Unit 14: Physiological Disorders and their Care.

For unit 14 I have chosen to study two different physiological disorders. We were able to choose two physiological disorders from a range of disorders, I have chosen to study Breast Cancer and Coronary Heart Disease, which is a circulatory disorder. I have decided to pick Coronary Heart Disease as I know somebody that died of heart attack due to CHD and Breast Cancer because there is a lot of research and information online. Once I have given a brief overview on both disorders I will discuss the signs, symptoms, causes of the disorders and how they impact an individual’s physical, mental, social and emotional health.

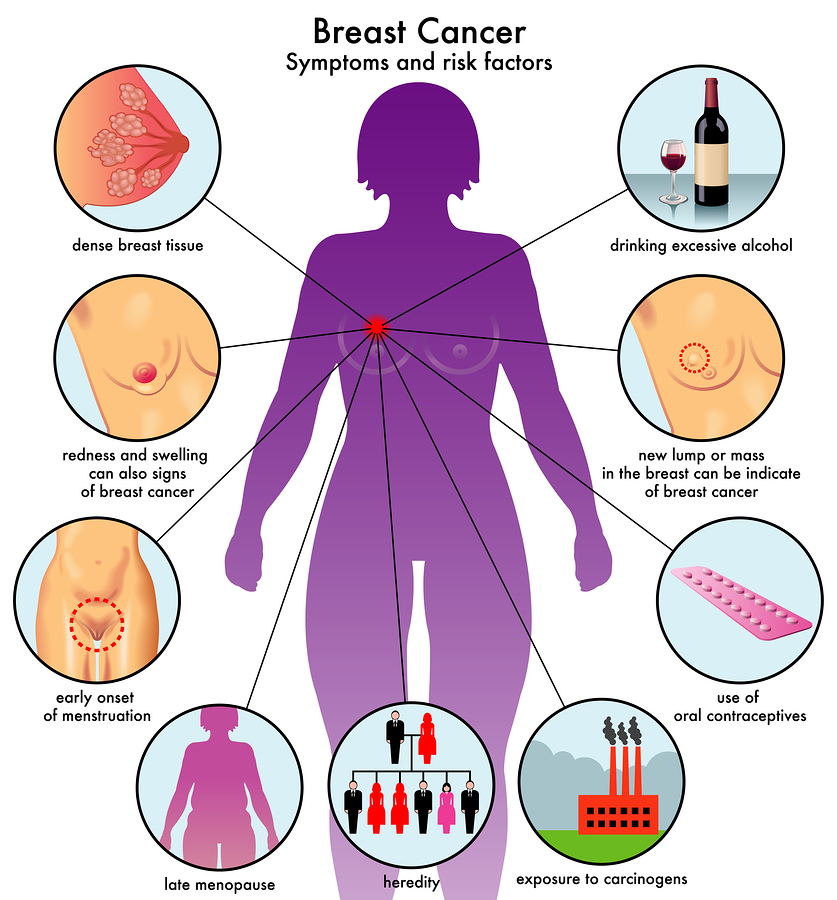
**P1: Explain the causes signs and symptoms of physiological disorders on service users.**

**D1: Evaluate the impact of physiological disorders on the health and wellbeing of service users.**

**Breast Cancer**

Breast cancer is an uncontrolled growth of breast cells. Breast cancer can occur when there are abnormal changes in the genes that are in charge of controlling the growth of cells and keeping them healthy. Usually, the healthy cells within the human body take over the old cells that are dying. However, the body isn’t always able to do this which results in cells dividing without any control or order and producing bad cells that can form a tumour. A tumour can be both benign which is not dangerous to health and is not considered to be cancerous or malignant which can be dangerous and is considered cancerous. If malignant cells are left in the breast without treatment overtime, they can spread to other parts of the body. (Breastcancer.org, 2017)

**Causes**

[](http://www.google.co.uk/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwigo5T8kJPWAhWB0RQKHREtA7cQjRwIBw&url=http://nethealthbook.com/cancer-overview/breast-cancer/causes-breast-cancer/&psig=AFQjCNH9cFwI-zcs6LK_mxNoJgX3EvH4qQ&ust=1504875694637663)

A diagram showing some of the causes of Breast Cancer.

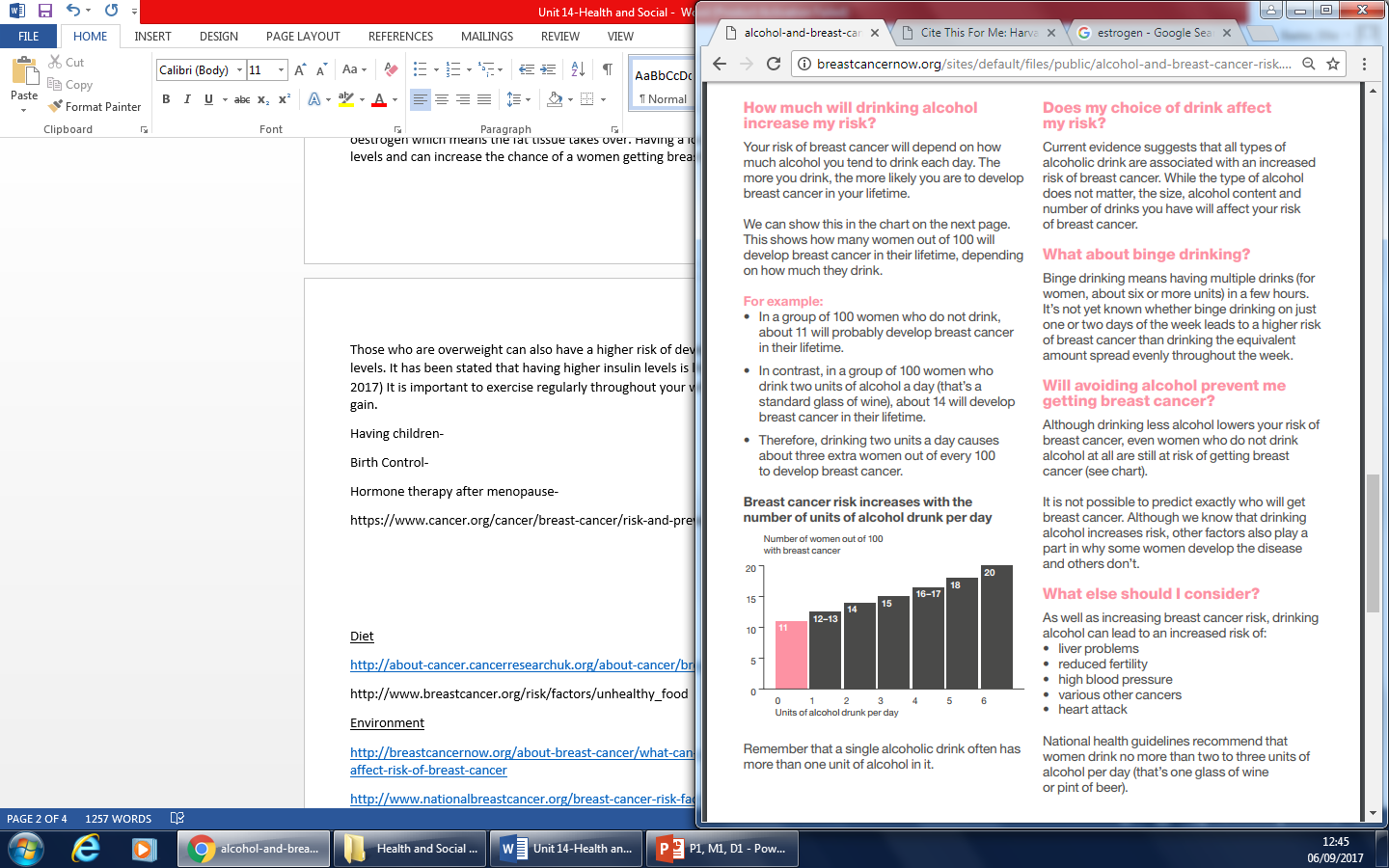
There are a number of causes and reasons why individuals develop breast cancer including inherited traits, lifestyle choices, diet and the environment. According to Cancer Research UK, “27% of breast cancer cases each year in the UK are linked to major lifestyle and other risk factors” and “An estimated 27% of female breast cancers in the UK are linked to lifestyle factors including overweight and obesity (9%), alcohol (6%), and certain occupational exposures (5%)”. (Cancer Research UK, 2017)

**Inherited Traits**

One of the causes of breast cancer is due to inherited traits. The statistics of breast cancer being inherited is about 5% to 10%, and is caused by a parent passing down an abnormal gene to a child. Individuals also have a higher risk of developing breast cancer if they have family members on the same side of the family who have had or have breast cancer or ovarian cancer. Other inherited traits of breast cancer include, having blood relatives including grandmothers, mothers, sisters and aunts on both sides of the family who have been diagnosed with breast cancer before the age of 50. Another inherited trait is if there are other cancers within your family despite breast cancer, such as prostate, pancreatic, stomach, thyroid and colon. Ethnicity can also be a cause of breast cancer, for example if you are of Ashkenazi Jewish (Eastern European) heritage you are at a higher risk of developing breast cancer. Mostly all inherited traits of breast cancer are linked with two abnormal genes which are, BRAC1 (Breast Cancer gene one) and BRCA2 (Breast Cancer gene two). All individuals have these two genes and they help to repair any cell damage and help to keep breast, ovarian and other cells in the body growing at a normal rate. However, sometimes these two genes can contain abnormalities that are passed down through generations. Those genes that carry abnormalities usually do not function properly and the risk of breast cancer increases. (Breastcancer.org, 2017)

**Lifestyle Choices**

There are a variety of lifestyle choices that can cause an individual to have an increased risk of developing breast cancer. One of these lifestyle choices is the amount of alcohol an individual intakes. The risk of developing breast cancer due to drinking alcohol increases depending on the amount of alcohol an individual consumes. Those who have one small drink a day have a very small risk of developing breast cancer compared to those who have up to 5 drinks in one day have 1 ½ times the risk of developing breast cancer compared to those who do not drink alcoholic beverages at all. It is stated that excessive alcohol consumption can mean you are at higher risk of developing other cancers not just breast cancer. (Cancer.org, 2017) According to Cancer Research UK, “Breast cancer risk is 7-12% higher per unit of alcohol per day”. “Breast Cancer risk is 4% higher in women who consume up to 12.5g (1.5 units) of alcohol per day, 23% higher in women who consume around 12.5-50g (1.5-6 units) of alcohol per day, and 60% higher in women who consume 50g+ (6+units) of alcohol per day, compared with non-drinkers”. (Cancer Research UK, 2017)



A graph showing that the Breast cancer risk increases with the number of units of alcohol drunk per day.

After a woman has been through the menopause there is a risk of them developing breast cancer if they are overweight or obese. Before the menopause the ovaries make the majority of a women’s oestrogen and a small amount is made from fat tissue, however after the menopause takes places the ovaries tend to stop producing the oestrogen which means the fat tissue takes over. Having a lot of fat tissue within the body increases the oestrogen levels and can increase the chance of a women getting breast cancer. Those who are overweight can also have a higher risk of developing breast cancer due to having high blood insulin levels. It has been stated that having higher insulin levels is linked to cancer, including breast cancer. Other proved statistics based on being overweight are, if an individual puts on weight in adulthood after the age of 18 they have a higher risk of developing breast cancer after the menopause. It is important to exercise regularly throughout your whole life especially after the menopause due to weight gain. (Cancer.org, 2017) According to Cancer Research UK, “An estimated 9% of female breast cancers in the UK are linked to excess body weight” and “Breast cancer among post-menopausal women is 12-13% higher in those who are overweight”. (Cancer Research UK, 2017)

Using Hormone replacement therapy (HRT) can increase an individual’s chance of developing breast cancer. The risk of developing breast cancer whilst using hormone replacement therapy increases the longer you use HRT, so it is advised to use it for short periods of time. There are three types of hormone replacement theory, there is a combined HRT (oestrogen and progesterone), oestrogen-only HRT and a steroid-based HRT which is called Tibolone. All of these types of HRT can increase your chance of developing breast cancer, however the risk is lower when using the oestrogen-only HRT. Despite this treatment increasing your risk, the risk does start to decrease once you have stopped taking HRT, within five years the risk of developing breast cancer will be the same as if you had never used the treatment. (Breast Cancer Now, 2017) According to Cancer Research UK, “Breast cancer risk is 55%-100% higher in oestrogen-progestogen HRT (combined HERT) current users versus never users”. (Cancer Research UK, 2017)

Smoking has had some links to increasing the risk of developing breast cancer. This is due to the build-up of heavy metals and carcinogenic substances in the breast tissue from a cigarette. It has been stated that women who smoke cigarettes develop breast cancer around eight years earlier than women who do not smoke. (Net Health Book, 2017) The risk of developing breast cancer due to smoking cigarettes has been linked mainly to younger, premenopausal women and extremely heavy second-hand smoke exposure has also been linked to the causes of breast cancer. (Breastcancer.org, 2017) According to Cancer Research UK, “Breast cancer risk is 7-13% higher in current smokers and 6-9% higher in former smokers”. (Cancer Research UK, 2017)

**Diet**

Having a bad diet and eating certain types of foods can result in your risk of developing breast cancer increasing. It has been estimated that roughly 9 out of every 100 cases of breast cancer could be avoided by individuals changing their diet. It has also been estimated that 5 out of every 100 cases of breast cancer could be avoided by maintaining a healthy body weight. There are a range of dietary fats including oil, margarine and butter that can increase the risk of breast cancer if an individual consumes a large amount. Particularly, women who have a lot of fats in their diet after they have had the menopause are more at risk of developing breast cancer. It is important to have a balanced diet and avoid consuming too many foods that contain high saturated fats including, fatty cuts of meat, cheese (especially hard cheese), biscuits, cakes, pastries and cream. It is suggested that animal fats containing polyunsaturated fats which are found in most vegetable oil and margarine should be replaced with monounsaturated fats such as olive oil, as this can help to decrease the risk of developing breast cancer. (About-cancer.cancerresearchuk.org, 2017) According to Cancer Research UK, “Breast cancer risk is 13% higher in women with the highest total fat intake compared with the lowest”. (Cancer Research UK, 2017)

**Environment**

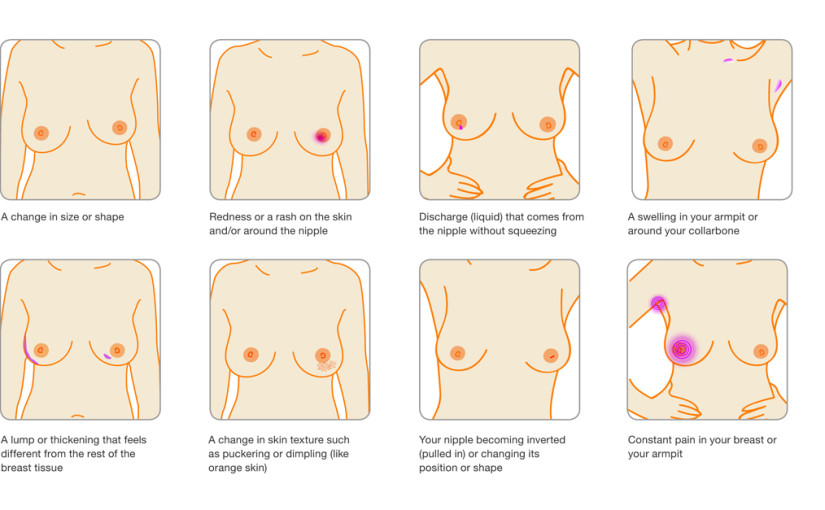
The environment and things that people expose themselves to can increase an individual’s chance of developing breast cancer. Ionising radiation can increase the chance of breast cancer, the risks related to mammograms and x-rays are extremely low, however natural sources such as the ground, food and cosmic rays can slightly increase the risk of developing cancer for an individual. Having radiotherapy treatment can increase the risk of an individual developing breast cancer. Particularly, radiotherapy treatment around the chest area which is used to treat Hodgkin’s lymphoma, cancers and respiratory diseases can increase the risk. Women who have received radiotherapy treatment around the chest area specifically women under the age of 30 have an increased risk of developing breast cancer in their later life. The risk of developing breast cancer is specific for each individual and can depend on the age of which you received radio therapy, the dose and type of radiotherapy and the time since you last had treatment. (Breast Cancer Now, 2017)

**Signs**

There are a variety of signs that can indicate that a woman may have breast cancer. A woman may notice that she feels that her breast appearance has changed and that they feel different from usual, this can be a natural change or may indicate a sign of breast cancer. Other visible signs can be a change in skin texture, redness or rash on the skin and the nipple looking different from usual. Breast pain can be a sign of breast cancer; however, breast pain is common with natural breast change or a benign tumour. There are many similarities between the signs and symptoms of breast cancer due to most of them being physical changes to the breast. Many people think that signs of breast cancer can include feeling tired, lethargic, generally unwell, weight gain and weight loss, however this is not the case. It is very likely to feel completely well but discover a noticeable change in the breast when you have breast cancer, which is why it is vital to have any unusual changes in the breast checked by the GP. (Breast Cancer Care, 2017)

**Symptoms**

The most common symptom of breast cancer is a lump found on the breast, however around 90% of lumps found on the breast are not cancerous. As well as finding a lump on the breast, there are a variety of other symptoms. If you find a new lump or an area that has thickened tissue in either breast that wasn’t noticeable before it is very important to get it checked by the GP, it is likely not to be serious but it is best to get it checked. Another symptom is if there is a noticeable change in the size or shape of one or both breasts, if it seems like an abnormal change it should be checked by the GP. Other symptoms include blood-stained discharge from either nipples, a lump or swelling in either armpit, dimpling on the skin of the breasts, a rash on or around your nipple and a change in appearance of the nipple. Usually breast pain is not a symptom of breast cancer, however this can differ depending on the individual. (Nhs.uk, 2017)



A picture displaying signs and symptoms of Breast Cancer.

Clinical Diagnosis- A clinical diagnosis is made on the basis of medical signs and patient-reported symptoms.

Differential Diagnosis- A differential diagnosis is the process differentiating between two or more conditions which share similar signs or symptoms.

**Impact of Breast Cancer**

**Physical**

Having breast cancer can have a big impact on an individual’s physical health. Breast cancer and its treatment can particularly affect the way in which your body looks which is why many people find difficult to cope with. Weight gain is a physical impact of breast cancer that many individuals experience, weight gain is particularly common with those who are newly diagnosed with breast cancer. Those who experience a change in the way their body looks and put on weight can feel very self-conscious, however they should not feel embarrassed as the majority of women diagnosed with breast cancer will experience the same thing. Other physical impacts include menopausal symptoms such as, hot flushes, chills, irregular periods and night sweats. A loss of sex drive and vaginal dryness can also be a physical impact that individual’s experience, some treatments that individuals receive can cause pain and sensitivity which can cause sex to be uncomfortable. (Breast Cancer Care, 2017)

**Emotional**

Those who are diagnosed with breast cancer experience a range of different emotions. Individual’s first initial feelings when they are first diagnosed with breast cancer tend to change overtime, as some individuals feel as though being diagnosed with breast cancer is a new start and a new way of life. Many individuals who are diagnosed with breast cancer feel frightened as it is unknown what the future may hold, however some individuals also feel a sense of relief as the cancer has been found and the correct treatment can be given. Other emotions experienced are shock, anger and feeling out of control as many people find it hard to understand why them. (Breast Cancer Care, 2017)

Many individuals who are diagnosed with breast cancer deal with feeling anxious as they are having to deal with an illness that can be potentially life threatening. Having anxiety can affect both your physical and emotional health, if it effects an individual emotionally they will feel very tense, worried and nervous. Having anxiety can also affect an individual completing everyday tasks, such as dropping your children to school. (Breast Cancer Care, 2017)

Depression is also a common emotional effect that individuals may experience. Depression can occur at any time including during your diagnoses, whilst having treatment and after treatment has finished. Those who are experiencing feelings of depression due to being diagnosed with breast cancer should not feel alone and should speak to family members or professionals. Signs of depression can include, a loss of enjoyment for everyday activities, loss of interest in your appearance, loss of appetite and feeling very low or suicidal. If you are experiencing these feelings it is vital that you get help as struggling on can be fatal. (Breast Cancer Care, 2017)

As part of breast cancer treatment many women will have a mastectomy. After having this surgery, it can be very painful due to the breast area being extremely bruised, this can cause individuals to feel upset due to the pain. The surgery can also affect individual’s confidence and self-esteem as many women feel as though they look manly and unattractive. Over time these feelings will pass as individuals will feel more comfortable with their body changes.

**Social**

Having breast cancer can have an impact on an individual’s social life. Some individuals find that their relationships change after they have been diagnosed, sometimes friends, co-workers and family members treat individuals differently. Relationships may change because the individual is avoided by friends, co-workers and family members due to the not wanting to discuss the topic of cancer. The individual who has been diagnosed with cancer may avoid seeing friends and family themselves, this may be because they too feel self-conscious to go out and they may not want to discuss the diagnoses as it could make the individual upset. Other reasons could be that they are too tired or sick to get out of bed so they physically cannot go out and socialise. (Cancerinstitute.org.au, 2017)

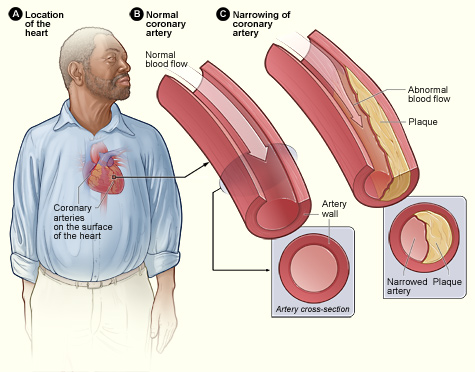
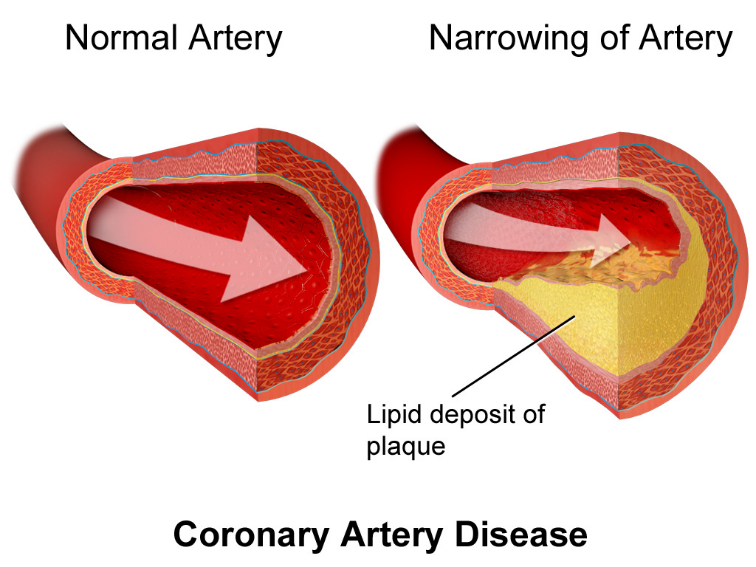
**Mental**

Being diagnosed with breast cancer can affect an individual’s mental health. Particularly, individuals find it tough when they go to work due to not being able to relate to co-workers anymore. They may feel isolated in the work place due to not wanting to talk to co-workers about breast cancer, as talking to co-workers could risk them starting to treat you differently. Many cancer patients want to be treated the same as before they were diagnosed. Other mental effects of breast cancer are that individuals may be too sick to work due to treatment, this can cause people to not be able to go to work and in some cases statutory sick pay is not provided. This can be worrying due to financial worries but also upsetting as many individuals build up good relationships with the colleagues they work with and may feel like they are missing out on normality. (Breast Cancer Care, 2017)

Being diagnosed with breast cancer does affect an individual and their physical, emotional, social and mental health massively. However, some individuals who are diagnosed try to see the positive in the diagnoses as they feel they want to make the most of their lives and the time that they might have left depending the seriousness of the diagnoses. Some individuals who gain weight due to their diagnoses, feel motivated to lose the weight. This encourages them to eat healthier and complete regular exercise. It can also create opportunities for individuals to make new friends by joining different clubs such as a running club. Some individuals choose to change their spirituality or start believing in a religion when they are diagnosed with cancer, the reason for this is because research has suggested that spirituality can improve the quality of an individual’s life and can help to lessen depression and ensures a better physiological function. Many individuals who are diagnosed with cancer decide to put their emotions to one side and see it as a positive. Many feel lucky that their cancer has been found so that they can receive the treatment they need as quickly as possible, others see it as a new way of life and a way to better themselves as a person. It is also a great way to make new friends and take on new opportunities that you may not have before the diagnosis. There are many support groups for breast cancer that give individuals the opportunity to go and talk to people just like them, this can be relieving for people who struggle to talk to their families. There are a variety of support groups that individuals can attend including, peer-led or self-help groups which are led by individuals suffering with cancer, professional-led groups which are run by counsellors or social workers and informational support groups that are led by professionals who can offer out information about breast cancer. Having the range of support groups ensures that there is a group that suits all individuals, it is also a great way to make friends if you attend the groups. (Mdanderson.org, 2017)

**Coronary Heart Disease- Circulatory Disorder**

Coronary Heart Disease (CHD) is one of the most major causes of death in the UK and worldwide. CHD is a disease is caused when the heart’s blood supply is blocked or interrupted due to the build-up of a waxy substance called plaque in the coronary arteries. Overtime, the build-up of plaque can harden or rupture which narrows the coronary arteries and reduces the flow of oxygen-rich blood to the heart. In many cases, blood clots form which cut off the oxygen-rich blood to the heart muscle and a heart attack occurs. (Nhlbi.nih.gov, 2017)

Diagrams showing a normal artery compared to a narrowing artery.

