GENOVA DIAGNOSTICS

Directory of Laboratory Testing Services

2015 Edition

GENOVA DIAGNOSTICS®

About Genova Diagnostics

Headquartered in Asheville, N.C., Genova Diagnostics is a global specialty clinical laboratory, pioneering a systems approach that supports healthcare providers in the personalized treatment and prevention of chronic disease.

Chronic diseases are often complex and Genova's system-based testing helps physicians develop targeted treatments for their patients. Easy-to-read color graphic reports synthesize test results into actionable information and facilitate physician-patient communication. The internationally renowned lab is committed to the highest standards and has a team of medical experts who provide consultation to healthcare professionals, as well as a robust array of educational resources, ensuring that physicians order the right tests for their patients.

Please visit www.gdx.net for the most up-to-date information and additional resources.

KEY

*	Not available in New York
~	Not reimbursable by Medicare
‡	ABN required
°	Not available in Ohio
TAT	Turn-around time

Test Components are not offered separately

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GASTROINTESTINAL IMMUNOLOGY

GASTROINTESTINAL/IMMUNOLOGY TESTING

2200 GI Effects® Comprehensive Profile*

Description:

GI Effects® Stool Analysis Profiles identifies 24 commensal bacteria targets using DNA (PCR) technology. Culture based technology is used for assessment of bacteria and yeast. Markers of digestion, inflammation and absorption are also included. Parasitology is done by microscopic exam and EIA. Pathogens (C. difficile, H. pylori, Shiga toxin E. coli, and Campylobacter spp.) are available as EIA add-ons.

Specimen Type:

Stool

TAT:

17 days

Method:

GC/MS, DNA analysis, Automated Chemistry, EIA, Microscopy

Biomarkers Reported:

See Page 22 - 23

Add-on Profiles

See Page 18 - 21

*Not currently available in New York

GI fx GI Effects Stool Profiles

Comprehensive Profile

CPTs

Description	CPT #
DNA NOS Amplified Probe	87798 x24
Assay Test for Blood, Fecal	82274
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Parasitology Identification, Concentrate	87177
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Cryptosporidium, EIA	87328
Entamoeba histolytica, EIA	87336
Giardia lamblia, EIA	87329
Calprotectin	83993
Eosinophil Protein X (EPX)	83520
Bacteriology, Aerobic	87045
Bacteriology, Aerobic	87046 x3
B-Glucuronidase	84311
Bacteriology, Anaerobic	87075
Yeast Culture	87102

2205 GI Effects® Microbial Ecology Profile*

Description:

GI Effects™ Stool Analysis Profiles use DNA analysis to identify commensal bacteria plus yeast and fungi. Parasitology is done by microscopic exam and EIA. Pathogens (C. difficile, H. pylori, Shiga toxin E. coli, and Campylobacter spp.) are available as EIA add-ons.

Specimen Type:

Stool

TAT:

17 days

Method:

DNA analysis, EIA, Microscopy

Biomarkers Reported:

See Page 22 - 23

Add-on Profiles

See Page 18 - 21

GI fx GI Effects Stool Profiles

Microbiology Profile

CPTs

Description	CPT #
DNA NOS Amplified Probe	87798 x 24
Parasitology Identification, Concentrate	87177
Parasitology Identification, Trichrome Stain	87209
Cryptosporidium, EIA	87328
Entamoeba histolytica, EIA	87336
Giardia lamblia, EIA	87329
Bacteriology, Aerobic	87045
Bacteriology, Aerobic	87046 x 3
Bacteriology, Anaerobic	87075
Yeast Culture	87102

*Not currently available in New York

CDSA 2.0™

Description:

Evaluates digestion, absorption, inflammation, gut flora, and the colonic environment. This profile is indicated for all chronic GI problems, for acute bowel pattern changes, and for many systemic diseases and provides a sensitivity panel for treating pathogenic flora.

Comprehensive noninvasive risk assessment for differential diagnosis between inflammatory bowel disease and irritable bowel syndrome, reliable assessment of exocrine pancreatic function.

Specimen Type:

Stool

TAT:

14 days

Method:

Standard Bacteriology Culture MALDI-TOF, Automated Biochemical ID, Enzymatic, GC-MS, EIA, Microscopic, GC-FID, Standard Mycology Culture, ISE

Biomarkers Reported:

See Page 22 - 23

Add-on Profiles

See Page 18 - 21

CPTs

Description	CPT #
Beta-Glucuronidase*	84311
pH, Stool	83986
Short Chain Fatty Acids, Stool	82492
Bacteriology, Aerobic	87045
Bacteriology, Aerobic	87046x3
Bacteriology, Anaerobic	87075
Yeast Culture	87102
Bile Acids	82239
Pancreatic Elastase	82656
Calprotectin	83993
Eosinophil Protein X	83520

*Not Available in New York

CDSA/P 2.0™

Description:

Evaluates digestion, absorption, inflammation, gut flora, and the colonic environment, and evaluates for parasites using microscopic examination and EIA testing. The profile is indicated for all chronic GI problems, for acute bowel pattern changes, and for many systemic diseases and provides a sensitivity panel for treating pathogenic flora.

Comprehensive noninvasive risk assessment for differential diagnosis between inflammatory bowel disease and irritable bowel syndrome, reliable assessment of exocrine pancreatic function.

Specimen Type:

Stool

TAT:

14 days

Method:

Standard Bacteriology Culture MALDI-TOF, Automated Biochemical ID, Enzymatic, GC-MS, EIA, Microscopic, GC-FID, Standard Mycology Culture, ISE

Biomarkers Reported:

See Page 22 - 23

Add-on Profiles

See Page 18 - 21

CDSA 2.0™ WITH PARASITOLOGY

CPTs

Description	CPT #
Beta-Glucuronidase*	84311
pH, Stool	83986
Short Chain Fatty Acids, Stool	82492
Bacteriology, Aerobic	87045
Bacteriology, Aerobic x 3	87046x3
Bacteriology, Anaerobic	87075
Yeast Culture	87102
Bile Acids	82239
Pancreatic Elastase	82656
Calprotectin	83993
Eosinophil Protein X	83520
Parasitology Identification, Concentrate	87177
Parasitology Identification, Trichrome Stain	87209
Giardia lamblia EIA	87329
Cryptosporidium EIA	87328
Entamoeba histolytica EIA	87336

CDSA™ (Comprehensive Digestive Stool Analysis) w/o Parasitology

Description:

Evaluates digestion and absorption, bacterial balance and metabolism, yeast and immune status. For patients with irritable bowel syndrome, indigestion, malabsorption, and other GI-related problems.

Stool exam for triglycerides, chymotrypsin, putrefactive SCFAs, meat and vegetable fibers, long chain fatty acids, cholesterol, total fecal fat, total short chain fatty acids, n-butyrate, short chain fatty acid distribution, beta glucuronidase, pH, bacterial and yeast cultures, and sensitivities as appropriate.

Specimen Type:

Stool

TAT:

14 days

Method:

Standard Bacteriology Culture MALDI-TOF, Automated Biochemical ID, Enzymatic, GC-FID, Standard Mycology Culture, ISE

Biomarkers Reported:

See Page 22 - 23

Add-on Profiles

See Page 18 - 21

CDSA™

CPTs

Description	CPT #
Phospholipids	82715
Triglycerides, Stool	82715
Chymotrypsin, Stool	84311
Meat Fibers	89160
Long Chain Fatty Acids, Stool	82725
Cholesterol, Stool	82715
Beta-Glucuronidase	84311
pH, Stool	83986
Short Chain Fatty Acids, Stool	82492
Fecal Lactoferrin	83630
Occult Blood	82274
Yeast Culture	87102
Bacteriology, Aerobic	87045
Bacteriology, Aerobic x 3	87046x3
Bacteriology, Anaerobic	87075

CDSA/P™ (Comprehensive Digestive Stool Analysis/Parasitology)

Description:

Evaluates digestion, absorption, gut flora, and the colonic environment, and evaluates for parasites using microscopic examination and EIA testing. The profile is indicated for all chronic GI problems, for acute bowel pattern changes, and for many systemic diseases and provides a sensitivity panel for treating pathogenic flora.

Stool exam for triglycerides, chymotrypsin, putrefactive SCFAs, meat and vegetable fibers, long chain fatty acids, cholesterol, total fecal fat, total short chain fatty acids, n-butyrate, short chain fatty acid distribution, beta glucuronidase, pH, bacterial and yeast cultures, sensitivities as appropriate, microscopic parasite exam, EIA for E. histolytica, Giardia, and Cryptosporidium.

Specimen Type:

Stool

TAT:

14 days

Method:

Standard Bacteriology Culture MALDI-TOF, Automated Biochemical ID, Enzymatic, GC-MS, EIA, Microscopic, GC-FID, Standard Mycology Culture, ISE

Biomarkers Reported:

See Page 22 - 23

Add-on Profiles

See Page 18 - 21

CDSA™
WITH PARASITOLOGY

CPTs

Description	CPT #
Phospholipids	82715
Triglycerides, Stool	82715
Chymotrypsin, Stool	84311
Meat Fibers	89160
Long Chain Fatty Acids, Stool	82725
Cholesterol, Stool	82715
Beta-Glucuronidase	84311
pH, Stool	83986
Short Chain Fatty Acids, Stool	82492
Fecal Lactoferrin	83630
Occult Blood	82274
Yeast Culture	87102
Bacteriology, Aerobic	87045
Bacteriology, Aerobic x 3	87046x3
Bacteriology, Anaerobic	87075
Parasitology Identification, Concentrate	87177
Parasitology Identification, Trichrome Stain	87209
Giardia lamblia EIA	87329
Cryptosporidium EIA	87328
Entamoeba histolytica EIA	87336

Microbiology Analysis

Description:

Evaluates stool for levels of beneficial flora, imbalanced flora, yeast, and pathogenic bacteria. Fecal bacteria and yeast cultures, sensitivities as appropriate.

Specimen Type:

Stool

TAT:

14 days

Method:

Standard Bacteriology Culture MALDI-TOF, Automated Biochemical ID,

Biomarkers Reported:

Bacteriology Culture, aerobic

Bacteriology Culture, anaerobic

Yeast Culture

Add-on Profiles

See Page 18 - 21

Microbiology Analysis

GASTROINTESTINAL

CPTs

Description	CPT #
Bacteriology, Aerobic	87045
Bacteriology, Aerobic x 3	87046
Bacteriology, Anaerobic	87075
Yeast Culture	87102

Parasitology

Description:

Evaluates stool for the presence of parasites, using microscopic examination. Indicated for patients with sudden changes in bowel pattern, especially for those who have been traveling abroad or camping.

Fecal Microscopic exam, with or without EIA for *E. Histolytica*, *Giardia lamblia*, and *Cryptosporidium*.

Specimen Type:

Stool

TAT:

10 days

Method:

EIA, Microscopy

Biomarkers Reported:

Parasite Identification, Concentrate Prep

Parasite Identification, Trichrome Stain

Cryptosporidium EIA

Giardia lamblia EIA

Macroscopic worms

Add-on Profiles

See Page 18 - 21

Parasitology
GASTROINTESTINAL

CPTs

Description	CPT #
Parasitology Identification, Concentrate	87177
Parasitology Identification, Trichrome Stain	87209
Cryptosporidium EIA	87328
Giardia lamblia EIA	87329
Marcoscopic Exam for Worms	87328

Comprehensive Parasitology Profile (CP)

Description:

Evaluates stool for presence of parasites and levels of beneficial flora, imbalanced flora, pathogenic bacteria, and yeast. Fecal bacterial and yeast cultures, sensitivities as appropriate, microscopic parasite exam, EIA for E. histolytica, Giardia and Cryptosporidium.

