

Personal Detail

Name	John Brown
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Telephone	0771552399
Date of Birth	11 December 1966
Occupation	SPORTS THERAPIST
Current medication	NONE
Allergies	NONE KNOWN
Current health	GOOD
Medical history	
Comments	

The information contained herein is strictly confidential.

Results

The enclosed report and test results are exclusive to you. If any of the results are shown to be above or below the stated ranges, P.H.S. advise you to seek further advice from your GP.

Test	Result	Therapeutic range
Blood Pressure	141/80	See report
Body Fat Percentage	21	See report
Body Mass Index	24	See report
Blood in urine	Negative	Negative
Glucose in urine	Negative	Negative
Ketones in urine	Negative	Negative
pH of urine	6	4.5 – 7.5
Leucocytes in urine	Negative	Negative
Nitrites in urine	Negative	Negative
Protein in urine	Negative	Negative
Forced Expired Volume (FEV 1)	124	See report
Forced Vital Capacity (FVC)	118	See report
Peak Expiratory Flow (PEF)	112	See report
Forced Expired Ratio (FEV 1%)	108	See report
Creatinine	63.6 µmol / l.	Men: < 97 µmol / l. Women: < 80 µmol / l.
Urea	3.57 mmols / l.	1.7 – 8.3 mmols / l.
Bilirubin	17.5 µmol / l.	< 17 µmol / l. *
Alanine Aminotransferase (ALT)	18.9 U / l.	Men: 0 – 41 U / l. Women: 0 – 32 U / l.
Alkaline Phosphatase	198 U / l.	Men: < 270 U / l. Women: < 240 U / l.
Gamma-Glutamyl Transpeptidase	36.3 U / l.	Men: 11 – 50 U / l. Women: 7 – 32 U / l.
Glucose	4.58 mmols / l.	4.2 – 6.11 mmols / l.
Haemoglobin	10.4 mmol / l	Men: 8.7 – 11.2 mmol / l Women: 7.5 – 9.9 mmol / l
Cholesterol	3.71 mmols / l.	< 5.2 mmols / l.
HDL Cholesterol	1.38 mmols / l.	> 0.91 mmols / l.
LDL Cholesterol	1.864 mmols / l.	< 4.00 mmols / l.
Triglycerides	1.03 mmols / l.	0.5 - 2.3 mmols / l.
Prostatic Specific Antigen (PSA)		0 - 4.0ug / l.
Thyroid Stimulating Hormone		0.27 - 4.2 MIU/ml.
Free T 4		12 – 23 to pmol/dl.
Cardiovascular Risk		See report

These values, which relate to the Reflotron-Plus laboratory instrument, are published by Roche Diagnostics Limited.

Blood Pressure

The heart is an effective pump, transporting almost 8000 litres of blood around the body each day, delivering an essential supply of nutrition in the way of oxygen, minerals and vitamins.

Blood pressure is the exerted pressure of blood upon the walls of the blood vessels. Your blood pressure is measured using a machine called a sphygmomanometer and is dependent upon two factors: the cardiac output, which is the rate of contraction of the heart itself, and the peripheral blood flow resistance, determined by the calibre of the smaller arteries.

The terms systolic and diastolic are used to define blood pressure. The systolic, (higher figure) refers to the contraction of the left ventricle as it pumps blood into the aorta. The diastolic, (lower reading) is determined when the heart is resting between beats and there is no discharge of blood.

The normal blood pressure of a young adult is approximately 120 systolic and 80 diastolic and measured in terms of millimetres of mercury (mmHg). As we age there is gradual thickening of the arteries and a loss of elasticity, leading to a subsequent rise in blood pressure. A reading of 170 systolic and 90 diastolic may be regarded as a normal reading for a man of 70 years.

A rise in blood pressure (hypertension) often goes unnoticed. A regular checking of your blood pressure is important. A moderate increase in blood pressure is enough to cause damage to the heart and its blood vessels, leading to atherosclerosis, circulatory disturbances of the limbs, coronary thrombosis and disorders of the kidney. Hypertension has been identified as a predisposing factor leading to stroke (cerebral vascular accident).

Your blood pressure has been recorded at 141/80.

Your pulse was recorded at 60 beats per minute.

This is within normal ranges and therefore, no action is necessary.

Body Fat Percentage

(Bioelectrical Impedance Analysis)

Your overall weight previously would be used to determine if you were obese (clinically overweight). Obesity in recent years has been reviewed and is now calculated by the percentage of fat in your body. Excess body fat has been linked to a number of conditions, hypertension (high blood pressure), heart disease, diabetes and cancer. A new study published in “Nature” magazine in May 2001 declared that 7% of all cancers are attributable to obesity in the nonsmoking fraternity. These statistics rise sharply for those individuals who do smoke, and being overweight can significantly contribute to cancer development.

Physical Health Screens use the bioelectrical impedance analysis to calculate your body fat percentage. This method utilizes a very low electrical signal passed through the body, which has proved, safe, reliable and imperceptible.

The electrical signal finds difficulty passing through body fat, but little difficulty passing through moisture found in muscle and other lean tissue. The body fat percentage can be measured accurately using this impedance.

Hydration levels will affect body fat percentage readings. A calculation will usually prove highest in the early morning as the body tends to be dehydrated following a night’s sleep. The best time to analyse your body fat percentage is in the evening.

There are daily fluctuations in body fat percentages. Variations may be evident due to food or alcohol consumption, strenuous exercise, menstrual cycle, illness or having a wet body.

The following is a table of body fat percentage values

	Under 30 years.	Over 30 years.
Male	14 – 20 %	17 – 23 %
Female	17 – 24 %	20 – 27 %

Your body fat percentage has been calculated as 21%.

This is within normal ranges and therefore, no action is necessary.

Body Mass Index

The system of body mass index (BMI) can be used to determine whether you as an individual are at risk of specific health related problems as a result of being either overweight or underweight. This is done by providing a guideline-based upon height and weight.

The table below categorises your body mass index.

BMI	Category
20 and below	Underweight
21 to 25	Normal
26 to 29	Overweight
30 and above	Obese

It is estimated that if your body mass index is between 17 and 22 then your life expectancy should be longer than average. There is a similar negative correlation for people with a higher body mass index.

The body mass index is calculated by the following formula:-

BODY MASS INDEX = WEIGHT (kilograms) DIVIDED by HEIGHT (meters 2)

Your weight = 78 kg and your height = 1.8 m.

Your Body Mass Index has been calculated at 24.

This is within normal ranges and therefore, no action is necessary.

Urinalysis

Any worthwhile health screen should include urinalysis, as early detection of any problem is very important. The test is a simple one, involving a mid-stream urine specimen.

False positive results are possible during urinalysis. For example, your body can excrete excess amounts of vitamin C. If there are large amounts of vitamin C in the specimen it may interfere with some or all of the test results. The sample provided should not be less than thirty minutes old for a true reflection of the findings.

BLOOD:- This may simply be the result of vigorous exercise. It can indicate an infection or bleeding within the kidney.

GLUCOSE:- Excess sugar (glycosuria) can indicate undiagnosed diabetes mellitus. A positive result does not necessarily equate to the fact that you have diabetes.

KETONES:- The dipstick used in the urinalysis will, if present, detect ketones, particularly if you have starved yourself (calorie deprivation). The Ketones and glucose test will be viewed collectively.

LEUCOCYTE ESTERASE: - This test will detect esterase, an enzyme released by white blood cells. Urinary tract infections may present, even in those individuals who have no symptoms. If undetected and subsequently untreated, then there is the possibility of severe kidney damage occurring.

pH:- This is the measurement of either acidity or alkalinity and is influenced by a number of factors. Kidney stones are less likely to occur in alkaline urine.

PROTEIN:- Under normal circumstances protein would not be evident in the urine. In kidney disease and infection protein will appear in the urine. In people who take vigorous exercise orthostatic proteinuria can occur.