**Causes**

There are a number of causes and reasons why individuals develop Coronary Heart Disease including inherited traits, lifestyle choices, diet and the environment. According to the British Heart Foundation, “CHD by itself is the most common cause of death in the UK. In 2010, just below one in five male deaths and one in ten female deaths were from the disease- a total of around 80,000 deaths”. Also according to the British Foundation, “CHD, by itself, is the most common cause of premature death in the UK. Just under one fifth (17%) of premature deaths in men and one in twelve (8%) premature deaths in women were from CHD, which caused over 25,000 premature deaths in the UK in 2010”. (Bhf.org.uk, 2017)

**Age**

Age is one of the causes that can increase the risk of developing CHD. The risk of developing CHD due to age is earlier in men, with the risk for coronary heart disease starting at the age of 45. In women, the risk increase starts at the age of 55. (Nhlbi.nih.gov, 2017) It is stated that, about four out of five people who die of coronary heart disease are 65 years old or older. (Ghc.org, 2017)

**Thrombosis**

Having thrombosis can increase your risk of developing CHD. Thrombosis is when an individual has a blood clot in their vein or artery. Sometime thrombosis occurs in the coronary artery which prevents the blood from reaching the heart muscle. If this occurs, it usually leads to a heart attack. (Nhs.uk, 2017)

**Inherited Traits**

One of the causes of Coronary Heart Disease is inherited traits. If there is a family history of CHD an individual has an increased risk of developing the disease. Particularly, the risk increases if there is a male relative under the age of 55 with CHD or a female relative under 65 with CHD. According to Medical News Today, “Individuals who have at least one biological parent with CHD have a 40-60% higher risk of developing the disease themselves”. (Medical News Today, 2017)

**Lifestyle Choices**

Smoking is a major risk and cause of developing Coronary Heart Disease. The nicotine and carbon monoxide from the smoke can put strain on the heart as it makes it work faster. Smoking also damages the lining of an individual’s arteries, which leads to the build-up of fatty material that in time narrows the artery. The narrowing of the artery can cause angina or a heart attack. According to the British Heart Foundation, “Smokers are almost twice as likely to have a heart attack compared with people who have never smoked”. Second-hand smoke can also be harmful for individuals. Research into the impacts of second hand tobacco smoke shows that it can cause heart disease in non-smokers. This means that those who smoke are potentially harming their own family and friends. (Bhf.org.uk, 2017)

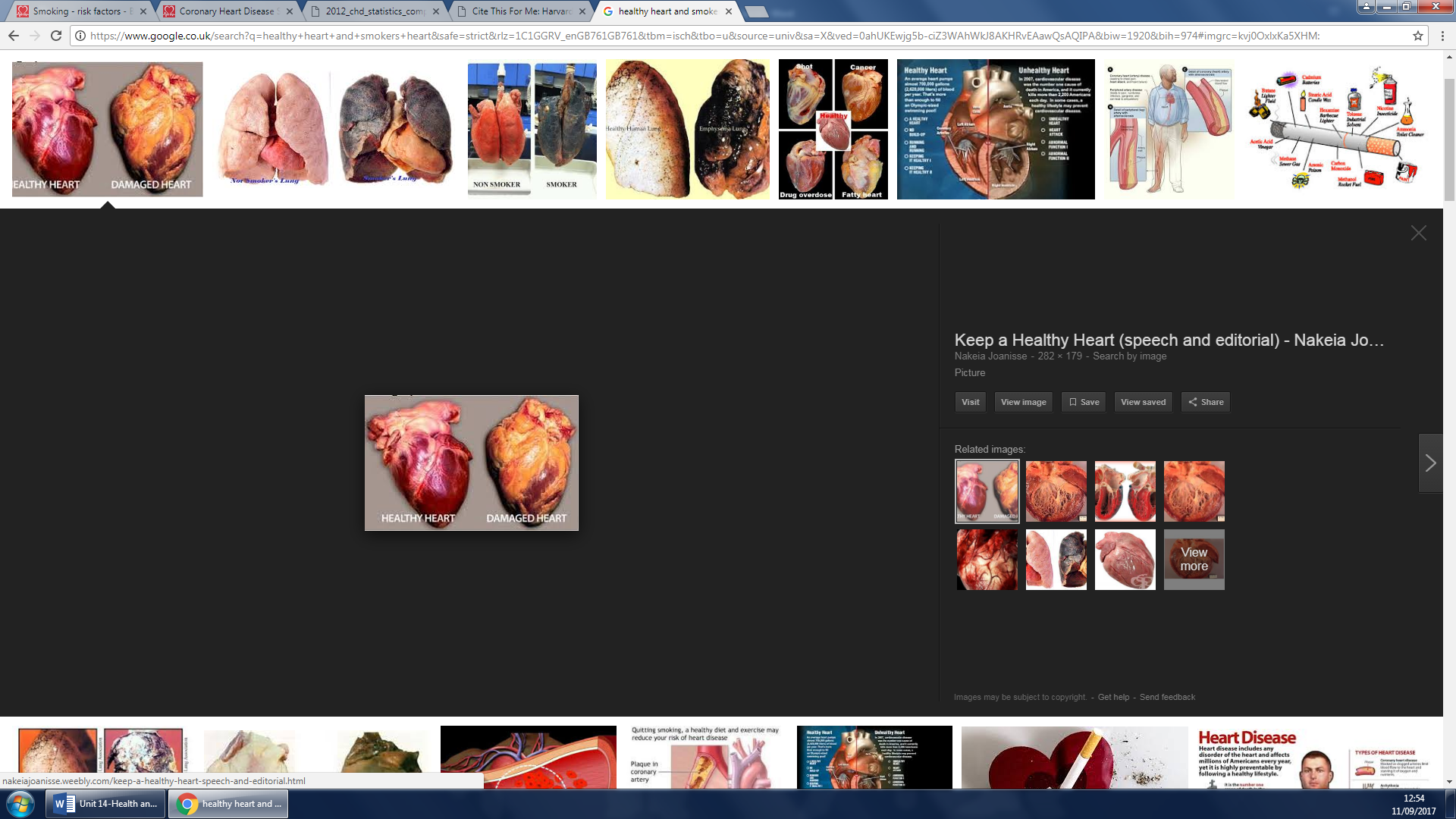


Photo showing the difference between a healthy heart and a smoke damaged heart.

Having a lack of exercise within your lifestyle is a risk factor for developing CHD. It is very important to complete regular physical activity as this helps to increase the risk of CHD by helping to control cholesterol levels, blood pressure, regulate blood sugar which is very important for individuals with diabetes and to lose weight or stay at a healthy weight. Being overweight or obese can also increase the risk of developing CHD, particularly being overweight or obese cause’s heart attacks. Obesity is mainly linked to CHD due to it being linked to other CHD risk factors such a high cholesterol levels, high blood pressure and diabetes. (Nhlbi.nih.gov, 2017)

**Diet**

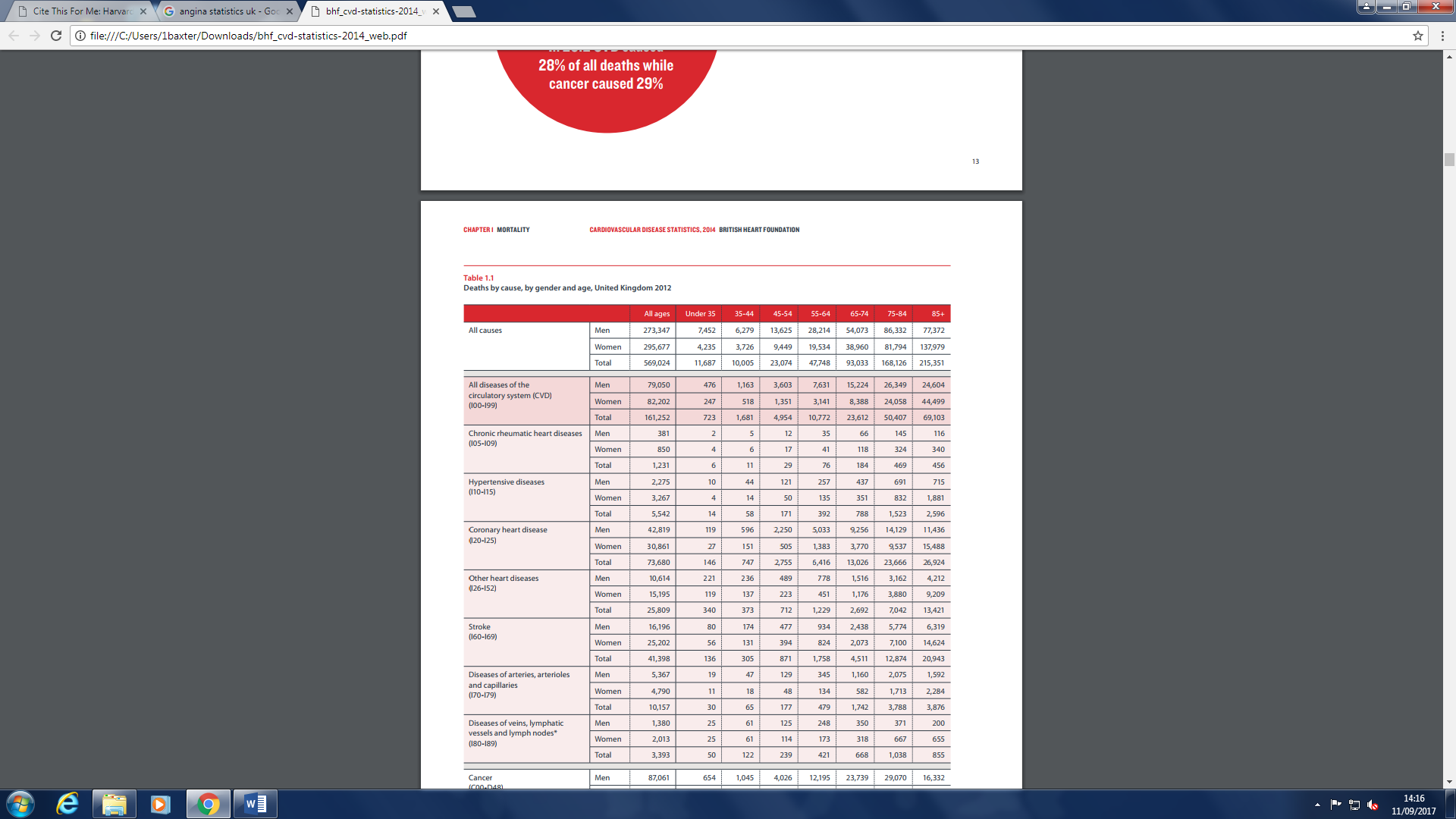
Having diabetes can increase the risk of developing CHD. Having a high blood sugar level can lead to diabetes, which can more than double your risk of developing CHD. It is stated that, coronary heart disease is recognised to be the cause of death for 80% of people with diabetes. (Diabetes.co.uk, 2017)

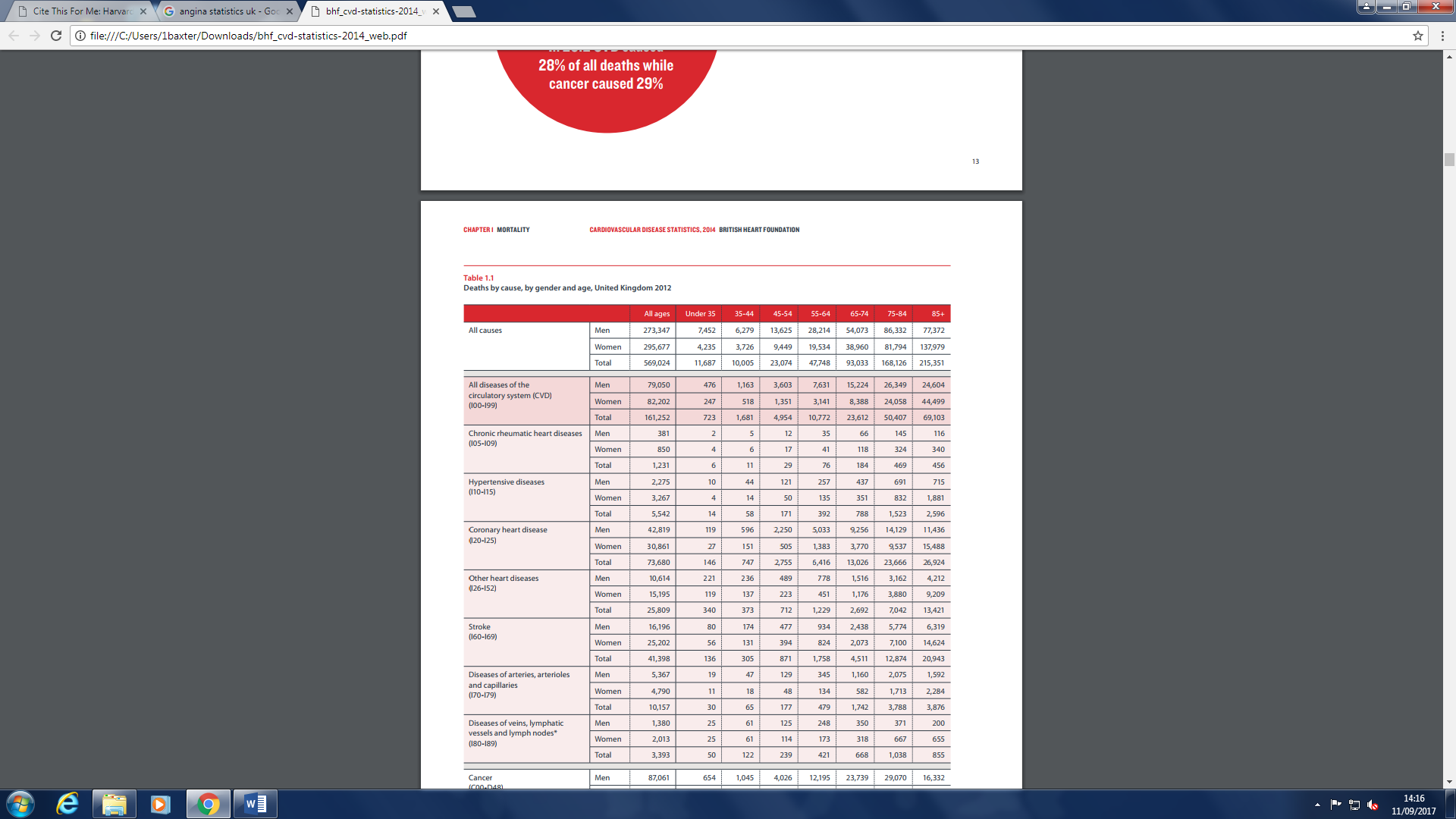
Having a high cholesterol level can also increase the risk of developing CHD. Cholesterol is a fat made by the liver from the saturated fat in your diet. Cholesterol is essential for healthy cells but can lead to CHD if there is too much cholesterol in the blood. The causes of high cholesterol levels are similar to CHD and include an unhealthy diet, smoking, diabetes, high blood pressure and having a family history of heart disease. (Nhs.uk, 2017)

Overall, it is extremely important to complete daily exercise in order to help prevent diet related causes of CHD. Completing regular exercise helps to reduce the risk of CHD by helping an individual to control their cholesterol, blood pressure and regulate blood sugar levels. According to Heart UK, “In 2013 in England 300 million prescriptions were issued to help treat CHD”. (H, 2017)

**Environment**

Having high stress levels can increase the risk of an individual developing CHD. If an individual suffers with the disease and starts to experience feelings of anxiety or feels extremely stressed, it may bring on symptoms such as Angina which is heart pain that causes the chest to tighten. Stress can often lead from a stressful work life or problems within the family as they are personal to individuals. (Bhf.org.uk, 2017)

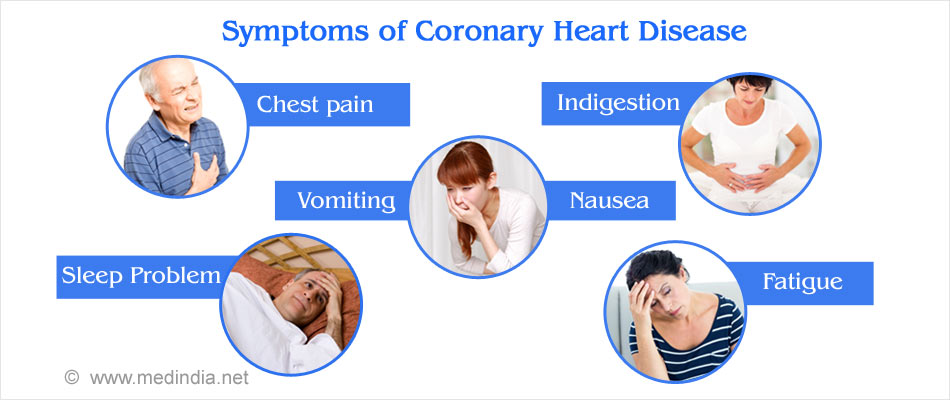




A table showing the amount of deaths caused by all heart related diseases and the amount of deaths due to CHD.

**Signs**

There are very few signs of Coronary Heart Disease and many people may experience no signs before being diagnosed with the condition. One sign of CHD can be heart palpitations. Heart palpitations are heartbeats that become more noticeable, it may feel like your heart is pounding, beating too fast or irregularly and this will usually only last for a short amount of time. Most of the time heart palpitations are nothing to worry about but if they occur regularly and become painful they can be a sign of CHD and should be treated by a GP. Another sign of CHD is breathlessness. Breathlessness is the most common reason for an individual visiting a hospital and one of the most common reasons why people call 999. When breathlessness comes unexpectedly it is usually down to a medical reason and should be checked out by a health professional. Usually long-term breathlessness is a sign of CHD rather than sudden breathlessness. Breathlessness can also be linked to angina and heart failure which are symptoms of CHD. Other signs of CHD include, sleep problems, fatigue, vomiting, nausea and indigestion. (Nhs.uk, 2017)



Signs of Coronary Heart Disease.

**Symptoms**

There are a range of symptoms that are linked to Coronary Heart Disease. The main three symptoms of CHD are angina, heart failure and heart attacks. Angina is caused by CHD and is a mild, uncomfortable feeling that can feel similar to indigestion. Angina can come in different severity, a severe angina attack causes an individual to feel a painful feeling of heaviness or tightness specifically around the chest area but the pain may spread to the arms, neck, jaw, back of stomach. Angina is usually triggered if an individual is feeling stressed or is completing physical activity, most symptoms of angina will pass within 10 minutes. (Nhs.uk, 2017) It is stated that approximately two million people in the UK are being diagnosed with the condition, affecting 14% of men and 8% of women. (GM, 2017)

Another symptom of Coronary Heart Disease is heart failure. Heart failure occurs when the heart is unable to pump enough blood to meet the body’s needs. Sometimes, the heart cannot fill with enough blood or the heart cannot pump blood to the rest of the body with enough force. In some cases, individuals have both problems. An individual will develop heart failure over a period of time as their hearts pumping action becomes weaker, heart failure can either affect the right side of an individual’s heart or the whole heart. The leading causes of heart failure are coronary heart disease, high blood pressure and diabetes. (Nhlbi.nih.gov, 2017)

Heart Attacks can also be caused by CHD. A heart attack occurs when an individual’s artery is completely blocked meaning no blood can reach the artery, having a heart attack can permanently damage the heart muscle. If an individual is having a heart attack they will experience a similar pain to angina but it will be a more severe pain, heart attacks can also happen when an individual is asleep. A heart attack can occur with no symptoms but individuals who have symptoms of a heart attack may feel lightheaded, they may sweat, feel nauseous or have breathlessness. (Nhs.uk, 2017) According to the British Heart Foundation, “Today, 530 people will go to hospital due to a heart attack and 190 people will die from a heart attack”. (Bhf.org.uk, 2017)

**Impacts of Coronary Heart Disease**

**Physical**

Having Coronary Heart Disease can effect an individual’s physical life and health massively. Once being diagnosed with CHD individuals will have to adapt their lifestyles, some of these adaptations can be significant changes. Many individuals diagnosed with CHD will have to change their lifestyle, this could include following a strict healthy diet, being physically active regularly, maintaining a healthy weight and giving up smoking and alcohol. This can be difficult particularly for overweight individuals diagnosed with CHD as they will have to change their diet and start completely daily exercise, which can be challenging as it is likely those who are overweight are also unfit.

