



personal health profile



Mr A Sample
House 1
Street 1
City 1
PostCode

PID: 200999999

Date: 10-Jul-2009

your 'well man check plus' results

Dear Mr Sample,

Please find enclosed your 'personal health profile' and results. We have also enclosed an additional copy of your laboratory results should you need to provide a copy to your doctor.

Your results are compared with lower and upper ranges of accepted normal values or stated as positive or negative.

We have provided comments and recommendations on all of your test results that appear to be outside of the normal range or positive. These are only valid against a specific test, on a specific sample, at a specific point in time.

The tests do not protect you from illness. Should you experience any symptoms of ill health it is important that you seek the advice of your doctor.

As 85% of all diagnoses are made in the laboratory, we believe that regular testing of bodily functions can help to detect early indications of potential health risks. For those that have regular checks, we can track variations in the results from previous screens, which may indicate potential ill health at an early stage.

Being more aware of how your body and its major organs are functioning can also motivate you to lead a healthier lifestyle and take a more proactive approach to protecting your future health and well-being.

Please do not hesitate to contact us should you need any further clarification of any aspect of this report or would like more information about our services.

Yours sincerely,

.....
ABC



WELL MAN CHECK PLUS

Name: Mr A SAMPLE

DOB: 17-Dec-1947

PID: 2009999999

Report Date: 10-Jul-2009



tests & investigations

WELL MAN CHECK PLUS

Analysis of Results

Interpretation of Results

- Haematology
 - Red Blood Cells
 - White Blood Cells
 - Clotting Cells
 - Inflammation Marker

- Biochemistry
 - Kidney Function
 - Liver Function
 - Proteins
 - Minerals
 - Gout Test
 - Diabetes Test
 - Iron Profile
 - Lipid Profile
 - Heart Disease Risk

- Endocrinology
 - Thyroid Test
 - Prostate Profile

- Microbiology
 - Bowel Disease Screen
 - Urine Chemistry
 - Urine Microscopy

- Immunology
 - Rheumatoid Arthritis
 - Cardiovascular Disease

Medical Check

- Body Measurements
- Body Mass Index
- % Body Fat
- Basal Metabolic Rate

Medical History & Lifestyle Analysis

Summary

Health Information

Your Next Health Check

IMPORTANT

A Health Check, much like the annual M.O.T that you have for your car, aims at detecting problems at an early stage when it is quicker, easier and less costly to correct potential problems.

By comparing your health screening results on a regular basis, we are able to establish your normal values and detect any variations at an early stage.

The added benefit of knowing how your lifestyle is affecting your health is that it gives you the opportunity to adapt and look forward to a healthier future.



analysis of results

Your laboratory results are compared to a reference range considered to represent the normal healthy state.

Reference ranges for normal results may vary according to gender, age, testing method and country in which they were performed. If you have any questions regarding this, please contact us.

If some results are marginally outside of the reference range it does not necessarily mean that an illness is present. You will have your own range of 'normal' based largely around that stated in the laboratory report.

Other results are stated as being simply positive or negative. These are not necessarily diagnostic and may only indicate that there may be a potential health problem and further tests and investigations may be necessary to confirm or rule out a problem.

Your personal medical details are considered when interpreting results and in the follow up suggestions made.

The medical questionnaire is an important tool in that it provides us with a unique set of information that allows us to carry out an accurate assessment of your laboratory results.

We take the following factors into consideration when analysing your results:

- Medical history - certain disease states may affect a range of results.
- Gender - certain tests vary between males and females.
- Age - there are different ranges for children, adults and the elderly.
- Diet - some tests e.g. blood glucose, cholesterol etc. may be affected.
- Time - there may be variations between day and night.
- Exercise - strenuous exercise can release enzymes from the tissues.
- Drugs - may have affects on some tests.

By annual routine testing you will be able to build up a picture of what is normal for you and thus any variation from this can be determined at an early stage.

Should any results show significant levels outside of the normal range, or be positive, taking the above information into consideration a Consultant Pathologist will make any necessary comments. Any suggested follow-up will be explained by a qualified Medical Advisor in your report.



interpretation of results

PATIENT	Surname: Sample
	Forename: A
	DOB: 17-Dec-1947
	Sex: M

LABORATORY	Sample date: 10-Jul-2009
	Report date: 10-Jul-2009
	PID: 2009999999
	Lab ref: 0009999999

WELL MAN CHECK PLUS

HAEMATOLOGY PROFILE

The haematology profile or full blood count provides important information about the type, number and appearance of cells in the blood, especially red blood cells, white blood cells, and clotting cells.

All blood cells are made in the bone marrow, the centre of large bones. Some medications or diseases can damage the bone marrow. This can reduce the numbers of different types of red or white blood cells.

	Result	Units	Range
Red Blood Cells			
HAEMOGLOBIN	15.2	g/dL	13.0 - 17.0
HCT	0.435		0.37 - 0.50
RED CELL COUNT	4.85	$\times 10^{12}/L$	4.40 - 5.80
MCV	89.7	fL	80 - 99
MCH	31.3	pg	26.0 - 33.5
MCHC	34.9	g/dL	30 - 35
RDW	12.4		11.5 - 15.0

Red blood cells are one of the most vital components of the blood. A single drop of blood contains millions of red blood cells which are constantly travelling through your body delivering oxygen and removing waste. The cells are red because they contain a protein chemical called haemoglobin which is bright red in colour.

Haemoglobin carries oxygen and gives the blood cell its red colour. The haemoglobin test measures the amount of haemoglobin in blood and is a good measure of the blood's ability to carry oxygen throughout the body.

HCT (haematocrit) measures the amount of space (volume) red blood cells take up in the blood.

Red cell count analyses the number of red cells in the blood. Red blood cells carry oxygen from the lungs to the rest of the body. They also carry carbon dioxide back to the lungs so it can be exhaled. If the red cell count is low (anaemia), the body may not be getting the oxygen it needs. If the count is too high there is a chance that the red blood cells will clump together and block tiny blood vessels. This also makes it hard for your red blood cells to carry oxygen.

MCV (mean corpuscular volume) shows the size of the red blood cells.

MCH (mean corpuscular haemoglobin) is the amount of haemoglobin in an average red blood cell.

MCHC (mean corpuscular haemoglobin concentration) is the concentration of haemoglobin in an average red blood cell.

MCV, MCH and MCHC values help in the diagnosis of different types of anaemia.