Specimen Type:

Stool

TAT:

14 days

Method:

Standard Bacteriology Culture MALDI-TOF, Automated Biochemical ID, EIA, Microscopic, Standard Mycology Culture

Biomarkers Reported:

Microbiology

Bacteriology Culture, aerobic

Bacteriology Culture, anaerobic

Yeast Culture

Prescriptive Antibiotic Susceptibility

Natural Agent Growth Inhibitors

Parasitology

Parasite Identification, Concentrate Prep

Parasite Identification, Trichrome Stain

Cryptosporidium EIA

Entamoeba histolytica EIA

Giardia lamblia EIA

Add-on Profiles

See Page 18 - 21

Comprehensive Parasitology
GASTROINTESTINAL

CPTs

Description	CPT #
Bacteriology, Aerobic	87045
Bacteriology, Aerobic	87046x3
Bacteriology, Anaerobic	87075
Parasitology Identification, Concentrate	87177
Parasitology identification, Trichrome Stain	87209
Giardia lamblia EIA	87329
Cryptosporidium EIA	87328
Entamoeba histolytica EIA	87336
Yeast Culture	87102

Intestinal Permeability Assessment

Description:

Analyzes urine for the clearance of two non-metabolized sugars, lactulose and mannitol. Identifies "leaky gut" and malabsorption.

A measurement of urinary clearance of the challenge substances lactulose and mannitol, and lactulose/mannitol ratio, to assess increased intestinal permeability or malabsorption.

Specimen Type:

Urine

TAT:

7 days

Method:

Kinetic (Jaffe), Enzymatic

Biomarkers Reported:

Lactulose

Mannitol

Lactulose/Manitol Ratio

Intestinal Permability

GASTROINTESTINAL

CPTs

Description	CPT #
Lactulose % Recovery	84378
Mannitol % Recovery	84378

Bacterial Overgrowth of the Small Intestine Breath Test

Description:

This simple, non-invasive test detects bacterial overgrowth in the small intestine, a common condition that often underlies chronic symptoms of maldigestion and malabsorption, including bloating, gas, diarrhea, irregularity, and abdominal pain.

Reports total levels of Hydrogen, Methane, and Hydrogen + Methane. Graphs Hydrogen + Methane (in ppm) levels plotted over 120 minutes.

Specimen Type:

Breath

TAT:

10 days

Method:

GC-TDC, SSS

Biomarkers Reported:

Hydrogen

Methane

Bacterial Overgrowth

GASTROINTESTINAL

CPTs

Description	CPT #
Hydrogen, Breath Test	91065

Lactose Intolerance Breath Test

Description:

This simple, non-invasive test detects lactose intolerance, a condition affecting more than 50 million Americans. Proper detection enables effective treatment of lactose maldigestion and malabsorption, to help alleviate chronic symptoms of bloating, gas, diarrhea, and abdominal pain.

Reports total levels of Hydrogen, Methane, and Hydrogen +Methane. Graphs Hydrogen + Methane (in ppm) levels plotted over 3 hours.

Specimen Type:

Breath

TAT:

10 days

Method:

GC-TDC, SSS

Biomarkers Reported:

Hydrogen

Methane

Lactose Intolerance
GASTROINTESTINAL

CPTs

Description	CPT #
Hydrogen, Breath Test	91065

Calprotectin

Description:

Calprotectin is a highly sensitive biomarker for evaluating inflammation of the gastrointestinal tract. Calprotectin is FDA-cleared for differentiating Irritable Bowel Syndrome (IBS) from Inflammatory Bowel Disease (IBD). Fecal Calprotectin has been shown in the literature to be a useful, non-invasive screening tool to help identifying which patients may need endoscopy for suspected IBD.

Specimen Type:

Stool

TAT:

7 days

Method:

EIA

Biomarkers Reported:

Calprotectin

Calprotectin
GASTROINTESTINAL

CPTs

Description	CPT #
Calprotectin, fecal	83993

Cryptosporidium EIA

Description:

Tests for the antigen specific to the protozoan pathogen, Cryptosporidium.

Specimen Type:

Stool

TAT:

7 days

Method:

EIA

Biomarkers Reported:

Cryptosporidium

Cryptosporidium EIA
GASTROINTESTINAL

CPTs

Description	CPT #
Cryptosporidium EIA	87328

Eosinophil Protein X

Description:

As a non-invasive marker, Eosinophil Protein X reflects IgE-mediated inflammation. Fecal EPX elevations can be associated with several conditons including IBD, IgE-mediated food allergies, parasite or worm infections and collagenous colitis.

Specimen Type:

Stool

TAT:

7 days

Method:

EIA

Biomarkers Reported:

Eosinophil Protein X

Eosinophil Protein X
GASTROINTESTINAL

CPTs

Description	CPT #
Eosinophil Protein X	83520

Fecal Lactoferrin

Description:

Lactoferrin is a glycopotein expressed by activated neurophils that serves as a marker of gastrointestinal inflammation.

Specimen Type:

Stool

TAT:

14 days

Method:

EIA

Biomarkers Reported:

Fecal Lactoferrin

Fecal Lactoferrin

GASTROINTESTINAL

CPTs

Description	CPT #
Lactoferrin, fecal	83630

Giardia lamblia EIA*

Description:

Tests for the antigen specific to the protozoan pathogen, Giardia lamblia.

Specimen Type:

Stool

TAT:

14 days

Method:

EIA

Biomarkers Reported:

Giardia lamblia

Giardia lamblia EIA

GASTROINTESTINAL

CPTs

Description	CPT #
Giardia lamblia EIA	87329

*Not currently available in New York

Gut Immunology

Description:

Evaluates immunological imbalance specific to gastrointestinal tract inflammatory disease activity.

Calprotectin is FDA-cleared for differentiating Irritable Bowel Syndrome (IBS) from Inflammatory Bowel Disease (IBD). Eosinophil Protein X reflects IgE-mediated inflammation. Fecal EPX elevations can be associated with several conditons including IBD, IgE-mediated food allergies, parasite or worm infections and collagenous colitis.

Specimen Type:

Stool

TAT:

7 days

Method:

EIA

Biomarkers Reported:

Calprotectin

Eosinophil Protein X

GI Immunology

GASTROINTESTINAL

CPTs

Description	CPT #
Calprotectin	83993
Eosinophil Protein X	83520

H. pylori Stool Antigen HpSA*

Description:

H. pylori stool antigen (HpSA) testing reveals H. pylori antigens shed directly into the stool.

Specimen Type:

Stool

TAT:

7 days

Method:

EIA

Biomarkers Reported:

H. pylori (HpSA)

H. pylori Stool Antigen (HpSA)

GASTROINTESTINAL

CPTs

Description	CPT #
H. pylori (HpSA)	87338

*Not currently available in New York

Pancreatic Elastase

Description:

Pancreatic Elastase (PE1) is a simple, noninvasive fecal marker for assessing exocrine pancreatic function, allowing the clinician to establish a prompt and reliable diagnosis of primary or secondary pancreatic insufficiency. PE1 is not degraded during intestinal transit, is not greatly affected by increases or decreases in intestinal transit times, and results are not affected by pancreatic enzyme replacement therapy.

Specimen Type:

Stool

TAT:

14 days

Method:

EIA

Biomarkers Reported:

Pancreatic Elastase 1

Pancreatic Elastase

GASTROINTESTINAL

CPTs

Description	CPT #
Pancreatic Elastase 1	82656

Parasitology – Direct Exam

Description:

Direct Examination for Larvae. Isolated from stool by patient or health care practitioner and submitted for identification.

Specimen Type:

Suspected parasite (e.g. worm, tapeworm…)

TAT:

10 days

Method:

Macroscopic and Microscopic Examination

Biomarkers Reported:

Parasite Identification Larvae

Parasitology - Direct Exam

GASTROINTESTINAL

CPTs

Description	CPT #
Parasitology – Direct Exam	87210

Yeast Culture

Description:

Evaluates the presence of yeast and may include a sensitivity panel, using prescriptive and natural inhibitor agents.

Yeast culture, sensitivities as appropriate, using fecal specimens.

Specimen Type:

Stool

TAT:

14 days

Method:

Standard Mycology Culture

Biomarkers Reported:

KOH Prep

Yeast Culture

Add-on Profiles

See Page 18 - 21

Yeast Culture

GASTROINTESTINAL

CPTs

Description	CPT #
KOH Prep	87210
Yeast Culture	87102

IBStatus

Description:

IBStatus offers a concise look at the overall health of the gastrointestinal (GI) tract. It is a non-invasive evaluation that uses biotechnology to evaluate digestion, absorption, inflammation, and parasite infection. This test is designed to specifically help identify inflammatory conditions (including subclinical inflammation) associated with Inflammatory Bowel Disease (IBD), NSAID enteropathy, and post-infectious Irritable Bowel Syndrome (IBS).

Specimen Type: Stool

TAT:

14 days

Method:

Standard Mycology Culture, EIA, Microscopy, Monoclonal Antibody

Biomarkers Reported:

Calprotectin

Clostridium difficile

Cryptosporidium EIA

Entamoeba histolytica EIA

Giardia lamblia EIA

Occult Blood

Pancreatic Elastase 1

Parasitology (microscopic)

IBStatus™

CPTs

Description	CPT #
Pancreatic Elastase	82656
Calprotectin	83993
Occult Blood	82274
Clostridium difficile EIA	87324
Parasitology Identification, Concentrate	87177
Parasitology Identification, Trichrome Stain	87209
Cryptosporidium EIA	87328
Giardia lamblia	87329
Entamoeba histolytica EIA	87336

Add-on Tests

HpSA- H.pylori	87338
Eosinophil Protein X	83520
Bacteriology, Aerobic	87045
Bacteriology, Aerobic	87046 x3

Gastrointestinal Add-On Markers

Bile Acids

Specimen Type:

Stool

Available Add-on For:

CDSA/P, CDSA

CPTs

Description	CPT #
Bile Acids	82239

Calprotectin

Specimen Type:

Stool

Available Add-on For:

CDSA/P, CDSA, Microbiology Analysis

CPTs

Description	CPT #
Calprotectin, fecal	83993

Campylobacter & Shiga-like Toxin by EIA

Description:

Evaluates stool for the presence of Campylobacter and Shiga Toxins (Stx1 & Stx2) produced by Shiga Toxin-producing Esherichia coli strains, the most common of which is E. coli O157:H7, as an adjunct to CDSA, Comprehensive Parasitology, Microbiology Analysis, or Bacteriology Culture & Sensitivities. Campylobacter and Shiga-like Toxin by EIA detection is indicated for patients with acute diarrhea.

Specimen Type:

Stool

Available Add-on For:

CDSA/P, CDSA, CDSA/P 2.0, CDSA 2.0., Micro. Anlys., Bct. Cltr., CP

CPTs

Description	CPT #
Shiga-like Toxin	87427
Campylobacter	87449

2130 Campylobacter EIA (for GI Effects)*

Specimen Type:

Stool

Available Add-on For:

GI Effects 2200, 2205

CPTs

Description	CPT #
Campylobacter specific antigen EIA	87449

Chymotrypsin

Description:

Chymotrypsin is a protein-digesting enzyme secreted by the pancreas. It is useful in monitoring patients who have moderate to severe pancreatic dysfunction.

Specimen Type:

Stool

Available Add-on For:

CDSA/P 2.0, CDSA 2.0

CPTs

Description	CPT #
Chymotrypsin	84311

Gastrointestinal Add-On Markers

Clostridium difficile EIA

2131 Clostridium difficile EIA (for GI Effects)*

Specimen Type:
Stool

Available Add-on For:
CDSA/P, CDSA, CDSA/P 2.0, CDSA 2.0, GI Effects 2200, 2205

CPTs

Description	CPT #
C. difficile	87324

Cryptosporidium EIA

Description:
Tests for the antigen specific to the protozoan pathogen, Cryptosporidium.

