
Report Explanation

Surname : Haigh
Forename : Andy
Date of birth : 17/12/1974
Sample Number: YRV-240320217
Sex : Male
Lab No : 5263
Sample Dated : 11/03/2024 13:03
Sample Received : 12/03/2024 13:40
Result Reported : 12/03/2024 18:16
Sample Type: V - EDTA / V - Na2 EDTA / V - Yellow

Summary

haemoglobin is at upper limit and as a result haematocrit has elevated indicating slightly thicker blood levels can be quickly reduced via a blood let /blood donation
lymphocytes are low indicating a recent immune response
ck elevates with exercise and is not concerning
transferrin saturation is slightly elevated showing elevated iron storage this is due to iron levels being top end of range
thi smay be why haemoglobin is at upper limit (trt can also effect haemoglobin but hormone levels are mid range so i wouldn't expect it)
urea elevates with high protein intake and is not concerning
hdl ratio is slightly elevate dthis can be improved by increasing hdl levels eithe rvia diet (thing slike oily fish) or supplementation 2g krill oil daily
testosterone level is fine but there is room to increase it
fsh and lh are suppressed and shbg is reduced this is expected when on trt and not concerning
b12 is elevated this is not concerning though it will increase red cells

Haematocrit (PCV)

Result H 0.513
Range L/L 0.38 - 0.50

This screening measures how much of your blood is made of red blood cells. A haematocrit measurement is useful in identifying anaemia, bleeding disorders, liver disease and red cell production within the circulatory system, Haematocrit also shows the oxygen carrying capacity of blood.

Blood contains several different types of cells. Haematocrit describes the volume of red cells in the blood it is shown as a percentage of the total blood.

High, bone marrow disorder, blood disease, dengue fever, dehydration, lung disease (COPD), AAS use, shock.

Low, low blood oxygen, anaemia, haemorrhage, heavy bleeding with menstruation, HodgkinTMs lymphoma, heart failure, chronic kidney disease, leukaemia, toxins.

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Lymphocytes

Result LL 0.95
Range x10⁹/L 1.20 - 3.65

Lymphocytes are a type of white blood cell (leukocyte) that is of fundamental importance in the immune system. Lymphocytes are the cells that determine the specificity of the immune response to infectious microorganisms (viruses, bacteria, fungal, parasitic), tumours and other foreign substances). In adults, lymphocytes make up roughly 20-40 percent of the total number of white blood cells. They are found in the circulation and also are concentrated in central lymphoid organs and tissues (spleen, thymus, tonsils and lymph nodes) where the initial immune response is likely to occur. Are three types, B-lymphocytes, T-lymphocytes, and Natural killer cells.

High, (lymphocytosis) acute viral infections (chicken pox, rubella, cytomegalovirus, Epstein-Barr virus (glandular fever), measles, herpes, certain bacterial infections (whooping cough), tuberculosis, toxoplasmosis (parasite), colitis, lymphocytic leukaemia, lymphoma, stress, chicken pox, neutropenia, Crohns disease, AddisonTMs disease, hepatitis. Low (lymphocytopenia) Autoimmune disorders (lupus, rheumatoid arthritis), infections (HIV, viral hepatitis, typhoid fever, influenza), bone marrow damage (chemotherapy, radiation therapy), malnutrition, HodgkinTMs lymphoma disease. A false low can be because of marijuana use, mercury poisoning, food allergies, severe hypothyroidism, corticosteroids use

C. K

Result H 902
Range U/l 39.0 - 380.0

CK is elevated in cardiac conditions, muscular dystrophy, muscle damage/degeneration, brain damage/inflammation, and strenuous exercise, also other conditions include hypoparathyroidism, oedema, and influenza.

CPK isoenzymes are broken down into three (3) categories:

1. CK:MM - derived from skeletal muscle.
2. CK: MB - derived from heart muscle.
3. CK:BB - derived from brain and nerve tissue and may also be a useful marker for prostate, breast, ovarian, colon, lung, and digestive tract cancers.