RDW (red cell distribution width) shows if the cells are all the same or different sizes or shapes.



	Result	Units	Range
White Blood Cells			
WHITE CELL COUNT	7.39	$\times 10^9/L$	3.0 - 10.0
Neutrophils	4.74	$\times 10^9/L$	2.0 - 7.5
Lymphocytes	1.74	$\times 10^9/L$	1.5 - 4.0
Monocytes	0.67	$\times 10^9/L$	0.2 - 1.0
Eosinophils	0.22	$\times 10^9/L$	0.0 - 0.4
Basophils	0.02	$\times 10^9/L$	0.0 - 0.1
All cell populations appear normal.			

White blood cells are the key to the body's immune or defence system. They fight infections and protect our body from foreign particles such as harmful germs and bacteria. White blood cells are colourless as they do not contain any haemoglobin. They are formed from the stem cell of the bone marrow and have a life-span of a few of days.

The major types of white blood cells are **neutrophils**, **lymphocytes**, **monocytes**, **eosinophils**, and **basophils**.

Each type of cell plays a different role in protecting the body. The numbers of each one of these types of white blood cells give important information about the immune system.

	Result	Units	Range
Clotting Cells			
PLATELET COUNT	211	$\times 10^9/L$	150 - 400
MPV	9.9	fL	7 - 13

Clotting cells or **Platelets** are the smallest type of blood cell. They are important in blood clotting. When bleeding occurs, the platelets swell, clump together, and form a sticky plug that helps stop the bleeding. If there are too few platelets, uncontrolled bleeding may be a problem. If there are too many platelets, there is a chance of a blood clot forming in a blood vessel.

MPV (mean platelet volume) is a measurement of the average size of the platelets. New platelets are larger, and an increased MPV occurs when increased numbers of platelets are being produced. MPV provides an indication of platelet production in your bone marrow.

	Result	Units	Range
Inflammation Marker			
ESR	8	mm/hr	1 - 20

ESR (erythrocyte sedimentation rate) is an **Inflammation Marker** which is a non-specific test used to help diagnose conditions associated with acute and chronic inflammation, including infections, cancers, and autoimmune diseases. It is said to be non-specific because increases do not indicate exactly where the inflammation is in your body or what is causing it, and also because it can be affected by other conditions besides inflammation. For this reason, ESR is typically used in conjunction with other tests.

COMMENTS – haematology profile

Your haematology profile results are all normal.



BIOCHEMISTRY PROFILE

The biochemistry profile measures the constituents of the plasma or serum component of the blood. It also focuses on the body's major organ functions such as the liver and kidney and assesses mineral levels, enzymes, bone and muscle health.

	Result	Units	Range
Kidney Function			
SODIUM	141	mmol/L	135 - 145
POTASSIUM	4.3	mmol/L	3.5 - 5.1
CHLORIDE	105	mmol/L	98 - 107
BICARBONATE	24	mmol/L	22 - 29
UREA	6.5	mmol/L	1.7 - 8.3
CREATININE	79	umol/L	66 - 112

Sodium is both an electrolyte and mineral. It helps regulate the water (inside and outside the body's cells) and electrolyte balance of the body. Sodium is also important in how nerves and muscles work.

Potassium is essential to regulate how the heart beats. It also helps move nutrients into cells and waste products out of cells and influences how nerves and muscles communicate.

Chloride, like sodium, helps maintain a balance of fluids in the body.

Bicarbonate prevents the body's tissues from getting too much or too little acid. The kidney and lungs balance the levels of bicarbonate in the body.

Urea is a waste product produced as the body digests protein and is carried by the blood to the kidneys, which filter the urea out of the blood and into the urine. The urea test shows how well the kidneys are working.

Creatinine is a chemical waste molecule that is generated from muscle metabolism. Measurement of this is an indicator of the level of other waste products. Creatinine is an accurate marker of kidney function.

	Result	Units	Range
Liver Function			
BILIRUBIN	*30	umol/L	0 - 20
ALKALINE PHOSPHATASE	54	IU/L	40 - 129
ASPARTATE TRANSFERASE	22	IU/L	0 - 37
ALANINE TRANSFERASE	29	IU/L	10 - 50
CK	135	IU/L	38 - 204
GAMMA GT	*50	IU/L	9 - 40

Bilirubin is a product of haemoglobin breakdown. It is removed from the body via the liver, gall bladder and bowel.

Alkaline Phosphatase is an enzyme located mainly in the liver and bones. High levels can indicate liver or bone disease.

Aspartate Transferase is an enzyme created mainly by cells of the liver and the heart. Disease processes or injury affecting either organ may cause release of this enzyme.

Alanine Transferase is an enzyme produced mainly by the liver. Diseases that affect the liver and the excessive consumption of alcohol may elevate it.

CK (creatinine kinase) is a muscle enzyme and measures muscle cell damage and death.

Gamma GT (gamma-glutamyl transpeptidase) is a liver enzyme raised levels can indicate diseases of the liver, bile ducts, and kidney.



	Result	Units	Range
Proteins			
TOTAL PROTEIN	79	g/L	63 - 83
ALBUMIN	49	g/L	34 - 50
GLOBULIN	30	g/L	19 - 35

Total Protein represents the sum of albumin and globulin. It is more important to know which protein fraction is high or low than what the measure of total protein is.

Albumin is made mainly in the liver and helps keep the blood from leaking out of blood vessels. It also helps carry some medicines and other substances through the blood and is important for tissue growth and healing.

Globulin consists of different proteins and is made by the liver and the immune system. Certain globulins bind with haemoglobin while others transport metals, such as iron, in the blood and help fight infection.

	Result	Units	Range
Minerals			
CALCIUM	2.37	mmol/L	2.15 - 2.55
Corrected Calcium	2.25	mmol/L	2.15 - 2.55
PHOSPHATE	1.30	mmol/L	0.87 - 1.45

Calcium is the most common mineral in the body and one of the most important. The body needs it to build and repair bones and teeth, help nerves work, make muscles squeeze together, help blood clot, and help the heart to work. The majority of calcium in the body is stored in bone. The rest is found in the blood. If the calcium result is abnormal, a **Corrected Calcium** calculation is carried out to provide further information.

Phosphate, also called phosphorus, is a chemical which the body needs to get energy from the food. It is an important component of bones and vitamin D is required to absorb it.