Specimen Type:
Stool

Available Add-on For:
Parasitology

CPTs

Description	CPT #
Cryptosporidium EIA	87328

Eosinophil Protein X

Specimen Type:
Stool

Available Add-on For:
CDSA/P, CDSA, IBStatus

CPTs

Description	CPT #
Eosinophil Protein X	83520

2132 Escherichia coli EIA (for GI Effects)*

Specimen Type:
Stool

Available Add-on For:
GI Effects 2200, 2205

CPTs

Description	CPT #
Enterohemorrhagic E.coli Shiga-like toxin	87427

Fecal Fats

Specimen Type:
Stool

Available Add-on For:
CDSA/P 2.0, CDSA 2.0

CPTs

Description	CPT #
Long Chain Fatty Acids	82725
Triglycerides	82715
Cholesterol	82715
Phosopholipids	82715
Cryptosporidium EIA	87328

2134 Fecal Lactoferrin (for GI Effects)*

Specimen Type:
Stool

Available Add-on For:
GI Effects 2200, 2205

CPTs

Description	CPT #
Lactoferrin, fecal	83630

*Not currently available in New York

Gastrointestinal Add-On Markers

Giardia lamblia EIA

Specimen Type:

Stool - No additional specimen required if ordering Parasitology.

Available Add-on For:

Parasitology

CPTs

Description	CPT #
Giardia lamblia EIA	87329

Helicobacter pylori Stool Antigen EIA

2133 Helicobacter pylori EIA (for GI Effects)*

Specimen Type:

Stool

Available Add-on For:

CDSA/P, CDSA, CDSA/P 2.0, CDSA 2.0, GI Effects 2200, 2205, IBStatus

CPTs

Description	CPT #
Helicobacter pylori Stool Antigen EIA (HpSA)	87338

Macroscopic Examination for Worms

Description

Examination for adult cestodes, nematodes and trematodes or pieces of worms that may be shed in stool.

Specimen Type:

Stool

Method:

Macroscopic and Microscopic Examination

Available Add-on For:

CDSA/P, CDSA/P 2.0, CDSA 2.0, CP, Parasitology

(Always included on the GI Effects 2200, if positive)

CPTs

Description	CPT #
Macroscopic Worms	87169

MIC Sensitivities, Yeast or Bacteria

Description:

Yeast or Bacteria sensitivities are run as appropriate using prescriptive and natural inhibitor agents.

Specimen Type:

Stool

Available Add-on For:

CDSA/P, CDSA, CDSA/P 2.0, CDSA 2.0, Micro. Anlys., Bact. Culture, Yeast Culture, CP

CPTs

Description	CPT #
Bacterial or Yeast	87186

Occult Blood

Specimen Type:

Stool

Available Add-on For:

CDSA/P 2.0, CDSA 2.0

CPTs

Description	CPT #
Occult Blood	82274

*Not currently available in New York

Gastrointestinal Add-On Markers

Pancreatic Elastase 1

Specimen Type:

Stool

Available Add-on For:

CDSA, CDSA/P

CPTs

Description	CPT #
Pancreatic Elastase 1	82656

Shiga-like Toxin by EIA

Specimen Type:

Stool

Available Add-on For:

CDSA/P, CDSA, CDSA/P 2.0, CDSA 2.0, CP

CPTs

Description	CPT #
Shiga-like Toxin	87427
Campylobacter	87449

Short Chain Fatty Acids Distribution

Specimen Type:

No additional specimen required

Available Add-on For:

CDSA, CDSA/P

CPTs

Description	CPT #
SCFA	8249

Gastrointestinal Add-ons	GI Effects 2200, 2205	CDSA 2.0	CDSA/P 2.0	CDSA	CDSA/P	IB Status	Bact. Cult	CP	Micro. Anlys.	Para.
Bacteriology						+				
Bile Acids				+	+					
Calprotectin				+	+				+	
Campylobacter & Shiga-like Toxin EIA		+	+	+	+		+	+	+	
2130 Campylobacter EIA	+									
Chymotrypsin		+	+							
Clostridium difficile EIA		+	+	+	+					
2131 Clostridium difficile EIA	+									
Cryptosporidium EIA				+	+					+
Eosinophil Protein X						+				
2132 Escherichia coli EIA	+									
Fecal Fats		+	+							
2134 Fecal Lactoferrin	+									
Giardia lamblia EIA										+
Helicobacter pylori Stool Antigen EIA		+	+	+	+	+				
2133 Helicobacter pylori EIA	+									
Macroscopic Examination for Worms		+	+	+	+			+		+
Occult Blood		+	+							
Pancreatic Elastase 1				+	+					
Shiga-like Toxin by EIA		+	+	+	+					
Short Chain Fatty Acids Distribution				+	+					

Gastrointestinal Profiles Biomarkers Comparison Table

BIOMARKERS REPORTED	2200*	2205*	CDSA	CDSA/P	CDSA/P 2.0	CDSA 2.0 w/o P
*Not Available in New York						
Digestion/Absorption						
Digestion						
Pancreatic Elastase 1	•		+	+	•	•
Chymotrypsin			•	•	+	+
Putrefactive SCFA			•	•	•	•
Meat Fibers			•	•		
Vegetable Fibers			•	•		
Products of Protein Breakdown (Total) (Valerate+Isobutyrate+Isovalerate)	•					
Absorption						
Long Chain Fatty Acids	•		•	•		
Fecal Fat (Total)	•		•	•	+	+
Triglycerides	•		•	•		
Phospholipids	•		•	•		
Cholesterol	•		•	•		
Gut Immunology						
Calprotectin	•		+	+	•	•
Eosinophil Protein X (EPX)	•		+	+	•	•
Fecal sIgA	•					
Metabolic						
SCFA (Total*) (Acetate, n-Butyrate, Propionate)	•		•	•	•	•
n-Butyrate Concentration	•		•	•	•	•
n-Butyrate %	•		•	•		
Acetate%	•		•	•		
Propionate%	•		•	•		
pH			•	•	•	•
SCFA Distribution	•		•	•	+	+
Beta-glucuronidase	•		•	•	•	•
Bile Acids			+	+	•	•
Inflammation						
Lactoferrin	+	+	•	•		
Mucus			•	•		
Gastrointestinal Microbiome						
Commensal Bacteria (PCR)						
***Bacteroidetes* Phylum**	•	•				
Bacteroides-Prevotella group	•	•				
Bacteroides vulgatus	•	•				
Barnesiella spp.	•	•				
Odoribacter spp.	•	•				
Prevotella spp.	•	•				
Firmicutes Phylum	•	•				
Anaerotruncus colihominis	•	•				
Butyrivibrio crossotus	•	•				
Clostridium spp.	•	•				
Coprococcus eutactus	•	•				

Gastrointestinal Profiles Biomarkers Comparison Table

BIOMARKERS REPORTED	2200*	2205*	CDSA	CDSA/P	CDSA/P 2.0	CDSA 2.0 w/o P
*Not Available in New York						
Commensal Bacteria (PCR)						
Faecalibacterium prausnitzii	•	•				
Lactobacillus spp.	•	•				
Pseudoflavonifractor spp.	•	•				
Roseburia spp.	•	•				
Ruminococcus spp.	•	•				
Veillonella spp.	•	•				
***Actinobacteria* Phylum**	•	•				
Bifidobacterium spp.	•	•				
Bifidobacterium longum	•	•				
Collinsella aerofaciens	•	•				
***Proteobacteria* Phylum**	•	•				
Desulfovibrio piger	•	•				
Escherichia coli	•	•				
Oxalobacter formigenes	•	•				
***Euryarchaeota* Phylum**	•	•				
Methanobrevibacter smithii	•	•				
***Fusobacteria* Phylum**	•	•				
Fusobacterium spp.	•	•				
***Verrucomicrobia* Phylum**	•	•				
Akkermansia muciniphila	•	•				
Firmicutes/Bacteroidetes (F/B Ratio)	•	•				
Bacteriology	•	•				
Beneficial Bacteria	•	•	•	•	•	•
Additional Bacteria	•	•	•	•	•	
Mycology (Yeast/Fungi)	•	•	•	•	•	•
Parasitology						
Microscopic Exam Results	•	•		•	•	
Parasitology EIA Tests	•	•		•	•	
Other Biomarkers						
Occult Blood	•		•	•	+	+
Color	•		•	•		
Consistency	•					
Campylobacter	+	+	+	+	+	+
Shiga Toxin *E. Coli*	+	+	+	+	+	+
Clostridium difficile EIA	+	+	+	+	+	+
Helicobacter pylori Stool Antigen	+	+	+	+	+	+
Macro for Worms			+	+	+	+

+ Add-ons

IgE Food Antibodies

Description:

The IgE antibody is the cause of "classic" or atopic allergic reactions and is well known for causing immediate allergic reactions. The IgE Food Antibodies Profile measures the IgE levels in serum that react to different foods. Food categories include dairy, grains, nuts, and seafood.

Specimen Type:

Serum

TAT:

7 days

Method:

Chemiluminescent, Immunoassay EIA

Biomarkers Reported:

See Page 26 - 27

IgE Food Antibodies
IMMUNOLOGY

CPTs

Description	CPT #
IgE Foods	86003 x 19
Total IgE	82785

IgG Food Antibodies*

Available add-ons: Vegetarian Profile: Artichoke, Bean sprout, Cantalope, Cashew, Cherry, Coconut, Filbert, Flax Seed, Garbonzo, Kamut, Millet, Mung Bean, Navy Bean, Oat Bran, Parmesan Cheese, Pistachio, Safflower, Triticale, Watermelon, Wheat Bran, Wild Rice.

Description:

ELISA test to semi-quantify serum levels of total IgG antibodies for 87 combined foods. Indicated for patients with suspected food sensitivities.

Food categories include: Dairy, Fish/Shellfish, Fruits, Nuts/Grains, Poultry/Meat, Vegetables. Vegetarian Food categories include: Dairy, Fruits, Nuts/Grains, Vegetables.

Specimen Type:

Serum

TAT:

7 days

Method:

Chemiluminescent, Immunoassay EIA

Biomarkers Reported:

See Page 26 - 27

IgG Food Antibodies
IMMUNOLOGY

CPTs

Description	CPT #
IgG Foods	86001 x 87
Total IgE	82785

*Not currently available in New York

0075 Allergix™ IgG4 Food Antibodies - 90 Antigens*

Description

The Allergix™ IgG4 antibody is related to "delayed" or nonatopic food reactions that exacerbate or contribute to many different health problems. Simultaneous high levels of many IgG4 food-specific antibodies is generally associated with intestinal hyperpermeability. This profile measures the IgG4 levels in serum that react to 90 different foods, including commonly eaten foods such as corn, milk, egg, and wheat. A food reaction patient guide is provided with each test result.

Specimen Type:

Serum

TAT:

7 days

Method:

ELISA

Biomarkers Reported:

See Page 26 - 27

IgG Food Antibodies 90

CPTs

Description	CPT #
IgG4 Food Antibodies	86001 x90

*Not currently available in New York

0076 Allergix™ Bloodspot IgG4 Food Antibodies – 30 Profile* ‡

Description:

The Bloodspot℠ IgG4 Food Antibody Assay is a blood spot test that measures the total IgG4 levels that react to common food antigens. The test kit is simple enough for the patient to use at home.