People who are extremely fit and have a well-balanced diet can also be diagnosed with CHD. In this case, doing too much exercise can put strain on the heart due to it having to work extremely fast causing things like heart attacks. Having to stop exercise and rest more regularly can be just as challenging as having to start exercising as many people are passionate about doing exercise. It is important to have a balance of exercise and rest for the individuals with CHD who are working their heart to hard. (Nhlbi.nih.gov, 2017)

**Mental**

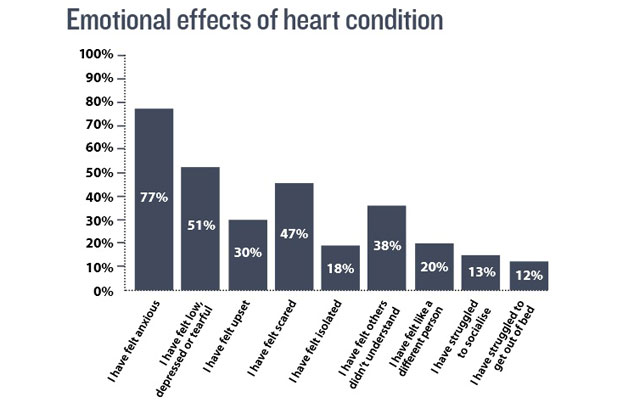
Coronary Heart Disease can have an effect on all areas of an individual’s life, including their work. According to the British Heart Foundation, “Nearly a third (29%) of people in work said the mental impact of their condition affected their ability to work”. This can result in individuals being less focused at work, having to take periods of time off, reduce their hours or completely leave the job. (Bhf.org.uk, 2017) Some individuals with CHD have to apply for disability benefits, individuals will only qualify for these benefits if they can demonstrate that their heart condition is stopping their ability to work or if they are unable to hold down a job. (Joann Kim, 2017)

**Emotional**

One of the biggest impacts of Coronary Heart Disease is an individual’s emotional health. Many individuals living with CHD will experience feelings of stress, fear, anxiety, depression and may worry about changing their lives to better their health. It is very important for those individuals who are feeling emotional about being diagnosed with CHD to talk to professionals or their family and friends, as talking to people can help to relieve how an individual is feeling. (Nhlbi.nih.gov, 2017)

Individuals may feel embarrassed about the way they are feeling about their diagnosis however, it is normal to feel anxious or depressed as there are many new physical limitations and social limitations that the individual will have to adapt to. Individuals may also feel afraid to go back to the hospital for appointments, this may be because they have had bad news at previous appointments. Other feelings that individuals may have to deal with is worrying about their future and the fear of death. The most common fear when living with a heart condition like CHD is having a heart attack.

According to the British Heart Foundation, “More than two thirds -68%- said their condition had affected them mentally, emotionally or psychologically. Of those who said their heart condition had affected their emotional wellbeing, anxiety was the most common symptom, with 77% saying the suffered from it. Over half (51%) said they had felt low, depressed or tearful, 47% felt scared and 38% felt other people didn’t understand how the condition affected them.” (Bhf.org.uk, 2017)



A graph showing the emotional effects of heart condition such as Coronary Heart Disease.

**Social**

Having Coronary Heart Disease can impact an individual’s social life. Those who have CHD usually have to follow a strict diet which does not include fatty foods or alcohol, this can make it difficult to go out for a meal and a drink with friends for example. This can affect individual’s friendships as they will not be seeing their friends regularly. Having CHD can also affect relationships. According to a reliable source, “A slightly small number 22% said it has strained their relationship. A further 2% said their relationship has ended as a result”. (Sites.google.com, 2017)

Being diagnosed with coronary heart disease does affect an individual and their physical, emotional, social and mental health massively. However, some individuals who are diagnosed try to see the positive in the diagnoses as they feel they want to make the most of their lives and the time that they might have left depending the seriousness of the diagnoses. In particular, coronary heart disease impacts an individual’s physical life the most. When diagnosed with coronary heart disease individuals feel motivated to better themselves, they do this by getting fit and by following a healthy diet. Having CHD also creates new opportunities to make friends by going to British Heart foundation support groups, this allows individuals to speak to people in the same situation as them and many individuals feel more positive after a session at the support group. According to a reliable source, “48% of people felt lucky to be alive, while 9% said they felt relieved. 26% said their relationship had strengthened as a result of their heart condition”. (Sites.google.com, 2017)

**M1: Analyse the changes in body systems and functions resulting from different types of physiological disorders on service users.**

An individual’s body functions with a disease such as breast cancer will work differently to somebody who does not have this cancer.

**Immune System**

An individual’s immune system with breast cancer compared to an individual’s immune system without breast cancer will function differently. The immune system helps to protect an individual’s body against illness and infection caused by bacteria, viruses, fungi or parasites. Having breast cancer can weaken the immune system, the reason for this is because the cancer cells within an individual’s body spread into the bone marrow. Bone marrow makes blood cells that help to fight infection within the body but when cancer cells spread into the bone marrow it stops making so many blood cells. This makes it hard for the body to fight off infection which is why treatment is usually needed.

Cancer treatments that an individual receives for breast cancer can also make their immune system weaker than those who do not require treatment for breast cancer. Treatment such as chemotherapy, biological therapies and radiotherapy can temporarily weaken an individual’s immune system due to treatment causing there to be a drop in the number of white blood cells made in the bone marrow. Some individuals with breast cancer may receive high doses of steroids, this can also weaken the immune system.

Having breast cancer does not mean the individual’s immune system is weak, it is just the treatment they have received that can weaken the immune system. Those who have a weak immune system are extremely vulnerable to infection, so it is vital that those who have breast cancer are careful about who they are around as picking up infection could make the individual extremely ill. (Cancer Research UK, 2017)

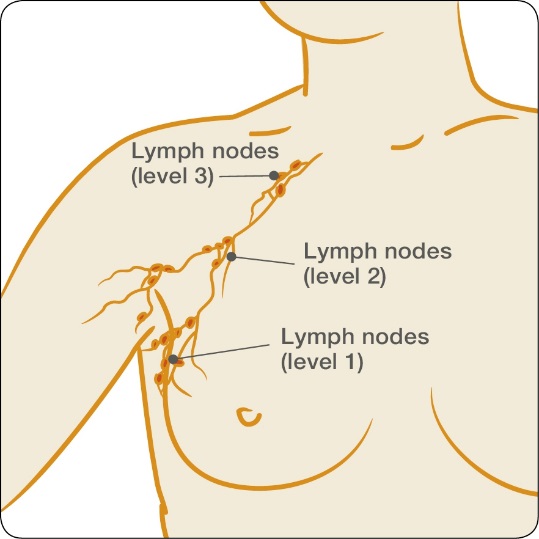
Those with breast cancer will have to take time to care for their immune system compared to those without breast cancer as their immune system will care for itself. It is vital that individuals with breast cancer have a good amount of sleep, getting 7 hours or more uninterrupted sleep can help the immune system to start functioning well again. It is important that before, during and after cancer treatment individuals have a good amount of sleep. As there is evidence that sleep deprivation weakens the immune system. It is also important to have a well-balanced diet as this helps an individual’s overall health and immune system. Many vitamins claim that they help to boost the immune system however they can interfere with cancer treatments, eating fresh food is a better option. (Breastcancer.org, 2017)

**Lymph Nodes**

Whilst an individual is having breast cancer surgery, lymph nodes are usually removed by the doctor. The reason for the removal of the lymph nodes is to check them for breast cancer cells. If breast cancer cells are discovered if the lymph nodes, the individual will have to undergo more surgery to remove more lymph nodes. Lymph nodes play a key role in the human body by filtering bacteria and other harmful substances out of the body. Unfortunately, the more lymph nodes an individual has removed the bigger the affect to their immune system. Any cut, graze, bite, burn or any injury that breaks the skin means the individual is more likely to develop an infection and once your lymph nodes have been removed the risk of developing an infection will never go away.

If individuals have their lymph nodes removed it often leads to lymphedema. Individuals with lymphedema will experience swelling and pain straight after surgery or just after radiation therapy. Despite the pain individuals are encouraged to use the affected area as normal, this is so that the body part starts to quickly function again. Individuals who have had their lymph nodes removed have to be extremely careful when it comes to exercise, although exercise is important it is vital that the individual allows themselves time to heal after surgery. Those with lymphedema have to take extra care in looking after their skin compared to those who do not have lymphedema. It is important to always ensure the area is clean, dry and moisturised in order to stop the skin from cracking.

Other changes to an individual’s lifestyle if they have lymphedema are, regular exercise. However, it is important to manage the amount an individual does and no strenuous activities should be completed. It is beneficial for an individual with lymphedema to contact trained health professionals so that they can be advised on the amount of exercise they can do and what types of exercise. Eating well is also a key as treating lymphedema when an individual is over weight is difficult. It is important to eat a lot of fruit and vegetables aiming for 2 ½ cups per day, white flour and sugar should be substituted for whole-grain foods, red meats such as bacon and hot dogs should be cut down on and alcohol should be limited to one drink a day. (Cancer.org, 2017)



A picture showing the stages of Lymph Nodes.

**Breast Feeding**

In some breast cancer cases, women will have to have a mastectomy or a double mastectomy. A mastectomy is an operation to remove one whole breast to reduce the risk of the cancer developing. A double mastectomy is the removal of two whole breasts. If women have to undergo this surgery it can result in them not being able to breast feed their child, compared to those without breast cancer who would be able to breast feed their child with no problem. Many women who are not able to breast feed their children due to surgery can find it very emotional as they feel they cannot give their children the best nutrients. It can be challenging to breast feed due to one breast not being able to produce enough milk to fill up your child. Despite it being challenging to produce milk after a mastectomy it is possible to breast feed, even after a double mastectomy. However, it is a lot harder to breastfeed compared to a woman who has not had the surgery and a piece of equipment has to be used. The equipment that can be used to breastfeed is called an SNS device. An SNS device is a supplemental nursing system that gives women the opportunity to experience breastfeeding. The device is simple and involves attaching a syringe and a tube to your nipple, your baby will follow their natural instinct and latch on. (Brave Bosom, 2017)



A picture of an SNS device.

An individual’s body function with a heart defect such as coronary heart disease will work different to somebody who does not have the disease.

**Circulatory System**

The heart is the most important organ in the body and is part of the circulatory system along with the blood vessels and the blood. The main role of the heart is to pump the blood through the blood vessels into different parts of the body and it is vital for survival to have a healthy circulatory system. When an individual has a heart disease such as CHD it can lead to problems with the body’s metabolism. To help improve metabolism an individual will have to change their diet compared to an individual without CHD who would already have a high metabolism. Foods containing a lot of iron such as fish should be consumed by those with a low metabolism as this will help to boost kit. Vitamins are also available to help boost metabolism. It is important to complete regular exercise when you are diagnosed with coronary heart disease. The reason for this is because doing exercise makes your heart and blood circulatory system more efficient, lower individuals cholesterol levels and keep the blood pressure at a healthy level.

**Heart Rate**

Individuals with coronary heart disease have a different heart rate to those without CHD. When an individual has CHD there heart has to work harder and faster than normal due to the blockage of fatty tissue in the artery. This can result in individuals having a faster heart rate, high blood pressure and experiencing breathlessness. Those with coronary heart disease have to follow a strict, healthy and balanced diet compared to those without the disease who can eat a range of fatty foods. Recommended for individuals with CHD is a low-fat, high-fibre diet which should include plenty of fresh fruit and vegetables. Saturated and unsaturated foods should be avoided as this can increase an individual’s blood pressure and will make the heart work harder. It is important to also be more physically active as it helps to control an individual’s blood pressure ensuring it doesn’t get too high. (Nhs.uk, 2017) Having a faster heart rate due to CHD means that an individual will have to have more sleep and rest time compared to an individual without the disease who would usually only rest at night. An individual with a faster heart rate will also not be able to take part in any strenuous activities as this will put extra pressure on the heart and potentially lead to things like a heart attack. Those with CHD will have to allow time to go to regular appointments with a heart doctor, this will be to monitor heart rate and blood pressure. Regular tests such as blood tests can affect an individual’s daily life as they will have to allow time for appointments, this could result in individuals having to miss out on things compared to an individual without CHD who would not have to use their time for appointments. Those with CHD are likely to have to take a variety of medicines to control the disease, this could result in an individual having to change their daily routine in order to fit in taking the medication. (Bupa.co.uk, 2017)

Conclusion

Overall, I have learnt about the signs, symptoms and causes of both breast cancer and coronary heart disease and how these diseases impact an individual. I have also gained an understanding on how an individual with breast cancer or coronary heart disease body’s function differently compared to individual without the diseases. As well as this, I found out how breast cancer and coronary heart disease impacts an individual’s personal life such as how the diseases impact an individual’s physical, mental, emotional and social. Lastly, I have looked into how an individual’s body is effected by breast cancer and coronary heart disease. For example, it is likely that an individual with breast cancer will have a weak immune system due to the disease and an individual with coronary heart disease will have a faster heart rate. Overall, I have investigated many ways in which these disorders can have a knock on effect to holistic development.

**P2: Compare investigate and diagnostic procedures for different physiological disorders.**

**M2: Assess the importance of specific procedures in confirming the diagnosis of physiological disorders.**

For P2 and M2, I will be looking at the observations that take place when an individual comes to the GP or hospital when they feel unwell. These observations may include taking an individual’s blood pressure, body temperature, pulse rate and respiratory rate. Once these tests have been carried out, if a GP was concerned further investigative procedures will be carried out such as a blood test or looking at the individual’s medical history. After the investigative procedures have been carried out there may still be concerns and it is likely the individual will be referred to the hospital for further testing. At the hospital diagnostic procedures will be carried out if necessary, these could include a lumbar puncture, biopsy, scans or a mammogram. Sometimes when an individual goes to the GP or hospital, professionals can miss symptoms or misdiagnose. Therefore, I will look into the importance of recognising non-specific or confusing symptoms such as myalgia encephalomyelitis.

**Observations**

**Blood Pressure**

When an individual’s heart beats it pumps blood around the body so that your body has the oxygen and energy it requires. When the blood moves around the body it pushes against blood vessels, the strength of the pushing is an individual’s blood pressure. It is important to keep an individual’s blood pressure at a controlled level as if it becomes too high, it can put a strain on their arteries. If an individual has strain on their arteries it can lead to strokes and heart attacks. There are usually no symptoms when an individual has high blood pressure, so the only way to tell if an individual has high blood pressure is to have it measured. (Bloodpressureuk.org, 2017) A blood pressure test can be given at a number of places such as, a local GP surgery, some pharmacies, and some workplaces or at an NHS health check appointment which is offered to adults in England who are ages 40-74. It is advised that all adults over the age of 40 should have their blood pressure tested every five years for precaution. The blood pressure test is usually carried out by a doctor or in more cases a nurse. The device used to test an individual’s blood pressure is called a sphygmomanometer, which usually consists of a stethoscope, arm cuff, pump and dial. Although, there are now automatic devices which consist of a sensor and a digital display. Whilst having the test it is important to keep calm and not talk as this can raise an individual’s blood pressure. During the test the following will occur:

* The individual will hold out one of their arms so it's at the same level as their heart, and the cuff is placed around it – their arm should be supported in this position, such as with a cushion or arm of a chair
* the cuff is pumped up to restrict the blood flow in the individuals arm – this squeezing may feel a bit uncomfortable for the individual, but only lasts a few seconds
* The pressure in the cuff is slowly released while a stethoscope is used to listen to their pulse (digital devices use sensors to detect vibrations in your arteries)
* The pressure in the cuff is recorded at two points as the blood flow starts to return to the individuals arm – these measurements are used to give their blood pressure reading

Once the test is complete the individual will be able to find out their result immediately. If it is a manual blood pressure machine the health care assistant will tell the individual the result and if it is an automatic device the result will come up on the screen. When the individual is given their blood pressure reading there will be two results these are, the systolic pressure and the diastolic pressure. The systolic pressure is the pressure when an individual’s heart pushes the blood out and the diastolic pressure is when the individual’s heart rests between beats.

General blood pressure guide:

|  |  |
| --- | --- |
| Normal blood pressure | Between 90/60mmHG and 120/80mmHG |
| High blood pressure | 140/90mmHG or higher |
| Low blood pressure | 90/60mmHG or lower |

(Nhs.uk, 2017)

An individual with breast cancer will have their blood pressure measured as an observational method. However, someone with breast cancer is likely to have a normal blood pressure rather than an abnormal blood pressure.

An individual with coronary heart disease will also have their blood pressure measure as an observational method. Having a blood pressure level of 120/80mmHG or above raises the risk of an individual developing CHD therefore, those who have coronary heart disease are likely to have a high blood pressure. For individuals with CHD along with a high blood pressure it is important to exercise regularly and to eat a healthy diet in order to lower their blood pressure level. (Nhlbi.nih.gov, 2017)

It is beneficial to have a blood pressure test as it means health professionals are aware of individual’s blood pressure levels. If an individual has an abnormal blood pressure it can be a sign of underlying issues such as high stress levels, pregnancy or coronary heart disease. Therefore, having a blood pressure test means that health professionals can find out if there is something wrong with an individual and provide them with treatment. It also means they can give individuals advice on how to normalise their blood pressure such as exercising regularly and eating a healthy diet.

Despite their being benefits of having a blood pressure test, there are also weaknesses of the test meaning health professionals should not rely completely on the results of the test. This is due to the machine not always giving an efficient reading, for example an individual coming in for a blood test may feel very nervous. Due to nervousness the individual’s blood pressure may rise causing the blood pressure machine to think the individual has an abnormal blood pressure. In this case, the reading would be inaccurate and therefore further tests would have to be carried out before diagnosing the individual with high blood pressure as the individual would be taking precautions or medication that they did not require.

The cost of an individual having a blood pressure test is low due to the majority of GP surgeries and hospitals having their own blood pressure monitor. However, it has been suggested that individuals buy a blood pressure monitor for their own home. The cost of the machine is very inexpensive and having one takes up less of the GP’s time but also individual’s time as doctor visits can be reduced. Particularly, having a blood pressure machine at home for those with coronary heart disease is handy. This means that individuals with the disease can monitor their blood pressure if they are feeling ill for example before contacting their GP. (Godman, 2017)

Blood pressure monitors and the results that they give are usually accurate. However, it is likely that the blood pressure monitor will give different readings depending on where the monitor is placed on the arm. The reading that you may get from your upper arm may be different to your wrist, this is due to an individual’s blood pressure varying throughout the human body. Overall, all blood pressure monitors have the same accuracy, the reading just depends on the position of the monitor on the arm. Digital monitors are more accurate compared to manual monitors. All digital monitors have to be clinically proven accurate and they have to meet the AAMI (Association of Medical Instrumentation) standards. (Healthcare Wellness & Healthcare Products, 2017)

**Body Temperature**

Each individual’s body temperature differs resulting in their not being a normal body temperature. However, the average body temperature is around 37C. An adult’s body temperature can range between 36.1C to 37.2C and children’s body temperature is slightly higher and can range between 36.6C to 38C. An individual’s temperature does not stay the same throughout the day and will vary depending on how active an individual is, what time of day it is, the age of the individual, the sex of the individual, what the individual has eaten or drunk and for women, where they are in the menstrual cycle. There are a range of thermometers that can be used to take a body temperature reading including, digital thermometers where the reading is taken from the armpit or mouth, an ear thermometer, strip-type thermometer and mercury-in-glass thermometers. The reading for a body temperature test can differ depending on where the temperature is taken from, an under the armpit temperature reading tends to come out lower than a temperature reading taken from an individual’s mouth.

If an individual’s temperature comes out higher than the average temperature this is known as a fever, and if an individual’s temperature comes out lower than the average temperature this is known as hyperthermia. If an individual has a fever their temperature could be anything above 38C, however this is a mild fever and the body should be able to fight off the fever within a couple of days. When an individual’s temperature goes above 39.4C, medical attention is required and calling a doctor is advised. Individuals are likely to experience symptoms such as bad throat swelling, rashes, a stiff neck, vomiting or a headache. (WebMD, 2017)

An individual with signs and symptoms of breast cancer will have their body temperature taken as an observational method. Many individuals with breast cancer will not have an abnormal body temperature. However, Dr. Hong from the Roswell Park Cancer Institute found out that, “Breast cancer patients with more advanced cancers have a higher body temperature compared to those with less advanced disease”. (Roswell Park Cancer Institute, 2017) This statement shows that an individual’s body temperature with breast cancer can be an indication of the cancer spreading to other parts of the body. An individual with breast cancer is also advised to check their body temperature with an at home thermometer. This is because breast cancer treatment such as chemotherapy can cause individual’s to have a high or low temperature. It is stated on the Macmillan website that individuals experiencing temperature (high or low) or a fever should contact an on-call doctor, the hospital if a contact number has been provided or a breast care nurse/chemo nurse. (Community.macmillan.org.uk, 2017) A reliable source also advises that breast cancer patients should,

* Take your temperature every 2-3 hours and keep a record of the reading.
* Drink and eat a lot of liquids (water, juice, popsicles, gelatin, soup and herbal tea are good things to try).
* Get plenty of rest.
* Cover yourself according to how your body feels. If you’re cold or have the chills, use a blanket. If you’re too hot, use only a sheet.
* Use a cold compress on your forehead if you feel very hot. You can also sponge yourself with cool water.

The above methods with help those with breast cancer maintain a normal body temperature. (Breastcancer.org, 2017)

An individual with coronary heart disease will have their body temperature tested as an observational method. However, body temperature does not predict likelihood of coronary heart disease. (Medhelp.org, 2017)

Strengths of a body temperature test are that they are very easy to use and can measure an individual’s body temperature within seconds, making this test a very easy way to see if an individual is unwell. Another strength of a body temperature test is that they can give accurate results if using the best thermometer. In hospitals and doctor’s surgeries ear thermometers are used, those using an ear thermometer are trained to use it as if it is used incorrectly it can give an inaccurate reading. It is beneficial to have a body temperature test via an ear thermometer done at a hospital or GP surgery as this will give the individual the most accurate reading and further treatment can be given if it is required. Another strength of a body temperature test is that they can be conducted at home. If an individual feels unwell or feels like they have a temperature, they can test their own temperature at home to give them a rough reading before contacting the doctors. This means that individuals are only making doctors’ appointments if it is necessary.

There are a number of problems that can arise when a body temperature test is taken including inaccurate results. There are a range of body temperature thermometers that can be used and most thermometers will give a different result. Ear thermometers are easy to use; however, they are not the best thermometer to use at home. This type of thermometer can give an inaccurate reading if not placed in the correct part of the ear, it can also cause further problems if the thermometer is pushed too far into the ear for example. Strip-type thermometers can also give inaccurate readings, this is due to the thermometer taking a temperature reading of the skin and not the body. The strip-type thermometer may also take inaccurate readings due to individuals having to touch the strip in order to stick it down onto the skin, this can cause the strip to already be heated before taking a reading. Mercury-in-glass thermometers should not be used and are not sold anymore, this type of thermometer can cause problems for individuals as they can break when being used which can release small shards of glass and highly poisonous mercury. This could cause an individual to be extremely ill. Other factors that can affect the reading of a body temperature test are, drinking a hot drink such as tea before a test can cause an individual’s body temperature to be higher than their normal temperature. Medicines such as antibiotics can also cause an individual’s body temperature to rise. Individuals should also not complete hard exercise or have a hot bath at least 30 minutes before their body temperature test as this can affect the result.

Body temperature tests can be carried out at home using a variety of different thermometers which can be brought in local stores. A body temperature test can also be taken at a GP surgery and is usually taken by a doctor or nurse, an ear thermometer is the most common thermometer used in a GP surgery.

