced for healthier options is essential. Ensuring a healthy balanced diet is good, ensure red meat alcohol and sugary snacks are taken in moderation. Try eating more fresh fruit and vegetables.

The Expert Review guidelines from the World Cancer Research Fund suggest that the BMI for men and women should be between 18.5-24.9.

References


RED MEAT
1. 36,000 people in Britain are diagnosed with bowel cancer each year and around 16,500 die from it. This makes it Britain’s second biggest killer after lung cancer. (World Cancer Research Fund)

2. An intake of 120g of red meat per day can increase the risk of colorectal cancer by 24%. (Norat et al, 2006)

3. An intake of 30g processed meat a day can increase colorectal cancer risk by 36%. (Norat et al, 2006)
4. Meat that is fried and has a heavily browned surface can increase rectal cancer risk by 6 times. (Gerhardsson et al, 1991)

5. One portion of red meat (beef, lamb or pork) a day can increase risk of death by 13%, cardiovascular disease 18% and cancer mortality by 10%. One portion is the equivalent in size to a deck of cards. (Pan et al, 2012)

6. One portion of processed meat a day can increase risk of death by 20%, cardiovascular disease 21% and cancer mortality by 16%. This is the equivalent of one hot dog or two rashers of bacon (Pan et al, 2012).

7. It is advised that any processed meat (meat that is smoked, preserved with salt or chemical preservatives; ham, salami and some sausages) is eaten very rarely if not at all. This is because the preservatives can create carcinogens, chemicals that cause cancer. (World Cancer Research Fund)

8. The safe amount of red meat per week is 500g (cooked meat, which is the same as 700g of uncooked meat). This could be divided into 3 meals over the week of 150g or six meals around 80g each. Any more then this significantly increases your risk of bowel cancer. (World Cancer Research Fund)

9. In familial gastric cancers it was found that those with a high consumption of red meat and a genetic defect (microsatellite instability), were 25 times more likely to get gastric cancer. (Palli et al, 2001)

**Summary advice**
The World Cancer Research Fund suggests that red meat and processed meat consumption should be kept to a minimum. Several meals in the week could be meat free and minced Quorn could be used as a good alternative to minced beef.

Eating vegetables and whole grains are not only protective against cancer but they could be eaten instead eating large portions of meat.

Poultry and fish have not been found to have any links to cancer; therefore they may be healthier meat alternatives.

Beans and pulses such as chickpeas and lentils could be used to create interesting dishes in opposition to eating red meat. Eggs, cottage cheese and houmous are also good source of protein that could act as replacements for red meat dishes.

**References**


**THE USE OF ASPIRIN IN CANCER PREVENTION**

1. Studies have shown that taking aspirin over a number of years can affect oesophageal, pancreatic, brain, lung, stomach, colorectal, prostate (Rothwell et al, 2011) and breast cancer. (Holmes et al, 2010)

2. In a study containing 1121 participants, it was found that those taking 81mg of aspirin a day for at least a year had the risk of colorectal adenomas reduced by 19%. (Baron et al, 2003)

3. A study containing a cohort of 498 people showed that taking 75mg aspirin daily for a year or longer decreased the risk of breast cancer by 33%. (García Rodríguez and González-Pérez, 2004)

4. In a study with 871 carriers of Lynch syndrome, taking 600mg aspirin over 56 months decreased the risk of colorectal cancer by 63%. (Burn et al, 2011)

5. A study containing 19,934 women who took 100mg of aspirin every other day for an average of 10 years found that lung cancer risk was decreased by 22%. (Cook et al, 2005)

6. A study with 10,931 men and 7196 women found that 325mg daily doses of aspirin decreased prostate cancer risk by 19% and colorectal cancer risk by 22%. (Jacobs et al, 2007)

7. Taking low doses (75-100mg) of aspirin has been shown to give a 10% reduction in overall cancer incidence that begins during the first 10 years of treatment. (Thun et al, 2012)

8. Of 17,285 Participants taking 75mg or greater doses gave rise to a decrease in risk of 36% in cancer with distant metastases. (Rothwell et al, 2012)

9. A 24 year study of 1537 women who were taking 325mg aspirin for 2 or more times a week were found to have increased gastrointestinal bleeding by 43%. (Huang et al, 2011)

10. Another study with 1024 patients investigating the side effects of aspirin found that in some people micro-bleeds in the brain can occur as a result of taking aspirin. (Vernooij et al, 2009)

