

BIOCHEMISTRY PROFILES

BIOCHEMISTRY, which is also known as clinical chemistry, is the area concerned with the analysis of bodily fluids (urine, blood etc.) to determine the presence/activity of defined molecules. Biochemistry tests may be sub-categorized into:

1. General biochemistry
2. Endocrinology
3. Immunology
4. Pharmacology

This section includes general biochemistry profiles to provide information for the following conditions / organs:

MYELOMA is a hematological malignancy (blood cancer) of plasma cells (cells of the immune system) in bone marrow that produce antibodies. Testing for Myeloma may be performed to diagnose the disease, monitor disease progression / effectiveness of treatment or detect any possible complications.

DIABETES is a condition characterized by hyperglycemia (high blood sugar). This is usually due to insufficient levels of insulin. Common symptoms include: polyuria (excessive urine production), polydipsia (increased thirst) and vision problems. Currently there exist three main forms of Diabetes:

1. Type I
2. Type II
3. Gestational Diabetes

OSTEOPOROSIS is a condition where bones become softer thus increasing the chances of bone fracture. Osteoporosis is more common in post-menopausal women but it may also develop in men. In addition, osteoporosis may arise as a result of certain drug therapies (e.g. steroids) or in the presence of hormonal disorders.

LIVER FUNCTION tests are performed to aid in the diagnosis of liver diseases such as hepatitis, cirrhosis and cancer amongst others. These tests include liver enzymes, bilirubin and total protein to name a few.

LIPID PROFILE tests are performed to determine a persons risk for coronary heart disease. These tests will help determine whether someone is at risk of having blocked blood vessels that can lead to a heart attack or a stroke. These tests include total cholesterol, HDL (referred to as the good cholesterol), LDL (referred to as the bad cholesterol) and triglycerides. Based on the results the atherogenic ratio is calculated to determine risk of atherogenesis.

BIOCHEMISTRY

Useful Websites for additional Information:

1. For more information on Myeloma visit the Multiple Myeloma Research Foundation at: <http://www.multiplemyeloma.org/>
2. For more information on Diabetes visit the American Diabetes Association at: <http://www.diabetes.org/about-diabetes.jsp>
3. For more information on osteoporosis and bone health visit the National Osteoporosis foundation at: <http://www.nof.org/>
4. For more information on liver diseases visit MedlinePlus at: <http://www.nlm.nih.gov/medlineplus/liverdiseases.html>
5. For more information on specific lab tests visit Lab tests online at: <http://www.labtestsonline.org/understanding/index.html>

CCC BIOMEDICAL LABORATORY

BIOCHEMISTRY PROFILES

MYELOMA SCREEN

FBC and ESR
Biochemistry Profile
Protein Electrophoresis
Immunoglobulins
(IgA, IgG, IgM)
Bence-Jones Protein

BONE SCREEN

Urea and Electrolytes
Alkaline Phosphatase
Total Protein
Albumin
Globulin
Calcium
24 hour urinary calcium
24 hour urinary
phosphate

LIVER FUNCTION TESTS 1

ALP (Αλκ. Φωσφατάση)
SGTP (ALT)
SGOT (AST)
γGT
T. BILIRUBIN (Χολερυθρίνη)
BILIRUBIN DIRECT
INDIRECT BILIRUBIN

DIABETIC PROFILE

Glucose
Glycosylated Hb
Microalbumin

OSTEOPOROSIS SCREEN

Alkaline Phosphatase
Calcium
Albumin
Phosphate
Serum Crosslaps
Vitamin D (25 OH)

LIVER FUNCTION TESTS 2

ALP (Αλκ. Φωσφατάση)
SGTP (ALT)
SGOT (AST)
γGT
T. BILIRUBIN (Χολερυθρίνη)
BILIRUBIN DIRECT
INDIRECT BILIRUBIN
PROTEIN
ALBUMIN
GLOBULIN
LDH

IRON STATUS

Iron
Total Iron Binding Capacity
Ferritin

LIPID PROFILE

CHOLESTEROL
(Χοληστερόλη)
HDL-CHOLESTEROL
LDL-CHOLESTEROL
TRIGLYCERIDES (Τριγλυκ.)
ATHEROGENIC RATIO