

Alex Sample

Advanced Well Man

Blood Test

- 65 BIOMARKERS

Clinical Note: This interpretation is based on the blood results at the time of testing only and must be considered alongside **clinical history, examination findings, medications, supplements,** and any subsequent results. Blood markers can change over time and a **single test does not provide a diagnosis in isolation.**

Follow-Up Responsibility: Abnormal or borderline results identified in this report require follow-up through the patient's **GP or treating clinician,** who will assume responsibility for **ongoing monitoring, investigation, and treatment** where appropriate.

Safety Notice: If **new, worsening, or concerning symptoms** develop after this test such as chest pain, severe abdominal pain, shortness of breath, neurological symptoms, or jaundice, **urgent medical assessment should be sought** regardless of these results. This report is intended for **informational purposes only** and does not replace assessment by a **registered medical practitioner.** Management decisions should **not be based on laboratory results alone.**



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#	Category	Biomarkers
1.	Diabetes Screen	Hb A1c (mmol/mol)
2.	Cardiac Muscle & Joint Health	Uric Acid
3.	Inflammatory Markers	C Reactive Protein (high sensitivity)
4.	Cholesterol Profile	Cholesterol Triglycerides HDL Cholesterol LDL Cholesterol Non HDL Cholesterol HDL % of Total
5.	Extended Cholesterol Profile	Apolipoprotein A1 Apolipoprotein B Apolipoprotein B1/A1 Ratio Lipoprotein (a)
6.	Thyroid Function	Thyroid Stim. Hormone Free T3 (FT3) Free Thyroxine (FT4) Total Thyroxine (T4) Thyroid Peroxidase Antibodies Thyroglobulin Antibodies
7.	Vitamin Status	Active B12 Folate (serum) 25 OH Vitamin D
8.	Iron Studies	Iron UIBC TIBC Transferrin Saturation Ferritin
9.	Liver Profile & Proteins	Total Protein Albumin Globulin Alanine Transferase Alkaline Phosphatase Aspartate Transferase Gamma GT Bilirubin
10.	Kidney Function	Urea Creatinine estimated GFR
11.	Hormones (Sex & Reproductive)	Luteinising Hormone Follicle Stim. Hormone 17-Beta Oestradiol Sex Hormone Binding Glob. Testosterone Free Androgen Index Free Testosterone
12.	Full Blood Count	Haemoglobin (g/l) Red Cell Count Hct MCV MCH MCHC (g/l) RDW Platelets MPV White Cell Count Neutrophils Lymphocytes Monocytes Eosinophils Basophils Neutrophils % Lymphocytes % Monocytes % Eosinophils % Basophils %

Name: Alex Sample
Date of Birth: 01/01/1980

Sample Date: 05/10/2026
Sample Time: 09:15

Results Outside the Expected Range

Cholesterol: Total Cholesterol (5.62), LDL (3.87), Non HDL (4.50) and Apolipoprotein B (1.08) are above target, with an ApoB/ApoA1 ratio of 0.8. Lipoprotein (a) is reassuringly low. Diet, activity and a repeat test in three months are worth discussing with your GP.

Liver: ALT (52) and Gamma GT (61) are mildly raised. Alcohol, recent exercise and some medicines can all do this. A repeat test in six to eight weeks is sensible.

Vitamins: Vitamin D (41) and Active B12 (31.2) are below range. Vitamin D is often low in the UK through autumn and winter. Speak to your GP or pharmacist about supplements.

Inflammation: hs-CRP (3.40) is raised and Eosinophils (0.46) are slightly high, which can follow a recent infection or allergy. Recheck if it persists.

GENERAL COMMENT

TEST	RESULT	FLAG	UNITS	REFERENCE INTERVAL
Hb A1c (mmol/mol)	38	Normal	mMol/Mol	<42

NOTE

Glucose shows the level of sugar in your blood at the time of the test. Keeping this in the normal range helps ensure your body has enough energy without putting extra strain on your organs.

HbA1c reflects your average sugar levels over the past 2–3 months. This gives a clearer picture of long-term control and how well your body is managing sugar overall. Together with **glucose**, it helps detect risks of diabetes or poor sugar control.

C-Peptide and **insulin** levels indicate how well your pancreas is producing **insulin**, the hormone that moves sugar from the blood into the cells for energy.

HOMA-IR (Homeostatic Model Assessment of **Insulin** Resistance) is a calculated index that estimates **insulin** resistance from fasting **glucose** and fasting **insulin** levels.

GENERAL COMMENT

TEST	RESULT	FLAG	UNITS	REFERENCE INTERVAL
Uric Acid	362	Normal	umol/L	200 - 430

NOTE

Uric Acid and **Creatine Kinase (CK)** give information about joint and muscle health. **Uric acid** is a breakdown product from natural body processes; when it is higher or lower than expected, it can reflect how well the body is handling this waste. **Creatine kinase** is an enzyme released from muscle cells, and changes in its level can suggest more or less muscle activity than normal.