High, when total CK level is remarkably high, it usually means there has been injury or stress to muscle tissue, heart, or brain. This can include heart attack, heart muscle inflammation, heart injury, muscular dystrophy, brain injury, convulsions, electric shock.

False high, excessive alcohol intake, high protein diet, strenuous exercise.

Low, of no importance.

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Transferrin Saturation

Result H 51
Range % 20 - 50

Transferrin saturation, measured as a percentage, is a medical laboratory value. It is the value of serum iron divided by the total iron-binding capacity. Of the transferrin that is available to bind iron, this value tells a clinician how much serum iron is bound. For instance, a value of 15% means that 15% of iron-binding sites of transferrin are being occupied by iron.

High, Chronic infections, renal disease, protein deficiency, acquired liver disease, malnutrition, genetic deficiency, hereditary, iron-overload.
Low, Iron-deficiency anaemia, Estrogen therapy, pregnancy

Urea

Result H 9.3
Range mmol/l 2.50 - 7.8

Urea/Uric acid is a waste product from protein digestion the ash of protein digestion it is stored in the kidneys, hence there is an increase along with BUN in kidney problems but also liver issues.

High. Heavy metals, liver dysfunction, kidney dysfunction, cancer, pernicious anaemia, hyperthyroidism, diabetes, heart failure, hypertension and to some degree low testosterone.
Also, dehydration.

Low, levels are not common and are not usually a cause for concern. They can be seen in severe liver disease or malnutrition but are not used to diagnose or monitor these conditions.

HDL Cholesterol ratio

Result H 4.04
Range ratio < 4.0

This is the amount of HDL as a percentage of the total cholesterol.

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LH

Result L < 0.1
Range IU/l 1.70 - 8.60

Luteinizing hormone is released by the pituitary and stimulates hormone production via the Leydig cells in the testes.

FSH

Result L < 0.3
Range IU/l 1.50 - 12.40

The FSH blood test measures the level of FSH in blood. FSH is a hormone released by the pituitary gland, located on the underside of the brain. In women FSH helps control the menstrual cycle and the production of eggs by the ovaries. The amount of FSH varies throughout the woman™s menstrual cycle and is highest just before she releases an egg (ovulates)

In men, FSH helps control the production of sperm. The amount in men normally remains constant. Follicle stimulating hormone is released by the pituitary and stimulates sperm production via the Sertoli cells in the testes.

High, (women)during or after menopause, including premature menopause, when receiving hormone therapy, tumour in the pituitary gland, turner™s syndrome.

High (men), advancing age, (male menopause), damage to testicles (chemotherapy or radiation) treatment with hormones, tumours in pituitary gland.

Low (women) pregnancy, being very underweight, not ovulating, the pituitary gland or hypothalamus not producing normal amounts of some or all its hormones. Low (men) low sperm count AAS usage.

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SHBG

Result L 16.59
Range nmol/l 20.60 - 76.70

The Sex Hormone Binding Globulin (SHBG) test measures the amount of SHBG in the blood. SHBG is a protein that is produced by the liver. SHBG binds tightly to the hormones testosterone, dihydrotestosterone (DHT), and oestradiol (an oestrogen) and transports them in the blood in an inactive form. The amount of SHBG in the circulation is affected by age and sex, by decreased or increased testosterone or oestrogen production.

High, liver disease, hyperthyroidism, eating disorders (anorexia) Estrogen use (HRT) and oral contraceptives, hypogonadism.

False high, statin drugs, beta blockers, antifungals, hair loss drugs, antidepressants

Low, obesity, polycystic ovarian syndrome (PCOS) hypothyroidism, hirsutism, AAS use, acne, Cushing disease.

Vitamin B12

Result H 1274
Range pmol/l 180 - 700

A complex organic substance not produced by the body, but is essential for health, particularly the proper formation of RBCTMs and tissues.

High is uncommon, but could possibly be blood disease, leukaemia, liver disease or excess supplementation.

Low could be anaemia, pernicious anaemia, overactive thyroid, poor diet, intestinal mal absorption.