

# **The Health Equation**

Health Screen www.thehealthequation.co.uk

Patient Name 2023



The Health Equation White Horse Cottage Alton Barnes Marlborough SN8 4LB 020 7631 1414 www.thehealtheguation.co.uk

The Health Equation's core values are caring, excellence and partnership. We aim to integrate conventional and complementary medicine to deliver individual patient healthcare strategies. We have a superb connection to many of the specialists in London's medical district, having been in the West End for over 30 years, should referral to a medical specialist be necessary.

# THE HEALTH EQUATION

Health Screen

Name DOB AGE:

2023

Conducted by Mr Gerry Gajadharsingh DO Osteopath Diagnostic Consultant- Complementary Medicine Metabolic Balance Nutritional Coach Advanced Breath Practitioner

Dear Patient Name

Thank for you attending The Health Equation for your

# Health Screen on Date

This report has been based on your consultation, clinical examination and laboratory test results.

It has been broken down into several subsections to make it easier to understand.

My recommendations have been highlighted but you are invited back to discuss this report, if you so wish, with me during a standard 45-minute consultation, charged at our usual fee basis. This can be done over the phone, Skype or booked in for you to attend The Health Equation.

Please call my office if you wish to book your follow up consultation on

020 7631 1414 or email on info@thehealthequation.co.uk

# THE HEALTH EQUATION

With best wishes

Mr Gajadharsingh DO Osteopath Diagnostic Consultant- Complementary Medicine

# **Presenting Complaints**



Social History/ Work/Sports/Hobbies

Dietary	Recall

Breakfast:

Lunch:

Dinner:

Snacks/Sweets:

Hydration:

Caffeine

WHO guidelines are <150mg of caffeine a day, this equates to Black Tea 237ml 14-70mg Green Tea 237l 24-45mg Espresso 30ml 47-75mg Latte 237ml 63-175mg

Alcohol

THE HEALTH EQUATION

UK Government guidelines are Women <14 units per week Men <14 units per week (1 unit = 10ml or 8g of pure alcohol, this equates to 2 units for a 175ml glass of wine, 2 units for a pint of normal lager and 2 units for a 25ml shot of spirits)

Nicotine

There is no safe limit for smoking nicotine

**Recreational Drugs** 

Medication

# **Nutritional Supplements**

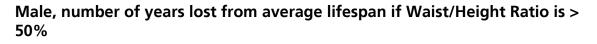
# **Clinical Examination**

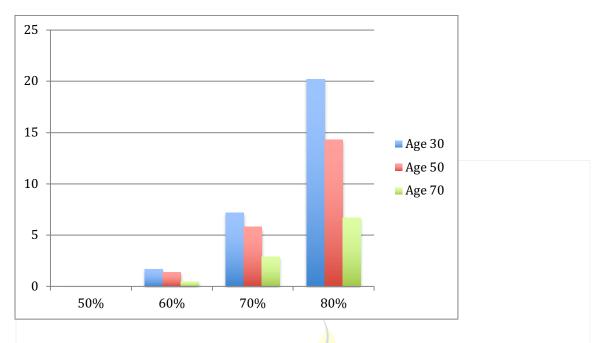
Your Age	Height (cm)	Weight (kg)	BMI	Body Fat%	Waist (cm)	Waist/Height Ratio
50	165	63	23.16	30%	90	55%
Range for Male			20-25	11- 22%		<50%
Female			18.5-25	23- 35%		<50%

Waist Measurement Hips Measurement Thigh Measurement Waist /Height Ratio: THE HEALTH EQUATION

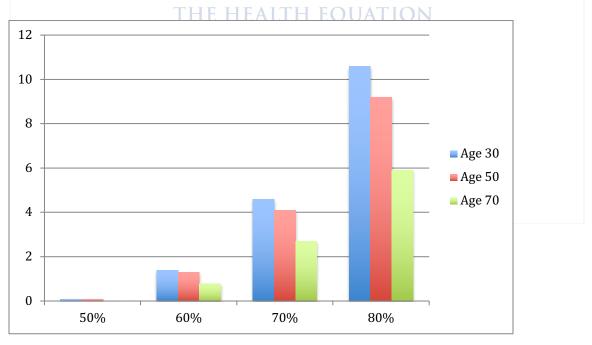
# Action: BMI: Non-Required Body Fat: Could develop more muscle tissue and reduce fat % Waist/Height Ratio: Reduction in Central fat deposition

High levels of stress elevate the hormone cortisol, cortisol is closely related to insulin therefore affecting glucose management and also increases central fat deposition. **Based on research by Dr Margaret Ashwell, Cass Business School, City University, London 2014.** 





# Female, number of years lost from aver<mark>age</mark> lifespan if Waist/Height Ratio is >50%



## **General Observation**

# **Respiratory Function**

Lung Auscultation/chest sounds: Nothing abnormal noted

Lung Function via Spirometry reveals FEV1 equals 2.4 FVC equals 2.99 FEV1/FVC Ratio 80% PEF 358

This tool is for Medical Professionals

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Professional Reference tools are designed for health professionals to use. They are written by UK doctors and based on research evidence, UK and European Guidelines, so you may find the language more technical than the <u>condition leaflets</u>.

See also separate article <u>Spirometry</u>.