	Result	Units	Range
Gout Test			
URIC ACID	464	umol/L	266 - 474

Uric Acid is a waste product of protein digestion. High levels can lead to excess uric acid being deposited as crystals in the tissues of the body. When this occurs in joints it causes the painful condition known as gout.

	Result	Units	Range
Diabetes Test			
RANDOM BLOOD GLUCOSE (FL)	5.2	mmol/L	3.5 - 7.9
FASTING BLOOD GLUCOSE	5.2	mmol/L	3.5 - 5.8

Glucose is the main type of sugar in the blood. It is the major source of energy needed to fuel the body's functions. If glucose levels that are too high or too low it can cause problems. The most common cause of high blood glucose levels is diabetes.

High results can be followed up with a HbA1c, or glycosylated haemoglobin test. This measures recent average blood glucose levels and gives a good indication of average blood glucose over a previous 2-3 month period.

	Result	Units	Range
Iron Profile			
IRON	*30.0	umol/L	10.6 - 28.3
T.I.B.C	60	umol/L	41 - 77
TRANSFERRIN SATURATION	50	%	20 - 55

The iron profile measures total amount of iron in the blood. It also checks to see if the iron is attaching to protein as it should. The iron profile may also tell how much iron is in the body besides what is in red blood cells.

Iron is an essential trace element and is necessary for the formation of red blood cells and certain enzymes. At the other extreme, high levels of iron can be poisonous.



T.I.B.C (total iron-binding capacity) measures the amount of iron that can be carried through blood and can also be used to monitor nutritional status and how the liver is functioning.

Iron Saturation is the level of iron in the blood which the body is able to use.

COMMENTS – biochemistry profile

The bilirubin, Gamma GT and total iron were above the range. Further details and an explanation can be found in the summary section of this report.

	Result	Units	Range
Lipid Profile			
TRIGLYCERIDES	*2.3	mmol/L	< 2.3
CHOLESTEROL	*5.1	mmol/L	Optimum <5.0
HDL CHOLESTEROL	1.3	mmol/L	0.9 - 1.5
LDL CHOLESTEROL	2.8	mmol/L	Up to 3.0

The lipid profile is a group of tests carried out to determine the relative risk of coronary heart disease and stroke.

Triglycerides are chains of high-energy fatty acids. These fatty acids are required for cells to function correctly.

Cholesterol is an essential body fat (lipid). It is necessary for building cell membranes and for making several essential hormones. Too much cholesterol can cause it to build up on the walls of blood vessels and allow clots to develop.

HDL Cholesterol (high density lipoprotein) helps to soak up excess cholesterol from the walls of blood vessels and carry it to the liver, where it breaks down and is removed from the body in the bile. This is known as "good cholesterol,"

LDL Cholesterol (low density lipoprotein) carries cholesterol, triglycerides and other fats to various tissues throughout the body. Too much LDL, commonly called "bad cholesterol," can lead to cardiovascular disease.

	Result	Units	Range
Heart Disease Risk			
HDL % of total	25	%	20 and over

HDL % of Total cholesterol is more indicative of cardiovascular disease than total cholesterol alone. Below 20 (%) indicates an increased risk to cardiovascular disease and above 20 (%) indicates a lower than average risk.

COMMENTS – lipid profile & heart disease risk

The triglycerides were at the upper end of the range. The total cholesterol was borderline and the LDL (bad) cholesterol was normal.

The HDL % of total cholesterol indicated below average risk to coronary heart disease and stroke.

We recommend that you routinely limit the amount of animal fat in the diet (including eggs, cheese and full fat milk) in order to maintain good health for the future.

This result is only one of the many risk factors associated with cardio-vascular disease. Others include high blood pressure, high body fats (lipids), smoking, lack of exercise and weight.



ENDOCRINOLOGY

	Result	Units	Range
Thyroid Test			
FREE THYROXINE	16.9	pmol/l	12.0 - 22.0

Free Thyroxine is a hormone and can be analysed to assess thyroid function. It indicates the amount of thyroid hormone actually available for use in the bloodstream.

The thyroid gland is found in the neck and produces hormones which are released into the bloodstream to control the body's growth and metabolism. If the thyroid gland releases too much thyroxine it increases the body processes and may cause symptoms such as weight loss, increased heart rate and blood pressure, protruding eyes, and a swelling in the neck. Reduced levels can slow body processes, may cause fatigue, slow heart rate, excessive weight gain, and constipation.

COMMENTS – thyroid test

Your thyroid function result is normal.

	Result	Units	Range
Prostate Screen			
Prostate Specific Ag (Total)	2.44	ug/l	0.00 - 4.10
Age		Reference Range	
Up to 39		0.00 - 1.40	
40 to 49		0.00 - 2.00	
50 to 59		0.00 - 3.10	
60 to 69		0.00 - 4.10	
70		0.00 - 6.50	
Prostate Specific Ag (Free)	0.27	ug/l	0 - 0.90
Free:Total ratio	*0.11		
	>0.19 is normal		

Prostate Specific Ag (Total) (total PSA) is a protein made by the prostate which naturally leaks into the bloodstream. This test is widely used to screen for disorders of the prostate.

Prostate Specific Ag (Free) (free PSA) is the proportion of the total PSA which is not bound to blood proteins.

The ratio of free PSA to total PSA is the significant factor when looking for early signs of prostate disease and can assist in differentiating between benign prostatic hypertrophy (BPH or enlarged prostate) and prostate cancer. By using the ratio of free PSA to total PSA it is possible to identify men at risk even when total PSA values are within normal limits.

Ejaculation and vigorous physical activity affecting the prostate, such as bicycle riding, may cause a temporary rise in PSA levels.

COMMENTS – prostate screen

There were some abnormal results highlighted in your prostate profile. A full explanation regarding the results and implications can be found in the summary section of the report.



MICROBIOLOGY

	Result	Units	Range
Bowel Disease Screen			
FAECAL OCCULT BLOOD	Not Detected		

Faecal Occult Blood is a term for blood present in the faeces that is not visibly apparent.

There are several disorders which may cause bleeding into the bowel (intestines) e.g. bleeding gums, ulcers, inflammation, polyps, haemorrhoids and bowel cancer. If these bleed heavily then your faeces would be obviously 'bloody' from bleeding in the lower gut or a very black colour from higher in the gut. If you only have a small amount of blood then the faeces look normal.