**Summary advice**

Studies show that taking aspirin can be beneficial in certain cancers. The effective dose can change depend on which cancer a person is trying to prevent. In general, the use of aspirin is most effective if taken over a period of 3 to 5 years or longer. If you are thinking of taking aspirin to prevent a cancer please talk to your specialist in regards to the options you have and the steps that you should take.
References


**TAMOXIFEN AND AROMATASE INHIBITORS**

1. In a study with 13,388 women, those taking 20mg tamoxifen a day over 5 years were found to have a 49% reduction in invasive breast cancer. (Fisher et al, 1998)

2. In a study with 13,388 women, those taking 20mg tamoxifen a day over 5 years were found to have a 50% reduction in non-invasive breast cancer. (Fisher et al, 1998)

3. A five year study following 10,000 women found that taking tamoxifen increased the risks of thromboembolisms (blood clots that can obstruct the flow in blood vessels) by 7 times. (Meier and Jick, 1998)
4. A seven years study with 13,388 women found that the risk of endometrial cancer was increased by 29% when taking 20mg of tamoxifen daily (Fisher et al, 2005). Endometrial cancers of stage III and IV occurred more frequently in long-term tamoxifen users 2 years or more (17.4% risk) than in non-users (5.4% risk). (Bergman et al, 2000).

5. The risks of endometrial cancer were 2 times more for 2-5 years of tamoxifen use and 6.9 times greater for at least five years compared with non-users (Bergman et al, 2000).

6. Three year endometrial-cancer-specific survival was significantly worse for long-term tamoxifen users than for non-users (76% for 5 years or more, 85% 2-5 years and 94% for non-users). (Bergman et al, 2000)

7. Postmenopausal breast cancer patients who have been treated for 12 months or more with tamoxifen (40mg, 30mg or less) daily are at a 2.3 times increased risk of endometrial cancer that for people who have never used it. (Van Leeuwen et al, 1994).

8. Aromatase is an enzyme that makes oestrogen, a chemical needed for tumours to grow. 4560 women exemestane (aromatase inhibitor) taking were followed for 35 months, the annual incidence for invasive breast cancer was decreased from 55% to 19%. (Goss et al, 2011)

9. Anastrozole (aromatase inhibitor) compared with tamoxifen with women taking the drugs over 3-years success (prevention of breast cancer) of anastrozole was 91.2% versus 89.3% for tamoxifen in hormone receptor-positive patients. (Baum et al, 2002)

References
BREASTFEEDING

1. A review of 7000 previous studies has shown that breastfeeding can reduce women’s risks of breast cancer by 4.3%. (Collaborative group on hormonal factors in breast cancer, 2002)

2. Breastfeeding can also benefit the baby by increasing immunity and decreasing the likelihood of obesity, both of which are factors that can prevent a range of future illnesses including cancer within the child. (World Cancer Research Fund, 2007)

3. Breastfeeding for 6 months and decreasing the risk of cancer by 4% would potentially result in 1000 fewer cases of breast cancer in the UK each year. (Cancer Research UK, 2001)

4. A study suggested that for each birth a mother’s risk of breast cancer decreases by 7%. (Collaborative group on hormonal factors in breast cancer, 2002)

5. A study with 685 women with inherited significant alterations in BRCA1 found that breastfeeding for up to a year or more caused a 45% reduction in the risk of breast cancer. (Jernström et al, 2004)

Summary advice
Experts say that breastfeeding every child exclusively for six months and complementarily for a further 6 months is advisable. This means for the first 6 months after birth the baby should only be given breast milk for food, after this stage breast milk may still be given alongside other foods. This should also be repeated with all babies. This benefits the mother and the baby, providing the mother with hormonal changes that prevent cancer and giving the baby a strong immunity and lower likelihood of obesity in later life.

References

SALT INTAKE

1. Salt intake is linked to 14% of cancers in the UK. (World Cancer Research Fund, 2007)

2. Salt, salty food, salted foods increase stomach cancer risk. (World Cancer Research Fund, 2007)

3. Ensure that you keep your salt intake to less than 6g a day or less than 2.4g of sodium. (Davies et al, 2011)

4. In a study of 5576 people, a high salt intake was linked to a higher mortality from stomach cancer: 61% in men and 54% in women. (Joossens et al, 1996)

References


EXERCISE

1. Exercise can reduce the risk of bowel, postmenopausal breast cancer and endometrial cancer. (World Cancer Research Fund, 2007)