CK-MB and **Myoglobin** are more specific markers of muscle, especially heart muscle. **CK-MB** is a subtype of **creatinine kinase** that reflects cardiac muscle activity, while **myoglobin** is a protein released when muscle tissue is stressed or damaged. Levels outside the normal range may indicate unusual muscle or heart strain.

GENERAL COMMENT

TEST	RESULT	FLAG	UNITS	REFERENCE INTERVAL
C Reactive Protein (high sensitivity)	3.40	High	mg/L	<1.00

NOTE

CRP (C-Reactive Protein) is produced by the liver and rises when there is inflammation in the body. A lower reading means little inflammatory activity, while higher readings can signal the body is reacting to some form of stress or irritation.

GENERAL COMMENT

TEST	RESULT	FLAG	UNITS	REFERENCE INTERVAL
Cholesterol	5.62	High	mmol/L	<5.00
Triglycerides	1.38	Normal	mmol/L	<2.30
HDL Cholesterol	1.12	Normal	mmol/L	0.90 - 1.70
LDL Cholesterol	3.87	High	mmol/L	<3.00
Non HDL Cholesterol	4.50	High	mmol/L	<4.00
HDL % of Total	20	Normal	%	>20

NOTE

Cholesterol is a type of fat in the blood that your body needs in small amounts, but too much can cause problems with the heart and circulation. **LDL cholesterol** is often called the "bad" **cholesterol** because it can build up in artery walls, while **HDL cholesterol** is the "good" **cholesterol** that helps clear excess fat from the bloodstream. **Triglycerides** are another form of blood fat mainly linked to diet and energy storage. Doctors often look at the total **cholesterol** to **HDL** ratio, as this shows the balance between harmful and protective **cholesterol** — the lower the ratio, the better. Together, these markers give a picture of cardiovascular risk and where lifestyle or medical changes may help protect long-term health.

GENERAL COMMENT

TEST	RESULT	FLAG	UNITS	REFERENCE INTERVAL
Apolipoprotein A1	1.31	Normal	g/L	>1.25
Apolipoprotein B	1.08	High	g/L	<1.00
Apolipoprotein B1/A1 Ratio	0.8	High	ratio	<0.7
Lipoprotein (a)	24.00	Normal	nmol/L	<75.00

NOTE

Apolipoproteins are proteins that help transport fats such as **cholesterol** and **triglycerides** through the bloodstream. **Apolipoprotein A1 (ApoA1)** is the main protein component of **HDL**, often known as the "good" **cholesterol** because it helps clear excess fat from the arteries. Higher **ApoA1** levels are generally linked with better cardiovascular protection. In contrast, **Apolipoprotein B (ApoB)** is found on **LDL** and other **cholesterol**-carrying particles that can contribute to plaque buildup in artery walls. Because each **LDL** particle carries a single **ApoB** molecule, **ApoB** is considered one of the most accurate indicators of the total number of potentially harmful particles in circulation.

Lipoprotein (a), or **Lp(a)**, is another inherited **cholesterol**-carrying particle that is structurally similar to **LDL** but includes an additional protein called apolipoprotein(a). Elevated **Lp(a)** levels can increase the risk of early heart disease and stroke because **Lp(a)** promotes inflammation and plaque formation in the arteries. Unlike other **cholesterol** markers, **Lp(a)** is largely determined by genetics and does not typically respond to diet or lifestyle changes. Measuring **Lp(a)** helps identify individuals who may have a higher inherited cardiovascular risk, allowing earlier and more personalised prevention strategies.

GENERAL COMMENT

TEST	RESULT	FLAG	UNITS	REFERENCE INTERVAL
Thyroid Stim. Hormone	2.140	Normal	mIU/L	0.270 - 4.200
Free T3 (FT3)	4.6	Normal	pmol/L	3.1 - 6.8
Free Thyroxine (FT4)	15.2	Normal	pmol/L	12.0 - 22.0
Total Thyroxine (T4)	96	Normal	nmol/L	59 - 154
Thyroid Peroxidase Antibodies	8.2	Normal	kIU/L	0.0 - 34.0
Thyroglobulin Antibodies	14.6	Normal	kIU/L	0.0 - 115.0

NOTE

TSH (Thyroid Stimulating Hormone) is the hormone made by the pituitary gland that tells your thyroid how much hormone to release. It plays a key role in regulating metabolism, energy levels, body temperature, and overall hormonal balance. Measuring **TSH** helps assess how well the thyroid is functioning.

fT3 (Free Triiodothyronine) is the active thyroid hormone that directly affects how your body uses energy. It helps regulate metabolism, heart rate, digestion, and body temperature. Measuring **fT3** provides insight into how well your thyroid hormones are being converted and how effectively your body is responding.

fT4 (Free Thyroxine) is the main hormone produced by the thyroid gland. It serves as a reservoir that gets converted into the active hormone **fT3**. **fT4** is essential for healthy metabolism, growth, energy production, and overall balance in the body. Checking **fT4** helps evaluate the thyroid's hormone output and overall function.