Spirometry Calculator			
Age	74	Sex Male 🗢	Calculate
Height (cm)	174	Predicted	<u>Reset</u>
FEV1 (L)	2.4	3.1	77 % (Normal)
FVC (L)	2.99	3.89	76 % (Normal)
FEV1/FVC Ratio	80%	77%	(Normal)
PEFR (L/min)	358	495	72 %

The EMIS predicted peak flow calculation used within its clinical systems is based on a published revision to the original Nunn and Gregg equation in 1973. The revised Nunn and Gregg equation is as below and applies

# Patient Name 2023

# Breathing Behaviour via Capnometry and Heart Rate variability revealed:

# Baseline

ETCO2: xxx mmHg (optimum greater than 35) Breathing rate: xxx cycles per minute (optimum 6 to 8 cycles per minute) Pulse xxxx bpm (normal 60-80bpm) Heart rate variability: xxx, low, some of this is age related and some of it to do with autonomic dysregulation Oxygen saturation xxx% adequate

Your version of **Relaxed** Breathing ETCO2: xxx mmHg, xxxx Breathing rate: xxx cycles per minute, xxxx Pulse xxxx bpm Heart rate variability: xxxx

# Anxiety Challenge

ETCO2: xxx mmHg Breathing rate: xxx cycles per minute Pulse xxx bpm Heart rate variability: xxxx

# THE HEALTH EQUATION

# Biofeedback

ETCO2: xxx mmHg Breathing rate: xxx cycles per minute Pulse xxx bpm Heart rate variability, xxxx

Heart rate variability is a non-invasive way of assessing your autonomic nervous system functioning. Breathing in is a sympathetic nervous system response, heart rate goes up, breathing out is a parasympathetic nervous system response, heart rate goes down, this difference is called Heart Rate Variability, specifically Breathing Heart Wave.

Low heart rate variability (HRV) s associated with reduced lifespan, cardiovascular diseases (CVD), diabetes, several mental health diseases and a growing list of other conditions, people with a higher rate of variability are considered healthier.

Up regulation of the sympathetic (stress) part of the autonomic, nervous system, targets, heart, lungs, liver, and muscles, conversely, the parasympathetic (relaxation) part of the autonomic, nervous system targets, digestive function, hormones of reproduction, and the immune system.



# **Cardiovascular Function**

No abnormality detected BP xxxx Pulse xxxx bpm and regular, normal sinus rhythm Heart auscultation, xxxx

# Cardiovascular risk Assessment via QRISK 3 2018

Reset Information Publications	About Copyright Contact Us Algorithm Software CE		
About you	Your results		
Age (25-84): 74	Your risk of having a heart attack or stroke within the next 10 years is:		
Sex: OMale Female			
Ethnicity: White or not stated 😊	28.2%		
UK postcode: leave blank if unknown	In other words, in a crowd of 100 people with the same risk factors as you, 28 are likely to have	a heart attack or str	roke within the next 10 year
Postcode:			
Clinical information			
Smoking status: ex-smoker			
Diabetes status: none 😌			
Angina or heart attack in a 1st degree relative < 60?			
Chronic kidney disease (stage 3, 4 or 5)?			
Atrial fibrillation?	Risk of		
On blood pressure treatment?	a heart attack or stroke		
Do you have migraines?	Your score has been calculated using estimated data, as some information was left blank.		
Rheumatoid arthritis?	Your body mass index was calculated as 24.44 kg/m <sup>2</sup> .		
Systemic lupus erythematosus (SLE)?			
Severe mental illness? (this includes schizophrenia, bipolar disorder and moderate/severe depression)	How does your 10-year score compare?		
On atypical antipsychotic medication?	Your 10-year QRISK <sup>®</sup> 3 score	28.2%	
Are you on regular steroid tablets?	The score of a healthy person with the same age, sex, and ethn		
A diagnosis of or treatment for erectile disfunction?	Relative risk**	1.3	
Leave blank if unknown	Your QRISK <sup>®</sup> 3 Healthy Heart Age	79	
Cholesterol/HDL ratio: 3.1			
Systolic blood pressure (mmHg): 170	* This is the score of a healthy person of your age, sex and ethnic group, i. clinical indicators and a cholesterol ratio of 4.0, a stable systolic blood pre	with no adverse sure of 125, and	
Standard deviation of at least two most	BMI of 25.		
recent systolic blood pressure readings 10 (mmHg):	** Your relative risk is your risk divided by the healthy person's risk. *** Your QRISK <sup>®</sup> 3 Healthy Heart Age is the age at which a healthy person o	your cox and	
Body mass index	ethnicity has your 10-year QRISK <sup>®</sup> 3 score.	your sex anu	
Height (cm): 174			
Weight (kg): 74			
alculate risk			

# Action: QRISK is xxxxx

For completeness sake, I can arrange a Carotid Doppler Ultrasound or Coronary Calcium CT scan, when people have elevated cholesterol. These investigations give information as to the state of plaque build-up in either the carotid artery of the neck (stroke risk) or coronary arteries. However, I don't think there is an immediate need to do this.

# Holter 24 hr ECG Analysis

This reveals xxxxx

The PR interval is the time from the onset of the P-wave to the start of the QRS complex on the ECG. It reflects conduction through the AV node. The normal PR interval is between 120 and 200 ms in duration. If the PR interval is greater than 200 ms First-degree heart block is said to be present.

Normal QRS width is 70 to 100 ms.

Essentially the electrical conductivity in the heart via the atrioventricular node is delayed. First-degree heart block (a misnomer as electrical messages are not blocked; they are simply delayed) it's not normally considered to be serious problem and many patients have no symptoms.

