



41 BIO MARKERS

WHAT'S INCLUDED?

ALPHAGENIX - OUR ADVANCED TRT HORMONE SCREENING

CHOLESTEROL STATUS

TOTAL CHOLESTEROL
LDL CHOLESTEROL
NON - HDL CHOLESTEROL
HDL CHOLESTEROL
TOTAL CHOLESTEROL : HDL
TRIGLYCERIDES

IRON STATUS

FERRITIN

RED BLOOD CELLS

HAEMOGLOBIN
HAEMATOCRIT
RED CELL
COUNT
MCV
MCH
MCHC
RDW

KIDNEY HEALTH

CREATININE
EGFR

CLOTTING STATUS

PLATELET COUNT

LIVER HEALTH

ALP
ALT
GAMMA GT

THYROID HORMONES

TSH
FREE T3
FREE THYROXINE

DIABETES

HBA1C

HORMONES

FSH
LH
OESTRADIOL
TESTOSTERONE
FREE TESTOSTERONE - CALC
PROLACTIN

PROSTATE

PSA - TOTAL

PROTEINS

TOTAL PROTEIN
ALBUMIN
GLOBULIN
SHBG

WHITE BLOOD CELLS

WHITE CELL COUNT
NEUTROPHILS
LYMPHOCYTES
MONOCYTES
EOSINOPHILS
BASOPHILS



BIO MARKERS

EXPLAINED:

ALPHAGENIX - THE ADVANCED HORMONE MARKERS

FSH

FOLLICLE STIMULATING HORMONE (FSH) IS PRODUCED IN THE PITUITARY GLAND AND IS IMPORTANT FOR MEN FOR MEN IN THE PRODUCTION OF SPERM. IN MEN, FSH ACTS ON THE SEMINIFEROUS TUBULES OF THE TESTICLES WHERE THEY STIMULATE IMMATURE SPERM CELLS TO DEVELOP INTO MATURE SPERM.

LH

LUTEINISING HORMONE (LH) IS PRODUCED BY THE PITUITARY GLAND AND IS IMPORTANT FOR MALE FERTILITY. IN MEN IT STIMULATES THE PRODUCTION OF TESTOSTERONE.

OESTRADIOL

OESTRADIOL IS A FEMALE STEROID HORMONE, PRODUCED IN THE OVARIES OF WOMEN AND TO A MUCH LESSER EXTENT IN THE TESTES OF MEN.

TESTOSTERONE

TESTOSTERONE IS A HORMONE THAT CAUSES MALE CHARACTERISTICS. FOR MEN, IT HELPS TO REGULATE SEX DRIVE AND HAS A ROLE IN CONTROLLING BONE MASS, FAT DISTRIBUTION, MUSCLE MASS, STRENGTH AND THE PRODUCTION OF RED BLOOD CELLS AND SPERM. TESTOSTERONE IS PRODUCED IN THE TESTICLES OF MEN. TESTOSTERONE LEVELS IN MEN NATURALLY DECLINE AFTER THE AGE OF 30, ALTHOUGH LOWER THAN NORMAL LEVELS CAN OCCUR AT ANY AGE AND CAN CAUSE LOW LIBIDO, ERECTILE DYSFUNCTION, DIFFICULTY IN GAINING AND MAINTAINING MUSCLE MASS AND LACK OF ENERGY. ALTHOUGH WOMEN HAVE MUCH LOWER AMOUNTS OF TESTOSTERONE THAN MEN, IT IS IMPORTANT FOR MUCH THE SAME REASONS, PLAYING A ROLE IN LIBIDO, THE DISTRIBUTION OF MUSCLE AND FAT AND THE FORMATION OF RED BLOOD CELLS. ALL LABORATORIES WILL SLIGHTLY DIFFER IN THE REFERENCE RANGES THEY APPLY BECAUSE THEY ARE BASED ON THE POPULATION THEY ARE TESTING. THE NORMAL RANGE IS SET SO THAT 95% OF MEN WILL FALL INTO IT. FOR GREATER CONSISTENCY, WE USE THE GUIDANCE FROM THE BRITISH SOCIETY FOR SEXUAL MEDICINE (BSSM) WHICH ADVISES THAT LOW TESTOSTERONE CAN BE DIAGNOSED WHEN TESTOSTERONE IS CONSISTENTLY BELOW THE REFERENCE RANGE, AND THAT LEVELS BELOW 12 NMOL/L COULD ALSO BE CONSIDERED LOW, ESPECIALLY IN MEN WHO ALSO REPORT SYMPTOMS OF LOW TESTOSTERONE OR WHO HAVE LOW LEVELS OF FREE TESTOSTERONE.