TPOAb (Thyroid Peroxidase Antibodies) and **TgAb (Thyroglobulin Antibodies)**, help identify autoimmune thyroid conditions such as Hashimoto's thyroiditis or, less commonly, Graves' disease. These antibodies signal that the immune system is mistakenly attacking the thyroid gland, which can lead to inflammation, reduced hormone production, and long-term thyroid dysfunction.

GENERAL COMMENT

TEST	RESULT	FLAG	UNITS	REFERENCE INTERVAL
Active B12	31.2	Low	pmol/L	>37.5
Folate (serum)	9.8	Normal	nmol/L	3.9 - 26.8
25 OH Vitamin D	41	Low	nmol/L	50 - 250

NOTE

Vitamin D plays a central role in bone and muscle health by helping the body absorb and regulate **calcium** and **phosphate**. It also supports immune defence, contributes to hormone balance, and influences mood and energy regulation.

Folic Acid (Vitamin B9) and **Vitamin B12** are closely linked in how the body produces **red blood cells**, DNA, and energy. Together, they support healthy nerve function, cell division, and brain activity. Folate provides the building blocks for cell growth, while B12 helps activate folate and sustain the nervous system, making both essential for overall vitality.

Total Antioxidant Status (TAS) describes the combined activity of antioxidants in the body. These are protective molecules from both diet and natural defences that help stabilise "free radicals" — unstable particles that can otherwise damage cells. This measure reflects the body's overall capacity to maintain balance and protect tissues from oxidative stress.

GENERAL COMMENT

TEST	RESULT	FLAG	UNITS	REFERENCE INTERVAL
Iron	17.4	Normal	umol/L	5.8 - 34.5
UIBC	38.0	Normal	umol/L	24.2 - 70.1
TIBC	55.4	Normal	umol/L	45.0 - 81.0
Transferrin Saturation	31	Normal	%	20 - 50
Ferritin	142	Normal	ug/L	30 - 400

NOTE

Ferritin and **Serum Iron** give a clear picture of your body's iron levels, both the iron you have stored and the amount circulating in your blood right now. Low levels can indicate iron deficiency, which often leads to low energy and anaemia, while high levels may suggest inflammation or that the body is holding on to too much iron.

Iron-binding markers like **TIBC**, **UIBC** and **Transferrin Saturation** show how well your body is transporting and using iron. When iron is low, the body increases its capacity to carry more, and when iron is high or during longer-term illness, this capacity drops. **Transferrin saturation** helps reveal the balance between iron supply and demand: low values suggest your body isn't getting enough, while high values may indicate excess.

GENERAL COMMENT

TEST	RESULT	FLAG	UNITS	REFERENCE INTERVAL
Total Protein	72	Normal	g/L	60 - 80
Albumin	46	Normal	g/L	35 - 50
Globulin	26	Normal	g/L	19 - 35
Alanine Transferase	52	High	U/L	<45
Alkaline Phosphatase	78	Normal	U/L	30 - 130
Aspartate Transferase	34	Normal	U/L	<40
Gamma GT	61	High	U/L	<55
Bilirubin	14	Normal	umol/L	<22

NOTE

Bilirubin, **albumin**, and **total protein** give an overview of how well the liver is working and maintaining balance in the blood. **Bilirubin** is a waste product from **red blood cells**, and normal levels show the liver is clearing it properly. **Albumin** and **total protein** reflect how well the liver is making proteins needed for healing, immunity, and carrying nutrients through the body.

Globulins and liver enzymes (**AST**, **ALT**, **GGT**, **ALP**) are markers that help detect stress or damage in the liver. **Globulins** are proteins that support immunity. The enzymes (**AST**, **ALT**, **GGT**, **ALP**) are naturally present in liver cells.

GENERAL COMMENT

TEST	RESULT	FLAG	UNITS	REFERENCE INTERVAL
Urea	5.1	Normal	mmol/L	2.5 - 7.8
Creatinine	88	Normal	umol/L	60 - 120
estimated GFR	94	Normal	ml/min/1.73m2	>90

NOTE

Urea, Creatinine & eGFR - These tests are used together to check how well the kidneys are working. **Urea** and **creatinine** are waste products filtered out of the blood by the kidneys, and **eGFR** is a calculation that estimates overall kidney function. Together, they give a clear picture of how effectively the kidneys are cleaning and balancing the body's fluids.