Specimen Type:

Blood spot

TAT:

7 -14 days

Method:

ELISA

Biomarkers Reported:

See Page 26 - 27

Bloodspot Foods

CPTs

Description	CPT #
Blood Spot IgG4 Food Antibds.	86001 x30

*Not currently available in New York
‡ABN Required

Immunology Profiles Biomarkers Comparison Table

*NOT AVAILABLE IN NEW YORK					
Biomarkers reported	**IgE Food Antibody**	**IgG Food Antibody***	**0075 IgG4 90***	**0076 IgG4 Bloodspot***	**IgG Spices***
Alfalfa		•			
Allspice					•
Almond	•	•	•	•	
Apple		•	•		
Apricot		•	•		
Asparagus		•	•		
Aspergillus			•	•	
Avocado		•	•		
Banana		•	•		
Barley			•		
Basil					•
Bay Leaf					•
Beef		•	•	•	
Beet		•			
Black Pepper			•		•
Blue Mussel	•				
Blueberry		•	•		
Brazil Nut	•				
Broccoli		•	•		
Buckwheat	•	•			
Cabbage		•	•		
Cane Sugar		•			
Cantaloupe			•	•	
Carrot		•	•		
Casein		•	•		
Cashew			•	•	
Cauliflower			•		
Cayenne					•
Celery		•	•		
Cheddar Cheese		•			
Chicken		•	•	•	
Chocolate		•	•		
Cinnamon			•		•
Clam		•	•		
Coconut	•		•		
Cloves					•
Cod	•	•	•		
Coffee		•	•		
Corn	•	•	•	•	
Corn Gluten		•			
Cottage Cheese		•			
Cow's Milk	•	•	•	•	
Crab		•	•	•	
Cranberry		•	•		
Cucumber		•	•		
Cumin					•
Dill					•
Egg White	•	•	•		
Egg Yolk		•	•		
Egg, Whole				•	
Fennel					•
Flounder			•		
Garlic		•	•	•	
Ginger			•		•
Gluten		•			
Goat's Milk		•			
Grape		•	•		
Grapefruit		•	•		
Green Pepper		•	•		
Halibut			•		
Hazelnut	•				
Honeydew			•		
Horse Radish					•
Kidney Bean		•			
Lactalbumin		•			
Lamb		•	•		

Immunology Profiles Biomarkers Comparison Table

*NOT AVAILABLE IN NEW YORK

Biomarkers reported	IgE Food Antibody	IgG Food Antibody*	0075 IgG4 90*	0076 IgG4 Bloodspot*	IgG Spices*
Lemon		•	•		
Lentil		•	•		
Lettuce		•	•		
Lima Bean		•	•		
Lobster		•	•	•	
Mackerel			•		
Marjoram					•
Mushroom		•	•		
Mustard					•
Mustard Seed			•	•	
Navy Bean			•		
Nutmeg					•
Oat	•	•	•	•	
Olive		•	•		
Onion		•	•		
Orange		•	•	•	
Oregano					•
Oyster		•	•		
Papaya		•			
Paprika					•
Parsley					•
Pea		•	•	•	
Peach		•	•		
Peanut	•	•	•	•	
Pear		•	•		
Pecan		•	•		
Peppermint					•
Pineapple		•	•		
Pinto Bean		•	•	•	
Pistachio			•		
Plum		•			
Pork		•	•	•	
Potato, Sweet		•	•		
Potato, White		•	•		
Raspberry		•			
Red Snapper		•			
Rice	•	•	•	•	
Rosemary					•
Rye		•	•		
Sage					•
Salmon	•	•	•	•	
Sardine		•			
Sesame	•	•	•		
Shrimp	•	•	•	•	
Sole		•			
Soy		•			
Soybean	•		•	•	
Spinach		•	•		
Strawberry		•	•	•	
String bean			•		
Sunflower		•	•	•	
Tea			•		
Thyme					•
Tomato		•	•	•	
Trout		•	•		
Tuna	•	•	•	•	
Turkey		•	•	•	
Vanilla			•		
Walnut, English		•	•	•	
Watermelon			•		
Wheat	•	•	•	•	
Yeast		•			
Yeast, Baker's			•		
Yeast, Brewer's			•		
Yogurt		•			
Zucchini		•	•		
Total IgE	•	•			

IgE Inhalants

Description:

Chemiluminescent test to evaluate serum IgE antibody levels to 14 region-specific common pollens and environmental inhalants. Indicated for patients with suspected environmental and/or seasonal allergies.

Region-specific inhalant categories include grass pollen, weed pollen, fungi, tree/shrub, household.

Specimen Type:

Serum

TAT:

7 days

Method:

Chemiluminescent

Biomarkers

Alder Tree
Australian Pine Tree
Bahia Grass
Bermuda Grass
Birch Tree
Brome Grass
Canary Grass
Cat Dander
Cocklebur
Cockroach
Common Ragweed
Cottonwood Tree
Cultivated Oat Grass
Dandelion
Dog Dander
Elm Tree
English Plantian
Eucalyptus Tree
Giant Ragweed
Johnson Grass
June Grass (Kentucky Blue)
Lamb's quarters
Maple Tree
Mesquite Tree
Mite Dermatophagoides Farinae
Mite Dermatophagoides Microceras
Mite Dermatophagoides Pteronyssinus
Mold Generic
Mountain Cedar Tree
Nettle
Oak Tree
Olive Tree
Orchard Grass
Pecan Tree
Perennial Rye Grass
Red Top
Rough Marsh Elder
Rough Pigweed
Russian Thistle
Scale
Sweet Vernal Grass
Timothy Grass
Total IgE
Walnut Tree
Western Ragweed
White Mulberry Tree

IgE Inhalants
IMMUNOLOGY

CPTs

Description	CPT #
IgE Inhalants	86003 x 14
Total IgE	82785

Please Note: Biomarkers vary according to geographical regions and region-specific tests will cover the 14 most common allergens in that region. See Pages 34 -35 for more information.

IgE Molds

Description:

Chemiluminescent test to evaluate serum IgE antibody levels to 15 molds. Indicated for patients with suspected environmental allergies specific to molds.

Specimen Type:

Serum

TAT:

7 days

Method:

Chemiluminescent

Biomarkers Reported:

Alternaria tenuis
Aspergillus fumigatus
Candida albicans
Cladosporium herbarum
Curvularia lunata
Epiccoccum purpurascens
Fusarium moniliforme
Helminthosporium halodes
Mucor racemosus
Penicillium notatum
Phoma betae
Pityrosporum orbiculare
Rhizopus nigricans
Stemphylium botryosum
Trichoderma viride
Total IgE

IgE Molds
IMMUNOLOGY

CPTs

Description	CPT #
IgE Molds	86003 X15
Total IgE	82785

IgG Spices*

Description:

Evaluate serum for levels of IgG and total IgE antibodies for 24 frequently used culinary herbs and spices. Indicated for patients with suspected allergic reactions to spices and herbs.

Specimen Type:

Serum

TAT:

7 days

Method:

Immunoassay EIA, Chemiluminescent

Biomarkers Reported:

Allspice
Basil
Bay Leaf
Black Pepper
Cayenne Pepper
Cinnamon
Cloves
Cumin
Curry
Dill
Fennel Seed
Ginger
Horseradish
Marjoram
Mustard
Nutmeg
Oregano
Paprika
Parsley
Peppermint
Rosemary
Sage
Thyme
Vanilla
Total IgE

IgE Spices
IMMUNOLOGY

CPTs

Description	CPT #
IgG Spices	86001 x 24
Total IgE	82785

*Not currently available in New York

Celiac & Gluten Sensitivity

Description:

Assays serum for IgA specific antibodies for possible or probable celiac disease or gluten sensitivity.

Antibodies include IgA Anti-Tissue Transglutaminase, Anti-Deamidated IgA, IgA Anti-Endomysial Antibodies, and IgA and IgG Anti-Gliadin Antibodies.

Specimen Type:

Serum

TAT:

7 days

Method:

EIA, IFA, Immunoturbidimetric

Biomarkers Reported:

Anti-Deamidated Gliadin IgA (DGP IgA)

Anti-Gliadin IgA

Anti-Gliadin IgG

Anti-Tissue Transglutaminase IgA

EMA IgA (reflex only)

Total IgA

Celiac & Gluten Sensitivities

IMMUNOLOGY

CPTs

Description	CPT #
Total IgA	82784
Anti-Tissue Transglutaminase IgA	83516
Anti-Deamidated IgA	83516
Anti-Gliadin IgA/IgG	83516 x 2

IgE Inhalants US Region Name	North Atlantic	Mid-Atlantic	South Atlantic	Subtropical FL	Ohio Valley	South Central	Upper MidWest	MidWest	Great Plains
Antigen Name									
Trees:									
Alder									
Australian Pine				•					
Birch	•						•	•	
Cottonwood									
Elm	•	•	•		•	•	•	•	•
Eucalyptus									
Maple	•	•					•	•	•
Mesquite									
Mountain Cedar					•				
Oak	•	•	•	•	•	•	•	•	
Olive									
Pecan			•	•		•			
Walnut									
White Mulberry									
Grasses:									
Bahia Grass				•					
Bermuda Grass	•	•	•	•	•	•		•	
Brome Grass									•
Canary Grass									
Cultivated Oat Grass									
Johnson Grass	•	•	•	•	•	•			•
June Grass (Kentucky Blue)		•	•		•	•		•	
Orchard Grass							•	•	
Perennial Rye Grass									•
Red Top							•		•
Sweet Vernal Grass									
Timothy Grass	•						•		
Weeds:									
Cocklebur		•							
Common Ragweed	•	•	•	•	•	•	•	•	•
Dandelion									
English Plantain			•			•			•
Giant Ragweed									
Lamb's Quarters	•			•	•				•
Nettle					•				
Rough Marsh Elder						•	•	•	
Rough Pigweed		•	•	•					
Russian Thistle									•
Scale									
Western Ragweed									
Mold:									
Mold Generic	•	•	•	•	•	•	•	•	•
Miscellanous:									
Cat dander	•	•	•	•	•	•	•	•	•
Cockroach	•	•	•	•	•	•	•	•	•
Dog dander	•	•	•	•	•	•	•	•	•
Mite - D. farinae	•	•	•	•	•	•	•	•	•
Mite - D. microceras	•	•	•	•	•	•	•	•	•
Mite - D. pteronyssinus	•	•	•	•	•	•	•	•	•

IgE Inhalants US Region Name	Texas +	Rocky Mtn	SouthWest	SoCal Coast	Central Valley	Inter Mountain	Inland NW	Pacific NW	Alaska
Antigen Name									
Trees:									
Alder							•	•	•
Australian Pine									
Birch						•	•	•	•
Cottonwood						•			•
Elm		•							
Eucalyptus									
Maple	•	•		•	•	•			
Mesquite			•						
Mountain Cedar	•	•	•			•			
Oak				•			•	•	
Olive			•	•	•				
Pecan									
Walnut				•	•				
White Mulberry			•						
Grasses:									
Bahia Grass									
Bermuda Grass	•		•	•	•	•			
Brome Grass				•					•
Canary Grass									•
Cultivated Oat Grass				•	•	•			
Johnson Grass			•						
June Grass	•			•			•		
Orchard Grass		•						•	
Perennial Rye Grass	•	•	•						
Red Top						•	•		
Sweet Vernal Grass								•	
Timothy Grass		•			•		•	•	
Weeds:									
Cocklebur									
Common Ragweed			•						
Dandelion									•
English Plantain	•						•		
Giant Ragweed	•	•							
Lamb's Quarters	•	•			•				•
Nettle									
Rough Marsh Elder	•								
Rough Pigweed		•	•	•	•	•	•	•	•
Russian Thistle		•	•			•	•	•	
Scale					•				
Western Ragweed					•	•		•	•
Mold:									
Mold Generic	•	•	•	•	•	•	•	•	•
Miscellanous:									
Cat dander	•	•	•	•	•	•	•	•	•
Cockroach	•	•	•	•	•	•	•	•	•
Dog dander	•	•	•	•	•	•	•	•	•
Mite - D. farinae	•	•	•	•	•	•	•	•	•
Mite - D. microceras	•	•	•	•	•	•	•	•	•
Mite - D. pteronyssinus	•	•	•	•	•	•	•	•	•

NUTRITIONAL

NUTRITIONAL TESTING

NutrEval® Plasma*

NutrEval® FMV (First Morning Void)*

*Not currently available in New York

Description:

A comprehensive nutritional evaluation to identify specific imbalances of vitamins, nutrients, and essential co-factors. The NutrEval is an advanced diagnostic tool that assess functional and direct nutrient status to identify need in key areas, including: antioxidants, B-vitamins, nutrient and toxic elements, fatty acids, digestive support, oxidative stress, and amino acids. The report also provides personalized nutrient recommendations based on the patient's individual results.