COMMENTS – bowel disease screen

Your bowel disease screen did not detect any blood in your stool sample. Annual screening can help to detect the early signs of bowel disease / cancer.

	Result	Units	Range
Urine Chemistry			
pH	5.0		
Protein	Negative		
Glucose	Negative		
Ketone	Negative		
Blood	Negative		
Urine Microscopy			
WBCs	12 cells/uL.		
RBCs	5 cells/uL.		
Casts	Not Seen		
Epithelial cells	Not Seen		
Crystals	Not Seen		
Organisms	Not Seen		

Normal urine is straw-coloured and has a slight odour. Normal urine does not contain **glucose, protein, ketones** or **organisms**. **pH** is a measure of the acidity of the urine. Normal values are between 4.6 - 8.0.

Cloudy urine may contain **RBCs** (red blood cells), **WBCs** (white blood cells), bacteria, fat, or mucus. Foul-smelling urine is a symptom of urinary-tract infection. A fruity odour is associated with diabetes mellitus, starvation and dehydration.

Red blood cells in the urine can be due to vigorous exercise, exposure to toxic chemicals, kidney diseases, infections, parasitic infections, obstructions in the urinary tract, injuries and other conditions. White blood cells in the urine are usually a symptom of urinary tract infection.

Epithelial cells, tissue lining, can indicate damage to the small tubes that carry material into and out of the kidneys or again may be due to contamination.

Casts are small fibrous objects that are formed when protein and other materials settle in the kidney tubules and ducts. They are dislodged by normal urine flow. A large number of them in a urine specimen can be a sign of kidney disease.

Crystals can be formed by different chemicals in body fluids. Some of these appear in normal urine, such as calcium oxalate or uric acid crystals.

Organisms or bacteria, may be a symptom of urinary tract infection or contamination whilst taking the sample.



COMMENTS – urine chemistry / microscopy

All your urine results are normal.

The few red and white cells are of no clinical significance.

IMMUNOLOGY

	Result	Units	Range
Rheumatoid Arthritis			
Anti-CCP	Negative		

Anti-CCP (anti-cyclic citrullinated peptide antibody) is an early indicator of rheumatoid arthritis (RA). Anti-CCP antibodies have been detected up to 10 years before the first RA symptoms were noted.

RA is a common, chronic autoimmune disease affecting 1-2% of the world-wide population. It is characterised by inflammation of the joints and affects females more frequently than males. Unless treated early RA can lead to joint deformities and disability. Growing evidence suggests that early treatment of RA leads to earlier disease control and less joint damage.

COMMENTS – rheumatoid arthritis

No early antibodies to RA detected

	Result	Units	Range
Cardiovascular Disease			
CRP - High sensitivity	2.4	mg/l	0.0 - 5.0

CRP - High sensitivity (high sensitivity C Reactive Protein, hsCRP) is a critical component of the immune system. It is a complex set of proteins that our bodies make when faced with a major infection or trauma.

Recent evidence shows that testing apparently healthy adults using hsCRP indicates that this is a strong independent risk factor for the subsequent development of stroke, myocardial infarction and peripheral / vascular disease.

hsCRP has shown to predict future arteriosclerotic events in several prospective studies. It also adds to the predictive value of lipid testing alone and acts as a marker for existing arterial disease. The following are associated with increased CRP levels: elevated blood pressure, elevated body mass index, cigarette smoking, metabolic syndrome, diabetes, low HDL levels, high triglyceride levels, use of oestrogen or progesterone and chronic infections or inflammation.

COMMENTS – cardiovascular disease	CRP mg/L	Relative Cardiovascular Risk
Your result indicates that you have an average risk to cardiovascular disease.	<1.0	Low
	1.0–3.0	Average
	3.1–10.0	High
	>10.0	Persistent elevations may represent non-cardiovascular inflammation



summary

COMMENTS ON YOUR RESULTS

BILIRUBIN

Bilirubin is a liver enzyme. Slightly raised levels in isolation are most often caused by Gilbert's Syndrome. This is a fairly common, mild liver disorder in people who inherit a fluctuating serum bilirubin level. It is estimated that between three to seven percent of all adults have Gilbert's Syndrome. It is much more common in males. People with the disorder lead normal, healthy lives. No action is required.

GAMMA GT

This is a sensitive liver enzyme that rises in response to alcohol and some medications and chemicals. Your level was slightly raised. We recommend that you reduce alcohol intake when liver function may return to normal levels.

IRON LEVEL

This was slightly above normal. As the body cannot easily rid itself of excess iron we recommend that you never take any nutritional supplements containing iron without a doctor's advice.

PROSTATE PROFILE

The total PSA (prostate specific antigen) is the test carried out within the NHS. It is modern scientific evidence that suggests it is the ratio between the PSA Total and PSA Free (PSA Free:Total ratio) that is the significant factor when deciding upon who needs monitoring or investigating further. This method is important in that if the ratio is LOW, even though the PSA Total may be normal, indications are that follow up is needed.

We recommend that you arrange to discuss the low PSA ratio with your doctor. He/she may wish to carry out a DRE (digital rectal examination). If the prostate is smooth your doctor may be happy for us to repeat the profile in 3 months time for comparison. If it is irregular he may refer you for further investigation. There is no reason for immediate concern, however the low ratio **should not be ignored**.

SUGGESTED ACTIONS

We recommend that you arrange to discuss the results with your doctor. The iron and bilirubin levels are of no real significance. The Gamma GT will go into the normal range with a reduction in alcohol intake.