URINARY NITRITES:- In healthy individuals the urinary nitrite and the leucocyte esterase (LE) tests are negative. Most of the bacteria, derivatives of our diet, which colonise in the urine, will convert to nitrites. A positive result may indicate an infection such as E. coli.

The full results of your urinalysis are shown overleaf.

Urinalysis

Blood:	Negative
Glucose:	Negative
Ketones:	Negative
Leucocyte esterase:	Negative
pH:	6
Protein:	Negative
Urinary Nitrites:	Negative

There are no abnormalities detected from your urine sample. Therefore, there is no action necessary.

Lung Function

Using modern technology, Physical Health Screens will assess your lung function, often referred to as pulmonary function. This type of examination can detect ‘Asthma’ and / or ‘Chronic Obstructive Pulmonary Disease’.

A simple test called a spirometry test is used to measure the flow into and out of your lungs. The results are presented as a graph to determine the state of your lungs, indicating any airway obstruction.

Yearly spirometry can help detect lung disease at an early stage and allow the initiation of treatment at the earliest opportunity. Once symptoms are present, such as wheezing or shortness of breath significant damage may have already been done.

A computerised spirometry assessment is included for your personal portfolio.

Using these results, your lung function age equivalent is estimated at 20 years.

This is within normal ranges and therefore, no action is necessary.

Creatinine

Creatinine is formed in the muscles from creatine and phosphocreatine. The amount depends upon muscle bulk. In addition the kidneys through a process of glomerular filtration excrete it. Despite creatinine and urea offering an indication of the kidney function they are not definitive in respect to the identification of the nature of a nephropathy.

Creatinine and urea levels should remain constant because the excess is excreted via the kidneys. Samples are used to identify impaired renal function.

The creatinine and urea levels are not always equally reflected in the degree of renal dysfunction, both parameters are monitored simultaneously.

Your creatinine level has been determined at 63.6 $\mu\text{mol} / \text{l}$.

This is within normal ranges and therefore, no action is necessary.

Urea

Urea is the end product of protein metabolism and the rate of formation is influenced by the amount of protein in your diet.

An elevated urea level may indicate renal insufficiency, indicating that your kidneys cannot excrete appropriately and are unable to maintain the requisite equilibrium.

Urea and creatinine levels should remain fairly constant as the excess is excreted via the kidneys. Creatinine and urea samples are used to identify impaired renal function.

The urea and creatinine levels are not always equally reflected in the degree of renal dysfunction, both parameters are monitored simultaneously.

Factors such as fever and / or trauma can cause an elevation in levels of urea. A high protein diet will also increase urea levels in the blood. The interpretation of your urea will be determined in conjunction with that of your creatinine. Both of these tests are extremely valuable in the assessment of renal (kidney) function.

Your urea level has been recorded at 3.57 mmol / l.

This is within normal ranges and therefore, no action is necessary.

Bilirubin

Bilirubin is a yellow brown bile pigment which is responsible for the yellow brown colour in serum. Bilirubin is a substrate that is mainly produced during the degeneration of haemoglobin in the liver-spleen system. There are two sorts of bilirubin. The first one is bound to albumin, and called “unconjugated” or indirect bilirubin. In this state, it is transportable by blood, it is lipid soluble and toxic. The second type of bilirubin is in contrast to the first conjugated with glucuronic acid and therefore known as “conjugated” or direct bilirubin. It is water soluble and can be excreted in the urine via the kidneys. This conjugation takes place in the liver cells. Therefore the differentiation allows to conclude on the origin of the bilirubin.

Jaundice occurs when the bilirubin concentration rises above approximately 2 mg per 100 ml serum. There are three types of jaundice, depending on its origin; prehepatic, intrahepatic and posthepatic. Prehepatic jaundice means that the liver is not the reason for the higher concentration of bilirubin, so, the causes have to be somewhere out of the liver (e.g. jaundice caused by increased destruction of erythrocytes). Intrahepatic means that the reason for the raised concentration is inside of the liver (e.g. gall stones). The most common forms of jaundice – intrahepatic and posthepatic – are characterised by an increase of the conjugated bilirubin.

Bilirubin is also valuable for neonatal monitoring. Immediately after birth the bilirubin conjugated system is not yet fully developed. This causes an increase in unconjugated bilirubin. Due to lipid solubility, it can accumulate in the brain and cause permanent brain damage. This can be treated by UV-light.

Your Bilirubin has been recorded at 17.5 mmol / l.

This is to be considered outside normal ranges. Please seek further advice from your G.P.

Alanine Aminotransferase (ALT)

Liver function tests, also referred to, as 'LFTs' are blood tests that assess the state of the liver and the biliary system and are among the most commonly used tests in medicine. The cells of your liver produce this enzyme. Any inflammation or death of liver cells will cause an elevation of the alanine aminotransferase. When these cells are damaged they are released into the blood stream with a subsequent rise in serum levels.

Alanine aminotransferase is the most sensitive marker for liver cell damage.

Your Alanine Aminotransferase (ALT) has been recorded at 18.9 U / L.

This is within normal ranges and therefore, no action is necessary.

Alkaline Phosphatase

Alkaline phosphatase (ALP) is not a single enzyme; its activity represents the sum of individual activities of intestinal, placental and hepatic-bone-renal ALP, postgenetic forms including biliary-duct alkaline phosphatase and tumour phosphatases.

Determination of alkaline phosphatase is indicated in suspected cholestatic liver disease (caused by the suppression of the flow of bile), in the bone disease and in the skeletal involvement of other primary diseases such as malignant tumours, renal disease, osteomalacia (a condition marked by the softening of bone due to impaired mineralisation), hyperparathyroidism (abnormally increased activity of the parathyroid glands). The excess of parathyroid hormone may result in kidney stones and calcium deposits in the renal tubules; in generalized decalcification of bone (osteoporosis) and skeletal deformity.

Any type of cholestasis can produce an increase in serum alkaline phosphatase. Extra-hepatic cholestasis is characterised by increases in activity (unlike GOT / GPT) that are, on the whole more conspicuous than in intra-hepatic obstruction, being all the higher the more complete occlusion is. Liver disease with primary damage to parenchymal cells usually causes only moderate a rise in activity, the level depending on the degree of associated cholestasis. A persistent rise in alkaline phosphatase activity is produced by formation of liver metastases.

Main indication - liver: Suspicion of biliary (gall bladder and gall duct) involvement in the diagnosis of liver diseases.

High ALP levels are seen in osteoblasts (associated with bone production), so when there is increased osteoblastic activity, e.g. in the skeletal growth phases of childhood and adolescence, there is also an associated rise in serum ALP. Paget's disease (excess ALP causes too rapid bone formation: consequently bone is thin) is associated with very high ALP values; osteomalacia and rickets (Vitamin D deficiency) with moderate rise.

Bone tumours produce ALP levels that reflect the osteolytic and osteoblastic tendencies. Very high activities are found in osteosarcoma (malignant growth of bone) and in the bone metastases of carcinoma of the prostate.

Main indication – bone: Suspicion of skeletal diseases.

Raised serum total alkaline phosphatase may be observed in women during the third trimester of pregnancy; the increase is due to the placental isoenzyme component and is reversed within one week of delivery.

Your Alkaline Phosphate has been recorded at 198 U / L.

This is within normal ranges and therefore, no action is necessary.

Gamma-Glutamyl Transpeptidase

The early identification of liver diseases is very important, as acute and chronic forms are frequent occurring humane diseases.

γ -Glutamyltransferase (GGT) is mostly membrane-bound enzyme that occurs in many parenchymatous organs. However, an appreciable activity of it is found only in the kidneys, pancreas, liver, spleen and the small intestine. The activity in the cells of the renal tubules is 12 of that in the pancreas and 25 times as high of that in the liver. Yet the serum level of this enzyme is almost invariably determined only by liver and bile duct disorders. γ -Glutamyltransferase is usually regarded as one of the enzymes that indicate cholestasis.