Specimen Type:

Blood/Urine

TAT:

14 days

Method:

HPLC, GC-MS, Enzymatic, Kinetic (Jaffe), LC-MS-MS, Colorimetric, TBARS, ICP-MS

Biomarkers Reported:

See Page 39 - 44

Add-on Test

Vitamin D

CPTs

Description	CPT #
Metabolic Analysis Profile	
5-OH-indoleacetic Acid	83497
Citric Acid	82507
Creatinine	82570
Homovanillic Acid	83150
Lactic Acid	83605
Pyruvic Acid	84210
Vanilmandelic Acid	84585
Organic Acids	83921x19
Adipic Acid	
A-Ketoglutaric Acid	
B-OH-b-Methylglutaric Acid	
B-OH-Butyric Acid	
Isocitric Acid	
Malic Acid	
Suberic Acid	
Succinic Acid	
2-Hydroxyphenylacetic Acid	
3-Hydroxyproprionic Acid	
4-Hydroxyphenylpyruvic Acid	
A-Ketoadipic Acid	
A-Keto-b-Methylvaleric Acid	
A-Ketoisocaproic	
A-Ketoisovaleric	
Glutaric Acid	
Homogentisic Acid	
Methylmalonic Acid	
Orotic Acid	
Arabinose	
Benzoic/Hippuric Acids Ratio	
Citramalic Acid	
DHPPA	
Indoleacetic Acid	
Phenylacetic Acid	
Pyroglutamic Acid	
Cis-Aconitic Acid	
3-Methyl-4-OH-phenylglycol	
Kynurenic Acid	
Formiminoglutamic Acid	
Essential and Metabolic Fatty Acids	82542
Behenic Acid	82726
Docosatetraenoic Acid	82726
Lignoceric Acid	82726
Nervonic Acid	82726
Tricosanoic Acid	82726
Amino Acids Analysis	82139
Oxidative Stress Analysis	
8-OHdG	83520
Lipid Peroxides, Urine	84311
Glutathione	82978
Coenzyme Q10 (Ubiquinone)	82491
Nutrient & Toxic Elements	
Cadmium	82300
Heavy Metals:	83015
Antimony	
Arsenic	
Mercury	
Tin	
Lead	83655
Copper	82525
Magnesium	83735
Manganese	83785
Potassium	84132
Zinc	84630

0090 ION® Profile* ‡°/ ION® Pediatric Profile* ‡°

0190 ION® Profile - NY ‡/ ION® Pediatric Profile - NY ‡

0490 ION® Profile with Amino Acids 40* ‡°

0590 ION® Profile with Amino Acids 40 - NY ‡

Description

The ION® (Individual•Optimal•Nutrition) Profile is a combination of nutritional analyses that measures levels of organic acids, fatty acids, amino acids, vitamins, minerals, and antioxidants. Over time, functional nutritional inadequacies can result in a variety of chronic health conditions. The ION profile can help determine the basis for these chronic health conditions.

Specimen Type:

Blood/Urine

TAT:

21 days

Method:

LC/MS-MS, HPLC, UPLC, ICP/MS, GC/MS, Spectrophotometry, Chemiluminescence

Biomarkers Reported:

See Page 39 - 44

CPTs

0090/0490 Description	CPT #
Long Chain Fatty Acids	82726 x5
Additional Fatty Acids	82542
Amino Acids, Quant, 6 or more	82139
Vitamin D	82306
CoQ10, Lipid Peroxides	82491 x3
**Gamma Tocophenol	82491
Homocysteine	83090
Carotene	82380
Vitamin E	84446
Vitamin A	84590
Organic Acids	83921 x19
Citrate	82507
Homovanillic Acid	83150
Vanilmandelic Acid	84585
5-Hydroxyindoleacetic Acid	83497
Pyruvate	84210
**Lactic Acid	83605 x2
Creatinine	82570
Indican	83789 x2
Sulfate	84392
Aluminum	82108
Selenium	84255
Heavy Metal Screen (Cadium, Mercury, Arsenic}	83015
Magnesium	83735
Potassium	84132
Calcium	82310
Copper	82525
Zinc	84630
D-Arabinitol	84378

**Not on 0190/0590
*Not currently available in New York
‡ABN Required
°Not available in Ohio

0290 Cardio/ION™ Profile* ‡°

0390 Cardio/ION™ Profile - NY ‡

Description:

The Cardio/ION® Profile provides a comprehensive array of parameters to determine overall nutritional status with a specific impact on reducing the risk of cardiovascular disease and improving cardiovascular health.

Specimen Type:

Blood/Urine

TAT:

21 days

Method:

LC/MS-MS, HPLC, UPLC, ICP/MS, GC/MS, Spectrophotometry, Chemiluminescence, EIA

Biomarkers Reported:

See Page 39 - 44

CARDION
INDIVIDUAL•OPTIMAL•NUTRITION ®

CPTs

0290 Description	CPT #
Long Chain Fatty Acids	82726 x5
Additional Fatty Acids	82542
Amino Acids, Quant, 6 or more	82139
**Fibrinogen Antigen	85385
Vitamin D	82306
CoQ10, Lipid Peroxides	82491 x2
**Gamma Tocopherol	82491
Homocysteine	83090
Carotene	82380
Vitamin E	84446
Vitamin A	84590
Ferritin	82728
Insulin Total	83525
Lipoprotein A	83695
Low Density Lipoprotein Cholesterol	83721
Sex Hormone Binding Globulin	84270
Testosterone	84403
C-Reactive Protein High Sensitivity	86141
Lipid Panel	80061
Organic Acids	83921 x19
Citrate	82507
Homovanillic Acid	83150
Vanilmandelic Acid	84585
5-Hydroxy Indoleacetic Acid	83497
Pyruvate	84210
**Lactic Acid	83605 x2
Creatinine	82570
D-Arabinitol Sugars	84378
**8-Hydroxy-2'-Deoxyguanosine	83789
Indican	83789
Sulfate	84392
Aluminum	82108
Selenium	84255
Heavy Metal Screen (Cadmium, Mercury, Arsenic)	83015
Magnesium	83735
Potassium	84132
Calcium	82310
Copper	82525
Zinc	84630

**Not on 0390
*Not currently available in New York
‡ABN required
°Not available in Ohio

0400 TRIAD™ Profile* ‡

0410 TRIAD™ Bloodspot Profile*‡

Description:

This profile is a combination of the Allergix™ IgG4 Food Antibodies Assay (#0075), Organix Comprehensive (#0091) and Amino Acid Plasma-20 (#0011) profiles. The TRIAD™ Profile allows simultaneous assessment of food sensitivities and intestinal hyperpermeability; urinary microbial metabolites, detoxification indicators, functional vitamin and mineral sufficiency markers, and neural function markers; and essential amino acid status. The TRIAD Profile provides the clinician with a powerful array of clinical tools to design appropriate therapeutic interventions for the patient.

Specimen Type:

Blood/Urine

TAT:

14 days

Method:

LC/MS-MS, HPLC, Spectrophotometry, EIA

Biomarkers Reported:

See Page 39 - 44

CPTs

Description	CPT #
Organic acid	83921 x19
**IgG4 Food Antibodies	86001 x 90
Vanilmandelate	84585
Sulfate Urine	84392
Pyruvate	84210
Indican	83789
8-Hydroxy-2′-Deoxyguanosine	83789
Lactate	83605 x2
5-Hydroxyindoleacetate	83497
Homovanillate	83150
Creatinine	82570
Citrate	82507
Amino acids	82139
D- Arabinitol	84378
For 0410	
IgG4 Food Antibodies	86001 x 30

**Not on 0410
*Not currently available in New York
‡ABN Required

4146 Women's Health Profile*‡

Description:

The Women's Health Profile is a combination of tests specifically designed for women. The Women's Health Profile measures organic acids, fatty acids, serum lipid peroxides, ADMA, markers of metabolic syndrome, and estrogen. It can also help assess risk factors associated with genetics, biochemical imbalances, and environmental influences.

Specimen Type:

Blood/Urine

TAT:

14 days

Method:

EIA, Spectrophotometry, LC/MS/MS, HPLC, GC/MS, Automated Chemistry, Chemiluminescence, Colorimetric

Biomarkers Reported:

See Page 39 - 44

CPTs

Description	CPT #
5HIAA	83497
Additional Fatty Acid	82542
ADMA	82136
Cholesterol HDL	83718
Cholesterol LDL	83721
Citrate	82507
Creatinine	82570
Estradiol	82670
Estrone	82679x 5
Glucose	82947
Homovanillate	83150
Insulin	83525
Lipid Peroxide	82491
Magnesium	83735
Organic Acids	83921 x 19
Pyruvate	84210
Triglycerides	84478
Vanilmandelate	84585
Very Long Chain Fatty Acids	82726
Zinc	84630

*Not currently available in New York
‡ABN Required

ONE FMV®*

Description:

The ONE will help you understand your patients' individual diet and supplementation needs. This panel includes key organic acids to evaluate gastrointestinal function and functional need for vitamins, minerals, and co-factors. In addition, amino acids are measured to assess digestion, absorption, metabolic impairments, and nutritional deficits. Anti-oxidant reserves and the presence of oxidative injury are analyzed.