There is a xxxx burden of atrial ectopics (PSVC), and a xxxxx burden of ventricular ectopics (PVC). Both are within acceptable limits.

# Action:

The ECG report is attached at the end of this document.

# Neurological Function

# THE HEALTH EQUATION

хххх

# Action: Non-Required

# Abdominal Examination and other systems

хххх

Action: Non-Required

## Musculoskeletal system

# Action: Osteopathic Manual Treatment and a structured rehabilitation/exercise programme

# **Bone Density Risk**



Country: UK	Name/ID:	Ab	out the risk factors
Questionnaire:		10. Secondary osteoporosis	●No ◯Yes
1. Age (between 40 and 90 years) of	r Date of Birth	11. Alcohol 3 or more units/day	•No Yes
Age:         Date of Birth:           54         Y:         1963         M:	03 D: 09	12. Femoral neck BMD (g/cm <sup>2</sup> )	
2. Sex	• Male Female	Select BMD 💠	
3. Weight (kg)	78	Clear Calculate	
4. Height (cm)	178		
5. Previous Fracture	•No Yes	BMI: 24.6 The ten year probability of fracture (%)	
6. Parent Fractured Hip	• No Yes	without BMD	
7. Current Smoking	○No •Yes	Major osteoporotic	5.2
8. Glucocorticoids	○No •Yes	Hip Fracture	0.7
9. Rheumatoid arthritis	• No Yes	View NOGG Guidance	

#### **Risk factors**

For the clinical risk factors a yes or no response is asked for. If the field is left blank, then a "no" response is assumed. See also notes on risk factors.

The risk factors used are the following:

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Age	The model accepts ages between 40 and 90 years. If ages below or above are entered, the programme will compute probabilities at 40 and 90 year, respectively.
Sex	Male or female. Enter as appropriate.
Weight	This should be entered in kg.
Height	This should be entered in cm.
Previous fracture	A previous fracture denotes more accurately a previous fracture in adult life occurring spontaneously, or a fracture arising from trauma which, in a healthy individual, would not have resulted in a fracture. Enter yes or no (see also notes on risk factors).
Parent fractured hip	This enquires for a history of hip fracture in the patient's mother or father. Enter yes or no.
Current smoking	Enter yes or no depending on whether the patient currently smokes tobacco (see also notes on risk factors).
Glucocorticoids	Enter yes if the patient is currently exposed to oral glucocorticoids or has been exposed to oral glucocorticoids for more than 3 months at a dose of prednisolone of 5mg daily or more (or equivalent doses of other glucocorticoids) (see also notes on risk factors).
Rheumatoid arthritis	Enter yes where the patient has a confirmed diagnosis of rheumatoid arthritis. Otherwise enter no (see also notes on risk factors).
Secondary osteoporosis	Enter yes if the patient has a disorder strongly associated with osteoporosis. These include type I (insulin dependent) diabetes, osteogenesis imperfecta in adults, untreated long-standing hyperthyroidism, hypogonadism or premature menopause (<45 years), chronic malnutrition, or malabsorption and chronic liver disease
Alcohol 3 or more units/day	Enter yes if the patient takes 3 or more units of alcohol daily. A unit of alcohol varies slightly in different countries from 8-10g of alcohol. This is equivalent to a standard glass of beer (285ml), a single measure of spirits (30ml), a medium- sized glass of wine (120ml), or 1 measure of an aperitif (60ml) (see also notes on risk factors).
Bone mineral density (BMD)	(BMD) Please select the make of DXA scanning equipment used and then enter the actual femoral neck BMD (in g/cm2). Alternatively, enter the T-score based on the NHANES III female reference data. In patients without a BMD test, the field should be left blank (see also notes on risk factors) (provided by Oregon Osteoporosis Center).

Osteopo Society

### Notes on risk factors

#### **Previous fracture**

A special situation pertains to a prior history of vertebral fracture. A fracture detected as a radiographic observation alone (a morphometric vertebral fracture) counts as a previous fracture. A prior clinical vertebral fracture or a hip fracture is an especially strong risk factor. The probability of fracture computed may therefore be underestimated. Fracture probability is also underestimated with multiple fractures.

#### Smoking, alcohol, glucocorticoids

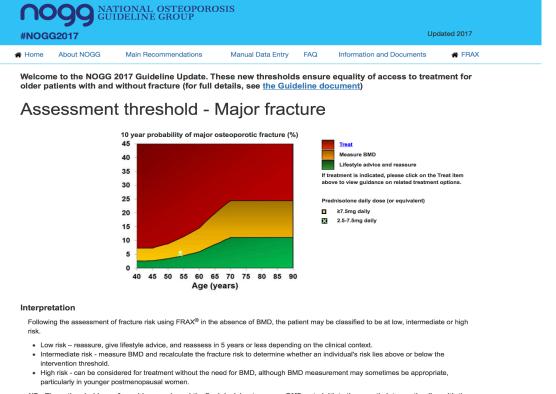
These risk factors appear to have a dose-dependent effect, i.e. the higher the exposure, the greater the risk. This is not taken into account and the computations assume average exposure. Clinical judgment should be used for low or high exposures.

#### **Rheumatoid arthritis (RA)**

RA is a risk factor for fracture. However, osteoarthritis is, if anything, protective. For this reason reliance should not be placed on a patient's report of 'arthritis' unless there is clinical or laboratory evidence to support the diagnosis.