At home body temperature tests can be brought from a number of chemists, pharmacies and stores for a small price. A digital thermometer is the cheapest and can cost as little as £3, strip tests cost around £5 and ear thermometers are the most expensive starting from around £25 up to £150. Body temperature tests do not cost the NHS or GP surgeries very much due to most GP surgeries and hospitals having their own thermometer. There is only an initial cost of buying the thermometer and then it can be used over and over again until it needs to be replaced. Most GP’s and hospitals use an ear thermometer as they are the most effective, they can cost up to £150 and potentially more depending on how efficient the ear thermometer is.

Thermometers used to measure an individual’s body temperature are fairly accurate especially if it is an oral reading. To ensure the measurement is accurate it is vital that the individual’s mouth is completely closed so that the thermometer only measures the individual’s temperature and not the outside temperature. A digital ear thermometer can often give an inaccurate result. Earwax in the ear or if an individual has a small ear canal can affect the reading. (Mayo Clinic, 2017)

**Pulse Rate**

A pulse rate is the number of times per minute that an individual’s heart contracts or beats. A normal adults pulse rate usually ranges from 60 to 100 beats per minute, an individual’s heart rate can differ depending on how fit on unfit they are. If an individual has a lower heart rate of around 40 beats per minute, it indicates that the individual has an efficient heart function and a good cardiovascular fitness. Many factors can influence an individual’s pulse rate including, fitness level, air temperature, emotions, body size and medications. An individual is able to check their own pulse rate by placing their index and third finger on their neck to the side of their windpipe. A pulse rate can also be checked using the wrist, an individual can place two fingers between the bone and the tendon over their radial artery. When an individual feels their pulse, they should count the number of times it beats in 15 seconds and then multiply the number they get by 4 to calculate their beats per minute. (Mayo Clinic, 2017) A pulse rate can be taken by a nurse or doctor at a GP surgery or an individual can take their own pulse and the test does not cost.

An individual with breast cancer may have their pulse rate checked as an observational method. However, there have been no studies that associate an abnormal pulse rate with breast cancer. (Lee DH, 2017)

An individual with coronary heart disease is likely to have an abnormal resting pulse rate and an individual showing signs and symptoms of coronary heart disease will have their pulse rate checked as an observational method. A study conducted on 30,000 healthy men by Norwegian researchers stated that, “Compared with those whose heart rates remained stable at 70 beats per minute or less, those whose rates increased to 85 or more were almost twice as likely to die of heart disease. (Bakalar, 2017) A health professional will check an individual’s pulse rate if they are suffering with CHD in order to check the rate and regularity of the pulse.

A benefit of a pulse rate test is that it requires no equipment and takes very little time to complete. It is also a convenient test as individuals can check their own pulse without having to go to the doctors. Many individuals check their pulse rate just after they get up to ensure their resting pulse rate is normal and after they have completed exercise to ensure their pulse rate is not too low or high. This simple test reassures individuals that their heart is beating at a healthy rate. Another strength of checking an individual’s pulse rate is that it can help to understand why individuals are experiencing certain symptoms such as, irregular or rapid heartbeat (palpitations), dizziness, fainting, chest pain or shortness of breath. It is very beneficial to complete a pulse rate test as it can help to find underlying problems that require treatment. This test is particularly beneficial for those with coronary heart disease who have to take medication such as, digoxin or beta-blockers as these medications can cause the pulse rate to slow down. Doing a pulse rate test means that an individual with coronary heart disease can monitor their pulse rate and ensure that their heart is not beating too slowly. (WebMD, 2017)

A problem that could arise when an individual is taking their pulse rate is that they could count the beats per minute wrong. If an individual counts too many beats per minute or too little, they will get an incorrect number for their beats per minute. This could cause individuals concern if they think they have an abnormal pulse rate and they make book to have a check when it is not necessary. It is important that an individual repeats the pulse rate test a couple of times to ensure that get roughly the same result each time. Another problem is that some individual’s may use their thumb to check their pulse rate, this will give an incorrect reading as the thumb has its own pulse. It is important that individual’s use their index finger and third finger to get a correct result. Another way to check an individual’s pulse rate is to use the pulse in the carotid artery (neck), this can cause problems if an individual presses down too hard or the artery. If an individual presses down too hard on the carotid artery they could become lightheaded and fall over, this is particularly dangerous for individuals older than 65. (WebMD, 2017)

A pulse rate test and the result can be fairly inaccurate. This is due to, individuals not using the right amount of pressure. If there is too much pressure it can slow down the heart rate and if the pressure is too little beats may be missed when counting. Another factor that can affect the accuracy is, an individual moving too much whilst they are trying to take their pulse. To ensure the most accurate result it is beneficial if a health professional takes an individual’s pulse, this can be done in a physical examination. (WebMD, 2017)

**Respiratory Rate**

The respiratory rate is the number of breaths per minute and it is measured by counting the number of times an individual’s chest rises or falls per minute when they are resting. By measuring the respiratory rate, professionals can work out whether an individual’s respirations are normal, abnormally fast which is called tachypnea, abnormally slow which is called bradypnea or nonexistent. On average, the typical respiratory rate for a healthy adult at rest is 12-16 beats per minute. An individual’s respiration rate may increase or decrease depending on factors such as, fever, illness or if they have other medical conditions. (MedicineNet, 2017)

A respiratory rate test can be tested at a local GP surgery and is usually carried out by nurse and in some cases a doctor. In some areas, local clinics can also conduct respiratory rate tests and trained individuals will carry out the tests.

An individual with breast cancer may have their respiratory rate checked as an observational method. However, there is no evidence to show that breast cancer causes an individual to have an abnormal respiratory rate.

An individual with coronary heart disease will have their respiratory rated checked as an observational method, this is due to coronary heart disease causing breathlessness for some individuals. CHD causes an individual’s heart to work faster therefore this affects an individual’s respiratory rate as it is likely the individual will have to take more breaths per minute in order to not feel breathless. (Chaddha, 2017)

A strength of the respiratory rate test is that it is free, this means it is a well-used test that is sometimes used before using observational methods that cost. Another strength of the respiratory rate test is that it helps to see how well an individual’s heart is functioning, it also allows a doctor to diagnose an individual if they feel there is something wrong with their respiratory rate. Getting a quick diagnosis means that individuals can start receiving treatment quickly.

A problem with the respiratory rate test is that the results of the test can be unreliable. This is due to a health professional counting an individual’s respiratory rate themselves, the professional could count too fast or miss count resulting in them getting an incorrect result. This could result in further testing being conducted that was not required. It is important that the health professional counts an individual’s respiratory rate a couple of times to ensure they get the same result each time.

Respiratory rate tests are one of the most used tests and are a core aspect of a clinical assessment. Despite them being widely used, the current methods used to measure respiratory rate are inaccurate. The two methods used to measure respiratory rate are formal measurement and spot assessments. In a study conducted at the London teaching hospital it was stated that, “54 doctors in a London teaching hospital participated. Both methods showed high levels of inaccuracy, though formal methods were more accurate than ‘spot’ assessments. 52 and 19 % of doctors did not identify the respiratory rates shown as abnormal, using ‘spot’ and formal assessment methods respectively.” It also stated that, “This may be significantly delaying appropriate clinical care, or even misguiding treatment.” These statements show that there needs to be more accurate methods put in place to measure an individual’s respiratory rate. (Philip et al., 2017)

**Investigative Procedures**

**Blood Test**

Having a blood test is one of the investigative procedures that health professionals use. Blood tests are carried out for a number of reasons and are one of the most common medical tests used. Blood tests can be used to check over the general health of an individual, check if an individual has an infection, check if an individual has any genetic conditions and to see how well an individual’s organs are working especially the kidneys and liver. Blood tests only take a short period of time to complete and can be completed at the GP surgery or the hospital. Blood tests are conducted by doctors, nurses or a phlebotomist who is a specialist in taking blood samples. A blood test is a quick procedure which lasts no more than a few minutes. It can be carried out at an individual’s GP surgery or a local hospital. Before an individual has a blood test they will be advised on what they need to do before. Depending on the type of blood test the individual is having they may have to not eat or drink anything apart from water for up to 12 hours before the test. Individuals who take medication may also have to stop taking it prior to their blood test. It is vital that individuals follow instructions given by health professionals as if not it can affect the result of the test or it may have to be delayed.

During a blood test individuals will have a sample of blood taken from a blood vessel in their arm, the sample is taken from the inside of the elbow or wrist as this area has the most visible veins. To make the blood test easier a tight band called a tourniquet is put around the top of an individual’s arm, this squeezes the individual’s arms which temporarily slows the flow of the blood and the individual’s vein will swell. To take the blood, a needle is attached to a syringe or special container which is inserted into the individual’s vein, the syringe is used to draw out a sample of blood. Once the sample has been taken, pressure is applied to the area with a cotton-wool pad and a plaster may be applied to keep the area clean. (Nhs.uk, 2017)

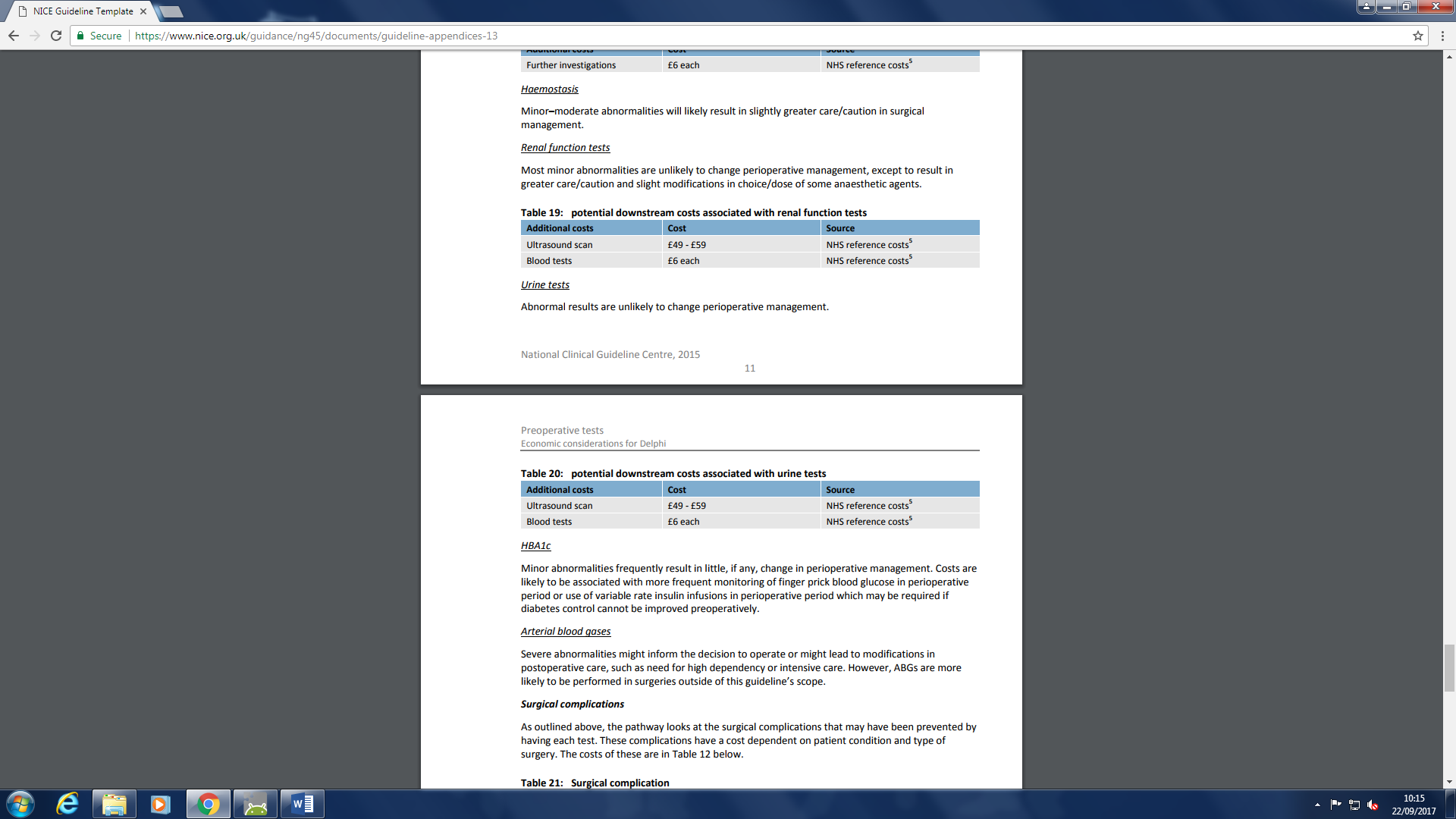
An individual will have a blood sample taken via a blood test if they have suspected signs of breast cancer. A blood test can be used to test for circulating tumor cells and protein within the blood. Specifically, blood marker tests are used to detect cancer activity within an individual’s body. A cancer such as breast cancer produces a type of protein in the blood that can be detected when a blood test is carried out. Blood tests are not only used to help diagnose an individual with breast cancer but they are also used throughout treatment to determine whether the cancer has moved to other parts of the body, to check if the cancer is responding to the treatment the individual is receiving and after treatment to see if the breast cancer has returned. (Breastcancer.org, 2017)

An individual with suspected signs of coronary heart disease will have a blood test as part of the investigative procedure stage. A blood test is taken as it is able to show if an individual has high cholesterol levels, having high cholesterol levels is a common sign of CHD. A blood test is also used to measure the activity of Lp-PLA2 (lipoprotein-associated phospholipase A2) which is an indicator of vascular inflammation. Vascular inflammation is a sign of plaque build-up in the arteries which causes CHD. (Whiteman, 2017)

It is beneficial for a blood test to be carried out as it can be used to find out various things including, assessing the general state of health of an individual, they can confirm if the individual has an infection, they can help to determine if an individual has a physiological condition and can see how well certain organs are working such as the liver and kidneys. Another benefit of blood tests are that it can acknowledge something that the individual was unaware they had. This results in the individual being able to receive the treatment required to ensure they have good health. (Thehealthblog.net, 2017)

Sometimes when an individual has a blood test problems can arise, the majority of the time a blood test goes smoothly and is over quickly. However, sometimes it can be difficult to find a vein resulting in a number of health professionals having to attempt the blood test. Possible complications can occur when an individual has a blood test including, infection, bleeding, bruising, dizziness and hematoma. It is also not possible to completely rely on a blood test due to the results sometimes being incorrect. Results can be incorrect due to an individual not showing visible signs within the blood at the time of the blood test. This may result in the individual having to return for another blood test at a later date to ensure the results are correct.

Around two million blood tests are conducted per day resulting in blood tests being the main type of investigative procedure carried out by the NHS. According to data published in December 2011/12, blood tests cost from 24p to £13.28 depending on the type of blood test. (Gponline.com, 2017) From a report produced by The Bristol Centre for Reproductive Medicine in October 2016, it says that an initial blood test costs the NHS £6. If the blood results come back as abnormal, further investigations are required which cost another £6.



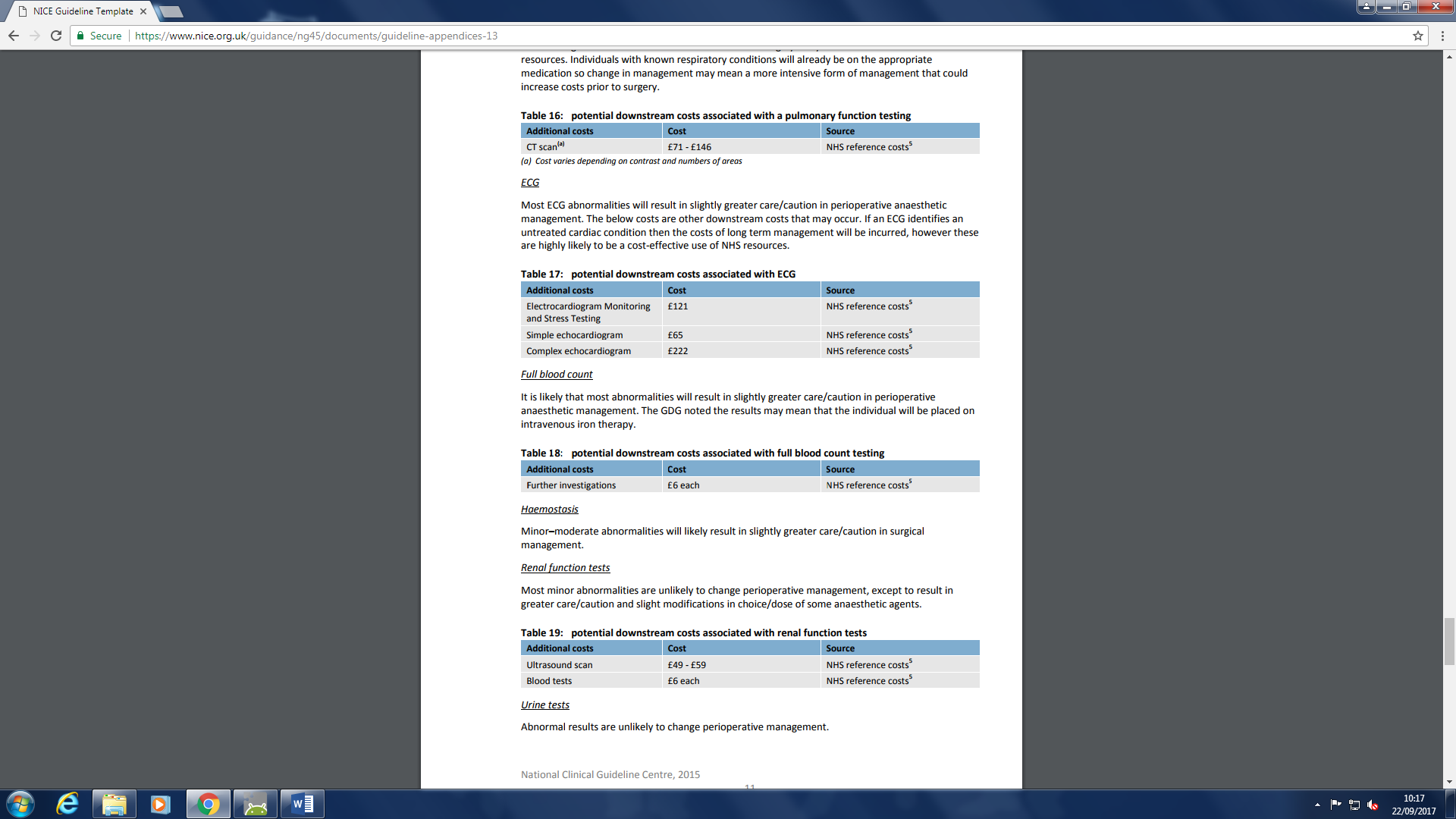


Table showing the cost of a blood test and further investigations test.

**Medical History**

A health professional will look into an individual’s medical history as part of the investigative procedure. A medical history is looking back at an individual’s past events and circumstances that may be relevant to the current state of an individual’s health. The record may include an account of past diseases, injuries, treatments and other medical conditions that the individual has or has had in the past. The individual may be asked a series of questions based on their medical history that a health professional will require them to answer. However, if individuals do not want to answer all the questions asked, health professionals are able to look at their online medical records. A medical history will be carried out at either a GP surgery by a nurse or doctor and also at a hospital.

Example of a medical history form:

|  |  |
| --- | --- |
| **History element** | Additional information |
| Introductory information | Demographics (age, sex, race, place of birth, marital status, occupation, religion, next of kin) |
| Main presenting complaint | The problem that has promoted the patient to request the consultation (and/or additional information) |
| **Past History** |  |
| Medical | General state of health, childhood illnesses, adult illnesses, psychiatric illnesses, accidents and injuries, operations and hospitalisations (list surgical procedures in chronological order) |
| Podiatric | Previous foot/limb problems and treatments received |
| Current health status | Current GP or hospital clinics attended  Current allied health professionals clinics attended  Alternative therapists attended |
| Drugs/ Medication history | Current and previous prescription-only medicine regimes  Current and recent over-the-counter regimes  Allergies and hypersensitivity history |
| Family history | Health and age of siblings/parents/children  Ages and causes of death of parents/grandparents |
| Social history | Smoking/alcohol/recreational drug consumption  Hobbies and recreational activities |

A health professional will look into the medical history of an individual displaying signs and symptoms of breast cancer. This is due to family history of breast cancer being a risk of an individual developing breast cancer and if an individual has had breast cancer before they have a higher risk of developing the disease again. An individual’s medical history form will include previous cases of breast cancer within the family and if the individual has had it before. About 13 percent of women diagnosed have a first-degree female relative (mother, sister or daughter) with breast cancer. (Ww5.komen.org, 2017)

A medical history is always an investigative procedure that health professional will carry out when an individual is experiencing signs and symptoms of coronary heart disease. Particularly, a doctor will ask the individual about their personal health including, health and lifestyle questions, cholesterol levels, stress levels, blood pressure, exercise habits. They will also ask the individual if they smoke, drink or have diabetes. The medical history allows the doctor to have an understanding of why an individual is experiencing signs and symptoms related to coronary heart disease. (WebMD, 2017)

Medical histories are very beneficial and it is important that individuals know about their medical/family history as they will get asked question based on their family history as part of an investigative procedure. A strength of a medical history is that it can help individuals to increase their risk of developing certain diseases. For example, if there is a lot of coronary heart disease within an individual’s family they should ensure that they have a healthy diet and that they exercise regularly. Without looking into an individual’s family history individuals may not be aware of the diseases they are at risk of. They are also very beneficial for health professionals as it allows them to have an overview of previous conditions an individual has had and whether the previous conditions are linked to why an individual has arranged an appointment.

One of the problems with medical history records is the security. Medical histories are extremely personal and have confidential information on them. It is vital that all records remain confidential, however sometimes records can be leaked. Now that most medical records are online this makes it even more difficult to keep all records confidential, this is due to the cost of software being extremely expensive and new technology being confusing to use. Health professionals may share information with the wrong people by accident. Another weakness of medical history records is that professionals cannot completely rely on them. This is due to some individuals not knowing all of their medical history or family history. For example, if an individual was showing signs and symptoms of coronary heart disease a health professional would look at their medical history and family history. If the individual was not aware of previous CHD within their family this would not be on the family history, this could result in the health professional ruling out coronary heart disease due to no inherited traits and not completing further tests.