Specimen Type:

Urine

TAT:

14 days

Method:

EIA, HPLC, Enzymatic, GC-MS, Kinetic (Jaffe), LC-MS-MS, TBARS

Biomarkers Reported:

See Page 39 - 44

ONE FMV®

OPTIMAL NUTRITION EVALUATION

CPTs

Description	CPT #
Metabolic Analysis Profile	
5-OH-indoleacetic Acid	83497
Citric Acid	82507
Creatinine	82570
Homovanillic Acid	83150
Lactic Acid	83605
Pyruvic Acid	84210
Vanilmandelic Acid	84585
Organic Acids	83921x19
Adipic Acid	
A-Ketoglutaric Acid	
B-OH-b-Methylglutaric Acid	
B-OH-Butyric Acid	
Isocitric Acid	
Malic Acid	
Suberic Acid	
Succinic Acid	
2-Hydroxyphenylacetic Acid	
3-Hydroxyproprionic Acid	
4-Hydroxyphenylpyruvic Acid	
A-Ketoadipic Acid	
A-Keto-b-Methylvaleric Acid	
A-Ketoisocaproic	
A-Ketoisovaleric	
Glutaric Acid	
Homogentisic Acid	
Methylmalonic Acid	
Orotic Acid	
Arabinose	
Benzoic/Hippuric Acids Ratio	
Citramalic Acid	
DHPPA	
Indoleacetic Acid	
Phenylacetic Acid	
Pyroglutamic Acid	
Cis-Aconitic Acid	
3-Methyl-4-OH-phenylglycol	
Kynurenic Acid	
Formiminoglutamic Acid	
Amino Acids Analysis	
Amino Acids, Urine	82139
Oxidative Stress Analysis	
8-OHdG	83520
Lipid Peroxides, Urine	84311

*Not currently available in New York

Integrative Profiles Biomarkers Comparison Table

Biomarkers Reported	NUTREVAL PLASMA*	NUTREVAL FMV*	ONE FMV*	#0090 ION °	#0490 ION w AA40 °	#0290 C/ION °	#0400 TRIAD*	#0410 TRIAD BS*	#4146 WHP*
*Not Available in New York °Not Available in Ohio									
Amino Acids									
1-Methylhistidine	•	•	•		•				
3-Methylhistidine	•	•	•		•				
α-Aminoadipic Acid	•	•	•		•				
α-Amino-N-Butyric Acid	•	•	•		•				
ß-Alanine	•	•	•		•				
ß-Aminoisobutyric Acid	•	•	•		•				
Alanine	•	•	•		•				
Anserine		•	•		•				
Arginine	•	•	•	•	•	•	•	•	•
Asparagine	•	•	•	•	•	•	•	•	
Aspartic Acid	•	•	•	•	•	•	•	•	
Carnosine		•	•		•				
Citrulline	•	•	•	•	•	•	•	•	
Cystathionine	•	•	•		•				
Cysteine	•	•	•						
Cystine		•	•		•				
Ethanolamine	•	•	•		•				
Gamma-Aminobutyric Acid	•	•	•		•				
Glutamic Acid	•	•	•	•	•	•	•	•	
Glutamine	•	•	•	•	•	•	•	•	
Glycine	•	•	•	•	•	•	•	•	
Histidine	•	•	•	•	•	•	•	•	
Homocysteine				•	•	•			
Homocystine					•				
Hydroxylysine					•				
Hydroxyproline					•				
Isoleucine	•	•	•	•	•	•	•	•	
Leucine	•	•	•	•	•	•	•	•	
Lysine	•	•	•	•	•	•	•	•	
Methionine	•	•	•	•	•	•	•	•	
Ornithine	•	•	•	•	•	•	•	•	
Phenylalanine	•	•	•	•	•	•	•	•	
Phosphoethanolamine	•	•	•		•				
Phosphoserine	•	•			•				
Proline	•	•	•		•				
Sarcosine	•	•	•		•				
Serine	•	•	•	•	•	•	•	•	
Taurine	•	•	•	•	•	•	•	•	
Threonine	•	•	•	•	•	•	•	•	
Tryptophan	•	•	•	•	•	•	•	•	
Tyrosine	•	•	•	•	•	•	•	•	
Valine	•	•	•	•	•	•	•	•	
Urea	•	•	•						
Ammonia	•	•	•						
Amino Acid Ratios									
Arginine/Ornithine		•							
Asparagine/Aspartate	•								
Glutamine/Glutamate	•		•	•	•	•	•	•	
Phenylalanine/Tyrosine				•	•	•	•	•	
Hydroxyproline/Proline					•				
α-ANB/Leucine					•				
Tryptophan/LNAA (Large Neutral AA - Leu+Ile+Val+Phe+Tyr)				•	•	•	•	•	

Integrative Profiles Biomarkers Comparison Table

Biomarkers Reported	NUTREVAL PLASMA*	NUTREVAL FMV*	ONE FMV*	#0090 ION °	#0490 ION w AA40 °	#0290 C/ION °	#0400 TRIAD*	#0410 TRIAD BS*	#4146 WHP*
*Not Available in New York °Not Available in Ohio									
Cardiovascular Health									
Lipoprotein Factors									
Total Cholesterol						•			
HDL Cholesterol						•			•
Direct LDL						•			•
Triglycerides						•			•
Lipoprotein (a)						•			
Lipoprotein Ratios						•			
LDL/HDL						•			
Total/HDL						•			
Glucose									•
Insulin						•			•
Chronic Inflammatory Markers									
C-Reactive Protein (HS)						•			
Ferritin						•			
Fibrinogen						•			
Oxidant Stress Factors									
Coenzyme Q10						•			
Vitamin E									
Lipid Peroxides						•			•
ADMA									•
Arginine/ADMA Ratio									•
Nutrient and Toxic Elements									
Nutrient Elements									
Calcium				•	•	•			
Copper	•	•		•	•	•			
Magnesium	•	•		•	•	•			•
Manganese	•	•							
Potassium	•	•		•	•	•			
Selenium	•	•		•	•	•			
Zinc	•	•		•	•	•			•
Toxic Elements									
Aluminum				•	•	•			
Antimony	•	•							
Arsenic	•	•		•	•	•			
Cadmium	•	•		•	•	•			
Lead*	•	•		•	•	•			
Mercury	•	•		•	•	•			
Tin	•	•							

Integrative Profiles Biomarkers Comparison Table

Biomarkers Reported	NUTREVAL PLASMA*	NUTREVAL FMV*	ONE FMV*	#0090 ION °	#0490 ION w AA40 °	#0290 C/ION °	#0400 TRIAD*	#0410 TRIAD BS*	#4146 WHP*
*Not Available in New York °Not Available in Ohio									
Fatty Acids									
Polyunsaturated Omega-3									
Alpha-Linolenic Acid (ALA)	•	•		•	•	•			
Docosahexaenoic Acid (DHA)	•	•		•	•	•			•
Docosapentaenoic Acid	•	•		•	•	•			•
Eicosapentaenoic Acid (EPA)	•	•		•	•	•			•
% Omega-3s	•	•							
Polyunsaturated Omega-6									
Arachidonic Acid	•	•		•	•	•			•
Dihomogamma Linolenic Acid (DGLA)	•	•		•	•	•			
Docasadienoic Acid				•	•	•			
Docosatetraenoic Acid	•	•		•	•	•			
Eicosadienoic Acid	•	•		•	•	•			
Gamma Linolenic Acid (GLA)	•	•		•	•	•			
Linoleic Acid (LA)	•	•		•	•	•			
% Omega-6s	•	•							
Polyunsaturated Omega-9									
Mead Acid				•	•	•			
% Omega-9s	•	•							
Monounsaturated Omega-7									
11-Eicosenoic Acid				•	•	•			
Myristoleic Acid				•	•	•			
Nervonic Acid	•	•		•	•	•			
Oleic Acid	•	•		•	•	•			
Palmitoleic Acid	•	•		•	•	•			
Vaccenic Acid	•	•		•	•	•			
Saturated									
Arachidic Acid	•	•		•	•	•			
Behenic Acid	•	•		•	•	•			
Capric Acid				•	•	•			
Hexacosanoic Acid				•	•	•			
Lauric Acid				•	•	•			
Lignoceric Acid	•	•		•	•	•			
Margaric Acid	•	•							
Myristic Acid				•	•	•			
Palmitic Acid	•	•		•	•	•			
Stearic Acid	•	•		•	•	•			
% Saturated Fats	•	•							
Odd Chain									
Heneicosanoic Acid				•	•	•			
Heptadecanoic Acid				•	•	•			
Nonadecanoic Acid				•	•	•			
Pentadecanoic Acid	•	•		•	•	•			
Tricosanoic Acid	•	•		•	•	•			
Trans									
Elaidic Acid	•	•							
Palmitelaidic Acid				•	•	•			
Total C:18 Trans				•	•	•			
Ratios (calculated)/Various									
LA/GLA									
LA/DGLA	•	•		•	•	•			
EPA/DGLA				•	•	•			
AA/EPA	•	•		•	•	•			•
Triene/Tetraene				•	•	•			
Stearic/Oleic									
Omega-6s/ Omega-3s	•	•							
Index of Omega-3	•								

Integrative Profiles Biomarkers Comparison Table

Biomarkers Reported	NUTREVAL PLASMA*	NUTREVAL FMV*	ONE FMV*	#0090 ION °	#0490 ION w AA40 °	#0290 C/ION °	#0400 TRIAD*	#0410 TRIAD BS*	#4146 WHP*
*Not Available in New York °Not Available in Ohio									
Organic Acids									
Nutrient Cellular and Mitochondrial Markers									
Fatty Acid Metabolism									
Adipate	•	•	•	•	•	•	•	•	•
Suberate	•	•	•	•	•	•	•	•	•
Ethylmalonate				•	•	•	•	•	•
Carbohydrate Metabolism									
Pyruvate	•	•	•	•	•	•	•	•	•
Lactic Acid	•	•	•						
L-Lactate				•	•	•	•	•	
ß-Hydroxybutyrate				•	•	•	•	•	
β-OH-β-Methylglutaric Acid		•							
β-OH-Butyric Acid (BHBA)	•	•							
Energy Production (Citric Acid Cycle)									
Citrate	•	•	•	•	•	•	•	•	•
cis-Aconitate	•	•	•	•	•	•	•	•	•
Isocitrate	•	•	•	•	•	•	•	•	•
a-Ketoglutarate	•	•	•	•	•	•	•	•	•
Succinate	•	•	•	•	•	•	•	•	•
Fumarate				•	•	•	•	•	•
Malate	•	•	•	•	•	•	•	•	•
Hydroxymethylglutarate	•	•	•	•	•	•	•	•	•
Vitamin Markers									
B-Complex Vitamin Markers									
a-Ketoadipic Acid	•	•	•						
a-Ketoisovalerate	•	•	•	•	•	•	•	•	•
a-Ketoisocaproate	•	•	•	•	•	•	•	•	•
a-Keto-ß-Methylvalerate	•	•	•	•	•	•	•	•	•
Xanthurenate	•	•	•	•	•	•	•	•	•
ß-Hydroxyisovalerate				•	•	•	•	•	•
Glutaric Acid	•	•	•						
3-Hydroxypropionic Acid	•	•	•						
Isovalerylglycine	•	•	•						
3-Hydroxyisovaleric Acid	•	•	•	•					
Methylation Cofactor Markers									
Methylmalonate	•	•		•	•	•	•	•	•
Formiminoglutamate	•	•		•	•	•	•	•	•
Cell Regulation Markers									
Neurotransmitter Metabolism Markers									
Vanilmandelate	•	•	•	•	•	•	•	•	•
Homovanillate	•	•	•	•	•	•	•	•	•
5-Hydroxyindoleacetate	•	•	•	•	•	•	•	•	•
Kynurenate	•	•	•	•	•	•	•	•	•
Quinolinate	•	•	•	•	•	•	•	•	•
Kynurenic / Quinolinic Ratio	•	•	•						
3-Methyl-4-OH-phenylglycol	•	•	•						
Picolinate				•	•	•	•	•	•
Oxidative Damage and Antioxidant Markers									
p-Hydroxyphenyllactate				•	•	•	•	•	
Lipid Peroxides	•	•	•						