#### Bone mineral density (BMD)

The site and reference technology is DXA at the femoral neck. T-scores are based on the NHANES reference values for women aged 20-29 years. The same absolute values are used in men.



NB - These thresholds are for guidance only and the final decision to assess BMD or to initiate therapeutic intervention lies with the individual clinician.

#### Management

- For a more detailed description of investigations, supportive measures and treatments, please refer to the full Guideline
- No trials have been designed and powered to detect differences in the magnitude of fracture reduction between different treatments. Thus
  the choice of agent is determined by the spectrum of anti-fracture effects across skeletal sites, side effects and cost.
- Treatment review should be performed after 3 years of zoledronic acid therapy and 5 years of oral bisphosphonate treatment.
  Continuation of bisphosphonate treatment beyond 3-5 years can generally be recommended in individuals age >75 years, those with a
- history of hip or vertebral fracture, those who sustain a fracture while on treatment, and those taking oral glucocorticoids.
- If treatment is discontinued, fracture risk should be reassessed after a new fracture, regardless of when this occurs. If no new fracture
  occurs, assessment of fracture risk should be performed again after 18 months to 3 years.
- There is no evidence to guide decisions beyond 10 years of treatment and management options in such patients should be considered on
  an individual basis.

## **Action: Non-Required**

# General Practitioner Assessment of Cognition (GPCOG) Score

#### This tool is for Medical Professionals

Professional Reference tools are designed for health professionals to use. They are written by UK doctors and based on research evidence, UK and European Guidelines, so you may find the language more technical than the **condition leaflets**.

This test was designed as a GP screening tool for dementia.<sup>[1]</sup> See also separate Screening for Cognitive Impairment article.

There are two components: a cognitive assessment conducted with the patient, and an informant questionnaire (only considered necessary if the results of the cognitive section are equivocal, ie score 5-8 inclusive).

Results >8 or <5 on the GPCOG patient section were assumed to be cognitively intact or impaired, respectively. For patients requiring an informant questionnaire, a score of 3 or less out of 6 in this section indicates cognitive impairment.<sup>[2]</sup>

General Practitioner Assessment of Cognition (GPCOG)

GPCOG Patient Examination Unless specified, each question should only be asked once.

Name and address for subsequent recall "I am going to give you a name and address. After I have said it, I want you to repeat it. Remember this name

(Allow a maximum of 4 attempts but do not score yet)	
Time Orientation	
What is the date? (accept exact only)	Correct - 1 point 🗢
Clock Drawing (visuospatial functioning) use a paper with a prin	ited circle.
Please mark in all the numbers to indicate the hours of a clock (correct spacing required).	Correct - 1 point 🗢
For a correct response (above), the numbers 12, 3, 6, and 9 should b and the other numbers should be approximately correctly placed.	e in the correct quadrants of the circle
Please mark in hands to show 10 minutes past eleven o'clock (11:10).	Correct - 1 point 🔶
For a correct response (above), the hands should be pointing to the 1 but do not penalise if the respondent fails to distinguish the long and	
Information	
Can you tell me something that happened in the news recently? (recently = in the last week)	Correct - 1 point \$
Respondents are not required to provide extensive details, as long as news story. If a general answer is given, such as "war", "a lot of rain", ask for deta If unable to give details, the answer should be scored as incorrect.	•

What was the name and address I asked you to remember? Score for each of the 5 components - John, Brown, 42, West Street,	All correct - 5 points 🗢
Kensington.	
GPCOG Patient Score = 9 /9	Cognitively intact

# Urine Analysis

	Leucocytes	Nitrites	Protein	рΗ	Blood	Specific	Ketones	Glucose
						Gravity		
Your	Neg	Neg	Neg	7	Neg	1.101	Neg	Neg
Result								
Target	Neg	Neg	Neg	7	Neg	1.010	Neg	Neg

# Action: Non-Required THE HEALTH EQUATION

# Faecal occult blood/QFIT & Calprotectin

12/04/2023, 17:05

Lab Ref no.: Collected: THE HEALTH E	$\times$			
	11/04/2023 08:00	<b>Received:</b> 12/04/2023 11:50		
WHITE HORSE ALTON BARNES MARLBOROUGH SN8 4LB	QUATION COTTAGE WILTSHIRE	Reference: Report Date: 12 April 2023 16:51:40		
GERRY GAJADH	IARS			
BIOCHEMISTRY				
	chemical Test	<4 ug/g		
QFIT Comment		A quantitative faecal immunochemical test for		
		haemoglobin result below 10 ug/g renders		
		colorectal cancer unlikely. If symptomatic,		
		consider other causes of clinical presentation.		
		Please note change of platform to OC Sensor Pledia		
		effective 04/10/21.		
aecal Calpro	tectin	* 78 ug/g (0 - 50)		
	Calprotectin: <50 ug/g - Not indicative of GI			
	inflammation. Consider IBS, or quiescent IBD if			
		this is a known patient.		
		-		
		Calprotectin: 50-250 ug/g repeat calprotectin		
		in 2 weeks (Also consider other potential causes		
		(infection, NSAIDS, GI malignancy) depending on		
		the magnitude of the result and clinical context.)		
		Repeated Calprotectin result: 100 - 250 ug/g		
		routine referral to gastroenterology.		
		Calprotectin: >250 ug/g urgent referral to		
		gastroenterology.		
		Note change in method and platform to OC-Sensor		
		Pledia e/f 10/01/2023, UKAS accreditation pending		