Conducting a medical history about an individual does not cost the NHS. However, if an individual would like to have access to their own medical records they have the right to but it may cost the individual. An online access of an individual’s GP records are free of charge but charges will apply if the individual would like to see the original copy or have a paper copy. There is no fee for an individual to have a look at their medical records but if they want to take away their medical records there is a fee. Stated on the NHS website, “£10 for records that are only held electronically and up to £50 for those records that are not available in electronic form or only partially available in electronic form.” (Nhs.uk, 2017)

**Diagnostic Procedures**

**Scans (Mammogram)**

A mammogram is a type of scan that shows a lump or mass which can indicate the possibility of breast cancer. Mammograms can be used to detect breast cancer in women who are experiencing no symptoms and to detect breast cancer in women who are experiencing symptoms such as a lump, pain, rashes or skin dimpling. A specially qualified radiologic technologist prepares women for the mammogram by correctly placing the breast on the mammography unit. The breast is placed on a special platform and is compressed with a clear plastic paddle by the technologist. It is important that the breast is compressed as it is vital the breast thickness is evened out so that all of the breast tissue can be visualized. In total the examination process takes around 30 minutes. Breast screening is offered to women aged 50-70 in England even if they are experiencing no signs or symptoms of breast cancer. The reason a mammogram is offered is to try and detect breast cancer as early as possible so that individuals have a lower risk of the disease spreading or becoming untreatable. The cost of a mammogram scan for both breasts starts from around £230. (User, 2017)

A mammogram is one of the main diagnostic procedures used to screen for breast cancer. A scan such as mammogram is not used to diagnose coronary heart disease. There are many benefits of a mammogram scan. Firstly, the imaging of the breast is extremely clear which means that small tumors can be detected by a physician. It is vital that small tumors are noticed due to small tumors being easier to treat. Another benefit is that the mammogram can detect more than just breast cancer. For example, if a women had a small abnormal tissue growth in one of her milk ducts which is called Ductal Carcinoma in Situ (DCIS), this can be removed to prevent it from getting bigger and turning into a cancerous tumor. Mammograms leave no radiation in the patient’s body despite a mammogram being an x-ray examination, resulting in more women agreeing to have a mammogram done.

However, there are slight risks when having a mammogram, however these risks are extremely low and it is well worth having a mammogram done. Women should always inform the physician if they are pregnant, this is due to radiation from the mammogram machine potentially having some harm towards the baby. However, this risk is extremely low. A weakness of a mammogram is that it can only detect breast cancer, this means that other suspected cancers have to be tested with other methods. This is a disadvantage as a mammogram image can give an extremely clear image which would be extremely beneficial when testing for other types of cancers. (Mayo Clinic, 2017)

The accuracy of a mammogram is extremely high due to the clear image picture allowing health professionals to detect tumors easily. However, 5% to 15% percent of individuals who have had a mammogram have to go for further testing such as an additional mammogram or a scan. Additional scans are mainly done as a precaution. A reliable source has estimated that, a woman who has yearly mammograms between ages 40 and 49 has about a 30% chance of having a false-positive mammogram at some point in that decade.



Example of images a physician would receive from a mammogram.

**Biopsy**

Whereas a biopsy is when a sample of body tissue is taken from an individual in order to examine the tissue more closely. It is likely that a doctor will recommend a biopsy when an initial test is showing that the tissue is abnormal, a doctor may describe an abnormal area of tissue as a tumor or mass. A biopsy is most commonly conducted when there are signs or symptoms of cancer but they are also done if an individual has an abnormal mole that has changed size or shape indicating melanoma. There are a range of biopsy types including, needle biopsy, CT-guided biopsy, ultrasound-guided biopsy, bone biopsy, bone marrow biopsy, liver biopsy, kidney biopsy, aspiration biopsy, prostate biopsy, skin biopsy and surgical biopsy. Once the tissue has been collected from a biopsy it is sent to a pathologist, a pathologist specialises in diagnosing conditions based on tissue samples and other alongside tests. (WebMD, 2017) A biopsy can cost between £300 to £600 depending on the type of biopsy required.

A common investigative procedure when an individual has signs and symptoms of breast cancer is a biopsy. A breast biopsy removes tissue and sometimes abnormal fluid from the suspicious area within an individual’s breast. Once the biopsy has been completed it will be tested under a microscope to see if there is breast cancer present in the tissue. A biopsy is the only investigative procedure that can give an accurate result on whether the suspicious area is cancerous. (www.nationalbreastcancer.org, 2017) However, before having a biopsy individuals are advised to have a breast-imaging specialist review their mammogram due to 65%-80% of breast biopsy results being benign.

An individual with signs and symptoms of coronary heart disease will not require a biopsy as part of the diagnostic procedure.

The benefit of having a biopsy especially a breast biopsy is that the results gives an accurate diagnosis. It is able to provide the individual with information about the cancer such as if it is benign or cancerous. Once the results are back due to the being accurate, the individual is able to receive treatment immediately. If the results come back as benign this is also a benefit as it motivates individuals to have a healthy lifestyle in order to reduce their risks of developing breast cancer.

However, there are some problems that may arise when an individual is having a biopsy in particular a breast biopsy. Individuals may have bruises around the breast area, they may have some scarring, an infection could occur and hematoma which is pooling of blood trapped in the biopsy areas. After a biopsy an individual usually requires at least one day of rest at home, this can be affected work and family commitments. When having a biopsy individuals will have to go under a local anesthetic which can potentially cause problems for some individuals. Despite their being some after effects of biopsies, they are generally risk free and patients will be told about the side effects before undergoing the biopsy. (Imaginis.com, 2017)

A medical doctor or doctors of Osteopathy usually perform a biopsy. However, a dermatologist for example may also perform a quick biopsy on an abnormal mole whilst the individual is under anesthetic. A pathologist analyses the tissue once it has been removed from the body.

In most cases a biopsy result is accurate, however they are sometimes not always accurate. The accuracy of a biopsy result depends on the type of biopsy carried out. For example, a needle biopsy procedure’s accuracy depends on the expertise of the individual carrying out the biopsy due to it being a challenging procedure. (Inc, 2017)

Physical Examination

A physical examination is used within the diagnostic procedure. All individuals with suspected coronary heart disease will have a physical examination to ensure they are getting diagnosed correctly. The physical examination can be performed in a doctor’s surgery or at the hospital by a doctor.

This diagnostic procedure will not be carried out for an individual with breast cancer as it is not able to diagnose breast cancer.

The physical examination includes looking at an individual’s general appearance as the doctor is able to gain a large amount of information about an individual just by watching them and having a conversation with them. Doctors may assess things such as how well their memory and mental quickness is, if they have healthy skin and if they can easily stand and walk. After the general appearance stage, a heart exam will be performed. This is completed by a doctor listening to an individual’s heart with a stethoscope, the doctor will be listening for an irregular heartbeat, a heart murmur or other indications that indicate heart disease. A lung exam is also part of the physical examination, this is completed using a stethoscope and the doctor will listen out for crackles, wheezes or decreased breath sounds as these can indicate heart disease. Lastly, a head and neck exam is performed. The doctor will check the individuals throat, tonsils, teeth, gums, ears, nose, sinuses, eyes, lymph nodes, thyroid and carotid arteries as all of these features can indicate sings of coronary heart disease.

This diagnostic procedure is beneficial as it can help to confirm if an individual has coronary heart disease which means necessary treatment can be given to the individual. Another benefit is that it fairly quick examination that does not require any advanced equipment resulting in the test not being expensive.

Despite the positives of a physical examination, there are some negative points about this test. Overall, this test is fairly accurate as if an individual has coronary heart disease there should be visible signs and symptoms. However, the doctor performing the physical examination may mistake a sign or symptom for something else and then the individual may be given incorrect treatment. Another disadvantage of a physical examination is that equipment may be faulty therefore it may give incorrect readings resulting in the results being inaccurate. Therefore, it is important to have a second opinion when completing a physical examination to ensure that the doctor is correct.

When a health professional is carrying out observations, investigative procedures and diagnostic procedures, it is vital that signs and symptoms are not missed. Missing symptoms would not only negatively impact the individual but also the health professional who has missed symptoms and the NHS. If symptoms are missed this could cause an individual’s health to deteriorate and further illnesses could occur. Missing a symptom could also make the individual feel like they have wasted health professionals time if they are told nothing is wrong with them, they could also feel anxious or unsure on what to do if they truly believe there is something wrong with them despite what they have been told. Missing symptoms could potentially cost the NHS a lot of money, it is likely that the individual would require more treatment if their condition worsens resulting in the NHS having to pay for more treatment. Therefore, it is vital that health professionals thoroughly check through results to ensure that no symptoms are missed and that the individual has good health.

**P3: Explain the treatment and support available for service users with different physiological disorders.**

**M3: Assess the provision of treatment, support and types of care for service users with different types of physiological disorders.**

**D2: Justify the potential benefits of different investigations and treatment options for service users diagnosed with physiological disorders.**

For P3, M3 and D2 I will be looking at the different types of treatment available for service users with breast cancer or Coronary Heart Disease. I will look into what medication, surgery, rehabilitation and complementary therapy individuals with the physiological disorders can have and the lifestyle changes individuals need to make in order to better their health. For each type of medication, surgery, rehabilitation and complementary therapy I will assess how well it positively impacts the individual and if it has any negative impacts. I will also discuss improvements that could be made for each treatment to ensure that it is an effective treatment for both breast cancer patients and coronary heart disease patients.

**Treatment and support (Breast Cancer)**

**Medication**

**Trastuzumab**

There are a range of different medications that individuals with breast cancer can take to help improve their condition. The type of medication an individual will take depends on the severity of their breast cancer and the way it is making them feel.

Trastuzumab (Herceptin) is a monoclonal antibody which attaches proteins on or in cancer cells that are within an individual’s body. The drug is used for cancers that have large amounts of protein which is called HER2 (human epidermal growth factor receptor 2), HER2 makes cancer cells within the body grow and divide and so the medication can make the cells stop growing and kill them. This medication is specifically used for early breast cancer and would be used alongside chemotherapy or before or after surgery. It is also used for advanced breast cancers that have spread to other parts of an individual’s body. An individual would take Trastuzumab alongside chemotherapy or some individuals choose just to take Trastuzumab due to bad side effects from other treatment. Trastuzumab can be given through the bloodstream through a drip and this takes between 30 to 90 minutes. It can also be given by an injection on the upper, outer part of an individual’s leg, the injection takes around 2 to 5 minutes. This type of medication will be given to a patient with breast cancer either at the hospital or at a GP surgery. An advantage of the medication having to be given at a hospital or GP surgery is that the individual knows that the medication will be given successfully as trained professionals will be administering it. If it is given at the GP, this will usually be at a local GP surgery which is convenient for individuals as they will be able to fit the appointment to have the drip/injection around their daily lives. A disadvantage of having to go to the hospital to have the medication is that some people may not live close to a hospital, resulting in individuals having to travel for a long time. There may also be long waiting times at the hospital as there are usually delays, this is a disadvantage as it could massively effect an individual’s daily life such as picking up children if there are long delays.

An advantage of taking the medication Trastuzumab is that throughout the time an individual is taking it health professionals will ensure they are healthy. They do this by taking bloods to check the level of the blood and if there are any other substances in the blood. The bloods are also checked to ensure an individual's liver and kidneys are working well. They also ensure your heart is working well throughout the medication by conducting a heart trace test (ECG). Another advantage of Trastuzumab is that the side effects of the treatment are not as bad as chemotherapy for example. Therefore, many individuals that have had chemotherapy and not coped with the affects choose to take Trastuzumab as an alternative option to see if this medication works better for them. A study found out that adding Trastuzumab to chemotherapy to treat women who were diagnosed with early-stage, HER2-positive breast cancer improves overall survival and disease-free survival compared to chemotherapy alone. (Breastcancer.org, 2017)

There are a few disadvantages of the medication Trastuzumab. Firstly, cancer drugs such as Trastuzumab can interfere with other medicines and herbal products that individuals are taking. It is important that individuals tell their doctor about other medications they are taking so that they can be advised on what they can and cannot take when taking Trastuzumab. Trastuzumab can also harm a baby that is developing in the womb. Therefore, it is vital that an individual does not become pregnant and does not father a child when they are taking this medication. An individual should also not become pregnant or father a child for 7 months after taking Trastuzumab due to their being a risk of the medication still being in the individual’s system. A woman is also not allowed to breastfeed their child whilst taking this medication due to the risk of the drug coming through the breast milk and the child consuming it. Breastfeeding should also not occur until 7 months after finishing the treatment. This drug can also affect the fertility of individuals. It is important that those who are wanting to become pregnant for father a child talk to a doctor as they can provide options such as a man storing his sperm or a women storing her eggs before starting to take the medication.

More than 1 in 10 (10%) individuals will have side effects from taking Trastuzumab. Some of the most common side effects are, increased risk of getting infection, allergic reactions, joint or muscle pain and diarrhoea. The medication can cause an individual's white blood cells to reduce which increases the risk of developing an infection. Signs of an infection can include, headaches, aching muscles, a cough, a sore throat and feeling cold. If an individual taking Trastuzumab experiences these symptoms they should contact a doctor for advice. A few individuals’ get an allergic reaction when taking Trastuzumab. If an individual has an allergic reaction to the medication they may feel itchy, sweaty or dizzy and it is vital that the individual tells a nurse or doctor if they are experiencing these symptoms. An individual may have joint pain particularly in their knees after having this medication, this is very common and the pain can be reduced by taking pain killers. Diarrhoea is also a common side effect of this time of medication, an individual should contact a doctor or nurse as they can prescribe medication to help this pass. It is also important that individual's drink 2.5 litres of water a day. (Cancerresearchuk.org, 2017)

The overall quality of Trastuzumab when it is taken on its own can differ between individuals. Some individuals found that it made them feel better in terms of less side effects, resulting in them having a better quality of life because they could get on with their daily routine. However, it is proven that Trastuzumab does not work as well on its own compared to when it is taken alongside chemotherapy. This shows that the quality of the medication on its own is poor. Despite this, the quality of Trastuzumab when it is taken with chemotherapy is good as combining Trastuzumab with chemotherapy significantly improved overall survival compared with chemotherapy alone.

**Chemotherapy**

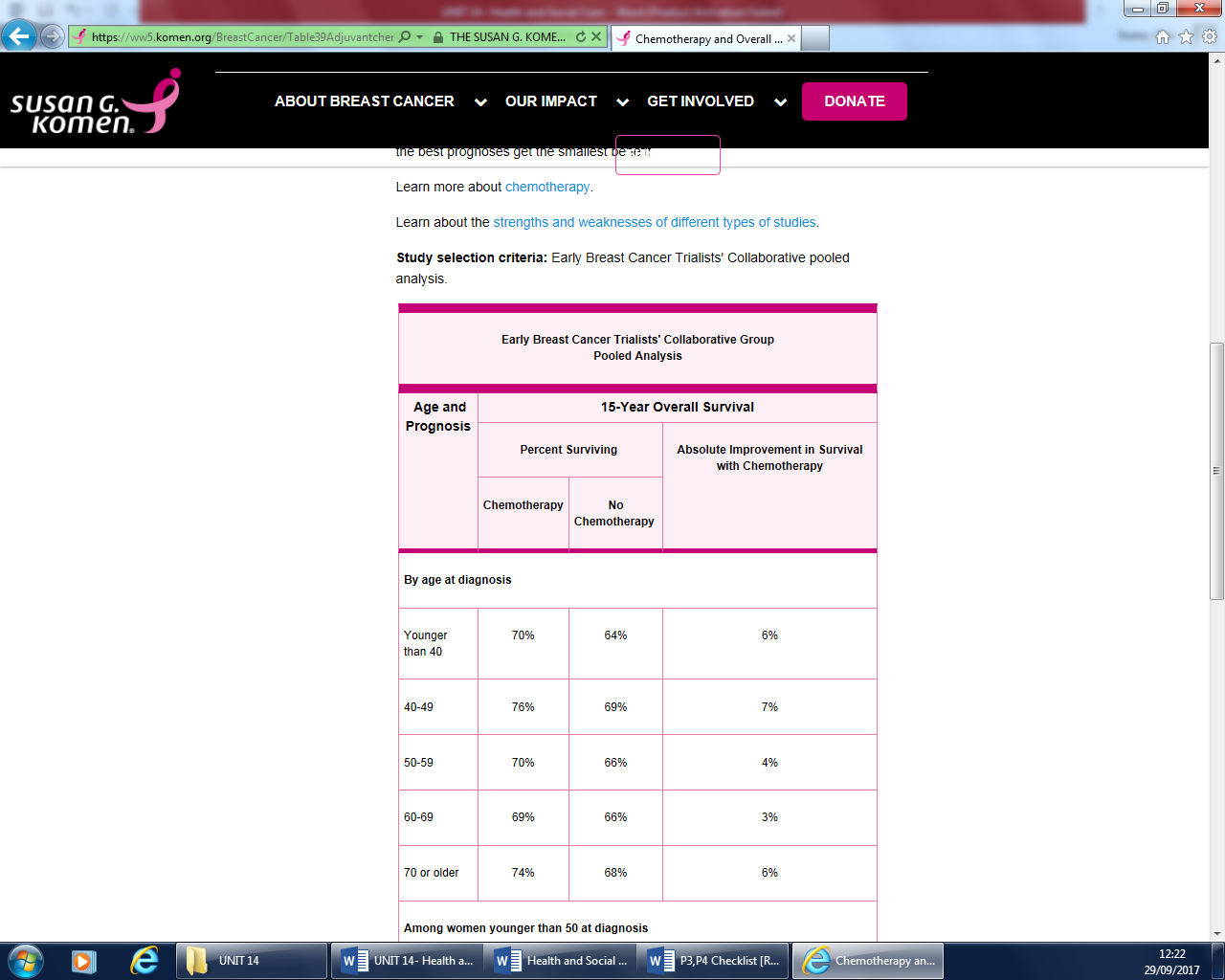
Chemotherapy is a type of medication/treatment used to help treat breast cancer by using anti-cancer drugs which are also known as cytotoxic. The aim of chemotherapy is to destroy the breast cancer cells within an individual’s body. Cancer cells within an individual’s body grow by dividing in uncontrolled way, chemotherapy gets in the way of the cancer cells and attempts to stop them from dividing and growing. Before an individual is offered chemotherapy, health professionals will look into various factors. These factors include, the size of the individual’s breast cancer, whether the lymph nodes are affected and the grade of the cancer. The general health of an individual is also considered before starting chemotherapy. Chemotherapy treatment will usually start after an individual has had surgery and before radiotherapy if the individual is having it or it is offered before surgery. Having chemotherapy before surgery helps to slow the development of rapidly growing cancer or to shrink larger cancers. Chemotherapy can also be used to help secondary cancer that have spread further than the breast, the chemotherapy will aim to control the growth of the secondary breast cancer. Chemotherapy has to be given to a patient with breast cancer in a hospital, it can be given at bedside in a non-surgical setting. An advantage of chemotherapy having to be given at a hospital is that the setting is calming and there are other individuals there who you are able to talk to. A disadvantage of having to go to the hospital to have chemotherapy is that some people may not live close to a hospital, resulting in individuals having to travel for a long time. There may also be long waiting times at the hospital as there are usually delays, this is a disadvantage as it could massively effect an individual’s daily life such as picking up children if there are long delays. Some chemotherapy can be given at home if it is in tablet form. An advantage of being at home whilst having chemotherapy is that the individual will feel more at ease as they will feel comfortable in their surroundings. This is beneficial as it is distressing for an individual if they are worrying about having chemotherapy. A disadvantage of having chemotherapy at home is that some individuals may have children at home, this can be distressing for children and some individuals may not want their children to see them having chemotherapy.

The benefits of chemotherapy treatment can depend on the type of chemotherapy an individual has had, the grade and stage of the breast cancer and the age of the individual receiving the treatment. The main benefit of chemotherapy is that it helps to control cancer cells and stop them spreading to other parts of the body. This is extremely beneficial as it means health professionals can focus on treating the one area where the cancer is rather than having to treat various areas. The risk of survival increases when breast cancer spreads to other parts of the body. Another advantage is that chemotherapy can help shrink breast cancer making it possible to operate on. If a cancer is too big it is not always possible to operate on therefore the chemotherapy can attempt to make the cancer operable. Once an individual has had surgery, chemotherapy can be beneficial. This is due to the chemotherapy reducing an individual’s chance of the cancer returning after surgery.

A disadvantage of chemotherapy is that it does not work for everyone, this can be extremely upsetting for individuals who have gone through chemotherapy to come to the end of it and find out it has not worked. The process of chemotherapy on an individual’s daily life can cause a big impact, this is due to individual’s having to attend hospital appointment often to have the treatment which can be very tiring. One of the main disadvantages of breast cancer are the side effects that many individuals experience.

Chemotherapy can temporarily affect the number of healthy blood cells an individual has within their body. This causes an individual to be more prone to infections, an individual is most at risk of developing an infection 7-14 days after having chemotherapy. Anaemia can also be caused if an individual has too few blood cells, in the worst cases a blood transfusion may be needed whilst having chemotherapy. Another side effect of chemotherapy is hair loss and thinning. Hair loss can be a particularly distressing and emotional side effect of chemotherapy for many individuals, most individuals who lose their hair will lose it 2-3 weeks into treatment. Individuals may also lose body hair such as eyebrows, eyelashes and pubic hair. This side effect is only temporary and the hair will start to grow back after treatment is over. Nausea and sickness for most individuals starts as soon as they have started chemotherapy, this side effect can last for several hours after or sometimes several days. The sickness can be controlled with anti-sickness tablets but if it gets extremely bad such as not being able to keep any fluids down the individual should contact a doctor or the hospital. As well as short term effects of chemotherapy, there are some long term effects. Some chemotherapy drugs can cause heart and lung problems which are likely to have to be treated for the rest of an individual’s life depending on the severity. It has also been researched that some chemotherapy drugs can also cause other cancers in the future. However, this side effect is extremely low and the benefits of chemotherapy outweigh this risk. (Breast Cancer Care, 2017)

The overall quality of chemotherapy for treating breast cancer is good, however it does not work for everyone. Despite this, for those it does work for it is an effective, good quality treatment that can prolong an individual’s life. The quality of chemotherapy can depend on when an individual has the treatment. For example, chemotherapy after breast surgery is proven to be the most beneficial time to have chemotherapy as it improves survival in women with breast cancer. Therefore, at this stage chemotherapy would be of the best quality. (Ww5.komen.org, 2017)



A table showing statistics of the overall survival depending on the age category and whether or not an individual has had chemotherapy.

**Radiotherapy**

Radiotherapy uses high-energy rays to treat disease such as breast cancer. Radiotherapy can be given both externally and internally. External radiotherapy aims high-energy x-rays at the affected area such as the breast using a large machine. Internal radiotherapy involves having material that is radioactive placed within the body. Radiotherapy works by destroying cancer cells within an individual’s body specifically in the area that needs to be treated. Normal cells can sometimes be affected by radiotherapy; however they do repair themselves overtime. Radiotherapy can either be given to attempt to destroy a tumour and cure the cancer or to help relieve symptoms an individual has if the cancer is incurable. Radiotherapy is sometimes given alongside chemotherapy and this is called chemo radiation. (Macmillan.org.uk, 2017) Radiotherapy is given to an individual at a hospital due to there being specialist equipment requires for this treatment. An advantage of going to the hospital to have radiotherapy is that some individuals feel like they are leaving their worries about their condition at the hospital rather than bringing it home with them. Whereas, if an individual was having the treatment at home they may feel like they are mixing their condition with their home life. A disadvantage of going to a hospital setting to have chemotherapy is that it can make individuals worried. Some individuals may be scared or anxious about going to the hospital and therefore may not turn up for the treatment.

There are many advantages of radiotherapy which makes it a good quality to treatment to receive. Firstly, radiotherapy can kill off a large amount of cancer cells. This sometimes results in radiotherapy being the only treatment some individuals have to have if all the cancer cells within the tumour are killed. Radiotherapy also has the ability to shrink tumours which can make an inoperable cancer operable due to the size of the tumour being reduced. Radiotherapy is also relatively safe for the individual having it, it is a painless procedure and generally does not require anaesthesia. Radiotherapy can also stimulate the immune system to respond to the tumour, which can help individuals to generally feel better within themselves.