Integrative Profiles Biomarkers Comparison Table

Biomarkers Reported	NUTREVAL PLASMA*	NUTREVAL FMV*	ONE FMV*	#0090 ION °	#0490 ION w AA40 °	#0290 C/ION °	#0400 TRIAD*	#0410 TRIAD BS*	#4146 WHP*
*Not Available in New York °Not Available in Ohio									
Organic Acids									
Toxicants and Detoxification									
a-Ketophenylacetic Acid	•	•	•						
a-Hydroxyisobutyric Acid	•	•	•						
2-Methylhippurate				•	•	•	•	•	•
Orotate	•	•	•	•	•	•	•	•	•
Glucarate				•	•	•	•	•	•
a-Hydroxybutyrate				•	•	•	•	•	•
Pyroglutamate	•	•	•	•	•	•	•	•	•
Sulfate				•	•	•	•	•	
Tyrosine Metabolism									
2-Hydroxyphenylacetic Acid	•	•	•						
Homogentisic Acid	•	•	•						
Malabsorption and Dysbiosis Markers									
Malabsorption Markers									
Indoleacetic Acid	•	•	•						
Bacterial /Yeast Dysbiosis Markers									
Bacterial - general									
Benzoate	•	•	•	•	•	•	•	•	
Hippurate	•	•	•	•	•	•	•	•	
Benzoic/Hippuric Acids Ratio									
Dihydroxyphenylpropionic Acid (DHPPA)	•	•	•						
3-Hyroxyproprionic Acid	•	•	•						
4-Hydroxyphenylpyruvic Acid	•	•	•						
Phenylpropionate				•	•	•	•	•	
Phenylacetate	•	•	•	•	•	•	•	•	
p-Hydroxybenzoate				•	•	•	•	•	
p-Hydroxyphenylacetate				•	•	•	•	•	
Indican				•	•	•	•	•	
Tricarballylate				•	•	•	•	•	
L. acidophilus/general bacterial									
D-Lactate				•	•	•	•	•	
Clostridial species									
3,4 Dihydroxyphenylpropionate				•	•	•	•	•	
Yeast/Fungal									
D-Arabinitol				•	•	•	•	•	
Arabinose	•	•	•						
Citramalic Acid	•	•	•						
Tartaric Acid	•	•	•						
Oxidative Stress									
Coenzyme Q10	•	•		•	•	•			
Alpha tocopherol	•	•		•	•	•			
Gamma tocopherol				•	•	•			
Vitamin A		•		•	•	•			
ß-Carotene		•		•	•	•			
Lipid Peroxides	•	•	•	•	•	•			•
Vitamin D				•	•	•			
Glutathione	•	•							
8-Hydroxy-2′-deoxyguanosine	•	•	•	•	•	•	•	•	

Integrative Profiles Biomarkers Comparison Table

Biomarkers Reported	NUTREVAL PLASMA*	NUTREVAL FMV*	ONE FMV*	#0090 ION °	#0490 ION w AA40 °	#0290 C/ION °	#0400 TRIAD*	#0410 TRIAD BS*	#4146 WHP*
*Not Available in New York °Not Available in Ohio									
Estrogen Metabolism									
2-hydroxyestrone (2-OHE1)									•
2-hydroxyestradiol (2-OHE2)									•
2-OHE1 + 2-OHE2									•
4-hydroxyestrone (4-OHE1)									•
16α-hydroxyestrone (16α-OHE1)									•
2-methoxyestrone (2-OMeE1)									•
4-methoxyestrone (4-OMeE1)									•
Ratios									
(2-OHE1 + 2-OH2)/16a-OHE1									•
2-OHE/2-OMeE1									•
Other Biomarkers									
Creatinine	•	•	•						
Additional Profiles									
IgG4 Food Antibodies - 90 antigens (see pg. 34 for full listing)				+	+	+	•		
IgG4 Food Antibodies - 30 antigens (see pg.34 for full listing)								•	
Vitamin K				+	+	+			

0091 Organix® Comprehensive Profile*‡

0391 Organix® Comprehensive Profile NY ‡

0291 Organix® Basic Profile* ‡

3291 Organix® Basic Profile NY ‡

0097 Organix® Dysbiosis Profile* ‡

0397 Organix® Compounds of Microbial Origin Profile NY ‡

Description:

The Organix® Comprehensive Profile provides a view into the body's cellular metabolic processes and the efficiency of metabolic function. Identifying metabolic blocks that can be treated nutritionally allows individual tailoring of interventions that maximize patient responses and lead to improved patient outcomes. Organic acids are metabolic intermediates that are produced in pathways of central energy production, detoxification, neurotransmitter breakdown, or intestinal microbial activity. Marked accumulation of specific organic acids detected in urine often signals a metabolic inhibition or block. The metabolic block may be due to a nutrient deficiency, an inherited enzyme deficit, toxic build-up, or drug effect. Several of the biomarkers are markers of intestinal bacterial or yeast overgrowth.

Specimen Type:

Urine

TAT:

14 days

Method:

LC/MS-MS Tandem Mass Spectrometry

Biomarkers Reported:

See Page 47 - 48

Organix® Urine Organic Acids U.S. patent pending 2008

CPTs

Description	CPT #
0091 Organix Comprehensive	
5-Hydroxyindoleacetate	83497
8-Hydroxy-2'-Deoxyguanosine	83789
D-Arabinitol	84378
Citrate	82507
Creatinine	82570
Homovanillate	83150
Indican	83789
Lactate	83605x 2
Organic Acid	83921x 19
Pyruvate	84210
Sulfate, Urine	84392
Vanilmandelate	84585
0291 Organix Basic	
5-Hydroxylndoleacetate	83497
Citrate	82507
Creatinine	82570
**Lactate	83605
Homovanillate	83150
Organic Acid	83921x 19
Pyruvate	84210
Vanilmandelate	84585
**Not on 3291	
0097 Organix Dysbiosis	
**D-Arabinitol	84378
Creatinine	82570
Indican	83789
**Lactate	83605
Organic Acid	83921x 8
**Not on 0397	

*Not currently available in New York
‡ABN Required

Metabolic Analysis Profile*

Description:

This test measures four critical areas of metabolism: gastrointestinal function and dysbiosis markers, cellular and mitochondrial energy metabolites, neurotransmitter metabolites, and functionally important organic acid metabolites of amino acids. The reference ranges for this test apply to children (2-12 yrs) and adults.

Includes 38 organic acids ratioed to creatinine, including 8 gastrointestinal metabolites, 13 cellular energy metabolites, 4 neurotrasmitter metabolites, and 14 amino acid metabolites.

Specimen Type:

Urine

TAT:

14 days

Method:

Kinetic (Jaffe), GC-MS, LC-MS-MS

Biomarkers Reported:

See Page 47 - 48

Metabolic Analysis Profile

CPTs

Description	CPT #
5-OH-indoleacetic Acid	83497
Citric Acid	82507
Creatinine	82570
Homovanillic Acid	83150
Lactic Acid	83605
Pyruvic Acid	84210
Vanilmandelic Acid	84585
Organic Acids include:	83921x19
Adipic Acid	
A-Ketoglutaric Acid	
B-OH-b-Methylglutaric Acid	
B-OH-Butyric Acid	
Fumaric Acid	
Isocitric Acid	
Malic Acid	
Suberic Acid	
Succinic Acid	
2-Hydroxyphenylacetic Acid	
3-Hydroxyproprionic Acid	
4-Hydroxyphenylpyruvic Acid	
A-Ketoadipic Acid	
A-Keto-b-Methylvaleric Acid	
A-Ketoisocaproic	
A-Ketoisovaleric	
Glutaric Acid	
Homogentisic Acid	
Methylmalonic Acid	
Orotic Acid	
Arabinose	
Benzoic/Hippuric Acids Ratio	
Citramalic Acid	
DHPPA	
Indoleacetic Acid	
Phenylacetic Acid	
Pyroglutamic Acid	
Tartaric Acid	
Cis-Aconitic Acid	
3-Methyl-4-OH-phenylglycol	
Kynurenic Acid	
Formiminoglutamic Acid	

*Not currently available in New York

Organic Acid Profiles Biomarkers Comparison Table

Biomarkers reported	MAP*	#0091 ORGX COMP* #0391 ORGX COMP NY	#0291 ORGX BASIC* #3291 ORGX BASIC NY	#0097 ORGX DYSB* #0397 ORGX CMOP NY
*Not Available in New York				
Nutrient Cellular and Mitochondrial Markers				
Fatty Acid Metabolism				
Adipate	•	•	•	
Suberate	•	•	•	
Ethylmalonate		•	•	
Carbohydrate Metabolism				
Pyruvate	•	•	•	
Lactic Acid	•			
L-Lactate		•	•	
ß-Hydroxybutyrate		•	•	
β-OH-β-Methylglutaric Acid (HMG)	•			
β-OH-Butyric Acid (BHBA)	•			
Energy Production (Citric Acid Cycle)				
Citrate	•	•	•	
cis-Aconitate	•	•	•	
Isocitrate	•	•	•	
a-Ketoglutarate (AKG)	•	•	•	
Succinate	•	•	•	
Fumarate		•	•	
Malate	•	•	•	
Hydroxymethylglutarate	•	•	•	
Vitamin Markers				
B-Complex Vitamin Markers				
a-Ketoadipic Acid	•			
a-Ketoisovalerate	•	•	•	
a-Ketoisocaproate	•	•	•	
a-Keto-ß-Methylvalerate	•	•	•	
Xanthurenate	•	•	•	
ß-Hydroxyisovalerate		•	•	
Glutaric Acid	•			
3-Hydroxypropionic Acid	•			
3-Hydroxyisovaleric Acid	•			
Isovalerylglycine	•			
Methylation Cofactor Markers				
Methylmalonate	•	•	•	
Formiminoglutamate	•	•	•	
Cell Regulation Markers				
Neurotransmitter Metabolism Markers				
Vanilmandelate	•	•	•	
Homovanillate	•	•	•	
5-Hydroxyindoleacetate	•	•	•	
Kynurenate	•	•	•	
Quinolinate	•	•	•	
Kynurenic / Quinolinic Ratio	•			
3-Methyl-4-OH-phenylglycol	•			
Picolinate		•	•	

Organic Acid Profiles Biomarkers Comparison Table

Biomarkers reported	MAP*	#0091 ORGX COMP* #0391 ORGX COMP NY	#0291 ORGX BASIC* #3291 ORGX BASIC NY	#0097 ORGX DYSB* #0397 ORGX CMOP NY
*Not Available in New York				
Oxidative Damage and Antioxidant Markers				
p-Hydroxyphenyllactate		•		
Lipid Peroxides				
8-Hydroxy-2′-deoxyguanosine		•		
Toxicants and Detoxification				
a-Ketophenylacetic Acid (from Styrene)	•			
a-Hydroxyisobutyric Acid (from MTBE)	•			
2-Methylhippurate		•	•	
Orotate	•	•	•	
Glucarate	•	•	•	
a-Hydroxybutyrate		•	•	
Pyroglutamate	•	•	•	
Sulfate		•	•	
Tyrosine Metabolism				
2-Hydroxyphenylacetic Acid	•			
Homogentisic Acid	•			
Malabsorption and Dysbiosis Markers				
Malabsorption Markers				
Indoleacetic Acid (IAA)	•			
Phenylacetate (PAA)	•	•		•
Bacterial /Yeast Dysbiosis Markers				
Bacterial - general				
Benzoate	•	•		•
Hippurate	•	•		•
Dihydroxyphenylpropionic Acid (DHPPA)	•			
3-Hydroxyphenylacetic Acid	•			
4-Hydroxyphenylacetic Acid	•			
Phenylpropionate		•		•
p-Hydroxybenzoate		•		•
p-Hydroxyphenylacetate		•		•
Indican		•		•
Tricarballylate		•		•
L. acidophilus/general bacterial				
D-Lactate		•		•
Clostridial species				
3,4 Dihydroxyphenylpropionate		•		•
Yeast/Fungal				
D-Arabinitol		•		•
Arabinose	•			
Citramalic Acid	•			
Tartaric Acid	•			
Creatinine	•			

Amino Acids Analysis, Urine* ‡

Description:

Quantifies levels of excretion of amino acids and their metabolites, and evaluates essential and non-essential amino acid nutrient status in the urine. It can also indicate functional deficiencies of a number of mineral and vitamin cofactors. Indicated for patients with suspected inadequate protein utilization and other metabolic disorders including depression.

Metabolic Markers for Urine Representativeness, Nutritionally Essential and Semi-Essential Amino Acids, Dietary Peptide-Related Markers, Non-essential Protein Amino Acids, Intermediary Metabolites and Diagnostic Markers.