An elevated γ -Glutamyltransferase activity can indicate numerous disorders or involvement of the liver, pancreatic disorders and in people with cardiac infarction.

In general it is considered that the increase in enzyme activity is not correlated to the diseases severity. Even only very mild damages to the liver cells can cause a rise of enzyme activity in the serum.

Your Gamma-Glutamyl Transpeptidase test result demonstrates a level of 36.3 U / L.

This is within normal ranges and therefore, no action is necessary.

Glucose

Blood sugar (glucose) levels are influenced by your carbohydrate intake. Normal blood sugar levels vary after a meal from approximately, 6.5 to 7.5 mmols/l. These variations are because of individual energy expenditure and the ingestion of food.

Blood glucose levels are regulated by insulin. Following consumption of a carbohydrate meal the islets of langerhans secrete 'insulin' into the blood stream and the excess glucose is transported to the liver for storage.

In Diabetes something goes wrong with this process, insufficient insulin is produced, and the excess glucose accumulates in the blood.

Diabetes Mellitus has become one of the most common metabolic disorders during the past thirty-five years. Physical Health Screens offer a simple test to determine your specific blood glucose level.

This test is important because during middle age in particular, the symptoms of diabetes may be mild or even go unnoticed in its early stages. Detection makes treatment easier.

Excess glucose in the blood can cause great harm over a period of time leading to damage to the eyes, kidneys, blood vessels and the nervous system.

It is vital that diabetes is diagnosed as early as possible and the appropriate treatment initiated.

Your blood glucose level has been recorded at 4.58 mmols / l.

This is within normal ranges and therefore, no action is necessary.

Haemoglobin

Haemoglobin measurements define Anaemia. Anaemia is defined as the reduction in the concentration of haemoglobin in the peripheral blood below the reference range for the age and sex of the patient. In patients with symptoms of anaemia e.g. weakness, lassitude, pallor of the mucus membranes, palpitation, the measurement of haemoglobin is indicated.

Items which may cause a low haemoglobin.

- A simple iron deficiency anaemia .
- Unknown toxic agents in the blood stream.
- Lead poisoning.
- Sudden blood loss from anywhere.
- Vitamin B12 deficiency.
- Liver disease.
- Abuse of alcohol. Alcoholism.

Items which may cause a high haemoglobin level:

- Dehydration.
- Renal disease.
- Congestive cardiac failure, but only if this has happened prior to the test.

Haemoglobin tests are essential for pregnant women and are taken from the start of pregnancy. Pregnant women with a low haemoglobin level become anaemic and if spotted early medication can be administered.

Your Haemoglobin level has been measured as 10.4 mmol / l.

This is within normal ranges and therefore, no action is necessary.

Cholesterol

What is Cholesterol?

Cholesterol is a fatty substance (lipid), which is essential to healthy life. Cholesterol is provided partly from the food we eat, but most of it is manufactured in the liver. Some people however, produce more cholesterol than they need. This problem often runs in families and is called familial hyperlipidaemia.

Why is too much cholesterol harmful?

Cholesterol builds up on the walls of your blood vessels like lime-scale furring up a water pipe. This adds to the risk of heart disease and stroke.

Who needs to have their cholesterol checked?

Cholesterol screening is necessary as part of assessing someone's risk of heart disease.

Your doctor may check your cholesterol if you have other risk factors e.g.

- If you have a family history of heart disease
- If you have evidence of heart disease
- If you have a family history of high cholesterol
- If you are a diabetic
- If you have high blood pressure

What do my test results mean?

Initially your doctor will send your blood for a total cholesterol level. This will be an indicator of whether s/he needs to know more about your cholesterol levels or not. The table below gives an idea of risk in relation to total cholesterol level results.

Cholesterol Level	Risk of heart disease
3.4 - 5.2 mmol/l	Acceptable /Low Risk
5.2 - 6.4 mmol/l	Some Risk
6.5 - 7.7 mmol/l	Moderate Risk
7.8 mmol/l and above	High Risk

What if my total cholesterol is high?

If your total cholesterol result is over 6.5mmol/l you may need a further blood test called a lipid profile. A lipid profile gives much more detailed information about the breakdown of different fats in your blood. A blood sample is taken after an overnight fast of 12 hours or so, as any recent intake of food or drink can have an effect on the results.

What does a lipid profile show?

The lipid profile will show the levels of three fats/lipids that are present in your blood: LDL (Low Density Lipoproteins), HDL (High Density Lipoproteins) and Triglycerides.

What can I do to help myself?

- Reduce your total fat - this means limiting the number of calories you take in that come from any fat.
- Replace saturated fat with poly and mono unsaturated fat - this means replacing fat from animals in meat and dairy products with oils and fish.
- Increase your fruit and vegetables to five portions a day - this increases your intake of fibre as well as A, C, and E vitamins.
- Increase your carbohydrates i.e. pasta, cereals, rice, bread - this will give you the energy you need that used to come from fat.
- If necessary, reduce your weight to the recommended level for your sex and height.
- Increase your physical activity and exercise - ideally exercising for 30 minutes x3 times a week.
- Limit your alcohol to recommended levels - no more than 2 -3 units a day for women and no more than 3-4 units a day for men (one unit of alcohol is around half a pint of beer or lager, one pub measure of spirits, or one small glass of wine).

If after three months your cholesterol levels remain too high, your doctor may prescribe drugs to lower the amount of cholesterol your body manufactures. Usually these have to be taken for life, as the body reverts back to overproducing cholesterol when they are stopped.

An American, ten-year landmark study offers conclusive evidence that the reduction of total blood cholesterol can reduce the incidence of coronary heart disease. This recent study is further confirmation of earlier research.

Screening for blood cholesterol levels offers the opportunity to identify those individuals with high blood cholesterol (hypercholesterolemia). The need to be aware of the risk factor in respect of heart disease is the first step toward a lifestyle change to reduce the associated risk.

Cholesterol is more than one substance within your bloodstream. There are fats (lipids), which are also found in cells. A certain amount of cholesterol in the blood is essential.

Cholesterol cannot dissolve in your blood and needs to be transported to and from cells by special agents called lipoproteins. The most important of these are low-density lipoproteins (LDL) and high-density lipoproteins (HDL)

Low Density Lipoprotein Cholesterol: is the main transport system of cholesterol. Too much LDL Cholesterol in the blood can slowly build plaque deposits upon the walls of arteries. This condition is known as atherosclerosis. LDL Cholesterol has often been described as 'bad cholesterol' as high levels reflect an increased risk of heart disease.

High Density Lipoprotein Cholesterol: is also referred to as 'good cholesterol' because high levels of HDL Cholesterol appear to protect against heart disease.

Triglycerides: are derivatives of fats eaten in our diet, some are manufactured in the body from sources such as carbohydrates. High levels of triglycerides (hypertriglyceridemia) have also been linked to heart disease in certain individuals.

Total Cholesterol = 3.71 mmols / l:

This is within normal ranges and therefore, no action is necessary.

HDL Cholesterol = 1.38 mmols / l:

This is within normal ranges and therefore, no action is necessary.

LDL Cholesterol = 1.864 mmols / l:

This is within normal ranges and therefore, no action is necessary.

Triglycerides = 1.03 mmols / l:

This is within normal ranges and therefore, no action is necessary.

Prostatic Specific Antigen

Prostate cancer is one of the commonest cancers in men and is often slow growing. It is sometimes present for a number of years before the onset of symptoms. The cause of this disease is not known, but effective treatment is dependent upon an early diagnosis.

Today a number of cancer markers have been identified. The prostatic specific antigen (PSA) has proved to be a benefit to the management of prostatic cancer.