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Result: Not-Detected

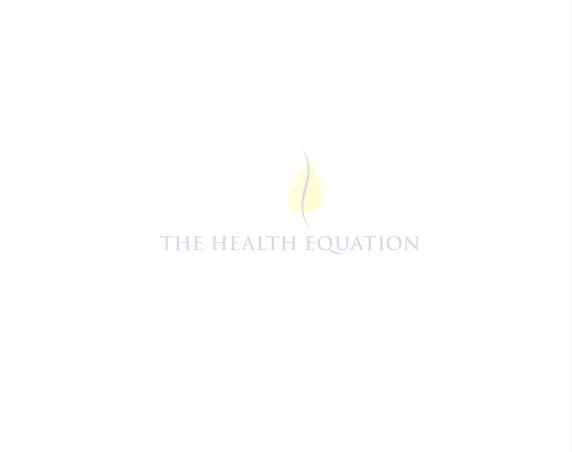
# Action: Non-required

**Blood Tests** 

**Blood Tests** 

Xxxxx

The results are inserted below:



THE HEALTH EQUATION	Hospital No.:					
4TH FLOOR NORTH	Reference:					
25 WIMPOLE STREET						
LONDON W1G 8GL	Report Date: 07 February	2020 11:48:22				
HAEMATOLOGY						
HAEMOGLOBIN (g/L)	156	g/L	130 - 170			
НСТ	0.449	-	0.37 - 0.50			
RED CELL COUNT	4.95	x10^12/L	4.40 - 5.80			
MCV	90.7	fL	80 - 99			
MCH	31.5	pg	26.0 - 33.5			
MCHC (g/L)	347	g/L	300 - 350			
RDW	12.7		11.5 - 15.0			
PLATELET COUNT	295	x10^9/L	150 - 400			
MPV	11.1	fL	7 - 13			
WHITE CELL COUNT	8.55	x10^9/L	3.0 - 10.0			
Neutrophils	53.3% 4.56	x10^9/L	2.0 - 7.5			
Lymphocytes	34.6% 2.96	x10^9/L	1.2 - 3.65			
Monocytes	9.9% 0.85	x10^9/L	0.2 - 1.0			
Eosinophils	1.4% 0.12	x10^9/L	0.0 - 0.4			
Basophils	0.8% 0.07	x10^9/L	0.0 - 0.1			
ESR	5	mm/hr	1 - 20			
	Note ref range raise	ed in patients over 4	0			
BIOCHEMISTRY						
SODIUM	141	mmol/L	135 - 145			
POTASSIUM	4.4	mmol/L	3.5 - 5.1			
CHLORIDE	105	mmol/L				
BICARBONATE	26	mmol/1				
UREA	4.8		1.7 - 8.3			
CREATININE	82	umol/L				
estimated GFR	89					
	For UK guidelines:	-				
	www.renal.org/inform	ation-resources				
BILIRUBIN	7	umol/L	0 - 20			
ALKALINE PHOSPHATASE	65	IU/L	40 - 129			
ASPARTATE TRANSFERASE	27	IU/L	0 - 37			
ALANINE TRANSFERASE	42	IU/L	10 - 50			
LDH	* 227	IU/L	135 - 225			
CK	151	IU/L	38 - 204			
GAMMA GT	40	IU/L	10 - 71			
TOTAL PROTEIN	70	g/L	63 - 83			
ALBUMIN	47	-	34 - 50			
GLOBULIN	23	g/L	19 - 35			
CALCIUM	2.40	mmol/L	2.20 - 2.60			
Corrected Calcium	2.37	mmol/L	2.20 - 2.60			
PHOSPHATE	0.89	mmol/L	0.87 - 1.45			
URIC ACID	391	umol/L	266 - 474			
RANDOM BLOOD GLUCOSE (FL)	5.0	mmol/L	3.5 - 7.9			
AMYLASE	36	IU/L	28 - 100			
TRIGLYCERIDES	1.8	mmol/L	< 2.3			
CHOLESTEROL	3.9	mmol/L	Optimum <5.0			
HDL CHOLESTEROL	1.3	mmol/L	0.9 - 1.5			
HDL % of total	33	8	20 and over			
LDL CHOLESTEROL	1.8	mmol/L	Up to 3.0			
Non-HDL Cholesterol	2.6	mmol/L	< 3.9			