The Prostate Profile needs to be followed up.



health & lifestyle assessment

BODY MEASUREMENTS

Height: 182.88 centimetres

Weight: 80.74 kilograms

Waist: 99.06 centimetres

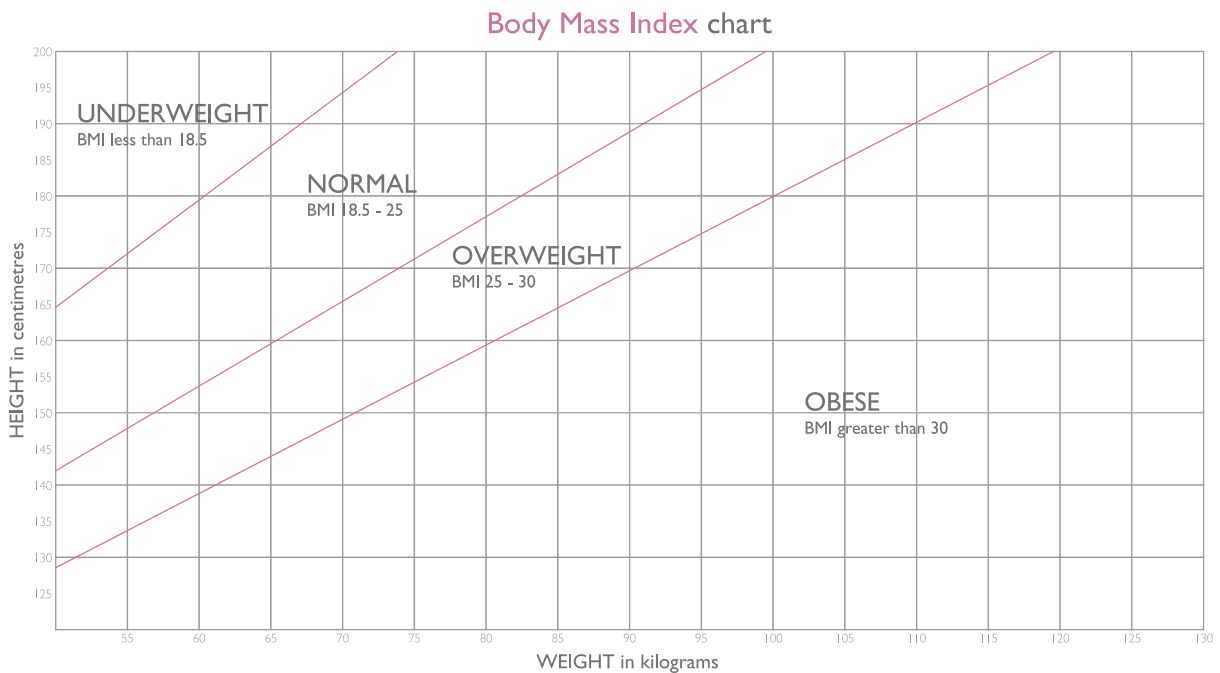
BODY MASS INDEX

BMI tells you if you're a healthy weight for your height. This is general advice for adults only. It does not apply to children, pregnant women or women who are breastfeeding.

Also, your BMI may not be accurate if you are a weight-trainer or an athlete, are over the age of 60, or have a long-term health condition.

Your BMI: 24

Classification: Normal



COMMENTS – body mass index

Your BMI is between 18.5 and 24.9. This is classed as normal. People whose BMI is within 18.5 to 24.9 possess the ideal amount of body weight, associated with living longest, the lowest incidence of serious illness.



% BODY FAT

% Body Fat is based on weight and waist size and is the amount of body fat you carry.

Fat is produced by the body when an excess intake of calories in the form of food or drink occurs. When the diet provides the body with more calories than it needs, this excess energy is stored in the form of body fat.

Body fat percentage, makes a difference to your body's shape and more importantly to your health.

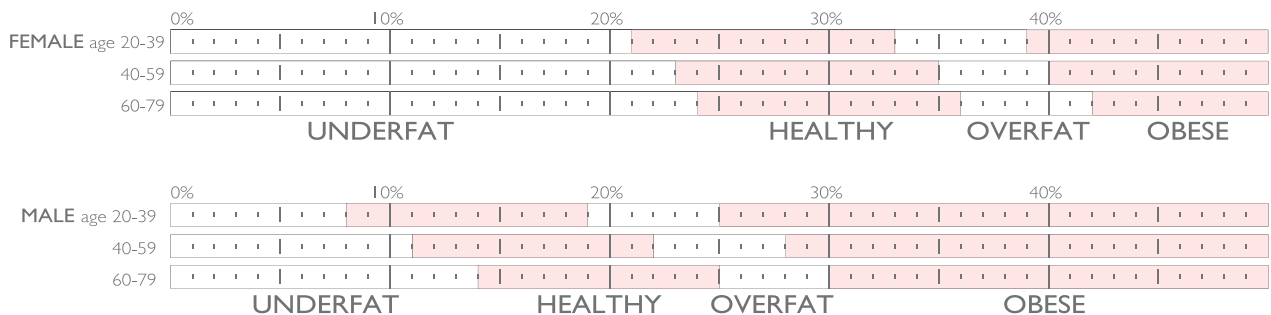
Your shape is affected by body fat percentage because muscle tissue is more compact than fat. For example, a woman who exercises regularly, measuring 5' 6" tall and weighing 10 stone, will have a lower body fat percentage; and look slimmer; than a woman of the same height and weight who doesn't exercise and therefore has a higher ratio of body fat.

The chart below will give you a guide as to what percent of body fat is considered healthy.

Your % Body Fat: 28

Classification: Overfat

% Body Fat chart



COMMENTS – % body fat

Too much fat can damage your health and could put you at greater risk of developing serious medical conditions. Excess body fat is known to contribute to heart disease, high blood pressure, Type 2 diabetes mellitus and some forms of cancer.

BASAL METABOLIC RATE (BMR)

Basal Metabolic Rate or BMR is the minimum amount of calories required to sustain your body's processes and functions as you rest. BMR decreases with age which basically means that as you get older, it gets that much harder to eat food and stay slim without increasing the amount and intensity of exercise that you do.

Your BMR: 1672 calories



medical history & lifestyle analysis

SMOKING

We note that you do not smoke which will have a positive effect on your health and well-being.

Smoking is by far the biggest contributor to premature death than any of the other lifestyle factors we address. In fact, when smoking is added into the equation, all those other negative lifestyle choices, from drinking too much alcohol, eating an unhealthy diet and leading a sedentary life, become even more lethal.

Smoking causes a list of potentially fatal health problems:

- Cancer of the lungs, bladder, cervix, kidneys, oesophagus and pancreas.
- Accelerates hardening of the arteries leading to heart attack or stroke.
- Emphysema and bronchitis.

as well as a number of problems which could significantly affect the quality of your life:

- Reduced fertility.
- Impotence.
- Cataracts and macular degeneration.
- Asthma.
- Premature aging and wrinkled skin.

Nicotine is a highly addictive drug and giving up smoking is not easy, but the good news is that thousands of people manage it every year and you could be one of them.