The American Cancer Society recommend that serum PSA measurements are undertaken annually in men over the age of 50. Additionally, individuals at particularly high risk, namely those with a family history of prostate cancer, should be tested at the age of 40 onward. The incidence of prostate cancer has peaked and is now falling in areas such as the United States where screening is common.

Some men are at higher risk than others: -

- Family history of early 'prostate cancer' (before the age of 50).
- Men with a first degree relative diagnosed with breast cancer.
- Personal or family history of enlarged 'prostate'.
- Diet low in fibre but high in animal fat and red meat.
- Over the age of 50 years.

Physical Health Screens are strategically well placed to offer PSA testing within the comfort of your own home. Using the latest technology Physical Health Screens will provide you with a result within forty-eight hours.

We will contact you, forty-eight hours following your health screen with your 'Prostatic Specific Antigen' result. In addition, you will be sent a hard copy through the post; this can be inserted into your portfolio.

Thyroid Function

Your thyroid gland is located in the neck and manufactures a hormone called thyroxine. To function adequately your thyroid gland requires iodine ingested in food.

The thyroid gland is responsible for your basal metabolism, mental and physical function and the normal action of the nervous system.

If the thyroid fails to function there is either an overproduction or underproduction of thyroxine.

Cardiac Risk Assessment

- Each year there are 250,000 deaths from coronary and circulatory disease.
- Someone has a heart attack almost every two minutes; half of these will prove fatal.
- Although the rate of heart disease is falling in the UK it remains one of the highest in the world.
- Coronary heart disease claims the lives of twice as many women as does cancer.
- Heart disease costs our economy around £10 billion each year through treatment and lost working days.

Physical Health Screens are in the unique position of being able to assess your current cardiac risk through a simple blood test and in the comfort of your own home. We can determine your specific risk in respect to the population as a whole..

Research has identified that high blood pressure (hypertension), smoking, high blood cholesterol (hypercholesterolemia) and a lack of physical exercise all contribute to potential heart disease.

Your risk can be calculated according to the 'Framingham' study. This is done by utilising the following data: - Total Cholesterol, Triglycerides, HDL Cholesterol, Sex, Age, Smoking status, Cardiovascular status, Blood Pressure and Diabetes.

This is within normal ranges and therefore, no action is necessary.

These results were as follows:

Incid.: 0.6 %
Range: 0.6 - 5.1 %
Multi: 1 %

Cholesterol	3.71 mmols / l
Triglycerides	1.03 mmols / l
HDL Cholesterol	1.38 mmols / l
Sex	Male
Date of birth	11 December 1966
Smoker	No
Diabetes	No
CVD	No
ECG / LVH	No
Blood Pressure	141/80

Health Promotion

Giving Up Smoking

Up to 13 million people smoke in the UK. Smoking is not just a habit but also an addiction due to the chemical nicotine. Nicotine is as addictive as cocaine. However giving up is now easier due to the recognition of the effect of nicotine and the formation of smoking cessation programs including nicotine replacement therapy and the use of other medications.

With the help and support of your GP and family quitting smoking and enhancing your health is possible.

Giving Up

There are many ways to quit smoking and it is important to find the way which will suit your needs best. The most effective technique is to use some form of nicotine replacement therapy (NRT) combined with your own desire to stop, and the will power to keep it up. NRT has been proved to double people's chances of quitting, as it helps to ease the cravings that make it so difficult to stop. There are different forms of NRT and each will suit people differently depending on their level of addiction and lifestyle.

40 % of smokers who enter a smoking cessation program are successful within 4 weeks.

Giving up means two struggles:

- against the chemical addiction of nicotine
- against the psychological habituation

Giving up using:

- Nicotine Replacement Therapy
- Other Methods

Nicotine Replacement Therapy

Nicotine replacement therapy (NRT) has been shown to double the chances of giving up smoking. Occasionally combining patches with a spray or gum may help.

The government announced recently, on 14th March 2001, that nicotine replacement therapies such as nicotine patches, gum and inhalers are to be made available on NHS prescription from doctors in England. In addition, certain NRT products would be available for general sale following widespread consultation on the subject. This means that some patches, lozenges and gums will soon be appearing in supermarkets and other outlets.

Sleep disturbance may occur whilst using NRT as can the normal side effects of nicotine (feeling sick, headaches, fast pulse).

Normally you can reduce the dose of NRT after 3 months. Ideally NRT should not be taken for more than six months. Stopping NRT suddenly can result in nicotine withdrawal. However being on NRT is safer than smoking.

Please consult your doctor prior to NRT if:

- Under 18 years of age
- Have a history of heart or circulatory disease
- Pregnant
- Breast feeding

Nicotine Gum

Nicotine Gum is available in two strengths so you can choose your dose in relation to the amount you smoked previously. Start with the 2 mg gum. It is important to chew it correctly and allow time for the nicotine to build up in your blood stream. After 30 minutes all the nicotine in the gum has been released. Some people do not like the taste. As well as helping with cravings, the chewing gum also gives you something to put in your mouth other than a cigarette.

The maximum number of gums per day is 15.

Nicotine Inhaler

If you crave the nicotine and also enjoyed the act of smoking there is a fairly new NRT available called a Nicotine Inhaler. To use it you suck on a white plastic inhaler that contains a mixture of menthol and nicotine vapour. This eases the craving whilst simulating the act of smoking. Each inhaler lasts 20 minutes and you will need between 6-12 inhalers per day for about 8 weeks. The advantage of this technique is that whilst it eases the craving you will probably only use it either when you are really desperate or in private, as you may feel stupid sucking on a plastic tube in public. The disadvantage is that as it aims to simulate the act of smoking it may remind you of what you are missing.

Nicotine Patches

Nicotine Patches, like Nicotine Gum, are available in a variety of strengths so you can choose the dose that relates most closely to the amount you smoked. They work by providing a constant dose of nicotine into the bloodstream in order to help prevent cravings. If you smoke 10 a day or more start with the higher dose. The three different strengths available are, 5mg, 10mg and 15mg; this also helps you to ease off your addiction gradually as you can start with the strongest dose and work down. It is also possible to choose between 16 hour patches, which are for use during the day, and 24 hour patches, that can be left on overnight in order to help control early morning cravings.

Nicotine Nasal Spray

If you are a heavy smoker and finding it very difficult to quit you may be able to get a private prescription from your doctor for Nicotine Nasal Spray. This provides you with an instant blast of nicotine through the lining of your nose and can help to ease cravings quickly. It involves use of the spray each side of the nose twice per hour up to 16 hours per day for the first 8 weeks and then reduced slowly over the next 4 weeks. However the main disadvantage of this treatment is that initially it can cause some nasal irritation.

Nicotine Tablets and Lozenges

The nicotine is absorbed through the lining of the mouth. It is important not to chew or swallow the tablets or lozenges.

The maximum number of lozenges per day is 25.

Other Methods

Zyban (bupropion)

GlaxoSmithKline are now marketing a new medicine, called Zyban in tablet form. This is the first prescription drug used to help people to stop smoking that does not contain nicotine. It has been found to double people's chances of stopping. A significant advantage of this drug is that it can also be used alongside nicotine replacement treatments and consequently chances of success are increased. Zyban is currently available in the UK.

It is thought to act by counteracting the effect of chemicals in the brain responsible for nicotine withdrawal.

Some people may get sleep disturbance or a dry mouth. Convulsions occur in 1/1000 which is the same as most tranquilizers.

Zyban should not be used if:

- Epileptic
- Pregnant
- On monoamine-oxidase inhibitors
- Anorexic/bulimic/bipolar disorder
- Suffer from liver disease

There are other methods that are available to help you quit smoking although none of them have been proved to be as effective as NRT or Zyban. There are options like Graduated Filters that fit over the end of your cigarette to prevent some of the tar and nicotine passing into your body. However this is not as good for your health as quitting completely and they should not be used with the idea that as they are filtered they are not doing you any harm.