GENERAL COMMENT

TEST	RESULT	FLAG	UNITS	REFERENCE INTERVAL
Luteinising Hormone	4.2	Normal	IU/L	1.7 - 8.6
Follicle Stim. Hormone	5.1	Normal	IU/L	1.5 - 12.4
17-Beta Oestradiol	118.0	Normal	pmol/L	41.4 - 159.0
Sex Hormone Binding Glob	32.6	Normal	nmol/L	18.3 - 54.1
Testosterone	14.80	Normal	nmol/L	8.64 - 29.00
Free Androgen Index	45.4	Normal	%	35 - 92
Free Testosterone	0.290	Normal	nmol/L	0.198 - 0.619

NOTE

Oestradiol (E2) is a key form of oestrogen involved in reproductive health, bone strength, cardiovascular protection, mood balance and skin health. In women, it plays a major role in the menstrual cycle, fertility and menopausal transition. In men, **oestradiol** supports libido, sperm health, bone density and metabolic balance.

Luteinising Hormone (LH) is produced by the pituitary gland and helps regulate overall reproductive function. In women, **LH** triggers ovulation and supports **progesterone** production. In men, **LH** stimulates the testes to produce **testosterone**.

Follicle-Stimulating Hormone (FSH) helps control reproductive hormone production and the development of eggs or sperm. In women, it regulates the menstrual cycle and indicates how well the ovaries are functioning. In men, healthy **FSH** supports sperm production and testicular function.

Sex Hormone Binding Globulin (SHBG) is a protein that binds to hormones like **testosterone** and **oestradiol**, controlling how much is freely available for the body to use. Optimal **SHBG** supports stable energy, mood, metabolism and reproductive health in both men and women.

Total Testosterone supports libido, muscle mass, bone density, motivation, cognitive function and energy levels in both men and women. Balanced levels promote metabolic health, mood stability and reproductive function.

NOTE (continued)

Free Testosterone is the active form of **testosterone** that is not bound to proteins and can be used by the body. In both men and women, it influences sexual health, mood, energy, strength and overall vitality.

Free Androgen Index (FAI) estimates how much active **testosterone** is available by comparing **total testosterone** to **SHBG** levels. A balanced **FAI** supports regular cycles, healthy hair and skin, stable energy, and normal metabolic function.

Prolactin is a pituitary hormone that affects reproductive balance, mood, energy and metabolic health in both sexes. In women, it helps regulate ovulation and menstrual function. In men, it plays a role in **testosterone** regulation and sexual function.

Progesterone helps balance oestrogen and supports mood, sleep and general wellbeing in both men and women. In women, it rises after ovulation and is essential for regular cycles, fertility and supporting the uterine lining.

GENERAL COMMENT

TEST	RESULT	FLAG	UNITS	REFERENCE INTERVAL
Haemoglobin (g/L)	148	Normal	g/L	130 - 180
Red Cell Count	4.95	Normal	10 ¹² /L	4.40 - 6.50
Hct	0.441	Normal	L/L	0.400 - 0.520
MCV	89.1	Normal	fL	80.0 - 100.0
MCH	29.9	Normal	pg	27.0 - 32.0
MCHC (g/L)	336	Normal	g/L	320 - 360
RDW	13.1	Normal	%	11.5 - 15.0
Platelets	246	Normal	10 ⁹ /L	150 - 450
MPV	10.2	Normal	fL	7.0 - 13.0
White Cell Count	6.8	Normal	10 ⁹ /L	3.0 - 11.0
Neutrophils	3.9	Normal	10 ⁹ /L	2.0 - 7.5
Lymphocytes	2.10	Normal	10 ⁹ /L	1.50 - 4.50
Monocytes	0.52	Normal	10 ⁹ /L	0.20 - 0.80
Eosinophils	0.46	High	10 ⁹ /L	0.00 - 0.40
Basophils	0.050	Normal	10 ⁹ /L	0.000 - 0.100
Neutrophils %	57.4	Normal	%	-
Lymphocytes %	30.9	Normal	%	-
Monocytes %	7.6	Normal	%	-
Eosinophils %	6.8	Normal	%	-
Basophils %	0.7	Normal	%	-

NOTE (continued)

A Full Blood Count looks at the main parts of your blood: white cells, red cells, and **platelets**. **White blood cells** help fight infections, and the balance of different types (granulocytes, lymphocytes, etc.) can give clues about your immune activity. **Red blood cells**, **Haemoglobin**, and related markers (**MCV**, **MCH**, **MCHC**, **RDW**) show how well your blood carries oxygen and whether the red cells are a normal size and shape. **Platelets** are checked for their number and size, as they are essential for blood clotting and healing. Together, these results give an overall picture of your blood health, oxygen-carrying capacity, and immune function.