Try our tips to give up smoking:

- Strengthen your resolve by reading a book like Alan Carr's "Easy Way to Stop Smoking"
- Use support groups and websites like www.gosmokefree.nhs.uk
- Give up with a friend, the support or competition may stop you from lighting up
- Avoid places where you usually smoke until all cravings have left your system
- Write down and understand all your usual excuses for breaking your resolve – recognize the risks and think of coping strategies
- Focus all your attention on the pleasures of not being tobacco dependent: no more standing outside in the rain to have a cigarette, no more smelly clothes, no more disapproving children or partners, no more agonies of long haul flights without being able to feed your addiction.



ALCOHOL

We note that you do drink alcohol and your alcohol intake is within the recommend weekly limit.

Alcohol is a drug which has achieved a level of social acceptability that far exceeds that of tobacco or other recreational drugs. Yet alcohol is an addictive drug that can be abused and can wreak havoc with our lives and the lives of those around us.

We receive very mixed messages about the benefits or otherwise of alcohol on our health:

Studies appear to show that a moderate amount of alcohol per day (2-3 units for men and 1-2 units for women) can protect against heart disease. This seems to be true of any type of alcohol although red wine appears to be more helpful than other drinks. Importantly it has only been shown to be of benefit to men over 40 and post menopausal women.

Unfortunately the list of risks that alcohol poses to our health is growing as more research is done:

- Cancer Research UK points to 7 types of cancer that can be caused by alcohol consumption. These include cancers of the mouth and throat and well as breast and liver cancer. The risk rises with the total amount of alcohol consumed regardless of the frequency it is drunk.
- Studies show that moderate to high alcohol consumption can reverse the positive effects on heart disease and indeed increase our risk through raised blood pressure.
- Alcohol can cause diseases of the liver including hepatitis and cirrhosis.
- Alcohol can also cause many health problems which although not life threatening in themselves can have a negative impact on the quality of our lives e.g. infertility, impotence and obesity.

So how do you drink safely and minimize the risks to health?

- It is better for your heart to drink a small amount often rather than a large amount infrequently. Try not to exceed your recommended units per day and do not save your unused units up for a binge at the end of the week.
- Try to rest your liver to allow it to recover for at least one or two days a week – this is easier to do if you build it into your routine, say alcohol free Mondays and Tuesdays.
- If you do drink to excess one evening then try to have 48 hours without alcohol to let your liver recover.
- Recognise the signs of dependency and take action. Visit the help line section on our website for useful contacts.

What constitutes a unit of alcohol? Check your favourite drink against our useful reminder:

- **MEN** – 3-4 units per day or less than 28 units per week.
- **WOMEN** – 2-3 units per day or less than 21 units per week.

	Bottle (330ml)	Can (440ml)	Pint
Beer / Lager			
Ordinary strength (3.5 - 4%)	1.3 units	1.8 units	2.3 units
Premium strength (5%)	1.6 units	2.2 units	2.8 units
Spirits	Small measure (25ml)	Large measure (35ml)	
Gin, rum, vodka & whisky	1 unit	1.4 units	
Wine (red or white)	Small glass (175ml)	Large glass (250ml)	Bottle (750ml)
12%	2.1 units	3 units	9 units



BLOOD PRESSURE

We note that you have reported having a normal blood pressure.

High blood pressure or hypertension affects over half of adults over the age of 65 and about 1 in 4 people at age 40. It is a significant risk factor in heart disease and stroke and yet most people do not know if they are suffering from it because it has no symptoms.

While unhealthy lifestyles are certainly a factor in causing high blood pressure, it can affect people who lead very healthy lives but who have a family history or a predisposition to it. It is therefore important that you have your blood pressure checked regularly, particularly once you are over 40 years old. High blood pressure can be successfully treated through changes in lifestyle and/or medication.

Blood pressure is a measure of the pressure of your blood in your arteries and is measured using 2 factors: the systolic pressure- the pressure of blood as your heart contracts; and the diastolic pressure- the pressure of blood as your heart rests between beats. You are considered to have raised blood pressure if your systolic blood pressure exceeds 140 and/or your diastolic pressure exceeds 85. Your doctor will want to monitor you if your blood pressure consistently is above these levels.

What affects blood pressure?

Short term:

- Anxiety – for many people even the act of having your blood pressure tested will cause anxiety and a raised result. Your doctor will certainly want to measure your blood pressure over time to ensure that it is not just caused by short term anxiety.
- Exercise – your blood pressure will rise as you take exercise.

These are completely normal short term rises in blood pressure which will subside as the anxiety passes and you cease to exercise.

Long Term:

- Narrowing and hardening of your arteries.

It is important that high blood pressure is monitored and treated. Lifestyle changes can improve high blood pressure by:

- Stopping smoking.
- Losing weight.
- Exercising more.
- Eating more fruit and vegetables.
- Reducing your alcohol consumption.
- Managing stress.
- Reducing salt intake.

You will find our tips and suggestions on adjusting your lifestyle in the relevant sections of this report. However if you cannot reduce your blood pressure through lifestyle changes alone then your doctor will almost certainly want to prescribe you a course of medication designed to bring your blood pressure down to healthy levels.



WEIGHT

Your weight relative to your height, together with other measures like your waist measurement and your body fat content can have an influence on your risk for heart disease and diabetes. Ideally, assuming we were slim and active young adults, we should all retain the same weight we were at 18 over our lifetime.

Unfortunately most of us don't manage that ideal and as we get older the weight creeps on, our clothes sizes get bigger, and before we know it we are nudging the "overweight" or "obese" sections of the weight charts.

So what is a healthy weight? It is difficult to generalize given the differences in peoples' body composition, but a good guide is to look at where you stand on 2 measures: your body mass index and your waist circumference. Your body mass index is a measure of your weight relative to your height. Your report will tell you what yours is. The ideal range is between 18.5 and 25 with a BMI of below 18.5 considered underweight and over 25 overweight.

- BMI 18.5 and below Underweight
- BMI 18.5 - 25 Ideal
- BMI 25 - 30 Overweight
- BMI 30 - 40 Obese
- BMI 40 and over Very obese

The problem is that BMI isn't always very helpful as it makes no allowance for very muscular bodies. As muscle weighs more than fat there are a number of fit, healthy and muscular people who would be considered overweight on this measure alone. This is why we also look at waist circumference as this is usually an indicator of how much fat is being stored around our middle, and importantly around our vital organs.

For women, your waist measurement should be under 80 cm (32 inches) and for men it should measure below 94 cm (37 inches). A high waist measurement is an important predictor of heart disease and diabetes. Being underweight or overweight brings their own health problems and both can affect your quality of life.