Herbal remedies

Nicobrevin Gum with herbal extracts may help. This contains menthyl valerate, quinine, camphor and oil of eucalyptus.

Cantassium Herbal Anti-smoking Naturatabs contain Lobelia which is a nicotine substitute that mitigates the nicotine craving.

Avena or **Oatstraw** is also thought to be useful. 25g of wild oats per day will help curb the need to start smoking again. Herbal sticks or artificial cigarettes will keep the fingers at rest.

It is also possible to use **Herbal Cigarettes**. However this is not advisable as there is no positive evidence to suggest that these methods will help you to quit. Plus even though Herbal Cigarettes don't contain any nicotine they still put harmful tar and carbon monoxide into your body and they do not stop you from enjoying the overall concept of smoking.

Taba gum

Tobacco-flavoured chewing gum is also available. This, like nicotine gum, gives you something to do with your mouth other than smoking. However there is no proof that it will prevent cravings so if you are trying to quit you would probably find the actual nicotine gum more beneficial.

Hypnotherapy

This aims to affect your underlying impulses in order to reduce your desire to smoke or increase your will to quit. It involves induction of a deeply relaxed state with increase suggestibility and suspension of critical abilities. Once in a hypnotic trance the hypnotherapist will suggest that the person will not find smoking necessary or pleasurable. Medically qualified hypnotherapists can be found by contacting the British Society of Medical And Dental Hypnosis (07000 560309)

Acupuncture

Alternatively it has been suggested that acupuncture triggers the release of endorphins, thus making people feel better and more able to cope with stopping smoking. Acupuncture is not more effective than placebo acupuncture for the cessation of smoking. This does not mean that this is not worthwhile as the sizable placebo effect results in 35% of people stopping smoking immediately. Qualified acupuncturists can be found via British Medical Acupuncturist Society (www.medical-acupuncture.co.uk), Acupuncture Association of Chartered Physiotherapists (www.aacp.com.uk) or the British Acupuncture Council (www.acupuncture.org.uk)

Dietary supplements

Smoking can effect the nutritional balance of the body. Smokers have a greater need for the anti-oxidant vitamins (vitamins A, C and E) along with the mineral selenium that also has cancer preventing effects.

Eating 5 portions of fruit or vegetables a day will help. Vitamin and mineral supplementation is an alternative.

Further Information

If you are determined to quit smoking and feel as though you need some extra help you can call the Quitline freephone number: 0800 00 22 00. Here you can receive help, advice and more information about the different treatments that are available.

Why give up?

Live longer! Ex smokers who give up in their 30's have a much less chance of dying before 65 than those who continue to smoke.

Female smokers who give up have a marginal higher chance of dying than those women who have never smoked.

The avoidance of smoking would eliminate 33% of cancer deaths in the UK.

Stop smoking and the risk of coronary heart disease is almost halved after one year.

Giving up smoking after a heart attack can decrease the chance of a further attack by 50%.

The risk of stroke decreases to that of non-smokers after stopping for 5 years.

Your children may not develop glue ear or asthma.

Your clothes and breath smell like a camel (animal not cigarette).

Save money:

Cigarettes per day	Years Smoking				
	1	5	10	20	50
5	£421	£2,107	£4,215	£8,431	£21,078
10	£842	£4,210	£8,420	£16,840	£42,100
25	£2,103	£10,516	£21,033	£42,066	£105,165
50	£4,206	£21,030	£42,060	£84,120	£210,300

What to expect after giving up

- Short Term Problems
- Long Term Improvement
- Top Ten Tips

Short Term Problems

Nicotine withdrawal

Nicotine withdrawal starts within 24 hours of stopping smoking.

The symptoms are:

- Anxiety
- Depressed mood
- Difficulty sleeping
- Irritability and anger
- Difficulty concentrating
- Increased appetite

These symptoms should only last 1-2 weeks.

Weight gain

Many ex-smokers complain of the initial weight gain after quitting. This is usually due to the substitution of sweets and snacking on junk food. Boredom leads to increased eating and often food tastes better. The solution is a combination of increased exercise and a healthy balanced diet.

Tips to avoid weight gain:

- Drink water regularly
- Chew sugarless gum
- Ensure a well balanced diet
- Start regular exercise after discussion with your GP

Increased mucus production

In the first few weeks many people complain that their lungs are worse due to increased coughing and mucus production. This is due to the normal clearing mechanism of the lungs starting to work again. The hair cells called cilia in the lungs start to beat again resulting in clearing of mucus. This induces the cough reflex and expectoration of mucus. As the mucus clears the lung inflates more resulting in further coughing for a short time. Things are getting better not worse!

Long Term Improvement

20 minutes: Heart rate and blood pressure return to normal

8 hours: Nicotine and carbon monoxide levels fall by half. Oxygen levels return to normal

1 day: Hair cells in lungs start to function again clearing mucus from lungs

2 days: Sense of smell and taste improve due nasal inflammation improving allowing the area at the roof of the nose where the sense of smell is located to function. Nicotine levels have reduced to zero

3 days: Breathing becomes easier due to better inflation of the lungs and a clearer nose.

2-12 weeks: Circulation of the blood improves improving exercise levels.

3-9 months: Lung function improves by 10%

5 years: The risk of a heart attack has fallen by 50%

10 years: The risk of lung cancer has fallen by 50% and the risk of a heart attack is the same as a non-smoker

Top 10 Tips

1. Acknowledge that giving up involves willpower and strategy for combating nicotine withdrawal
2. Make a list of why you want to stop smoking
3. Choose a date to start when chance of success is high (ie avoid periods of domestic/work related stress)
4. Get professional help from your GP or contact the NHS quit smoking advice line 0800 169 0 169 or www.givingupsmoking.co.uk
5. Ensure the support and involvement of family and friends
6. Stop completely
7. Reward your self at the end of a successful smoke free day
8. Avoid other smokers in the short term
9. Occupy your redundant fingers and mouth (eg, gum)
10. Avoid 'just one-cigarette' scenarios!

What to do if you can't stop

Many people find it impossible to give up smoking. Some will never give up.

If you are unable to give up, it is important to keep a close eye on your health in order to detect the diseases associated with smoking at an early stage. Remember early diagnosis results in better outcomes.

Never be afraid to visit your doctor if you think your health is at risk.

- If you are wrong - you will stop worrying
- If you are right - you increase the chance of successful treatment

People worry about the unknown.

Symptoms associated with smoking related disease

If you develop any of these, see your doctor:

Heart Disease

- Unexplained chest pain especially on exercise or involving left arm
- Shortness of breath at rest
- Ankle swelling
- Rapid or irregular pulse

Vascular disease

- Pain in lower legs on exercise
- Feet becoming cold
- White or mottled discolouration of feet
- Ulceration of foot

Lung cancer

Coughing up blood (haemoptysis)

Unexplained or persistent (more than 3 weeks):

- cough
- chest/shoulder pain
- shortness of breath
- weight loss
- hoarseness/change of voice
- persistent neck swelling/lumps in neck

Oesophageal cancer

Food sticking on swallowing at any age (dysphagia)

Indigestion/heartburn at any age combined with one or more of the following 'alarm' symptoms:

- weight loss
- proven anaemia
- vomiting

Indigestion in a patient aged 55 years or more with at least one of the following 'high risk' features:

- onset of indigestion less than one year ago
- continuous symptoms since onset

Jaundice (yellow hue to skin)

Upper abdominal swelling

Cancer of mouth, throat and nose

- Hoarseness/voice change persisting for more than 6 weeks
- Ulceration of mouth persisting for more than 3 weeks
- Swelling in the mouth persisting for more than 3 weeks
- All red or red and white patches of the lining of the mouth
- Difficulty swallowing persisting for 3 weeks
- One sided sore throat for more than 3 weeks
- One sided nasal obstruction particularly when associated with offensive or bloody discharge
- Unexplained tooth mobility not associated with dental disease
- Persistent swelling of the cheek (more than 3 weeks) especially if associated with a numb cheek.
- Swollen eye
- Un-resolving neck masses for greater than 3 weeks

Risks of Smoking

Smoking is not only bad for you but it can kill you and people exposed to your smoke.