Despite there being some good advantages of radiotherapy, there are some disadvantages. Radiotherapy can cause damage to an individual’s surrounding tissues such as their lungs or heart. This is not always the case and can depend how close the radiation gets to vital organs. For those with particularly large tumours, radiotherapy will not be able to get rid of all the cancer cells. It can only slightly reduce the number of alive cancer cells, for large tumours a series of radiotherapy would have to be conducted. Radiotherapy can extremely impact an individual’s daily life, due to radiotherapy having to be delivered daily. Most individuals would have to have radiotherapy 5 days per week, for 1-2 months which can massively effect home life.

When radiotherapy is killing off cancer cells it can also kill off normal, healthy cells this causes individuals to have some side effects. One of the most common side effects of radiotherapy is fatigue. This is due to all an individual’s energy being used up on trying to replace their normal, healthy cells that have been killed off. The skin around the area where and individual has had radiotherapy can become extremely sore, red marks or rashes may appear on the area. In very few cases, the development of a second cancer can occur due to radiation. This is extremely uncommon but can occur depending on factors such as, the area being treated and the age of the individual. Specifically, side effects for those having radiotherapy to treat breast cancer include, skin reactions, swelling of the breast, pain in the breast or chest area and hair loss in the armpit. (CancerQuest, 2017)

The overall quality of radiotherapy is good. It is particularly good when treating small tumours as in some cases a course of radiotherapy can completely kill the tumour. When treating large tumours the quality is not as good, this is due to it not being able to kill off the whole tumour, however it can shrink the tumour which means other treatment or surgery can be used on it. It has been stated on a reliable source that, “Radiotherapy is often organ-preserving, which inherently promotes a better quality of life”. (CJ, 2017)

**Surgery**

There are a few main surgery types that are used to try and treat breast cancer. The type of surgery an individual has depends on, the size of the cancer, where the cancer is located in the breast, the size of the individual’s breasts and personal wishes and feelings an individual has towards the surgery types.

**Lymph Node removal**

In some cases, cancer cells within the breast can spread into an individual’s lymph nodes. Lymph nodes are in charge of draining lymphatic fluid for the breast and arm. An individual’s lymph nodes will be checked either before surgery or whilst surgery is taking place. If cancer is found in the lymph nodes a surgeon will try and remove all of them but sometimes a second operation is required. Some individual’s chose to have radiotherapy to the lymph nodes rather than removal. When an individual has their lymph nodes removed they have general anaesthetic, the surgeon will may a small cut in the armpit to remove the lymph nodes. Usually 10-15 lymph nodes are removed but this can differ from person to person. After the removal the lymph nodes are sent to a pathologist who checks them for cancer cells, usually the results are back within two weeks. The lymph node removal procedure is carried out at the hospital. An advantage of this procedure being carried out at the hospital is that the lymph nodes can be sent off to the lab within the hospital quickly. This is beneficial as it means the results will come back quicker and treatment can be given if it is necessary.

An advantage of an individual having lymph node removal is that the removal helps to prevent cancer coming back, many people with breast cancer chose to have their lymph nodes removed because of this. Another advantage is that the removal is safe and is not complicated, it is also a relatively quick operation. The last advantage is that if an individual has the operation they may be able to take part in clinical trials which look at new treatments, this is beneficial as it is helping others with breast cancer.

A disadvantage of lymph node removal is that an individual might develop long term swelling which is called lymphedema, this can cause some pain. Another disadvantage of lymph node removal is that the removal is sometimes not necessary, in a lot of cases the lymph nodes are removed and no cancerous cells are found. A risk of an individual having their lymph nodes removed is that any operation has its risks, however the risk is low with this operation.

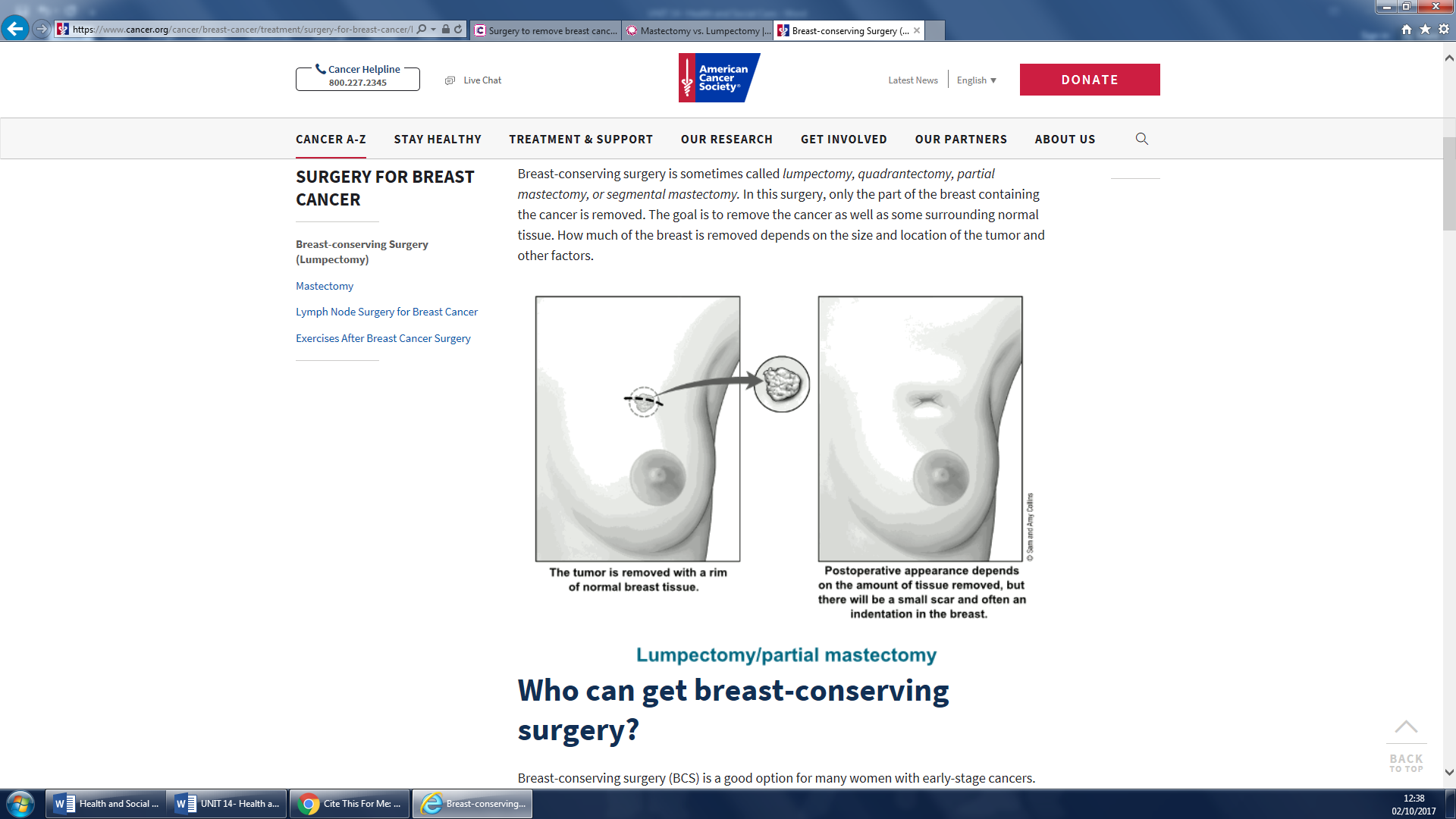
Some of the side effects that individuals experience when they are had their lymph nodes removed are, a loss of sensation in the back of the arm or the armpit, tingling, numbness, stiffness, inflammation of the arm veins and an increased risk of infection in the surgical area. The loss of sensation in the back of the arm or armpit can be caused if the nerve supplying sensation has been cut, overstretched or damaged during surgery. The inflammation of the arm veins can occur several days after the individual has had the surgery, the inflammation usually responds to treatment with ice and aspirin. In some cases, the inflammation can lead to a blood clot. If an infection occurs in the surgical area this will usually respond well to antibiotics. (Cancerresearchuk.org, 2017)

The quality of lymph node removal is good, this is due to the removal being able to discover if the breast cancer has spread at all. If the lymph nodes show up cancer cells when they are tested there is a chance that the breast cancer has spread. If an individual did not have their lymph nodes removed and tested they may not be aware if the cancer had spread.

**Lumpectomy**

A lumpectomy is removing an area of cancer from an individual’s breast. The surgeon completing a lumpectomy will remove some of the cancer and some surrounding breast tissue, the aim of a lumpectomy is to leave behind as much breast tissue as possible. This type of surgery is recommended when the cancer is small compared to the size of the breast, when it is in a suitable position in an individual’s breast and is only in one area of the breast. After this type of surgery an individual will usually have radiotherapy to help kill any cancer cells that may still remain in the breast. (Cancerresearchuk.org, 2017) A lumpectomy is carried out at a hospital as it is an operation that requires and individual to be under general anaesthetic. An advantage of a lumpectomy being carried out at the hospital is that the procedure should go to plan and if it does not the hospital have the resources to ensure it does go to plan. This is beneficial as it ensures individuals feel at ease before having an operation. A disadvantage of having this procedure at the hospital is that there are lots of people needing different surgery so therefore some operations may be pushed to the back of the waiting list. Some individuals may decide to have this surgery done at a private hospital so that the operation is done quickly.

Many women struggle to come to terms with the idea of having to have the whole breast removed due to breast cancer, so having a lumpectomy is an alternative which is an advantage. The biggest advantage of this surgery is that a woman is able to just have the tumour removed rather than the whole breast resulting in a women being able to keep her breasts. With lumpectomy treatment, the size of a women’s breast is sometimes reduced making it a different size to her other breast. Despite this, reconstruction is widely offered and there is a good cosmetic result with reconstructions. This surgery ensures that women have the same sized boobs after surgery which ensures women feel confident.



**Once an individual has had a lumpectomy, radiation is required to ensure the cancer has gone. This can be a disadvantage of a lumpectomy because it is likely individuals will have to compete a course of radiotherapy which would be 5 days per week lasting 5 to 7 weeks. This can massively impact individuals home and work life. If a women requires reconstruction after a lumpectomy, the course of radiotherapy can affect the timing of the reconstruction and sometimes can reduce reconstruction options. Another disadvantage of a lumpectomy is that once the tumor has been removed there is a risk of the breast cancer returning, this can be if the radiotherapy is unable to kill off all the cancer cells within the breast.**

**After an individual has the lumpectomy surgery, they are likely to have some side effects. Some individuals may only experience a couple of side effects but others may experience a range. Possible side effects include, pain or tenderness around the operated area, temporary swelling of the breast, hard scar tissue that can form where the surgery was performed, a change in the breast shape or size and nerve pain in the chest wall, armpit or arm that does not go away over time.**

**The quality of lumpectomy surgery is not as good as other breast cancer surgeries, this is due to the possibility of the cancer returning being higher. A lumpectomy on its own is usually not an option due to the chance of the breast cancer returning, therefore the quality of a lumpectomy on its own is poor. However, there have been good results from lumpectomy surgery and radiotherapy together making this a better quality option.**

**Mastectomy**

A mastectomy is the removal of a women’s whole breast and is used to treat breast cancer and prevent the cancer returning. A mastectomy is one of the main type of surgeries used to try and treat breast cancer. In 2012-2013, just under 23,200 mastectomies were carried out in England. After having a mastectomy, the recovery can take three to six weeks and women are likely to have to stay in hospital for 1-3 nights to ensure a full recovery will be made. For those who have a mastectomy, breast reconstruction is sometimes available. This procedure involves making an artificial breast that replaces the breast that has been removed. This procedure will take place in a hospital setting. An advantage of this is that there will be specialist staff working in the hospital who will be able to help an individual recover after their operation. This is beneficial as it will ensure the individual recovers well and does not get any infections. A disadvantage of the operation being in a hospital setting is that it can worry individuals more than they need to. Another disadvantage of being in hospital to recover is that individuals may feel uncomfortable in the surroundings and may prefer to be in the comfort of their own home instead.

There are both advantages and disadvantages of a mastectomy. The main advantage of a mastectomy is that it is the best surgery in terms of the risk of the cancer coming back being quite low. Having this procedure often gives women more confidence that their cancer will not return. Unlike some surgery’s, after having a mastectomy further treatment such as radiotherapy is not required. This is beneficial as after the operation women are able to go home and rest without having the worry about going back to the hospital for more treatment. Another advantage is, once the breast has been removed radiotherapy is still available if the cancer was to return. This is beneficial as it means there are still available treatment options even when a woman has had her breast removed.

The main disadvantage of a mastectomy, which many women find difficult to come to terms with is the permanent removal of the breast. Many women feel it will change their appearance too much or that they will look manly, these thoughts can stop a women from wanting to have a mastectomy despite the benefits of the operation. Despite being able to have a reconstruction done, this operation can take months to recover from. This is due to the body having to get used to the reconstruction, some bodies can reject this. The recovery can be long and painful resulting in a number of women deciding not to have the reconstruction. (Cancerresearchuk.org, 2017)

In most cases, a mastectomy goes well and individual’s recover fully. However, it is likely that after the surgery individuals will experience a range of side effects. Nearly all individuals will experience short term pain, this can be controlled with pain killers. Most also have swelling of the tissue around the chest area, which can be tender. All individuals who have a mastectomy will have a scar after the operation, this will be relatively small and will fade overtime. Some individuals may have swelling around the site of the operation due to body fluid collecting underneath the skin. This is known as seroma, in most cases it will disappear without treatment overtime. However, sometimes it does not disappear on its own and it has to be drained, this is done with a needle and syringe. Another side effect, is an infected wound. If the wound becomes red, painful, swollen and is leaking fluid it is most likely infected. This can be cleared up with antibiotics. It is very rare but for some individuals who have had a mastectomy, the side effects of the operation particularly the pain can be long-lasting. (NHS.uk, 2017)

The quality of a mastectomy is extremely good, the majority of women have no more problems with cancer returning after having a mastectomy and treatment. However, there is no guarantee that the cancer will not return after a mastectomy and in some cases it does. It is stated that, “Just over 80% of people diagnosed with breast cancer in the UK have surgery and just under half (43%) of women who have surgery for breast cancer have a mastectomy.” (Breast Cancer Care UK, 2017)

**Rehabilitation**

**Oncology rehabilitation**

Oncology rehabilitation includes a wide range of therapies designed to help individuals build up strength, maintain stress/emotion and regain independence. Physical therapy, occupational therapy, speech and language pathology and manual therapy. When an individual has different breast cancer treatments, the physical functioning and energy of an individual can be affected. If this occurs, oncology rehabilitation is available to help individuals overcome physical defects, build up strength, reduce pain and deal with fatigue. In particular, oncology rehabilitation may offer treatment methods such as:

* Oncology rehabilitation professionals can work alongside surgical oncologists to help prevent or reduce the chance of an individual developing lymphedema. They can do this by using drainage techniques, stretching exercises and massages.
* Scar and myofascial massage can be used after surgery to help decrease pain and discomfort for individuals.
* Therapeutic exercises and neuro-muscular training can be provided to help build up individuals strength and energy.
* Auriculotherapy can be used to help reduce some side effects of breast cancer such as, fatigue, nausea and pain.

Oncology rehabilitation will be given to an individual with breast cancer in a rehabilitation setting. An advantage of this setting is that there will be trained staff and the setting will be motivational, therefore individuals will feel motivated to improve their condition. A disadvantage of this setting, is that the care is not one on one. Therefore, if others are doing better than the individual and their condition is improving quicker the individual may feel embarrassed.

An advantage of an individual accessing oncology rehabilitation is that it can help an individual get back to their normal selves. This can include returning to work and completing daily tasks such as dropping children to school and picking them up. Oncology rehabilitation can also provide emotional help for those who struggle to talk to family members and friends. Trained counsellors will be there for individuals to talk to and will be able to give advice which is beneficial. Individuals can also receive treatment and advice on how to live their lives with their news appearance if they have had a mastectomy. For example, how to deal with pain whilst completing everyday tasks.

A disadvantage of oncology rehabilitation is that some of its services are not funded for by the NHS, resulting in them being expensive. For example, often day trips are organised to reward individuals for their hard work but they are not funded for, those who cannot afford trips can feel very left out. Another disadvantage, is that there is a long waiting list to access oncology rehabilitation on the NHS. This results in individuals not being able to access the services that they require.

The quality of oncology rehabilitation is good as it provides a strong support system for individuals who are dealing with the after effects of breast cancer. For those who do not feel as though they can talk to family and friends may seek alternative support like oncology rehabilitation because they feel like a burden. It is also a good way for individuals to talk to others who have had breast cancer to share experiences and methods of coping. It is also good because it helps individuals deal with pain that they may be experiencing after surgery for example. Many of the treatments available such as massage are effective which makes oncology rehabilitation a good quality treatment. (Rehabilitation and Cancer, 2017)

**Complementary therapy**

There are a range of complementary therapies that individuals with breast cancer can use as a way to help their mental wellbeing. Some of the available complementary therapies for breast cancer patients include massage, acupuncture and aromatherapy. Massage can be used as a complementary therapy. If an individual has had a mastectomy they can use massage as a way to fade the scar, oils are used to help this. Other massage types can be used to help relieve stress and ensure individual feels relaxed such as a deep-tissue massage. Acupuncture is a treatment that comes from ancient Chinese medicine. This therapy involves lots of fine needles being inserted into certain areas of an individual’s body for a therapeutic purpose. Aromatherapy is the practice of using natural oils which are extracted from flowers, bark, stems, leaves, roots and other parts of plants to enhance psychological and physical well-being. The inhaled aroma for these oils is believed to stimulate brain function. Most types of complementary therapy can be done at an individual’s home. An advantage of this is that individuals will feel comfortable in their own home and will relax which will improve mental-wellbeing. A disadvantage of complementary therapies being completed in an individual’s own home is that treatment such as massages can usually be expensive if someone comes to your house to do it. Therefore, most individuals access complementary therapies through the NHS.

There are both advantages and disadvantages of complementary therapies. An advantage of complementary therapies are that they can help improve the mental well-being of an individual dealing with breast cancer. They do this by relieving stress and helping an individual to relax. They can also help to relieve side effects such as pain. An advantage of acupuncture is that it can help relieve nausea, migraines, anxiety, and depression and it improves infertility. A benefit of aromatherapy is that the treatment can help to reduce anxiety, ease depression, boost energy levels and speed up the healing process after surgery.

A disadvantage of some complementary therapies is that they can sometimes affect how breast cancer treatments works, this is most common with herbal remedy treatment. Another disadvantage is that there can be long waiting lists to have complementary therapy. This is due to many hospitals and doctors providing a free service resulting in many patients wanting to access it. Complementary therapy is done privately but this can be very expensive. Complementary therapy is a good temporary treatment that can help breast cancer patients, however it is only temporary resulting in individuals having to complete a number of sessions or finding an alternative treatment.

Overall, the quality of complementary therapy is good as it can help to improve a cancer patient’s physical and mental wellbeing. It is also an effective support system for those individuals who struggle to talk to friends and family due to feeling like a burden. It is also a way to talk to other cancer patients to share each other's stories and to gain coping methods from professionals. (Breast Cancer Care, 2017)

**Lifestyle changes**

There are a number of lifestyles changes an individual with breast cancer can make as a method of improving their condition. The lifestyle changes include, eating well, keeping to a healthy weight, keeping physically active, looking after your bones, looking after your heart, stopping smoking and sticking to sensible drinking. Starting to change some of the above can massively help an individual in ensuring that they have a healthy body that can fight against the disease. Once a woman has had treatment it is common for them to put on some weight, to overcome this it is important that individuals only eat as much as they need, have a balanced diet with a lot of fruit and vegetables in it, do not eat foods that contain high saturated fats and become more physically active. Being physically active is important as it can help to improve physical health but also mental health as it can help to reduce stress and tiredness, which will help to make an individual feel more like themselves. It can also help to keep an individual's heart and bones healthy, which is vital for those with cancer. Lifestyle changes such as having a healthy diet will take place in an individual’s home. Individuals may change their diet by throwing out unhealthy food and allowing more time to prepare fresh home cooked meals. An individual who is trying to lose weight may access a gym setting as there will be equipment in the gym that will help individuals to lose weight. An advantage of an individual trying to improve their diet in their home is that they will have family around to support them who may also start eating more healthy meals. A disadvantage of improving diet within the home is that individuals will not have support from professionals such as nutritionist and therefore may struggle to know what foods to eat. An advantage of losing weight within a gym setting is that the gym has equipment and personal trainers that can help an individual to lose weight. A disadvantage of losing weight within a gym setting is that it is likely to be busy. This can be embarrassing for individuals and therefore individuals may not want to attend the gym.

An advantage of lifestyle changes for an individual with breast cancer is that it can help to prolong their lives. According to Macmillan, "There is some evidence that regular physical activity may help to reduce the risk of breast cancer coming back". Therefore, it is vital that individuals adapt to new lifestyle changes in order to live a longer life, cancer free. A second advantage is that it can help an individual to feel more like themselves despite side effects of treatment, they can help to reduce stress and tiredness resulting in an individual feeling more positive. Another advantage of lifestyle changes such as improving diet and exercising more is that it ensures your heart and bones are healthy, this is beneficial as it reduces the chance of an individual developing additional diseases.

A disadvantage of lifestyle changes is that it can be difficult for individuals to stop habits such as smoking and drinking. An individual who has to give up smoking and drinking due to breast cancer may find it extremely hard resulting in anxiety and depression. Another disadvantage of lifestyle changes is that they do not help to cure cancer which can result in individuals wanting to live their life to the full without restrictions such as changes to their lifestyle.

Overall, the quality of lifestyle changes for a patient with breast cancer is good. This is because it can help to improve both physically and mental wellbeing. It also helps to prevent an individual from developing further diseases due to lifestyle changes keeping the body healthy. (Macmillan.org.uk, 2017)



**Treatment and support (Coronary Heart Disease)**

**Medication**

There are a range of medications that individuals with coronary heart disease can take to help improve their condition and help reduce the risk of heart attacks. The type of medication a CHD patient will take will depend of the severity of their condition and how likely it is that they will have a heart attack. All CHD medication helps to reduce blood pressure or widen an individual's artery.

**Antiplatelets (Aspirin)**

Antiplatelets are a type of medication a CHD individual can take to help reduce the risk of having heart attacks. This medication can reduce the risk of heart attacks by thinning an individual's blood and by preventing it from clotting. There are a range of common antiplatelets that can be taken including low-dose aspirin, clopidogrel, ticagrelor and prasugrel. Low-dose aspirin is most commonly used and comes in a variety of forms such as a pill, dissolvable tablets, powders and oral gels. Some types of aspirin can be brought at a pharmacy but most CHD patients will be prescribed aspirin by a doctor. For an individual with CHD, they will have a long-term treatment with a low-dose aspirin. Aspirin has an antiplatelet affect which means it makes the blood less sticky and can reduce blood clots from developing. It is mainly used if an individual has experienced a heart attack or angina or if they have had an operation on the heart or blood vessels. An individual taking low-dose aspirin is likely to take it once a day for the rest of their life. Aspirin can be taken by an individual within their own home. An advantage of this is that an individual can take the tablet at a convenient time that they will remember, for example as soon as they wake up. A disadvantage of taking aspirin within the home is that sometimes individuals can take too many aspirin which can cause bad side effects that need medical attention and within the home there will not be any health professionals that can help.