Underweight - usually affects young girls and problems can include:

- Anaemia.
- Loss of periods which can affect fertility.
- Bone loss in middle age.

Overweight:

- Increased risk of heart disease and diabetes.
- Joint pain and lack of mobility.
- High blood pressure.
- Breathlessness.
- Sleep apnoea.
- Some cancers.
- Reduced fertility.

It is important for your health and well-being to be a normal weight for your height. The best way to add or lose weight is to make long term changes to your eating habits rather than to try one-off crash diets. Read more about healthy eating in our Diet section.



DIET

Along with exercise, diet plays a huge role in our health and well-being with many of the afflictions and infirmities of middle and old age being put down to years of poor diet. Although there is much conflicting dietary advice around, the industry is increasingly in agreement that the villains are refined starches, sugar, processed meat and saturated fat, and the heroes are fresh fruit and vegetables, whole foods and lean protein, especially fish.

What is clear is that diets don't work and that what we should be doing is making long term changes to the choices we make at meal times.

Why not follow some of our tips to a healthier future?

Include in your diet:

- Nuts and seeds, high in vitamins, minerals and heart healthy oils.
- At least 5 portions of fruit and vegetables a day – more if you can.
- As many different coloured fruit and vegetables as you can – the more variety you eat the more protective antioxidants you consume
- Oily fish – full of omega 3 oil which has been shown to benefit your heart, your brain and your circulatory system.
- Whole grains - not only do they supply more vitamins and minerals than their refined counterparts, they are high in fibre which maintains a healthy digestive tract.
- Small portions of lean red meat – you don't need to eat an 8oz steak to get the benefits of zinc, iron and protein. While the debate continues as to whether red meat is harmful or not, it is prudent to limit portion sizes.
- 5 small meals a day rather than 2 or 3 large ones – this helps to maintain your blood sugar levels throughout the day preventing the peaks and troughs that cause hunger and binge eating.
- Good fats – found in olives, olive oil, sunflower oil, rapeseed oil and avocados.

Avoid as much as you can:

- Sugar and refined carbohydrates including white flour, white rice and potatoes (these enter your blood stream as quickly if not more quickly than sugar). Your body responds to a huge increase in blood sugar by pumping out insulin in order to convert and store that sugar in your cells as energy (fat). The peaks and troughs in blood sugar associated with high sugar consumption leads to weight gain, hunger, lethargy and eventually could cause Type II diabetes.
- Saturated fat - typically found in farmed animals and includes the fat in your meat as well as in dairy products like butter and cream. Saturated fat is associated with high LDL (bad) cholesterol and is therefore implicated in heart disease.
- Trans fats or hydrogenated fats – these are fats used by the food industry and are oils which have been modified to make them solid at room temperature. The food industry loves them because they are cheap and long-lasting. However they are more dangerous for your health than the saturated animal fats they were designed to replace.
- Processed meat – while the debate continues as to whether red meat is good or bad for you, the evidence increasingly points to processed meats being unhealthy. Recent studies have shown a higher incidence of pancreatic cancer in the people who consumed the most. It is still unclear why this is the case but it seems that the processing is the culprit rather than the underlying meat. Try to cut back consumption to only once or twice a week.

Try to incorporate as many of our tips as you can for a long term change in your diet and your waistline, your health and your energy levels will thank you for it.



EXERCISE

We note that you do exercise.

There is no doubt about the role that regular exercise plays in keeping us healthy into old age. Indeed many of the chronic diseases that can afflict us as we age can be put down to a sedentary lifestyle. Research shows that by exercising regularly we can:

- Improve our cardiovascular system.
- Deter the onset of type II diabetes.
- Improve circulation and in particular keep the arteries that supply the heart and brain healthy and free from plaque.
- Keep rheumatoid arthritis at bay.
- Deter cancer.
- Prevent bone loss.
- Keep mobility and balance into old age reducing the risk of age related falls and fractures.
- Improve the symptoms of a multitude of conditions from depression to irritable bowel syndrome.

It is estimated that by taking regular exercise we can increase our lifespan by around 9 years.

So how much exercise and how vigorous does it have to be in order to gain the benefits?

The British Heart Foundation recommends 30 minutes of moderate exercise 5 times a week. The exercise doesn't have to be vigorous for improvements in health to be seen – 30 minutes of walking is a good start and even 3 times a week is better than none. However, increasing your heart rate and improving your aerobic capacity will show further benefits as will doing some resistance exercise such as weight training.

If you are not already exercising why not follow our tips to get started?

- Start light – you will only keep up an exercise routine if you enjoy it and exhausting yourself in your first couple of outings will make you want to give up.
- Plan ahead -one week at a time. Decide what you are going to do and when, and write it in your diary. You are more likely to commit if you have written goals.
- Get an exercise buddy – you are much less likely to opt out if you have made a commitment to someone else.
- Monitor your improvement – e.g. test your blood pressure, body fat content or waist circumference before you start and then again 3 months later. Seeing the improvement is great for motivation.
- Become more active day to day – take the stairs instead of the lift, resolve to always walk up escalators, leave the car at home. Even small changes like this can add up to big improvements in your health and fitness

NB: See your doctor before you embark on any new fitness regime especially if you are taking any prescribed medication for a medical condition.



WATER

We note that your daily fluid intake is below the recommended range and would advise that this be increased to at least 2 litres per day.

It is important to keep your body well hydrated by drinking fluids. Although much advice has focused on drinking at least 2 litres of water per day, current thinking accepts that it is fluid intake that is important and that this can come from your food (fruit and vegetables have a high percentage of water) as well as all the other beverages we consume daily.

The benefits of drinking enough fluids include:

- Helps prevent constipation by keeping stools soft.
- Keeps skin hydrated improving its appearance.
- Helps reduce kidney and urinary tract infections.
- Is thought to reduce hunger pangs which can be confused with thirst.

The amount of fluid we need is influenced by our day to day activities and our environment. You are likely to need to increase your fluid uptake if you:

- Exercise and lose fluid through sweat.
- Live in or visit a hot or humid country.
- Are pregnant or breast feeding.
- Go to a high altitude.
- Have a hangover.

The easiest way to know whether you are getting sufficient fluids is to check your urine. After passing urine twice or three times after waking your urine should be very pale to almost clear. If it remains dark and concentrated you need to increase your fluid intake.



health information

We enclose the information below that relates specifically to your own health.