FREE TESTOSTERONE - CALC

MOST TESTOSTERONE CIRCULATING IN THE BLOOD IS BOUND TO PROTEINS, IN PARTICULAR SHBG AND ALBUMIN; ONLY 2-3 % OF TESTOSTERONE IS FREE AND AVAILABLE TO CELLS. THIS TEST USES AN ALGORITHM TO CALCULATE THE LEVEL OF FREE OR UNBOUND TESTOSTERONE IN RELATION TO TOTAL TESTOSTERONE, SHBG AND ALBUMIN.

PROLACTIN

PROLACTIN IS A HORMONE WHICH IS PRODUCED IN THE PITUITARY GLAND AND PLAYS A ROLE IN REPRODUCTIVE HEALTH.



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CHOLESTEROL STATUS

CHOLESTEROL IS AN ESSENTIAL FAT (LIPID) IN THE BODY. ALTHOUGH IT HAS A BAD REPUTATION IT HAS SOME IMPORTANT FUNCTIONS, INCLUDING BUILDING CELL MEMBRANES AND PRODUCING A NUMBER OF ESSENTIAL HORMONES INCLUDING TESTOSTERONE AND OESTRADIOL

CLOTTING STATUS

PLATELETS OR CLOTting CELLS ARE THE SMALLEST TYPE OF BLOOD CELL. THEY ARE FORMED IN THE BONE MARROW AND ARE IMPORTANT IN BLOOD CLOTting. WHEN BLEEDING OCCURS, THE PLATELETS SWELL, CLUMP TOGETHER AND FORM A STICKY PLUG (A CLOT) WHICH HELPS STOP THE BLEEDING.

DIABETES

HAEMOGLOBIN A1C (HBA1C), ALSO KNOWN AS GLYCATED HAEMOGLOBIN, IS A LONGER TERM MEASURE OF GLUCOSE LEVELS IN YOUR BLOOD THAN A SIMPLE BLOOD GLUCOSE TEST. GLUCOSE ATTACHES ITSELF TO THE HAEMOGLOBIN IN YOUR RED BLOOD CELLS, AND AS YOUR CELLS LIVE FOR AROUND 12-16 WEEKS, IT GIVES US A GOOD INDICATION OF THE AVERAGE LEVEL OF SUGAR IN YOUR BLOOD OVER A 3 MONTH PERIOD.



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IRON STATUS

FERRITIN IS A PROTEIN WHICH STORES IRON IN YOUR CELLS AND TISSUES. USUALLY, THE BODY INCORPORATES IRON INTO HAEMOGLOBIN TO BE TRANSPORTED AROUND THE BODY, BUT WHEN IT HAS A SURPLUS, IT STORES THE REMAINING IRON IN FERRITIN FOR LATER USE. MEASURING FERRITIN LEVELS GIVES US A GOOD INDICATION OF THE AMOUNT OF IRON STORED IN YOUR BODY.

KIDNEY HEALTH

CREATININE IS AN ACCURATE MARKER OF KIDNEY FUNCTION, AND MAY HELP IN DIAGNOSING KIDNEY DISEASE. EGFR ASSESSES HOW WELL THE KIDNEYS ARE WORKING BY ESTIMATING THE AMOUNT OF BLOOD FILTERED THROUGH THE KIDNEYS. THE GLOMERULI ARE TINY FILTERS IN THE KIDNEYS RESPONSIBLE FOR REMOVING WASTE PRODUCTS. IF THESE FILTERS DO NOT DO THEIR JOB PROPERLY, KIDNEY FUNCTION CAN BE IMPAIRED.