The main advantage of an individual with CHD taking aspirin is that it can help prevent people from having a heart attack. This is beneficial as aspirin can help to prolong an individual’s life as heart attacks are less likely to occur, heart attacks are one of the most common ways to die so therefore the medication is reducing the risk. Despite this advantage, there are not any other advantages of aspirin for those with CHD. Aspirin can however, reduce the risk of an individual having a stroke.

One of the disadvantages of aspirin is that there are a number of guidelines meaning not all individuals with CHD are able to take it. Those who are considering taking aspirin must have a consultation with a doctor to see if the medication is appropriate, if an individual consumes a lot of alcohol or is undergoing any simple medical or dental procedures they will not be able to take aspirin. The doctor will be able to provide these types of individuals with alternative medication options. Another disadvantage of aspirin are the side effects that can occur when an individual is taking the medication, for example alcohol and aspirin do not mix well and can result in serious stomach problems. It is vital that individuals are aware on the amount of alcohol they can consume whilst taking aspirin to increase the risk of stomach problems. Lastly, aspirin will not cure coronary heart disease. Despite it reducing the risk of a heart attack occurring, it does not completely stop heart attacks. Therefore, some individuals taking aspirin will still experience heart attacks.

For those taking aspirin as a medication for CHD there can be a variety of side effects. Some individuals will only experience one or two side effects, others may experience more; this depends on how well an individual's body adapts to the medication. The most common side effects of aspirin are, indigestion and stomach aches which can be resolved by taking the medication with food. Another common side effect is bleeding and bruising more easily than before taking the medication. Some more uncommon side effects consist of, hives, breathing difficulties, allergic reaction to the medication, bleeding in the stomach or bleeding in the brain. These uncommon side effects of aspirin must be treated by a medical professional.

The overall quality of aspirin is good as it can help to reduce the risk of an individual with CHD having a heart attack. However, this type of medication is not completely accurate or affective because individuals who take it may still experience heart attacks.

**Statins**

Statins are another type of medication that an individual can take to help reduce the risk of developing coronary heart disease. Statins help to lower the level of low-density lipoprotein (LDL) cholesterol in the blood, which links to the risk of developing CHD. The most common types of statins that can be taken are called atorvastatin, simvastatin, rosuvastatin, and pravastatin. An individual will be prescribed statins if they have LDL cholesterol as this can lead to coronary heart disease, angina and heart attacks. If an individual has been diagnosed with a form of CHD or there is CHD within the family history a doctor may recommended to take statins. Statins can be taken by an individual within their own home. An advantage of being able to take statins within the home is that individuals do not have to take time out of their day to attend appointments. A disadvantage of taking statins within an individual’s home is that some individuals may forget to take the medication and they may not have anyone at home to remind them to take the medication.

The main advantage of statins is that most types of statins can successfully help to lower low-density lipoproteins, lowering low-density lipoproteins can help to reduce the risk of coronary heart disease and heart attacks. Statins also help to relax the blood vessels within the body which can help to decrease high blood pressure, which is also a factor that adds to the risk of developing CHD. Another benefit of statins is that they can help flight inflammation which can reduce artery damage, this reduces the risk of an individual developing heart problems in the future.

The main disadvantage of statins is that some of the side effects can be life threatening, despite this being rare it can still occur for some individuals who take statins. Another disadvantage of statins is that they do not work for everyone, an individual may take statins to reduce their cholesterol levels but they may still develop coronary heart disease. Statins can also increase the risk of an individual developing type 2 diabetes which is another disadvantage of statins.

For those who are taking statins to help reduce the risk of CHD there can be come side effects. Some individuals will experience minor side effects such as nosebleeds, feeling sick, an upset stomach and headaches. These minor side effects usually pass once the body is used to the medication. There are also more serious side effects that can occur when taking statins such as kidney failure. However, the British Heart foundation states that just 1 in 10,000 people who take statins will experience a serious side effect. Other more serious side effects that can occur are severe muscle pain called rhabdomyolysis and liver damage.

Overall the quality of statins is average. This is because they do not work for everyone and can cause life threatening risks for some individuals. There are many alternative medication options that individuals can take instead of statins and health professionals encourage individuals to take these. Despite statins causing potential life threatening risks, they can work for some individuals and can help to reduce the risk of individuals developing CHD or having a heart attack. (Nhs.uk, 2017)

**Beta-blockers**

Beta-blockers are another medication type that can be taken to help those with coronary heart disease. Beta-blockers are mainly used to treat angina and high blood pressure which are symptoms of CHD. Beta-blockers can also be used to treat heart failure and heart attacks. Beta-blockers work by blocking a hormone in the body which help to slow down an individual’s heart beat and improves their blood flow. The most common types of beta-blockers prescribed to patients include atenolol, bisoprolol, carvedilol and metoprolol. Beta-blockers are in pill form so therefore can be taken by an individual within their home. An advantage of an individual being able to take beta-blockers at home is that they can fit it into their daily routine to ensure they remember to take it and if they have any side effects such as sickness they can sleep this off at home. A disadvantage of taking beta-blockers at home is that an individual will not be in regular contact with health professionals, this could result in an individual dealing with a side effect like depression alone without having any help.

The main advantage of beta-blockers are that they can reduce the risk of an individual have a recurrent heart attack. This is extremely beneficial as the more heart attacks an individual has the less likely the individual will fully recover, so therefore beta-blockers can help to increase individual’s life expectancy. Another advantage is that beta-blockers can help to lower blood pressure if an individual has high blood pressure. This is beneficial as having high blood pressure can increase the risk of an individual developing CHD, so therefore if they reduce blood pressure they are reducing the risk of an individual developing CHD.

A disadvantage of beta-blocker is that they do not work for all individuals, this can be disheartening for patients as they are likely to have dealt with side effects for the medication to not work. In particular, beta-blockers cannot completely stop an individual from have a heart attack again. The medication helps to reduce the risk of a heart attack but it does not guarantee that an individual will not have one again. Another disadvantage is that in some cases, the medication can decrease an individual’s blood pressure too much causing them to have low blood pressure which can result in light-headedness. The last disadvantage is the side effects that can come with taking the medication.

Like most medications there are side effects that can occur when an individual takes beta-blockers. The most common symptoms of beta-blockers are dizziness, tiredness, blurred vision, cold hand/feet, slow heartbeat, diarrhoea and nausea. Some of these side effects can cause individuals to have problems with their everyday lives. For example, an individual who is experiencing blurred vision should not drive. There are also some less common side effects that some individuals who are taking beta-blockers may experience such as sleep disturbance (insomnia), loss of sex drive, problems getting or maintain an erection and depression. If an individual is struggling with the side effects of beta-blockers they can call a GP for advice.

Overall, the quality of beta-blockers is good. In particular, the mediation is very good for those with heart failure. Stated on a reliable source, “Probably the most potent effect of beta-blockers are in patients with heart failure where there is a dramatic-about 35 percent- reduction in all-cause mortality, risk in certain cardiac death, and improve symptoms and risk of hospitalisation.” (Nhs.uk, 2017)

**Surgery**

**Heart Transplant**

A heart transplant is used only in a small number of cases to treat coronary heart disease. This surgery type is used when the heart is extremely damaged and medication cannot treat it or when the heart is unable able to sufficiently pump blood around the body. Heart transplant surgery involves replacing an individual’s heart that is damaged with a healthy heart which would have been donated by an organ donor. An individual with coronary heart disease will eventually find that their heart is too damaged and unhealthy to be treated or to pump blood around their body, so therefore a heart transplant would be the only option. During a heart transplant operation, the individual is under general anaesthetic and a heart-lung bypass machine is used to keep the blood circulating with oxygen-rich blood. After the heart transplant an individual is usually required to stay in hospital for two to three weeks to ensure a full recovery will be made. Once out of hospital an individual can usually start completing their normal activities within a few months. Heart transplant surgery is carried out in a hospital setting due it being a complex procedure. An advantage of having this surgery in a hospital is that there are specially trained heart surgeons that can successfully carry out the operation ensuring nothing goes wrong. A disadvantage of having heart surgery in hospital is that individuals have to stay in hospital for up to three weeks. This can be distressing for individuals as it is a long period of time away from home and they may not feel comfortable in a hospital setting. Some heart transplant surgeries are completed in private hospitals if the individual can afford it.

The main advantage of a heart transplant is that the surgery can provide the individual with a better quality of life after the transplant has been completed. This is beneficial as it allows an individual to live their life to the full. Another advantage is that this may be the only solution available to save a person’s life, therefore it is a very important surgery. Another advantage is that it results in an individual not having to take several medication types to try and cure their condition. The last advantage of a heart transplant is that the survival rate is high. According to a reliable source, “Survival rates in solid organ transplant- for example, heart, liver and kidney- have improved significantly, with around 88% of patients surviving the first year after transplant surgery and 75% surviving for 5 years.”

A disadvantage of heart transplant surgery is that the individual will have to take several medicines, including immunosuppressant’s, for the rest of your life. If the medication does not take the medication their body would rapidly recognise their new heart as not their original heart and would try to reject it. Another disadvantage is that the operation is high risk and the cost is extremely high cost. The main disadvantage of heart transplant surgery is that there is a very limited supply of suitable donors so there is a very long waiting list. Unfortunately, suitable hearts do not become available for everyone and only 8 out of 10 people receive the heart transplant they require. Around half the people accepted onto the heart transplant waiting list receive a transplant within three years.

An individual who has a heart transplant may experience side effects such as rejection, this can occur when the immune system recognises that the transplanted heart is foreign and so it attacks it. Another side effect is that the donate heart can fail to work properly which can result in an individual having to have a second heart transplant. Individuals can also have side effects from the medication that they have to take such as increased vulnerability to infections, weight gain and kidney problems.

The overall quality of heart transplants is good. The number of individuals desperately waiting for a heart transplant has more than doubled in just five years, according to the latest statistics. This shows that heart transplants are a good quality surgery as there are lots of people waiting to have the surgery which shows that it is recommended by professionals.

**Rehabilitation**

**Cardiac rehabilitation**

Cardiac rehabilitation is in place for those who have had a heart attack or heart surgery. Cardiac rehabilitation is a programme of exercise and information sessions to help an individual get back to their normal health. These rehabilitation sessions can also help individual’s family members as they are provided with a range of information. Cardiac rehabilitation can help an individual to understand their condition, recover from their surgery, procedure or heart attack, make changes to your lifestyle that will help to improve their heart health and to reduce the risk of further heart problems. This type of rehabilitation is available for any individual who has had a heart attack, a coronary angioplasty, heart surgery, heart failure and angina. Cardiac rehabilitation is provided in a rehabilitation centre. An advantage of cardiac rehabilitation being provided in this setting is that they have the correct equipment to support an individual and to help them get back to their normal health. A disadvantage of this type of setting is that it may be overcrowded because there are not many centres around, this can result in an individual not being able to get the most out of their session.

There are many advantages of cardiac rehabilitation. Firstly, it can help an individual to get back to their normal selves, this includes being able to complete activities and sports. Another advantage is that cardiac rehabilitation can provide support for the family so that they know how to support and care for someone who has had a heart attack or a heart procedure. There are also many local cardiac rehabilitation programme centres making this type of rehabilitation accessible. Lastly, individuals are able to make friends whilst completing the cardiac rehabilitation programme. Individuals are able to support each other by sharing their experiences and coping methods.

A disadvantage of cardiac rehabilitation programmes is that they are high in demand, this results in individuals not being able to access the rehabilitation when they require it. These sessions can also be expensive if individuals have to access them privately rather than on the NHS which means some individuals cannot afford the sessions.

The overall quality of cardiac rehabilitation is good as it helps to support individual’s physical and mental state. It can also help to support family members which is important as it can be difficult for family members to know how to support their loved ones.

**Lifestyle changes**

There are a number of lifestyle changes an individual with coronary heart disease can make to help improve their condition. Having a heart-healthy lifestyle can help to prevent an individual’s condition becoming worse, a heart-healthy lifestyle involves an individual eating healthy, maintaining a healthy weight, managing stress, completing regular physical activity and quitting smoking. Making these lifestyle changes can not only improve an individual’s physical state but also mental state which can make individuals motivated to improve their condition. Those with CHD should avoid fried fast food, processed foods and instead should have a low-saturated fat, high-fibre, high-plant food diet as this can help to reduce the risk of developing heart disease or can improve the condition of an individual with CHD.

An advantage of an individual with CHD making lifestyle changes is it can help to improve the individuals overall condition, this can result in an individual having a longer life expectancy. Another advantage of exercising and having a healthy lifestyle is that it can help an individual to relieve stress and improve tiredness, this will make an individual feel more positive and they will be able to get on with their everyday lives.

A disadvantage of an individual having to make lifestyle changes is that it can be challenging. Many lifestyle habits begin at childhood therefore making it difficult to make lifestyle changes once an adult. Dramatic lifestyle changes such as stopping smoking if an individual has smoked for a long time can be extremely hard for an individual and can cause an individual to feel anxious or depressed. Another disadvantage of an individual having to make lifestyle changes is that it can affect their social life. Individuals with CHD should not be going out to eat and drink regularly as this is very unhealthy, this can cause friendships to break down as individuals will not be able to go out as much.

The overall quality of an individual making lifestyle changes is good. Firstly, it can help to improve an individual’s physical and mental health which is important for a longer life expectancy. This also results in individuals feeling better within themselves which can make them happier. Lifestyle changes also help to improve the condition of an individual with CHD, this is vital as it ensures an individual can live a relatively healthy lifestyle.

**P4: Compare the types of carers and care settings for service users with different types of physiological disorders.**

For P4, I will be looking at the different types of carer’s available for an individual with breast cancer and an individual with coronary heart disease and I will compare them. I will also look at the different provisions in place such as statutory, private and voluntary and how they support individuals with physiological needs.

**Carers**

**Informal carers**

Informal carers are a type of carer that can support an individual with physiological needs. An informal carer can be anyone without a health/nursing profession, including family, friends and neighbours. Informal carers can give an individual ongoing care and assistance but they do not accept payment for the care that they are giving.

Informal care such as family, friends and neighbours can help support an individual with breast cancer and coronary heart disease. Informal carers may support an individual with breast cancer by helping with daily tasks such as cooking dinner or taking the children to school and may also support by being there as someone to talk to, this would also benefit an individual with coronary heart disease as they may have to rest regularly. This is supportive as it is likely the care will be given to the individual within their own home which will make them feel comfortable and they may open up more to those that they love. However, this may not be the case as individuals with breast cancer can sometimes struggle to talk to their loved ones as they feel like they will not understand how they are feeling. It may difficult for an informal carer to provide support to an individual with CHD by talking to them as this condition is more complex. Family members may find it difficult to be an informal carer for their loved ones as they may struggle to deal with what the individual is going through and if they were to get emotional this would not be beneficial for the individual who is sick. A benefit of informal carers are that they are likely to be local, this is extremely supportive for those with breast cancer and coronary heart disease as they may be having a bad morning and feel as though they need some help or someone to talk to. Those individuals with physiological disorders would be able to ring a family, friend or neighbour and ask for some help rather than having to wait a long time for a doctor’s appointment. Another benefit of informal careers is that family and friends find it fulfilling when they know they have positively impacted their sick loved ones day, this motivates them to support the individual whenever they can. This is beneficial for individuals with physiological disorders as they know they have a good support system around them. The overall quality of informal carers is good in terms of them being there for support rather than treatment. Informal carers are a good support system but individuals with breast cancer and CHD will not be able to rely completely on informal carers as they cannot give the professional care that the individual requires.

**Professional carers**

A professional carers can also provide support for individuals with physiological needs. Professional carers will have a health/nursing background and may care for a variety of service users including the elderly, the disabled and individuals who are too sick to care for themselves. Professional carers may help an individual to wash, go to the toilet, dress, help an individual take their medication and help to cook dinner. Professional carers can be provided and paid by the NHS but some may be private.

Professional carers such as GPs, nurses, rehabilitation staff and counsellors can help to support individual with breast cancer and coronary heart disease. The support from GPs and nurses are beneficial for individuals within breast cancer and coronary heart disease. Whereas, support from a counsellor is related more to breast cancer as it can have a big impact on individual’s mental-wellbeing and support from rehabilitation staff is for individuals with CHD as they need advice and support in order to maintain a healthy heart.

A GP can support an individual with CHD or breast cancer by proving them with all the possible treatment options. This is supportive as it is giving individuals a variety of options rather than telling them what option they will be taking. A GP can support these individuals further by giving their opinion on which treatment they think will work best and will be most beneficial to the individual’s life. This is supportive as individuals will take into account a professional’s opinion as they are trained. The benefits of a GP are that they have a lot of knowledge therefore they can advise individuals on what treatment they should go for as they know which treatments have the best outcomes. A disadvantage of GPs is that they have to see a lot of patients every day, therefore they have not always got time to provide emotional support for individuals.

A GPs main role is to provide an individual with information on treatment whereas, nurses can support individuals with breast cancer and CHD by giving them treatment or caring for them after surgery. Nurses can support individuals with breast cancer after they have had surgery such as a mastectomy by giving them drugs and cleaning wounds to ensure the surgical area does not get infected. This shows good support towards those with breast cancer as the nurses are ensuring individuals recover well from surgery so that they can leave hospital as soon as possible. Nurses can also give emotional support towards patients as they spend more time with them, this is an advantage as sometimes individuals who have had surgery such as a mastectomy require someone to talk to. Nurses can also support individuals with coronary heart disease or if they have had a heart attack for example. They can do this by listening to the individual about their worries/concerns and they can try and find resolutions for these. Nurses can also provide individuals with the correct drugs after surgery for example. The main advantage of professional careers is that they have good knowledge of different disorders and can therefore provide individuals with the best advice and treatment to improve their condition and quality of life. The main disadvantage is that sometimes individuals with illnesses just want to be listened to rather than be given a range of information. Some professionals struggle to do this because they feel information is important this can result in a professional carer not being the best support system for an individual with physiological disorders. Overall the quality of professional carers is good because they are well trained and have knowledge on different physiological disorders and they can help individuals to overcome illnesses so that they can carry on leading a healthy life.

**Provisions**

**Statutory provisions**

The statutory care sector is a provision available for those with physiological needs. Statutory provision provides the most formal care out of all the provisions and it is paid for and provided by the government. Examples of statutory provisions include the NHS, school nursing and social services.

The NHS is the main statutory provision that is in place to provide treatment and help for individuals with physiological diseases, specifically breast cancer and coronary heart disease. The NHS has a vision and purpose in place which is, “We want everyone to have greater control of their health and their wellbeing, and to be supported to live longer, healthier lives by high quality health and care services that are compassionate, inclusive and constantly-improving.” The NHS also aim to improve patient experience, patient safety and patient involvement, this is beneficial for individuals with physiological needs as patients are the NHS’s main focus.

The NHS supports individuals with breast cancer by ensuring that there is better prevention, earlier diagnosis and innovative new treatments which result in there being a realistic opportunity to make major improvements to survival. They also help individuals with breast cancer to live with cancer and beyond cancer by helping individuals to live healthy and happy lives. The NHS can support an individual with coronary heart disease by providing specialist surgery such as heart transplants to help give individuals the best quality of life. They also provide individuals with a range of information on the NHS choices website so that individuals and their families know how to deal with the disease.

**Private provisions**

The private care sector is another provision available for those with physiological needs. This type of provision is ran like a business and its aim is to make profit by providing treatment to individuals with specific needs. Examples of private provisions include private hospitals, care homes and private nurseries.

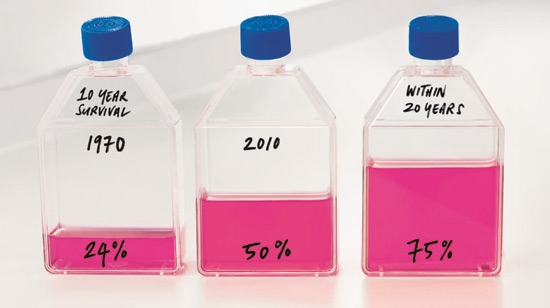
An individual with breast cancer can access a private specialist cancer unit where they will provide efficient care. They will provide alternative methods of treatment and they may trail new cancer treatment. The aim of private health care is to provide an alternative service to NHS as it has a larger financial backing and therefore can treat patients faster and with a variety of alternative treatment methods.

An individual with coronary heart disease can access a private hospital with a specialist heart unit. Specialist doctors are supplied to private hospitals, these provide specialist care to the patients to ensure a fast solution is reached. The health care professionals within the private hospital will be of high quality due to patients paying a large fee, the health care professionals need to be highly recommended and high skilled in order for the patients to justify contributing to private health care.

**Voluntary provisions**

The voluntary sector is the last provision available for those with physiological needs. This type of provision is run usually by volunteers and it is a non-profit making organisation. Most voluntary provisions are registered as a charity. Examples of voluntary provisions include, Age UK, Sue Ryder care and the British Heart foundation.

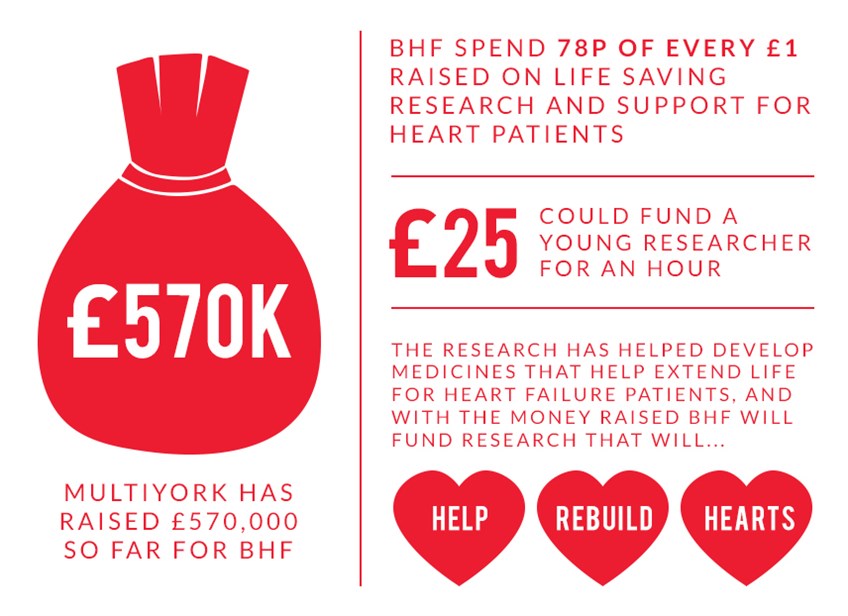
Cancer research is a charity set up to help individuals who have cancer including breast cancer, who have previously had breast cancer and their families. The aim and strategy of Cancer Research is to beat cancer sooner and their vision is to bring forward the day when all cancers are cured. They are working towards their aim by funding scientists, doctors and nurses to help find cures for cancer and by providing information to the public. They set up various charity events to help support the research needed to find a cure for cancer and they state that, “Every step we make towards beating cancer relies on every pound donated.” Cancer research help to support individuals with breast cancer by raising money through charity events to try and find a cure for cancer. They also provide support by providing online information for patients and their families so that everyone has a good understanding of breast cancer and ways it can be treated. They also support family with information on how to care for their loved ones, which is very supportive as it can be difficult for family members to know what to do and say.