\_\_\_\_

IRON       13.0       umol/L       10.6 - 28.3         T.I.B.C       51       umol/L       41 - 77         TRANSFERRIN SATURATION       25       & 20 - 55         C Reactive protein       6.0       %       40 - 6.0         Heamoglobin Alc       6.0       %       40 - 6.0         Heamol/mol/mol       • 42       mmol/mol/mol       • 42         Jipse       • 42       mmol/L       0 - 400         NTpro BNP       • 438       mg/L       0 - 400         Please note change of units from py/LL to ng/L.       from 19/09/2016.       Heart Failure Unlikely <400 ng/L         Raised Levels 400 - 2000 ng/L       For UK guidelines:       https://www.nice.org.uk/guidance/cg108         EMDOCRINOLOGY       1.50       mIU/L       0.277 - 4.2         THYROI STIMULATING HORMONE       1.50       mIU/L       50 - 200         Interpretation of results:       Deficient <25 - 49 nmol/L       50 - 200         Interpretation of results:       Deficient <25 - 49 nmol/L       So - 200         Interpretation of results:       Deficient <25 - 49 nmol/L       Normal Range 50 - 200 nmol/L         Consider reducing dose >200 nmol/L       Consider reducing dose >200 nmol/L       Consider reducing dose >200 nmol/L				
TRANSFERRIN SATURATION 25 & 20 - 55 C Reactive protein Haemoglobin Alc & 40 - 6.0 HALC (mol/mol) Lipase & 42 mmol/mol 20 - 41 Lipase & 42 mmol/mol 20 - 41 MRTPRO BNP & 42 mmol/mol 20 - 400 Please note change of units from pg/mL to ng/L. from 19/09/2016. Heart Failure Unlikely <400 ng/L Raised Levels 400 - 2000 ng/L For UK guidelines: https://www.nice.org.uk/guidance/cg108 ENDOCRINOLOGY THYROID STIMULATING HORMONE 1.50 mIU/L 0.27 - 4.2 FREE THYROXINE 1.50 mIU/L 0.27 - 4.2 DIN terpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L				
C Reactive protein Haemoglobin Alc HbAlc (mmol/mol) t 42 mmol/mol 20 - 41 Lipase 36.0 NTpro BNP 438 mg/L 0 - 400 Please note change of units from pg/mL to ng/L. from 19/09/2016. Heart Failure Unlikely <400 ng/L Raised Levels 400 - 2000 ng/L For UK guidelines: https://www.nice.org.uk/guidance/cg108 ENDOCRINOLOGY THYROID STIMULATING HORMONE FREE THYROXINE 25 OH Vitamin D 111 numl/L 50 - 200 Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L				
Haemoglobin Alc HAAMOGLOBIN ALC HAALC (mmol/mol) Lipase NTPro BNP + 42 36.0 V/L 13 - 60 V/L 13 - 60 Please note change of units from pg/mL to ng/L. from 19/09/2016. Heart Failure Unlikely <400 ng/L Raised Levels 400 - 2000 ng/L For UK guidelines: https://www.nice.org.uk/guidance/cg108 EMDOCRINOLOGY THYROID STIMULATING HORMONE FREE THYROXINE 25 OH Vitamin D 1.50 mIU/L 0.27 - 4.2 Part 12.9 pmol/l 12.0 - 22.0 111 nmol/L 50 - 200 Interpretation of results: Deficient <25 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L				
Hblc (mmol/mol)       * 42       mmol/mol 20 - 41         Lipase       36.0       U/L       13 - 60         NTpro BNP       * 438       ng/L       0 - 400         Please note change of units from pg/mL to ng/L.       from 19/09/2016.       Heart Failure Unlikely <400 ng/L	-		-	
Lipase NTpro BNP 36.0 U/L 13 - 60 ng/L 0 - 400 Please note change of units from pg/mL to ng/L. from 19/09/2016. Heart Failure Unlikely <400 ng/L Raised Levels 400 - 2000 ng/L For UK guidelines: https://www.nice.org.uk/guidance/cg108 ENDOCRINOLOGY THYROID STIMULATING HORMONE FREE THYROXINE 25 OH Vitamin D 1.50 Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L				
<pre>* 438 ng/L 0 - 400 Please note change of units from pg/mL to ng/L. from 19/09/2016. Heart Failure Unlikely &lt;400 ng/L Raised Levels 400 - 2000 ng/L For UK guidelines: https://www.nice.org.uk/guidance/cg108 ENDOCRINOLOGY THYROID STIMULATING HORMONE 1.50 mIU/L 0.27 - 4.2 PREE THYROXINE 25 OH Vitamin D 1.50 mIU/L 0.27 - 4.2 Interpretation of results: Deficient &lt;25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose &gt;200 nmol/L</pre>				
Please note change of units from pg/mL to ng/L. from 19/09/2016. Heart Failure Unlikely <400 ng/L Raised Levels 400 - 2000 ng/L For UK guidelines: https://www.nice.org.uk/guidance/cg108 ENDOCRINOLOGY THYROID STIMULATING HORMONE FREE THYROXINE 25 OH Vitamin D 111 mIU/L 0.27 - 4.2 pmol/l 12.0 - 22.0 Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L				
<pre>from 19/09/2016. Heart Failure Unlikely &lt;400 ng/L Raised Levels 400 - 2000 ng/L For UK guidelines: https://www.nice.org.uk/guidance/cg108</pre> ENDOCRINOLOGY THYROID STIMULATING HORMONE 1.50 mIU/L 0.27 - 4.2 FREE THYROXINE 12.9 pmol/l 12.0 - 22.0 Ill nmol/L 50 - 200 Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L	) BNP		-	
Heart Failure Unlikely <400 ng/L Raised Levels 400 - 2000 ng/L For UK guidelines: https://www.nice.org.uk/guidance/cg108 ENDOCRINOLOGY THYROID STIMULATING HORMONE FREE THYROXINE 25 OH Vitamin D 111 nmol/L 50 - 2200 Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L			units from pg/mL t	o ng/L.
Raised Levels 400 - 2000 ng/L High Levels >2000 ng/L For UK guidelines: https://www.nice.org.uk/guidance/cg108 ENDOCRINOLOGY THYROID STIMULATING HORMONE I.50 mIU/L 0.27 - 4.2 PREE THYROXINE 12.9 pmol/l 12.0 - 22.0 Ill nmol/L 50 - 200 Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L		from 19/09/2016.		
High Levels >2000 ng/L For UK guidelines: https://www.nice.org.uk/guidance/cg108 ENDOCRINOLOGY THYROID STIMULATING HORMONE FREE THYROXINE 25 OH Vitamin D 1.50 Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L		Heart Failure Unlikel	y <400 ng/L	
FOR UK guidelines: https://www.nice.org.uk/guidance/cg108 ENDOCRINOLOGY THYROID STIMULATING HORMONE FREE THYROXINE 25 OH Vitamin D 1.50 Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L		Raised Levels 400 - 20	000 ng/L	
FOR UK guidelines: https://www.nice.org.uk/guidance/cg108 ENDOCRINOLOGY THYROID STIMULATING HORMONE FREE THYROXINE 25 OH Vitamin D 1.50 Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L				
ENDOCRINOLOGY         THYROID STIMULATING HORMONE         FREE THYROXINE         25 OH Vitamin D         111         nmol/L         50 - 200         Interpretation of results:         Deficient <25 nmol/L		High Levels >2000 ng/1	L	
ENDOCRINOLOGY THYROID STIMULATING HORMONE FREE THYROXINE 25 OH Vitamin D 1.50 III Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L		For UK guidelines:		
THYROID STIMULATING HORMONE 1.50 mIU/L 0.27 - 4.2 FREE THYROXINE 12.9 pmol/l 12.0 - 22.0 111 nmol/L 50 - 200 Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L		https://www.nice.org.u	uk/guidance/cg108	
THYROID STIMULATING HORMONE 1.50 mIU/L 0.27 - 4.2 FREE THYROXINE 12.9 pmol/l 12.0 - 22.0 111 nmol/L 50 - 200 Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L				
FREE THYROXINE       12.9       pmol/l       12.0 - 22.0         25 OH Vitamin D       111       nmol/L       50 - 200         Interpretation of results:       Deficient <25 nmol/L				
25 OH Vitamin D 111 nmol/L 50 - 200 Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L				
Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L			-	
Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L	ł Vitamin D			50 - 200
Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L		Interpretation of res	ults:	
Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L		Deficient <25 nmol/L		
Consider reducing dose >200 nmol/L		Insufficient 25 - 49 m	nmol/L	
Consider reducing dose >200 nmol/L		Normal Range 50 - 200	nmol/L	
		-		
THE HEALTH EQUATION				
THE HEALTH EQUATION		TTE TTE ATTET E.		T
	1	HE HEALIH E	UUATION	