- Eating for your Heart – The British Heart Foundation
- Physical Activity and your Heart – The British Heart Foundation
- Think About Drink – Dept. Of Health
- Testicular/Prostate/Bowel Cancer – Cancer Research UK



your next health check

We hope your personalised report has given you an insight into how your body is functioning and what measures you can take to preserve good health.

By providing a regular comparison of results we are able to establish your norm and are better able to detect any variation at an early stage. This will enable us to advise you if and when any further action needs to be taken.

Do not hesitate to contact us if you would like to discuss any aspect in more detail or if you would like any further medical information or support.

With kind regards,
Yours sincerely,

.....
ABC

Unless you have been advised otherwise, your next health check will be due in:

Jul-2010

An automated email or text message will be sent 1 month prior to this date as a reminder.



laboratory report

PATIENT	Surname: Sample
	Forename: A
	DOB: 17-Dec-1947
	Sex: M

LABORATORY	Sample date: 10-Jul-2009
	Report date: 10-Jul-2009
	PID: 200999999
	Lab ref: 000999999

WELL MAN CHECK PLUS

Test	Result	Units	Range
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HAEMATOLOGY PROFILE

Red Blood Cells

HAEMOGLOBIN	15.2	g/dL	13.0 - 17.0
HCT	0.435		0.37 - 0.50
RED CELL COUNT	4.85	$\times 10^{12}/L$	4.40 - 5.80
MCV	89.7	fL	80 - 99
MCH	31.3	pg	26.0 - 33.5
MCHC	34.9	g/dL	30 - 35
RDW	12.4		11.5 - 15.0

White Blood Cells

WHITE CELL COUNT	7.39	$\times 10^9/L$	3.0 - 10.0
Neutrophils	4.74	$\times 10^9/L$	2.0 - 7.5
Lymphocytes	1.74	$\times 10^9/L$	1.5 - 4.0
Monocytes	0.67	$\times 10^9/L$	0.2 - 1.0
Eosinophils	0.22	$\times 10^9/L$	0.0 - 0.4
Basophils	0.02	$\times 10^9/L$	0.0 - 0.1

All cell populations appear normal.

Clotting Cells

PLATELET COUNT	211	$\times 10^9/L$	150 - 400
MPV	9.9	fL	7 - 13

Inflammation Marker

ESR	8	mm/hr	1 - 20
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BIOCHEMISTRY PROFILE

Kidney Function

SODIUM	141	mmol/L	135 - 145
POTASSIUM	4.3	mmol/L	3.5 - 5.1
CHLORIDE	105	mmol/L	98 - 107
BICARBONATE	24	mmol/l	22 - 29
UREA	6.5	mmol/L	1.7 - 8.3
CREATININE	79	umol/L	66 - 112

Liver Function

BILIRUBIN	*30	umol/L	0 - 20
ALKALINE PHOSPHATASE	54	IU/L	40 - 129
ASPARTATE TRANSFERASE	22	IU/L	0 - 37
ALANINE TRANSFERASE	29	IU/L	10 - 50
CK	135	IU/L	38 - 204
GAMMA GT	*50	IU/L	9 - 40

Proteins

TOTAL PROTEIN	79	g/L	63 - 83
ALBUMIN	49	g/L	34 - 50
GLOBULIN	30	g/L	19 - 35



laboratory report

PATIENT	Surname: Sample
	Forename: A
	DOB: 17-Dec-1947
	Sex: M

LABORATORY	Sample date: 10-Jul-2009
	Report date: 10-Jul-2009
	PID: 200999999
	Lab ref: 000999999

WELL MAN CHECK PLUS

Test	Result	Units	Range
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BIOCHEMISTRY PROFILE

Minerals

CALCIUM	2.37	mmol/L	2.15 - 2.55
Corrected Calcium	2.25	mmol/L	2.15 - 2.55
PHOSPHATE	1.30	mmol/L	0.87 - 1.45

Gout Test

URIC ACID	464	umol/L	266 - 474
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Diabetes Test

RANDOM BLOOD GLUCOSE (FL)	5.2	mmol/L	3.5 - 7.9
FASTING BLOOD GLUCOSE	5.2	mmol/L	3.5 - 5.8

Iron Profile

IRON	*30.0	umol/L	10.6 - 28.3
T.I.B.C	60	umol/L	41 - 77
TRANSFERRIN SATURATION	50	%	20 - 55

Lipid Profile

TRIGLYCERIDES	*2.3	mmol/L	< 2.3
CHOLESTEROL	*5.1	mmol/L	Optimum <5.0
HDL CHOLESTEROL	1.3	mmol/L	0.9 - 1.5
LDL CHOLESTEROL	2.8	mmol/L	Up to 3.0

Heart Disease Risk

HDL % of total	25	%	20 and over
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ENDOCRINOLOGY

Thyroid Test

FREE THYROXINE	16.9	pmol/l	12.0 - 22.0
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Prostate Screen

Prostate Specific Ag(Total)	2.44	ug/l	0.00 - 4.10
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Age Reference Range

Up to 39	0.00 - 1.40
40 to 49	0.00 - 2.00
50 to 59	0.00 - 3.10
60 to 69	0.00 - 4.10
70	0.00 - 6.50

Prostate Specific Ag(Free)	0.27	ug/l	0 - 0.90
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Free:Total ratio	*0.11		
	>0.19 is normal		



laboratory report

PATIENT	Surname: Sample
	Forename: A
	DOB: 17-Dec-1947
	Sex: M

LABORATORY	Sample date: 10-Jul-2009
	Report date: 10-Jul-2009
	PID: 200999999
	Lab ref: 000999999

WELL MAN CHECK PLUS

Test	Result	Units	Range
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MICROBIOLOGY

Bowel Disease Screen

FAECAL OCCULT BLOOD	Not Detected
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Urine Chemistry

pH	5.0
Protein	Negative
Glucose	Negative
Ketone	Negative
Blood	Negative

Urine Microscopy

WBCs	12 cells/uL.
RBCs	5 cells/uL.
Casts	Not Seen
Epithelial cells	Not Seen
Crystals	Not Seen
Organisms	Not Seen

IMMUNOLOGY

Rheumatoid Arthritis

Anti-CCP	Pending
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Cardiovascular Disease

CRP - High sensitivity	2.4	mg/l	0.0 - 5.0
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