Overall 120,000 deaths each year in the UK are due to smoking. That equates to 14 deaths per hour.

Deaths by smoking are six times higher than the total deaths arising from road traffic accidents, poisoning and overdose, other accidental deaths, murder and manslaughter, suicide, and HIV infection.

Smokers lose on average 16 years of life compared to non-smokers.

Smoking causes cancer, heart attacks, hardening of the arteries, bronchitis, emphysema, cough, shortness of breath, as well as birth defects.

It also causes bad breath, furring of the tongue, stains the teeth and fingers, causes wrinkles and premature aging.

- Cancer
- Heart and Circulation
- Respiratory Disease
- Pregnancy
- Infertility
- Other Problems

Benefits of smoking

A few studies have shown that smoking appears to have a small protective effect against the development of Parkinson's' disease and cancer of the endometrium (womb). The effects are so small as to have no health benefit compared to the risks of smoking.

Looking 'cool' while you have your leg amputated or under going cancer treatment is not a great help to survival.

What is in cigarettes?

Nicotine

This drug is responsible for the addictive nature of cigarette smoking. It has an effect on parts of the brain known as dopamine receptors that are also involved in heroin and cocaine addiction. The blood absorbs it within 15 seconds and results in an increase in heart rate and blood pressure.

Dependence on nicotine can be firmly established in the early days of smoking, especially in the young.

Individuals develop a nicotine dependence level that responds to the varying nicotine content of the cigarette. That is, lower levels means more cigarettes needed to satisfy the need.

Nicotine withdrawal leads to unpleasant side effects within 24 hours, which results in the failure to give up.

Nicotine addiction sustains cigarette smoking and is the major cause of difficulty in giving up.

Tar

This chemical is toxic to the lung. Over a year the average smoker produces an amount equal to a small tea cup full of tar.

Chemicals

Chemicals are present in the particles and gas produced by the cigarette. Tobacco smoke contains over 3000 chemicals. The major constituents are benzene, ammonia, benzopyrene, hydrogen cyanide, acrolein, formaldehyde and carbon monoxide.

Carbon monoxide cuts the oxygen carrying power of the blood by 15%.

Up to 60 chemicals produced by tobacco smoke are known to be cancer causing (carcinogens).

Dietary Health Promotion.

We are all aware that to look and feel good we should eat sensibly, but what does sensibly mean? If you have a medical condition that requires a specific diet you should not deviate from this without first seeking advice from your own GP.

There are a myriad of dietary philosophies being promoted by different bodies. Physical Health Screens offers advice based on the most recent research and literature reviews.

We are all individuals and have different dietary needs therefore the following information is intended only as a general guide.

- Eat a varied amount of foods: this will ensure that you achieve your energy, protein, minerals, fibre and vitamin requirements needed for good health.
- Try to balance the food you eat with physical exercise; try to maintain or improve your weight status: this can help reduce your risk of high blood pressure (hypertension). In addition, the chances of heart disease, stroke, diabetes and even some forms of cancer are all reduced.
- Select a diet moderate in sugar: sugar is loaded with calories and little in the way of nutritional value. It can also contribute to poor dental hygiene.
- Choose a diet moderate in salt and sodium: this helps to keep your blood pressure down.
- Ensure you get plenty of grain products, vegetables and do not forget the fruit: fruit provides complex carbohydrates, fibre, minerals, and vitamins which can assist in lowering your intake of fat.
- Look for produce that is low in fat, (particularly saturated fat) and cholesterol: this is a way of reducing your risk of heart disease and certain cancers.
- Alcohol: there is a strong link between alcohol intake and high blood pressure. Try to spread your alcoholic intake throughout the week. Do not binge drink. A large amount of alcohol in the evening may lead to a hypertensive state the following day.

You should never miss breakfast, even if it means getting up ten minutes earlier. Breakfast is the most important meal of the day allowing your body to refuel following eight to ten hours without food. Your body and brain are now craving glucose (blood sugar) as an energy source. A simple bowl of whole grain cereal, full skimmed milk and a piece of fruit can supply a significant amount of vitamin C, calcium, thiamine, riboflavin, fibre, iron and other essential nutrients. Research has shown that those individuals that eat breakfast can maintain their weight easier and have lower cholesterol levels than those who skip this important meal.

Reducing the risk of heart disease:

- Heart disease is the single biggest killer in this country. A number of factors will influence your risk of developing heart disease. One of these is your dietary intake.
- The first step should be to cut down on *total* fat consumption, and review the type of fat intake. Ideally you should eat the same amount of saturated and polyunsaturated fat.
- Polyunsaturated fat is often referred to as 'essential fat'. The reason? It contains chemical building blocks needed for normal everyday development and can actually help reduce your cholesterol level, which in turn reduces the risk of developing heart disease.
- In contrast, saturated fat will significantly contribute to the raising of your cholesterol level, which in turn increases your risk of developing heart disease.
- Remember; eat less total fat and select foods, which contain polyunsaturated fat instead of saturated fat.
- The majority of the fat on chicken or turkey lies under the skin, therefore, remove the skin before eating to significantly reduce the fat. Try to select lean cuts of meat. Ask the butcher to trim the fat away.
- Low fat yoghurt can be used to substitute cream in soups, casseroles or on deserts.
- Foods containing fibre may also help to reduce your cholesterol level, particularly beans, lentils and oats. Whole grain cereals are lower in sugar. Unsalted nuts and dried fruit make a snack rich in fibre. Fibre is perhaps, the best way of maintaining a healthy digestive system.
- One of the easiest ways of decreasing your risk of developing heart disease is to cut out added salt. Almost all foods contain salt during cooking. You do not need to add further. Try flavouring your food with lemon juice, herbs, and / or spices instead.

- Sugar is nothing but calories, which can result in obesity, which in turn means there is a greater risk of developing heart disease. We tend to use too much sugar in this country, try to cut down wherever possible. Try to get used to tea and coffee without sugar, you will probably find this easier by cutting down gradually. Choose unsweetened fruit juice and select canned fruit in natural juice in place of that canned in syrup. In addition, sugar contributes to tooth decay.
- You should eat plenty of fruit and vegetables. Store and cook these carefully so that the vitamins and minerals essential to good health are not lost. You should be aiming to eat at least five portions of fruit and vegetables daily.

As a guide, a healthy meal should contain one or more of the following: -

The Starch Foods;	Bread, potatoes, rice, pasta or cereal. (The main part of your meal)
The Protein Foods;	Meat, fish, egg, cheese, milk, pulses or nuts. (A moderate helping)
The Vitamins and Mineral Foods;	Vegetables, salad-vegetables, fruit or fruit juice. (Also a major component of a healthy meal)

Reducing the risk of cancer:

Scientific evidence suggests that about one-third of cancer deaths that occur each year are attributable to the adult diet, including its effect on obesity. Cigarette smoking accounts for another third. The majority of people who do not use tobacco, dietary choices and physical activity become the most important modifiable determinants of cancer risk. It is vital that before embarking upon any physical exercise programme you should consult your doctor first.

- Bowel (colorectal) cancer is the second most common cancer in the UK and the fourth most common throughout the world. In the UK alone, over 30,000 cases are reported each year. In the UK, statistics show that those most at risk are men over 60 years of age although both sexes, of almost any age, can be affected. A diet, which is high in red meat, alcohol, fat and low in vegetables and fibre, has been implicated as a causal factor. Another factor includes those individuals suffering from obesity.
- There is now strong evidence to support the fact that diet and lifestyle factors play a huge part in preventing this cancer from developing. Diets, which are high in vegetables and fruits, reduce the risk of polyps and colon cancer.
- Maintain a healthy and, stable body weight throughout life and making sure that your diet is high in fibre and minimally processed starchy foods and low in sugar is important. Fat and eggs can also help to lower your risk of this disease.