16/11/2022, 10:35

Name: DOB   Age: Gender: Lab Ref no. Collected: 15/11/2022 11:30 THE HEALTH EQUATION WHITE HORSE COTTAGE ALTON BARNES MARLBOROUGH WILTSHIRE SN8 4LB	Report Produced B The Doctors Labor Received: 15/11/2022 18:50 Hospital No.: Reference: 21612 Report Date: 15 November 2023	8	
	(Interim Report)		
BIOCHEMISTRY			
FERRITIN	* 407	ug/L	30 - 400
ENDOCRINOLOGY Prostate Specific Ag(Total)	0.36	ug/l	0.00 - 4.99
Floscate Specific Ag(local)	Agreed age-related thres		
	Kingdom for referral for	-	
	prostate cancer (age 50	- 69 years as f	ormally
	advocated by NICE) are:		
	40 - 49 years: >/= 2.5		
	50 - 69 years: >/= 3		
	>/= 70 years: >/= 5		
	Please note new referenc	P	
Prostate Specific Ag(Free)	0.20	ug/l	0 - 0.90
Free:Total ratio	0.56		
	>0.19 is normal		
FOLLICLE STIM. HORMONE	7.6	IU/L IU/L	1.5 - 12.4 1.7 - 8.6
LUTEINISING HORMONE TESTOSTERONE	28.0	nmol/L	7.6 - 31.4
15310315KOR5	Reference Ranges apply t		7.0 - 31.4
CRY HORMONE BINDING CLOS	Reference Ranges apply t 81	o aduits nmol/L	10 92
SEX HORMONE BINDING GLOB Testosterone/SHBG Ratio	34.6	rimo1/L	19 - 83 24 - 104
PROLACTIN	150	mIU/L	86 - 324
	***	112072	00 524

### Prostate Profile

ENDOCRINOLOGY				
Prostate Specific Ag(Total)	<0.03	ug/l	0.00 - 2.99	
	Agreed age-related thresholds in the United			
	Kingdom for referral for specialist evaluation for			
	prostate cancer (age 50 -	69 years as	formally	
	advocated by NICE) are:			
	40 - 49 years: >/= 2.5			
	50 - 69 years: >/= 3			
	>/= 70 years: >/= 5			
	Please note new reference	range from 2	9/09/2021	
Prostate Specific Ag(Free)	<0.02	ug/l	0 - 0.90	
Free:Total ratio	Unable to calculate.			
	>0.19 is normal			

# Action: No medical suggestions but see Supplementation suggestions for functional improvement.

Laboratories always provide a standard medical reference range which is generally based on a normal distribution which tends to capture 95% of the patient population being tested. So, I make comments on the following especially on the markers that are outside of the standard medical range:

# **Functional Blood Analysis**

Sent separately is a comprehensive Functional Blood Chemistry Analysis (FBA) & Functional Health report. This uses narrower reference ranges to the normal standard medical ranges that the lab uses. It gives us a much more detailed picture and the things to focus on and it also gives a very detailed understanding of the parameters and what they actually do.