LIVER HEALTH

THE LIVER REGULATES MOST CHEMICAL LEVELS IN THE BLOOD AND EXCRETES A PRODUCT CALLED BILE. THIS HELPS CARRY AWAY WASTE PRODUCTS FROM THE LIVER. ALL THE BLOOD LEAVING THE STOMACH AND INTESTINES PASSES THROUGH THE LIVER. THE LIVER PROCESSES THIS BLOOD AND BREAKS DOWN, BALANCES, AND CREATES THE NUTRIENTS AND ALSO METABOLIZES DRUGS INTO FORMS THAT ARE EASIER TO USE FOR THE REST OF THE BODY OR THAT ARE NONTOXIC.

PROSTATE

PROSTATE SPECIFIC ANTIGEN (PSA) IS A PROTEIN WHICH IS RELEASED INTO THE BLOOD BY THE PROSTATE GLAND. PROSTATE CANCER CAN RAISE PSA LEVELS BUT A PSA TEST IN ISOLATION IS NOT TO BE RELIED UPON TO DIAGNOSE PROSTATE CANCER, AS LEVELS CAN BE RAISED IN BENIGN PROSTATE DISORDERS (A FALSE POSITIVE). THERE IS ALSO THE POTENTIAL FOR PSA LEVELS TO BE NORMAL DESPITE THE PRESENCE OF PROSTATE CANCER, THIS IS CALLED A FALSE NEGATIVE.



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ALPHAGENIX - OUR ADVANCED TRT HORMONE SCREENING

PROTEINS

TOTAL PROTEIN REPRESENTS THE SUM OF THE PROTEINS ALBUMIN AND GLOBULIN IN YOUR BLOOD.. ALBUMIN IS A PROTEIN WHICH IS MADE MAINLY IN THE LIVER. GLOBULIN IS AN UMBRELLA TERM FOR A SET OF DIFFERENT PROTEINS THAT THE IMMUNE SYSTEM AND THE LIVER PRODUCE. CERTAIN GLOBULINS BIND WITH HAEMOGLOBIN WHILE OTHERS TRANSPORT METALS, SUCH AS IRON, IN THE BLOOD. SHBG (SEX HORMONE BINDING GLOBULIN) IS A PROTEIN WHICH TRANSPORTS THE SEX HORMONES (TESTOSTERONE, OESTROGEN AND DIHYDROTESTOSTERONE (DHT)) IN THE BLOOD.

RED BLOOD CELLS

RED BLOOD CELLS (RBC), ARE THE FUNCTIONAL COMPONENT OF BLOOD RESPONSIBLE FOR THE TRANSPORTATION OF GASES AND NUTRIENTS THROUGHOUT THE HUMAN BODY. THEIR UNIQUE SHAPE AND COMPOSITION ALLOW FOR THESE SPECIALIZED CELLS TO CARRY OUT THEIR ESSENTIAL FUNCTIONS.

THYROID HORMONES

THE THYROID GLAND RELEASES TRIIODOTHYRONINE (T3) AND THYROXINE (T4). THESE HORMONES PLAY AN IMPORTANT ROLE IN REGULATION OF YOUR WEIGHT, ENERGY LEVELS, INTERNAL TEMPERATURE, SKIN, HAIR, NAIL GROWTH, METABOLISM AND IS AN IMPORTANT PART OF THE ENDOCRINE SYSTEM.

WHITE BLOOD CELLS

WHITE BLOOD CELL (WBC) COUNT MEASURES THE NUMBER OF WHITE BLOOD CELLS IN THE BLOOD. WHITE BLOOD CELLS ARE KEY TO YOUR BODY'S IMMUNE SYSTEM. THEY FIGHT INFECTIONS AND PROTECT YOUR BODY FROM FOREIGN INVADERS SUCH AS HARMFUL GERMS AND BACTERIA. ADDITIONALLY, THEY PRODUCE MANY ANTIBODIES AND MEMORY CELLS TO PROTECT YOU FROM FURTHER INFECTIONS WITH THE SAME GERM.