- Exercise can also help to lower the risk of polyps and colon cancer. Physically active people are half as likely to develop colon cancer as those who do little or no exercise. Therefore;
- Eat a diet rich in vegetables and low in red meat and alcohol.
- Incorporate some form of regular physical activity in your day-to-day routine.
- Undertake some form of self-examination. (consult health promotion in your portfolio).
- Despite the fact that cancer is a complex disease and being multi-factorial in respect to its development, it is now readily accepted that the main factor influencing gastric (stomach) cancer risk is our diet. A new report by the World Cancer Research Fund, as many as 66% to 75% of cases may well be prevented by appropriate diet, possibly more than any other cancer.
- The same report also highlights that there is an increased risk of stomach cancer from a diet high in salt and salted foods and possibly, regular consumption of grilled or barbecued fish or meat.
- A diet high in animal fat and low in vitamin 'A' has also been isolated as a contributory factor for the development of prostate cancer.
- Each year in the UK, 4000 women are diagnosed with cancer of the womb (endometrium), and while in the long term cure rates are good, early diagnosis and treatment are essential. Most common in post-menopausal women between the ages of 50 and 64, especially those women who are obese. Significantly, overweight women can be up to ten times more at risk of developing this particular cancer. Therefore, an effective way of reducing your risk is to maintain a healthy body weight.

The World Cancer Research Fund recommends that a diet, which contains at least five portions of fruit and vegetables each day, may reduce the risks of developing endometrial cancer. In addition, a diet high in animal fats or saturated fat may well increase the risks.

Alcohol Assessment:

Most of us enjoy an alcoholic beverage at some time. Do you know if your alcohol intake, counted by units, is within a safe margin? Wines for example can vary from 7% to 14% by volume and which ultimately means either six units or double that.

The introduction of alcohol being counted by units was introduced in 1985 as a way of people being able to count safely their intake. We have always found it difficult to calculate just what is in each drink.

There is a simple method, which can be used to calculate how many alcoholic units are in a bottle or can.

Formula: Multiply the % of alcohol by the volume of liquid, divide this by 100 (if the volume is in cls) or by 1000 (if the volume is in mls)

Example: A 440 ml. can of lager with an alcohol content of 8%.
Therefore, 8% multiplied by 440 and divided by 1000 = 3.5 units.

Calculate your own intake of alcoholic units using the table below.

<u>Recommended Sensible Drinking Limits.</u>	
For men.	Up to 3 to 4 units each day.
For women.	Up to 2 to 3 units each day.

<u>Moderate to High Risk Drinking.</u>	
For men.	29 to 49 unit each week.
For women.	22 to 34 unit each week.

<u>Harmful Drinking</u>	
For men.	50 units or more a week.
For women.	35 units or more a week.

Breast Self Examination

In developing countries, breast cancer is the most common type of cancer among women, accounting for approximately 18% of female cancers. Here in the United Kingdom some 15, 000 deaths are attributable to breast cancer each year.

Age is the single most influential factor regarding the disease. There is an age specific incidence and of the 60% with an identifiable risk factor, age will account for one half.

A number of other risk factors have been linked to breast cancer. Women from a high socio-economic class are said to have an increased risk. Meanwhile, so too are women who began to menstruate at an early age (particularly, less than 12 years) or those ladies who begin the menopause at a later age (above 55 years).

It is now widely believed that genetics plays an integral role in the development of breast cancer. There is a 2 to 3 fold-increased risk if you have a first degree relative with the disease. In approximately 10% to 15% of all cases, there is a family history of breast cancer.

Most experts agree that obesity has an association with the risk of breast cancer development. It has been postulated that this risk may well be from the conversion of adrenal androgens to oestrogens in adipose tissue. There is an increased risk linked to alcohol consumption.

The age at first pregnancy appears to be significant in reducing the risk. The risk is half that of women who have their first pregnancy above the age of 30 or women who remain childless.

The objective outcome of any screening programme for breast cancer is to reduce the mortality rate. This is achieved by making women more aware of the benefits of 'breast self-examination', subsequently detecting tumours when they are localised and have not spread beyond the breast itself. Almost 90% of breast cancers are found by women themselves. In addition, there is strong evidence to support screening through breast mammography, reducing mortality in certain groups by up to 30%.

Breast self examination is a simple test that can be performed once each month in the privacy of your own home. The best time to undertake self examination is seven to ten days after the start of your menstrual cycle, this should be a period when your breasts are less tender. Postmenopausal women can choose to carry out self-examination the same day of each month.

Remember that breast self-examination is not a replacement for mammography or periodic examination by a medical practitioner.

The three stages to breast self examination

Stage One.

Inspection: stand in front of a mirror with your arms down by your side and observe the following.

- Changes to the shape and size of your breasts.
- Compare both breasts, Importantly, it is not uncommon to notice one breast larger than the other
- Observe the skin; note the texture and colour.
- Notice any veins that are especially prominent, is this usual for you?
- Look for puckering of the nipples
- Gently squeeze both nipples and look for a discharge.

Now, place your hands on your hips and repeat the above process again.

Stage Two.

Examination: This is best carried out during a bath or shower.

Place your right hand behind your neck and use the soapy fingers of your left hand to examine your right breast. You should trace a continuous spiral round your breast using the pads of your fingers in small circles. You should be looking for any unusual lumps or thickening of the skin. Ladies with larger breasts may need to exert a firmer pressure to detect changes.

Importantly, some people may have lumpy breasts normally. The significance of monthly self-examination means that you will become very familiar with your breasts, subsequently detecting changes at the earliest opportunity. When performing self-examination, never forget the area around and under your arms too, this is also breast tissue.

Now, repeat this process reversing your hands to examine your left breast.

Stage Three.

Lying down: Place a pillow underneath of your right shoulder and then place your right hand behind your neck. Examine your right breast with your left hand. This aspect of examination flattens the breast and makes it easier to examine.

- You should use the pads of your fingers to examine each breast individually moving in very small circular movements from the nipple outward.
- Without moving your fingers from your breast change the amount of pressure applied. This way there is less likelihood of missing something.
- Very gently, pinch the nipple so that you can feel behind it.
- Remember to examine thoroughly under the armpits.
- Anything that does not feel right should be checked out medically.

Now reverse the examination process and exam your left breast.

Testicular Self Examination

Testicular cancer is predominantly a disease of 16 to 35 year old males. Occasionally it can present in older men. The need for self-examination cannot be over emphasised. In view of the fact that it is an examination which can be done simply in minutes, and in the privacy of your own home.

Self examination should be performed once each month following a hot shower or bath as the heat will have relaxed the scrotum, subsequently making it easier to identify any abnormalities.

- Stand in front of a mirror. Check for any swelling on the scrotal skin.
- Examine the testicles individually using both hands. Place your index finger and the middle fingers under the testicle with the thumb placed on top. Roll the testicle gently between the thumb and fingers: you should not experience pain during this examination. **Do not be alarmed** if you discover one testicle larger than the other, This is normal.
- Find the epididymis. This is a soft, tube-like structure behind the testicle that collects and carries sperm. If you familiarise yourself with this structure you will not mistake it for a lump
- Cancerous lumps are most often found on the sides of the testicles, but can show up on the front. Lumps on the epididymis are not cancerous.
- Lumps that are free flowing within the scrotum and are not attached to a testicle are almost certainly not cancerous.

If you find anything that is suspicious, **see a doctor immediately**. The chances are that it will not be testicular cancer, it may well be an infection.

Remember, only a doctor can make a positive diagnosis, but equally important, only a doctor can make a negative one.