2. More than 3% of breast cancers, more than 5% of colon cancers, and around 4% of endometrial cancers in 2010 were linked to people doing fewer than 150 minutes of physical activity per week. (Parkin, 2010)

3. 12% of Bowel cancer cases in the UK could be prevented by people becoming more active and participating in exercise. (World Cancer Research Fund, 2007)

4. Prostate cancer mortality is reduced by 30% by incorporating exercise into the lifestyle. (Thomas and Davies et al 2007)

5. Incorporating exercise into the lifestyle can reduce the breast cancer recurrence risk by 40%. (Thomas and Davies et al 2007)

6. Doing six hours of physical activity a week can reduce the risk of death from bowel cancer by 50%. (Thomas and Davies et al 2007)

7. A meta-analysis found that those people who participated in physical activity were at 23% less risk of lung cancer. (Tardon et al, 2005)

8. Women who exercise may have a 20-30% decreased risk of endometrial cancer. (Monnikhof et al, 2007)
9. A study collating previous research found that people who regularly exercise were 16% less likely to develop bowel polyps. (Wolin et al, 2011)

10. Those who regularly exercise are 35% less likely to develop large or advanced polyps. (Wolin et al, 2011)

**Summary advice**
Exercise is important for health, current guidelines state that everyone should aim to do a minimum of 30 minutes of activity a day. It is not necessary to have to go to a gym. Walking, running, sports or swimming may be as beneficial. The more you can do the more of a benefit it will be. Try spending less time in front of the television and computer and do more active things like gardening which is more physical. Current guidelines state adults 19 or over should do 150 minutes a week, involving moderate physical activity. Two days a week should be for muscle strength and activity should be in 10 minute or longer intervals. Children 5-18 should do 60 minutes of vigorous activity a day and children below 5 should do 180 minutes of activity a day.

**References**


**VITAMINS and SPICES**

1. Folate in the diet can reduce pancreatic cancer risk by 23%. (WCRF, 2007)

2. A high zinc diet was found to be related to a lower mortality from prostate cancer and showed to decrease the risk of death by 36% (Epstein et al, 2011). Zinc can be found in oysters, sesame seeds, peanuts and a range of other foods.

3. A study found that women with low levels of vitamin D had a 71% greater chance of recurrence and a 60% greater risk of death. (Goodwin et al, 2009)

4. Curcumin, a chemical found in turmeric, was found to be useful in oesophageal cancer cells as studies found that it kills cancer cells within 24 hours (O’Sullivan-Coyne et al, 2009). 10mg a day had no side effects on any patients. (Aggarwal et al, 2003)
5. Curcumin has antioxidant and anti-inflammatory properties, lab tests shows that colon cancer tumours were reduced by greater than 57% with the use of the spice as a drug. (Rao et al, 1995)

References


COMBINED ORAL CONTRACEPTIVE PILL

1. Individuals with inherited significant BRCA1 gene alterations who used oral contraceptive (oestrogen and progesterone) before the age of 30 had a 29% increased risk of cancer (Narod et al, 2002).

2. Individuals with inherited significant BRCA1 gene alterations who used oral contraceptive (oestrogen and progesterone) for a period of 5 years or more, had a 33% increased risk of cancer (Narod et al, 2002).

References
HORMONE REPLACEMENT THERAPY

1. Hormone replacement therapy can cause ovarian, uterine and breast cancer. (Parkin, 2010)

2. Hormone replacement therapy is responsible for 1.1% of all cancers in women, and 0.5% of all cancers in the UK. This is around 1700 cases a year. (Parkin, 2010)

3. Women using hormone replacement therapy have a 66% increased risk of breast cancer, but this risk decreases after 5 years of stopping the medication. (Cancer Research UK)

4. 948,000 women were studied for 5-6 years, the findings suggested that those on HRT had a 20% increased risk of ovarian cancer and a 23% increased risk of death. (Beral et al, 2007)

5. Women on combined HRT have a higher breast cancer risk than the oestrogen-only HRT. (NHS)

6. Oestrogen-only HRT may protect against breast cancer after hysterectomy. (Anderson et al, 2012)

7. The risk of breast cancer after surgical menopause is decreased by 60% and is safe for BRCA1 and BRCA2 mutation carriers. (Rebbeck et al, 2005)

8. A study found that using Oestrogen only HRT resulted in five breast cancers in 1000 over five years. Using oestrogen-progestagen HRT over the same amount of time resulted in 19 additional cancers per 1000 users. (Beral et al, 2003)

References