“In the 1970s, less than a quarter of people with cancer survived. But over the last 40 years, survival has doubled- today half will survive. Our ambition is to accelerate progress and see three-quarters of people surviving the disease within the next 20 years.” (Cancer Research UK, 2017)

Macmillan is another charity that comes under the voluntary sector. Macmillan helps support individuals with cancer by raising money through charitable events and by providing support groups for those with cancer. Macmillan’s aim is to improve the lives of all individuals living with cancer and to inspire millions of other to do the same. They also aspire to provide support to everyone that needs it and to help those with cancer feel more in control of their lives. Macmillan support those with breast cancer by support groups and talks in a range of areas, in total there are more than 900 support groups. These groups give individuals the opportunity to others who understand what they are going through. They also give advice on how to deal with sensitive and emotional conversations such as talking to children about cancer. Macmillan also hold coffee mornings to help raise money and support individuals with cancer. This is an excellent way to raise money whilst socialising and anybody can get involved.

The British Heart foundation is a charity set up to help individuals who have heart diseases like CHD and individuals who have had hearts attacks and heart surgery. This charity are dedicated to the fight against heart disease and they fund thousands of research projects around the UK that are fighting heart disease. They help to support individuals by providing up to date information every year about heart disease so that the UK public are better informed. The charity post information about preventing heart disease, tests, conditions, treatments and lifesaving skills which is all vital information for individuals with CHD and their families. To raise money, the British Heart foundation put on a range of events including cycling challenges, overseas challenges and triathlons and they encourage the public to get involved as raising money can help find a cure for heart disease.

[](https://www.google.co.uk/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwiIk8LEpu3WAhWD7xQKHUvAAWoQjRwIBw&url=https://en.wikipedia.org/wiki/British_Heart_Foundation&psig=AOvVaw2O8JekCfk851iTT7R2gjI_&ust=1507973844962415)[](https://www.google.co.uk/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwiH2bjSpu3WAhVDaxQKHSS6A04QjRwIBw&url=https://www.multiyork.co.uk/blog/february-2016/supporting-the-british-heart-foundation&psig=AOvVaw2O8JekCfk851iTT7R2gjI_&ust=1507973844962415)

If there were not statutory, private and voluntary provisions in place for individuals with physiological disorders individuals needs would not be met and they would not be able to access the treatment they require. For example, if breast cancer charities were not available then people may not understand the symptoms of their conditions and may not seek treatment earlier enough for a positive resolution.

**D2: Justify the potential benefits of different investigations and treatment options for service users diagnosed with physiological disorders.**

**Breast cancer**

To help improve the overall survival rate of breast cancer, screening should be offered at a younger age and more frequently. Currently breast screening is offered to women who are registered with a GP and are aged between 50-70, every three years. To help decrease the amount of women developing breast cancer, screening should be offered when women are a lot younger.

When an individual has breast cancer they may have to have a mastectomy. For those women who have to have a mastectomy there should be more emotional support as it can be extremely difficult for women to accept that their breasts have been removed.

As well as an immediate counsellor after a mastectomy, there should not be a long wait for individuals to have breast reconstruction. If a woman wants to undergo breast reconstruction they should be able to have this procedure completed when they want to and feel ready to have to. Many women find it embarrassing not having breasts so having to wait a long period of time to have breast reconstruction can massively impact a women’s mental health, therefore the waiting list should be scrapped.

To help improve the survival rate of breast cancer, there should be more awareness about men having the disease. Breast cancer in women is well publicised as it is recognised by the colour pink which is mainly associated with women. To educate the public about breast cancer within men there should be more campaigns highlighting symptoms of breast cancer in men. As well as this, breast cancer support groups that only men are able to access should be more common. This will help men to not feel embarrassed about the disease but instead to help promote the disease.



Improvements could be made in the promotion of heart donations to enable more patients to have heart transplants. Many people are not aware of how easy it is to become an organ donor which can deter people away from applying. However, if the process was simplified more people would understand the process and therefore organ donations would increase**.**

**P5: Assess care needs of a selected service user with physiological disorder.**

For this learning aim, I have selected a service user who has suffered with breast cancer and is now in remission. I felt selecting a service user with breast cancer was beneficial as throughout this coursework I have gained knowledge on the disease and on what is in place to support an individual through the disease. As well as this, I know a family friend who has suffered with breast cancer so therefore I am able to find out what her care needs were whilst she was suffering with breast cancer. Therefore, I can use the information I already have as well as information I gather from my service user to complete this learning aim. My service user has since recovered from her physiological disorder so I will be talking through her needs during the time of the disorder.

**Primary Care Needs**

Primary care is the first point of contact for an individual who is dealing with an illness, injury or if they are experiencing symptoms that they have not experienced before. In most cases, an individual will arrange an appointment with a doctor at a GP surgery, a dentist or an optician to be checked over. If a health professional has concerns about the individual, they will refer the individual so that they can receive more specialist care.

**Secondary Care Needs**

After an individual has received primary care, they may be referred to a secondary care professional to receive specific specialist care. The health professional dealing with the patient will be trained within the patient’s issue for example, an individual with breast cancer may be seen by a medical oncologist. Usually, individuals will access secondary care within a hospital or clinic so that initial tests can be carried out if required.

**Tertiary Care Needs**

Tertiary care is given to individuals who require specialist treatment and care, this type of care is usually given within a hospital. Tertiary care is provided by highly trained professionals who expertise in a certain field, they are able to carry out investigations and treatment in order to help treat the patient. For example, an individual with a heart problem may be treated by a cardiac surgeon. (Studios, 2017)

**My individual’s needs**

An individual with breast cancer will receive care from all three sectors; primary, secondary and tertiary. My individual first discovered a lump in her right breast whilst she was having a shower. After discussing it with her husband, she decided to arrange an appointment to have the lump checked. The primary care she first accessed was at her local GP surgery, she arranged an appointment with a female doctor. During the appointment the GP carried out routine checks including a medical history, blood pressure and body temperature, an examination of her breasts and they discussed symptoms that she may have been experiencing. During the medical history check, there was no previous cases of breast or ovarian cancer within my individual’s family history and her blood pressure and body temperature results came back normal. Despite this, the GP was concerned about the lump within my individual’s breast and requested that my individual had a biopsy performed at her local hospital. My service user was then referred to the local hospital where she received secondary care including further testing. The GP requested a biopsy rather than a mammogram to speed up the testing process, this was due to the lump feeling rather big despite it not being a visible lump. At the hospital, the service user had a biopsy of the lump on her breast. Once the biopsy had been performed, she had to wait around 2 and half weeks for the results from her biopsy to come back; this was a very worrying time for my service user. An appointment with a consultant was made for my service user to come back and discuss the biopsy results, at the appointment my service user found out that she had breast cancer.

My service user was diagnosed with stage 1A breast cancer which meant that the cancer had not spread outside of her right breast. After being told about her diagnosis, my service user was given time in private with her husband to digest what she had been told. My service user was then told that she required a mammogram so that the consultant had an image of the lump, in order to see the size of the lump and the exact position of the lump within her breast. The mammogram was arranged and carried out shortly after my service user’s diagnosis and the scan image did not take long to come back to the consultant. Once the consultant had more information on the lump he was able to arrange for my service user to come and discuss different treatment options with a specialist oncologist. Once the appointment with my service user and the specialist oncologist was carried out, my service user was more educated on the different types of treatment available to her. It was decided that she would complete a course of chemotherapy to attempt to shrink the tumour so that it was more operable.

After the appointment, my service user required tertiary care. It was decided that she would complete a course of chemotherapy to try and shrink the tumour before she accessed other treatment options. My service user had a course of chemotherapy that lasted 3 and a half months, each week she would have 2 sessions of chemotherapy. The amount of sessions depended on how my service user dealt with the side effects as some weeks the chemotherapy made her feel extremely unwell. Once the course of chemotherapy was over, a scan was carried out to see if the chemotherapy has shrunk the tumour. From the scan, there were signs that the tumour had shrunk but only slightly. When my service user was given an overview of the scan she felt disappointed that it had not shrunk a great deal, she also felt as though she could not go through another course of chemotherapy because it made her feel so unwell. After a discussion with her husband, research online and a chat with a breast cancer specialist, my service user decided that she would like to have a mastectomy. An appointment was arranged for my service user to speak to a specialist consultant about having a mastectomy, the consultant agreed that this would be the best treatment option and would hopefully ensure my service user had a good chance of survival. The consultant booked my service user in for a mastectomy, the wait for the mastectomy was four weeks. At the appointment he also explained the procedure and explained that she would not be able to eat 24 hours before the operation.

During the wait for the mastectomy, my service user received primary care. She attended a check-up at the doctors so that the nurse could check how she was feeling, the nurse also completed basic health checks including my service users blood pressure. All of the general health checks were normal and my service user explained that she felt fine in herself apart from feeling tired which is a common side effect.

Four weeks later my service user returned to hospital to have her mastectomy. My service user came in prior to her operation to ensure she was prepped and ready for the operation, the nurses provided secondary care for my service user whilst she was in hospital waiting to go down to theatre for her operation. Once my service user was ready to have her operation, tertiary care was provided. The mastectomy took two and a half hours to complete and was performed by a group of specialist surgeons. After my service user had come round from the operation, the consultant visited my service user and explained that the operation went well. She was advised by the consultant to rest and take it easy whilst in recovery. My service user was given pain killers by the nurses to help control the pain she was feeling. In total, my service user stayed in hospital for three days. During this time, she was given a drip so that she was able to drink and eat again, before my service user left to go home her drainage tube was removed from her wound. Before going home my service user had a chat with a nurse about preparing for home. The nurse discussed gentle exercises, suitable bras and gave her numbers for Macmillan Cancer support and Cancer Research UK. The chat with the nurse reassured my service user that if she followed the advice given she would have a successful recovery and that if she needed to talk to someone she knew exactly who to call. The advice given to my service user from the nurse was personal to the service user. This is important as all service user’s cases are different and therefore it is vital that the support and advice is specific to the service user. For example, the nurse advised my service user to complete gentle exercise but no more than once a day due to her being 65+. Whereas, a younger individual would be advised to complete exercises more frequently. It is important that the information on exercises was specific to my service user otherwise she may have over done it and caused herself serious injury.

It took around 5 weeks for my service user to fully recover from her mastectomy. During the recovery time, my service user accessed the GP surgery where she received primary care. My service user attended several appointments during her recovery to ensure that the scar was correctly healing and that there were no infections. The GP also changed my service users dressing a few times during the recovery. My service user found the check-up appointments reassuring as the GP was confident that my service user would make a full recovery.

Once my service user had made a full recovery from the operation, she attended an appointment at the hospital with a specialist to discuss the next steps. The specialist explained that the operation had gone extremely well and that he was confident the tumour had been removed. He explained that he would like her to continue to have check-up appointments whilst in remission. My service user attended check-ups every three months after her mastectomy and was scheduled to have a mammogram on her other breast just as a precaution. The appointments she attended were successful and there were no signs that the breast cancer had returned.

After 6 months in remission my service user decided that she would like to have her other breast removed as a precaution. In a follow up appointment with her consultant she expressed this and the consultant was willing to perform another mastectomy. Due to the mastectomy not being urgent the waiting list was longer compared to the wait for my service users first mastectomy. After waiting around 2 months my service user’s mastectomy on her left breast was performed. Unfortunately, the recovery did not go as well as her first mastectomy recovery. This was upsetting and painful for my service user. Despite this, she received excellent tertiary care from specialist nurses and they eventually managed to clear up the infection. My service user has now been in remission for a year and half, she has recently had an appointment that was successful and her next appointment is scheduled for 6 months’ time.

A care plan was conducted by a specialist cancer nurse when my service user was recovering from her first mastectomy. This care plan was created specifically for my service user to help meet her personal needs. After my service users second mastectomy her care plan was reviewed. It is vital that care plans are reviewed as service users’ needs can change regularly and different support may be required. In my service users case her needs did change due to her recovery not being as straight forward as her previous recovery. After my service users second mastectomy her care plan was reviewed and adjusted in order to suit her needs at the time. It was vital that my service users’ needs were met as it ensured she was receiving suitable support and treatment. For example, in her previous care plan it was stated that her follow up appointments would take place and the GP surgery. However, this was changed as after her second mastectomy she required specialist nurses to clean her scar and redress it as she had an infection.

**Validity-** This is the quality of the information that you receive and are given. For example, the information you receive may or may not be the truth. Using reliable sources tend to ensure that information is valid. Websites such as the NHS or Cancer Research UK are informative and are valid but other medical websites may not be.

**Reliability-** This is the amount of trust you have in something such as the information that is given to you. For example, a treatment recommended by the NHS would be more reliable than a drug trial in America as NHS have positive treatment outcomes.

The information regarding treatment that has been given to my service user has been reliable. All the information and treatment recommendations have been given to my service user by health professionals who work for the NHS this proves that the information is reliable. The NHS have successful outcomes of mastectomy’s; this shows that the treatment my service user has had is reliable.

**P6: Plan treatment to meet the care needs of a selected service user with a physiological disorder.**

\*For confidentiality purposes my service user will be referred to as ‘Individual A’ throughout the care plan.

**D.P7: Explain how the plan would improve the health and well-being of a selected service user.**

The care plan is very beneficial to my service user in many aspects. When considering her physical needs, the plan treated her cancer and the outcome was that she is now in remission. This shows how effective the treatment she received was and the benefits the care plan had to her overall health.

The care plan was created personal to my service user’s needs, this meant that her chemotherapy treatment was adjusted to two sessions a week due to my service users age and previous health conditions including high blood pressure. Whereas a younger service user may receive several chemotherapy treatments, this would be included in their care plan so that health care professionals are aware of the amount of sessions an individual received. The timescale given within my service users care plan was appropriate as it allowed my service user enough time to have enough chemotherapy sessions, her two mastectomy’s and time to recover from them. Overall the timescales were appropriate as it allowed enough time for her cancer to be treated. The two treatment options that my service user had were chemotherapy and a mastectomy, the reasons for having chemotherapy sessions was because she had high expectations that this treatment would cure her cancer. Unfortunately, this was not the case and she was advised by her consultant to have a mastectomy due to the chemotherapy not working and not shrinking the tumour as much as he had hoped. For my service user, having a mastectomy was a last resort but after research and advice from her consultant she decided that this would be the most effective treatment option and help to prolong her life. Included in my service users care plan is the treatment she received, as well as notes regarding the treatment. Stated within my service users care plan is that she received anti-sickness medication to overcome the nausea and sickness she was experiencing during her chemotherapy treatment. This is personal to my service user as she experienced sickness during her treatment whereas other service users may not experience sickness resulting in them not requiring medication to treat sickness. Being provided with anti-sickness medication helped my service user physically as it meant she felt well enough to get up and out of the house rather than stay in bed sick. She was also given pain killers to help with the pain after her mastectomy and had help treating her infected wound after her second mastectomy. This is beneficial and is included within the care plan as it helped her to recover from her mastectomy’s and if she was not given pain relief her physical needs would not have been met.

The care plan has helped my service user to overcome the emotional and social impacts of cancer. This has been beneficial for her as cancer can be extremely daunting and having the support has meant she has dealt with having cancer well. In particular, her emotional well-being has been supported by the care plan as she has been able to access online websites including Cancer Research and had accessed a support line when she felt she needed to talk to somebody. Socially my service user was able to build up relationships with the staff who cared for her, the key staff who cared for my service user are stated within the care plan this meant that she could contact staff when she required. Continuity was important for my service user as she trusted the health professionals who cared for her, it also supported her socially as she felt she could trust and talk to the staff about any concerns she had.

The care plan created for my service user has helped to give her more freedom, the different treatment options she was able to access have resulted in her being in remission for some time. This has meant she has not had any worries about the cancer returning due to check-ups around every six months confirming this. The reassurance has enabled my service user to carry on with her everyday life, giving her the freedom to take part in activities/holidays without cancer restricting her. Having a mastectomy had some initial effects on my service user because of the body confidence issues it created for her and the lack of self-esteem she had. However, due to the courageous decision that my service user made to have a mastectomy to remove any chances of the cancer coming back, it has had an overall impact on her prognosis and therefore she will have longer with her family and friends. This means although the mastectomy impacted how my service user felt about herself, it has had a further impact on her life which has given her a new found confidence as she has beaten cancer and has the courage to beat cancer if she was ever diagnosed again.

During my service user’s treatment, she spent time in hospital when receiving chemotherapy treatment and stayed overnight when she had her mastectomy. Being in hospital for the first few days of her mastectomy recovery was important as it meant she had professionals around her who were able to treat her wounds, change dressings and give advice on how to have a steady recovery. Despite her stay within hospital, the treatment she received and the care plan allowed my service user to live within her own home with her family. If she had not opted for a mastectomy, it is likely that her cancer may have gotten worse. If her cancer had gotten worse and her health had

deteriorated it may have resulted in my service user having to move into a hospice to access specialist end of life care. Therefore, the care plan and treatment options my service user accessed has allowed my service user to live comfortably within her own home.

Overall, the care plan put in place to support my service user through her diagnosis, treatment and recovery has been extremely beneficial and supportive. The care plan I conducted for my service user was specific to her needs due to her age and high blood pressure, however this care plan could be suitable for other service users with breast cancer as it could be adjusted to their specific needs.

**M4: Plan treatment to meet the needs of a selected service user with a physiological disorder, reviewing, as appropriate, to improve outcomes.**

Whilst creating the care plan for my service user, there were some contingencies that occurred. After my service user finished her course of chemotherapy she opted not to have any more sessions, including not having radiotherapy or hormone replacement treatment this was due to her experiencing bad sickness throughout chemotherapy. Due to this my service user decided to have a mastectomy. To overcome this contingency, the care plan was adjusted to ensure that a mastectomy was included on the treatment option section as originally this was not included as my service user had expressed that she did not want a mastectomy. Another contingency that occurred during the planning of my care plan was that it was not included in the treatment schedule that my service user would be having a left breast mastectomy, to deal with this contingency the treatment schedule was reviewed and the second mastectomy was added to the treatment schedule to ensure all professionals were aware of the treatment my service user had completed.

It is important that service users care plans are reviewed to ensure that outcomes are improved and met. My service users care plan was reviewed once within the first three months of requiring the care plan, this ensured that her care plan was relevant to the treatment she was receiving. My service users care plan is now reviewed annually and is adjusted if necessary according to her health and needs. Her care plan has not yet needed to be adjusted due to her not having any additional health concerns.

When planning treatment for a service user, it is important to consider issues that may occur. Not all treatments work the same for all service users and therefore treatment may have to be adjusted for each individual. When planning treatment for my service user it was originally decided that my service user would have several sessions of chemotherapy over a short period of time, however when she started her chemotherapy sessions she suffered with sickness and therefore was only able to have up to two sessions of chemotherapy a week. This had to be adjusted on my service users care plan as originally it had not been stated.

There are a range of factors that need to be considered in order to meet my service user’s needs, these factors include being financial able to travel to and from the hospital and being physically well enough to attend appointment and have regular treatment. When my service user explained to a health professional that she was suffering with extreme sickness they provided her my anti-sickness medicine. This improved my service user’s outcome as it ensured she was physically well enough to complete her course of chemotherapy, if she had not been provided with the medication she may have not been well enough to complete the chemotherapy sessions which would have impacted her health. Due to my service user and her husband only having one car, this made it difficult at times to attend appointments as a lot of planning had to go into how my service user would be able to get to the hospital. My service user requested that check-ups throughout her treatment took place at her local GP as this was in walking distance from her house. To overcome this barrier, it was agreed that my service user could attend general check-up appointments at the GP. This was extremely beneficial for my service user as it meant she felt less stressed about attending appointments.

**D3: Justify the recommendations of the plan in relation to the needs of the service user and state advantages and disadvantages of treatment options.**

In the initial stages of my service user’s diagnosis she had general health check tests including a blood test, blood pressure test and temperature check, she also had a breast examination. This allowed the GP to rule out any other health conditions that my service user may have had and to feel the lump within the breast. An advantage of having a breast examination before being referred for further tests is that GP’s can usually tell when lumps are concerning. It also ensures that patients do not have to go through unnecessary worry whilst having more serious tests. However, a disadvantage of just having a breast examination is that a GP may not be certain that it is a cancerous lump or not and therefore may not refer a patient for further testing, this could result in a tumour growing. The first treatment option that my service user had was chemotherapy. Chemotherapy was chosen as the consultant wanted to attempt to shrink the tumour within my service users right breast before operating. Attempting to shrink a tumour before having surgery it beneficial as mastectomy’s are usually more successful and straight forward the smaller the tumour is. Despite this, there are some disadvantages of chemotherapy. Side effects of chemotherapy are one of the main disadvantages of the treatment option, a common side effect is severe vomiting and fatigue and this is a side effect my service user experienced. This is a constraint that some service users may consider before choosing to have chemotherapy as many individuals want to carry on with their lives as best they can and this is difficult when dealing with extreme sickness and fatigue.

After my service user experienced extreme sickness and fatigue she did not want to have any more chemotherapy sessions and did not want to try radiotherapy. Instead she opted for a mastectomy, there are both advantages and disadvantages of having a mastectomy. The main advantage of a mastectomy is that during the operation all of a women’s breast tissue is removed as well as the cancer cells within the breast tissue. After having a mastectomy women do not usually require other treatment such as radiotherapy, this was beneficial for my service user as she did not want to complete any other treatment due to her extreme sickness. Another advantage is that “81.2% of women who had double mastectomy were alive 10 years after diagnosis.” This is one of the reasons why my service user requested a double mastectomy as she wanted to prolong her life for as long as possible. There are some disadvantages of having a mastectomy but overall the advantages outride the disadvantages. The disadvantages include, scaring around the breast area, a lengthy painful recovery and the permanent loss of breast which can affect a women’s self-esteem. When my service user was deciding whether or not to have a mastectomy, she opted to have due the outcome of the operation being able to prolong her life. (Breastcancer.org, 2017)

There are recommendations that could have be made to my service users care plan during her treatment. The nurses or consultants could have given my service user anti-sickness medication sooner on in her treatment. This would have meant my service user could have carried on my chemotherapy sessions for longer because she would have felt better. If she had carried on with the chemotherapy sessions my service user may have not opted for a mastectomy. Another recommendation could be that my service user could have had more of her appointments at the doctor’s surgery due to it being challenging for her to get to appointments at the hospital. She could have had several doctor appointments and the doctor could have reported back to the consultant if there were any concerns.

The desired outcome for my service user is for her cancer to be cured to ensure that her life is prolonged for as long as possible. She also wanted to feel physically well throughout her treatment so that she could carry on with her daily life as normal. There were some constraints and limitations that occurred during my service user’s treatment which meant her wish to feel physically well throughout her treatment was not possible. Unfortunately, this outcome was not met due to her sickness but to overcome this and meet her outcome chemotherapy was not repeated. My service user’s main outcome was met as her cancer was cured and she has been in remission for a year, hopefully if she remains in remission her life will be prolonged for as long as possible.

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