The software algorithm is used to calculate the probability of various dysfunctions, and I tend to focus on anything >50%.

In your case, the things to focus on are:

Хххх

Action: See recommendations and discussion at follow up.

## **Recommendations:**

Хххх

Additional Investigations Suggested:

## Nutritional supplementation

Given your history, symptoms and blood results I would recommend the following:

Thank you for choosing The Health Equation

Mr Gerry Gajadharsingh DO Osteopath Diagnostic Consultant-Complementary Medicine



Metrics			Episodes		
Duration of Recording			Pauses		
Total monitoring time:		1d	No. of pauses:		0
Total time analysed:		23h 44m 20s	Longest RR interval:		
Noise burden:		1.09 %	Atrioventricular block		
Heart Rate			Туре:		
Max:	16/11/2022 17:08:44	74 bpm	Atrial Fibrillation / Flutter		
Min:	17/11/2022 05:53:12	37 bpm	Burden:		0%
Average:		49 bpm	Longest episode:		
Premature Supraventricu	lar Complexes		Max HR:		
Total PSVC beats:		45 (0.06%)	Ventricular Tachycardia		
No. of couplets:		0	No. of episodes:		0
Premature Ventricular Co	omplexes		Longest episode:		
Total PVC beats:		111 (0.16%)	Other Supraventricular Ta	chycardia	
No. of morphologies:		1	No. of episodes:		2
No. of couplets:		0	Longest episode:	16/11/2022 19:40:14	3 beats
Total Bigeminy beats:		0	Patient Notified Events		
Total Trigeminy beats:		0	Count:		0

#### **Cardiac Physiologist Report**

This is a 1 day holter recording.

Predominantly sinus bradycardia with intermittent first degree AV block. PRi - 164-219 ms, QRSd - 102-109 ms.

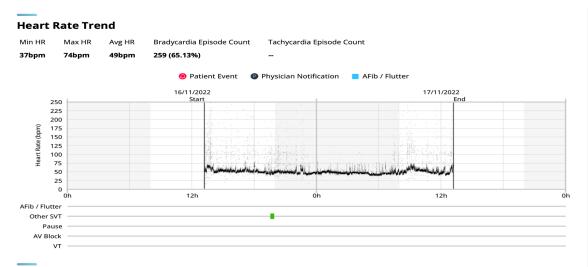
Maximum sinus rate 74 bpm Day 1 / 17:08:44 Minimum sinus rate 37 bpm Day 2 / 05:53:12 Average sinus rate 49 bpm Limited variation in heart rate across the recording period.

Rare atrial ectopy (PSVCs). 0.06 % burden presenting as 39 isolated beats and 2 triplets.

Rare (bifocal) ventricular ectopy (PVCs). 0.16 % burden presenting as 111 isolated beats.

No symptoms reported.

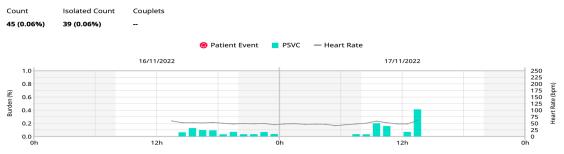
# THE HEALTH EQUATION



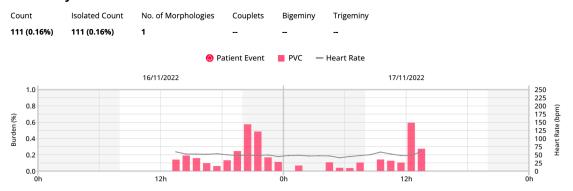
#### Atrial Fibrillation / Flutter Hourly Burden

No AFib found in the study

#### **PSVC Hourly Burden**



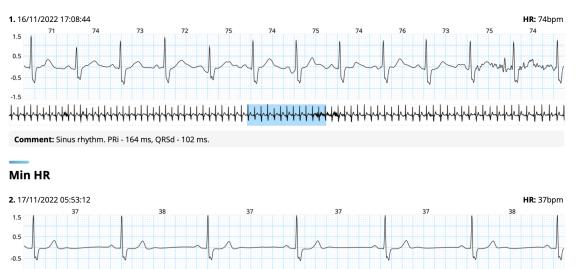
**PVC Hourly Burden** 



Stri	 Strip Index						
ID	Date & Time	Category	HR	Physician Notification	Association	Comments	Page
1	16/11/2022 17:08:44	Max HR	74bpm		-	Sinus rhythm. PRi - 164 ms, QRSd - 102 ms.	page 4
2	17/11/2022 05:53:12	Min HR	37bpm		-	Sinus bradycardia. PRi - 219 ms, QRSd - 109 ms.	page 4
3	16/11/2022 13:29:41	Sinus	74bpm				page 5
4	16/11/2022 17:08:45	Sinus	74bpm				page 5
5	16/11/2022 18:01:54	Sinus	64bpm				page 5
6	17/11/2022 09:22:07	Sinus	61bpm				page 5
7	17/11/2022 13:10:12	Sinus	64bpm				page 5
8	16/11/2022 19:48:36	Other SVT	105bpm				page 6
9	16/11/2022 18:36:01	PSVC					page 6
10	17/11/2022 12:25:23	PVC					page 6

#### Max HR

-1.5



-

Comment: Sinus bradycardia. PRi - 219 ms, QRSd - 109 ms.