OTHER SIGNS OF TESTICULAR CANCER:

- Any enlargement of a testicle.
- A significant loss of size in one testicle.
- A feeling of heaviness in the scrotum.
- A dull ache in the lower abdomen or in the groin.
- A sudden collection of fluid in the scrotum.
- Blood in the urine.
- Enlargement or tenderness of the breasts.

Stress

With high-pressure jobs and very busy lifestyles it is not surprising that many of us complain of 'being stressed'. Statistically, 75% of us will experience a degree of stress every two weeks, according to a national health survey. We have all suffered as a consequence of stress at some time. What is stress exactly?

Predictable changes occur as your body is influenced by physical and / or psychological factors, often termed stressors (stressful situations). When faced with these stressful situations, your adrenal gland begins to secrete a number of hormones, including; epinephrine, cortisol and norepinephrine. Following these hormonal influences, your heart rate will increase, your blood pressure rises and your pupils will dilate, this is what is referred to as the fight or flight syndrome. In addition, the liver is stimulated to release glucose for that quick energy burst.

Certain forms of stress are important and necessary. Motivation to solve challenges or problems is triggered by low level, manageable stress. Consider these as stimulatory stresses.

Continued or uncontrolled stress can cause significant health problems, including heart attack and possibly some forms of cancer. There is little doubt that stress can seriously erode your health.

Classical signs of stress include many of the following;

- Stiff neck.
- Headache.
- Backache (typically nagging).
- Sweaty palms.
- Irritability or intolerance.
- Upset stomach.
- Feelings of exhaustion.
- Insomnia.
- Loss of appetite.
- Hypertension (raised blood pressure).
- Diarrhoea.

The following pages offer a number of exercises that can be utilised to combat stress. Many can be undertaken at the office and are quick and easy to learn.

Exercise one:

There is little doubt that sleep is integral regarding your ability to manage the day ahead. A disturbed night's sleep often goes hand in hand with an increase in stress. e, following is an exercise designed to aid a restful and restorative night's sleep.

- When you retire to bed, get as comfortable as possible. Focus on your breathing, particularly the exhalation and notice the ease and naturalness of these exhalations.
- Now, simply relax as you exhale.
- Notice how your body feels, be aware of the hair on your head, does one hand feel slightly different to the other. Be aware of the bed supporting your weight and allow your shoulders especially to relax.
- Continue to relax with each and every exhalation.
- Now, with each and every exhalation direct all of your thoughts in and around your body. Begin to observe how inside your body actually feels, what kind of sensations do you experience?
- Accept the different sensations within your body; continue this process throughout your entire body.
- The number of sensations will slowly decline and sleep will result.

Exercise two:

Another quick and easy exercise that can be used before important meetings and, importantly yields a quick and effective response. Cardiologists agree that this type of exercise reduce the heart rate and increase blood flow while increasing muscular relaxation.

- Close your eyes: Breath in through your **nose** to a count of 3.
- Hold this inhalation for a further count of 3.
- Now, exhale through your **mouth** to a count of 6.
- Breathe freely and easily to a count of 4.
- Repeat the above at least six more times.

It is important to breathe through the mouth and nose where directed; Oxygen stimulates the brain on inhalation and carbon dioxide is expelled on exhalation. Meanwhile, holding the breath the breath to a count of 3 prevents a feeling of light-headedness by the increased oxygen.

Exercise three:

This technique is used within Neuro Linguistic Programming (NLP) and is a powerful resource. In the first instance, you should affix a black or red spot on a wall opposite where you will be sitting. This can easily be done by using a small sticker and draw a spot about the size of a penny. Position this on the wall so that it is above eye level, perhaps seven feet from the ground. It is advisable to have someone read this script to you first. The exercise has a number of names but is commonly called '*peripheral vision*' and can be practised at home or in the office, just allow yourself fifteen minutes to get the best from it;

Get yourself comfortable in a position opposite your spot on the wall. Focus your attention on the spot and continue to direct all of your attention on this spot. You may begin to realise, as you continue to focus your attention on the spot, that the rest of the room goes a little dark or even hazy and you begin to experience tunnel vision.

Tunnel vision is used continually in society; watching television, we only see the screen or reading a book, we only see the words. Even during a conversation with someone, we look at their face but ignore the rest of their body. This tunnel vision is often referred to as an inner tunnel vision. This type of tunnel vision is associated with stressful situations when we fixate upon specific objects.

As you continue to focus your attention on your spot on the wall, just be aware that there is another way of looking at things and we would like you to experience that too. Maintain your focus upon that spot on the wall but begin to broaden your field of vision and gradually become aware of what is on either side of your spot. Soon you can observe just what you see out of the corners of your eyes. Now, take that awareness even further, around and even behind you. Obviously, you cannot see behind you but use your senses to become aware of what is behind you, using senses of hearing and perception.

With your continuation of concentration upon that spot on the wall and the ability to see all around you also, you may notice that your breathing has slowed down, the muscles in your face have relaxed, especially across the forehead and you can help those muscles relax even further. You can take this relaxation, as far you require, perhaps you are becoming aware that your arms are becoming heavy and warm as they too relax, but perhaps it is a little early for that to have occurred.

Interestingly, once you enter peripheral vision you appear to activate the parasympathetic nervous system; the part of your nervous system that helps calm and slow you down. This allows your mind and body to return to equilibrium.

Now, allow yourself to come back by letting your vision return to normal.

Exercise four:

Active relaxation is a popular technique and operates by tensing muscle groups above their normal tension and then relaxing them. It is preferable to have your eyes closed.

- Make a fist with one hand and tighten the muscles, feel the tension and take a deep breath. Hold this breath (being aware of the tension in the fist) for a count of 3 and then relax the fist as you exhale and relax.
- Now, tense the arm, feel the tension, and take a deep breath. Hold this breath (being aware of the tension in the arm) for a count of 3 and then relax the arm as you exhale and relax.
- Now, tense the other fist, feel the tension, and take a deep breath. Hold this breath (being aware of the tension in the fist) for a count of 3 and then relax the fist as you exhale and relax.
- Now, tense the other arm, feel the tension, and take a deep breath. Hold this breath (being aware of the tension in the arm) for a count of 3 and then relax the arm as you exhale and relax.
- Now, tense your right foot, feel the tension, and take a deep breath. Hold this breath (being aware of the tension in the foot) for a count of 3 and then relax the foot as you exhale and relax.
- Now, tense your right leg, feel the tension, and take a deep breath. Hold this breath (being aware of the tension in the leg) for a count of 3 and then relax the leg as you exhale and relax.
- Tense your left foot and feel the tension while taking a deep breath. Hold this breath (being aware of the tension in the foot) for a count of 3 and then relax the foot as you exhale and relax.
- Tense your left leg and feel the tension and take a deep breath. Hold this breath (being aware of the tension in the leg) for a count of 3 and then relax the leg as you exhale and relax.
- Finally, tense your whole body, feel the tension, and take a deep breath. Hold this breath (being aware of the tension in the whole of your body) for a count of 3 and then relax your entire body as you exhale and relax.

Exercise five:

Perhaps one of the most powerful techniques is called visualisation. The process is a simple one enjoyed when you can dedicate at least thirty minutes without the worry of being disturbed.

Close your eyes and visualise yourself, either alone or with someone you love (this can be a partner, child or even the faithful dog), the choice is yours.

Take yourself off to a place of tranquillity and serenity using your own mind and visualisation.

A Mediterranean beach, the countryside or simply seeing yourself relaxed in a comfortable chair is all it takes.

Give yourself at least thirty minutes, but be able to visualise all of the details of your experience, smell the pollen, see the colours and the birds and bees. Look at that clear blue sky. Feel the soft carpet of warm golden sand underfoot. Notice the comfortable chair as it supports your entire weight.

You are limited only by the limits of your own imagination.

Remember, you are in total control, allow your mind to relax and you will relax too.

These are but a few of the many simple relaxation techniques available. If you are interested in more, then any good book shop should stock a range of texts with a whole myriad of different techniques.

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