Specimen Type:

Urine

TAT:

10 days

Method:

Kinetic (Jaffe), HPLC, Enzymatic

Biomarkers Reported:

See Page 51

Amino Acids Analysis, Urine
NUTRITIONAL

CPTs

Description	CPT #
Amino Acids, Urine	82139

*Not currently available in New York
‡ABN Required

Amino Acids Analysis, Plasma*‡

Description:

Quantifies levels of circulating amino acids and their metabolites, and evaluates essential and non-essential amino acid nutrient status in the blood. Also can indicate functional deficiencies of a number of mineral and vitamin cofactors. Indicated for patients with suspected inadequate protein utilization and other metabolic disorders including arthritis and depression.

Metabolic Markers for Plasma Representativeness, Nutritionally Essential and Semi-Essential Amino Acids, Dietary Peptide-Related Markers, Non-essential Protein Amino Acids, Intermediary Metabolites and Diagnostic Markers.

Specimen Type:

Plasma

TAT:

10 days

Method:

HPLC

Biomarkers Reported:

See Page 51

Amino Acids Analysis, Plasma
NUTRITIONAL

CPTs

Description	CPT #
Amino Acids, Plasma	82139

*Not currently available in New York
‡ABN Required

0010 Amino Acids 40 Profile*‡

0310 Amino Acids 40 Profile NY ‡

0011 Amino Acids 20 Profile* ‡

0311 Amino Acids 20 Profile NY ‡

Description:

Fasting plasma levels of amino acids represent homeostatic balance between supply and utilization of these critical building blocks. Problems in amino acid metabolism are revealed by the amino acids and metabolites that are reported in categories according to function. Amino acid analysis helps with determination of amino acid imbalances, evaluation of functional vitamin and mineral deficiencies, and diagnosis of metabolic disorders. A formula for a custom amino acid blend is provided with every plasma amino acid test result. This blend can be made by any compounding pharmacy.

Specimen Type:

Plasma

TAT:

10 days

Method:

0010/0310 - ION Exchange HPLC

0011/0311 - HPLC

Biomarkers Reported:

See Page 51

Amino Acids Plasma

NUTRITIONAL

CPTs

Description	CPT #
For 0010/0310	
Amino Acids, 40	82139
For 0011/0311	
Amino Acids, 20	82139

*Not currently available in New York
‡ABN required

0013 Bloodspot℠ Amino Acids 11 Profile* ‡

0113 Bloodspot℠ Amino Acids 20 Profile* ‡

Description:

The Bloodspot℠ Amino Acid Assay is a fingerstick amino acid test that measures all of the essential plus key nonessential amino acids. Fasting levels of amino acids represent homeostatic balance between supply and utilization of these critical building blocks. The Bloodspot Amino Acid Assay is a non-invasive alternative to the blood draw in determining essential amino acid status. The test kit is simple enough for the patient to use at home. A formula for a custom amino acid blend is provided with every Bloodspot Amino Acid test result. This blend can be made by any compounding pharmacy.

Specimen Type:

Blood spot

TAT:

14 days

Method:

HPLC

Biomarkers Reported:

See Page 51

Bloodspot Amino Acids 11

NUTRITIONAL

CPTs

Description	CPT #
For 0013	
Blood Spot Amino Acids 11	82139
For 0113	
Blood Spot Amino Acids 20	82139

*Not currently available in New York
‡ABN required

Amino Acid Profiles Biomarkers Comparison Table

Biomarkers reported	#0010*/0310 NY AA40 PLSM	#0011*/0311 NY AA20 PLSM	#0113 AA20 BS*	#0013 AA11 BS*	AA Analysis Plasma*	AA Analysis Urine*
*Not Available in New York						
1-Methylhistidine	•				•	•
3-Methylhistidine	•				•	•
a-Aminoadipic Acid	•				•	•
a-Amino-N-Butyric Acid	•				•	•
ß-Alanine	•				•	•
ß-Aminoisobutyric Acid	•				•	•
Alanine	•				•	•
Anserine	•					•
Arginine	•	•	•	•	•	•
Asparagine	•	•	•		•	•
Aspartic Acid	•	•	•		•	•
Carnosine	•					•
Citrulline	•	•	•		•	•
Cystathionine	•				•	•
Cysteine						•
Cystine	•				•	•
Ethanolamine	•				•	•
Gamma-Aminobutyric Acid	•				•	•
Glutamic Acid	•	•	•		•	•
Glutamine	•	•	•		•	•
Glycine	•	•	•		•	•
Histidine	•	•	•	•	•	•
Homocystine	•					
Hydroxylysine	•					
Hydroxyproline	•					
Isoleucine	•	•	•	•	•	•
Leucine	•	•	•	•	•	•
Lysine	•	•	•	•	•	•
Methionine	•	•	•	•	•	•
Ornithine	•	•	•		•	•
Phenylalanine	•	•	•	•	•	•
Phosphoethanolamine	•				•	•
Phosphoserine	•				•	•
Proline	•				•	•
Sarcosine	•				•	•
Serine	•	•	•		•	•
Taurine	•	•	•	•	•	•
Threonine	•	•	•	•	•	•
Tryptophan	•	•	•	•	•	•
Tyrosine	•	•	•		•	•
Valine	•	•	•	•	•	•
Amino Acid Ratios						
Arginine/Ornithine					•	•
Asparagine/Aspartate					•	
Glutamine/Glutamate	•	•	•		•	•
Phenylalanine/Tyrosine	•	•	•			
Hydroxyproline/Proline	•					
α-ANB/Leucine	•					
Tryptophan/LNAA (Large Neutral AA - Leu+Ile+Val+Phe+Tyr)	•	•	•	•		
Other Markers						
Ammonia					•	•
Urea					•	•
Creatinine						•
24hr Urine Volume					•	•
Plasma Representativeness Index						•
Plasma Representativeness Index					•	

Essential & Metabolic Fatty Acids Analysis

Description:

Evaluates the level of red cell membrane fatty acids, imbalances of which significantly affect inflammatory and other disorders. By knowing the various fatty acid levels, one can re-establish a balance using nutritional intervention.

Specimen Type:

Whole Blood

TAT:

14 days

Method:

GC/MS

Biomarkers Reported:

See Page 54

CPTs

Description	CPT #
Essential and Metabolic Fatty Acids	82542
Arachidic	
Arachidonic	
Behenic	
Dihomo-y-linolenic	
Docosapentaenoic	
Docosahexaenoic	
Docosatetraenoic	
Eicosadienoic	
Eicosapentaenoic	
Elaidic	
a-Linolenic	
Linoleic	
y-Linolenic	
Margaric	
Oleic	
Palmitic	
Palmitoleic	
Pentadecanoic	
Stearic	
Tricosanoic	
Vaccenic	
Behenic Acid	82726
Docosatetraenoic Acid	82726
Lignoceric Acid	82726
Nervonic Acid	82726
Tricosanoic Acid	82726

Essential & Metabolic Fatty Acids
NUTRITIONAL

0041 Fatty Acids - Erythrocytes*‡

0341 Fatty Acids - Erythrocytes NY‡

Description:

Red blood cell membrane levels of fatty acids reveal metabolic effects and long-term balance in the tissues. This test is preferred to assess nutritional status of the critical eicosanoid and long chain fatty acids necessary for membrane stabilization.

Specimen Type:

Whole Blood

TAT:

14 days

Method:

GC/MS

Biomarkers Reported:

See Page 54

Fatty Acids Erythrocytes
NUTRITIONAL

CPTs

Description	CPT #
Fatty acids	82726 x20
Red blood cell (RBC) membranes	
- Fatty acids	0111T x9
Additional Fatty Acids	82542

*Not currently available in New York
‡ABN required

0040 Fatty Acids - Plasma‡*

0340 Fatty Acids NY - Plasma‡

Description:

Plasma fatty acid levels reflect body stores as influenced by recent dietary intake and are useful for monitoring response to supplementation and dietary modifications. Plasma levels are preferred for assessment of dietary adequacy of these essential fatty acids as revealed by adipose tissue composition. Mead acid and the triene/tetraene ratio reveal chronic essential fatty acid insufficiency.

Specimen Type:

Plasma

TAT:

14 days

Method:

GC/MS

Biomarkers Reported:

See Page 54

Fatty Acids Plasma

NUTRITIONAL

CPTs

Description	CPT #
Additional Fatty Acids	82542
Very Long Chain Fatty Acids	82726x 9

*Not currently available in New York
‡ABN Required

0241 Bloodspot℠ Fatty Acids Profile* ‡

Description:

The Bloodspot℠ Fatty Acid Profile measures key omega-3 and omega-6 fatty acids and calculates key indicators to establish your optimal balance. Trans fatty acids—the "bad" oils in processed foods—are also measured. Individual fatty acids are measured as a percent of the total measurable fatty acids.

Specimen Type:

Blood Spot

TAT:

10 days

Method:

GC/MS

Biomarkers Reported:

See Page 54

Bloodspot Fatty Acids

NUTRITIONAL

CPTs

Description	CPT #
Additional Fatty Acids	82542
Very Long Chain Fatty Acids	82726

*Not currently available in New York
‡ABN Required

Fatty Acid Profiles Biomarkers Comparison Table

Biomarkers reported	#0040 FA* #0340 FA NY PLASMA	#0041 FA* #0241 FA NY WHOLE BLD	#0241 FA* BLOOD SPOT	ESSENTIAL AND METABOLIC FA
*Not Available in New York				
Polyunsaturated Omega-3				
Alpha-Linolenic Acid (ALA)	•	•	•	•
Docosahexaenoic Acid (DHA)	•	•	•	•
Docosapentaenoic Acid	•	•		•
Eicosapentaenoic Acid (EPA)	•	•	•	•
% Omega-3				•
Polyunsaturated Omega-6				
Arachidonic Acid	•	•	•	•
Dihomogamma Linolenic Acid (DGLA)	•	•	•	•
Docasadienoic Acid	•	•		
Docosatetraenoic Acid	•	•		•
Eicosadienoic Acid	•	•		•
Gamma Linolenic Acid (GLA)	•	•	•	•
Linoleic Acid	•	•	•	•
% Omega-6				•
Polyunsaturated Omega-9				
Mead Acid	•	•		
% Omega-9				•
Monounsaturated				
11-Eicosenoic Acid	•	•		
Myristoleic Acid	•	•		
Nervonic Acid	•	•		•
Oleic Acid	•	•		•
Palmitoleic Acid	•	•		•
Vaccenic Acid	•	•		•
Saturated				
Arachidic Acid	•	•		•
Behenic Acid	•	•		•
Capric Acid	•	•		
Hexacosanoic Acid	•	•		
Lauric Acid	•	•		
Lignoceric Acid	•	•		•
Margaric Acid				•
Myristic Acid	•	•		
Palmitic Acid	•	•		•
Stearic Acid	•	•		•
% Saturated Fats				•
Odd Chain				
Heneicosanoic Acid	•	•		
Heptadecanoic Acid	•	•		
Nonadecanoic Acid	•	•		
Pentadecanoic Acid	•	•		•
Tricosanoic Acid	•	•		•
Trans				
Elaidic Acid				•
Palmitelaidic Acid	•			
Total C:18 Trans	•	•	•	
Ratios (calculated)/Various				
LA/GLA			•	
Linoleic/DGLA	•	•		•
EPA/DGLA	•	•	•	
AA/EPA	•	•	•	•
Triene/Tetraene	•			
Stearic/Oleic		•		
Omega-6s/Omega-3s				•
Index Of Omega-3s			•	•

0036 Fat-Soluble Vitamins Profile* ‡

Description:

Measuring serum levels of the fat-soluble vitamins A, E, D, and K plus beta-carotene and CoQ10 gives clinicians a great tool to gain an overall perspective of a patient's health, nutrient processing, and dietary insufficiencies.

Specimen Type:

Serum

TAT:

10-14 days

Method:

UPLC; EIA; Chemiluminescence

Biomarkers Reported:

25-Hydroxyvitamin D

ß-Carotene

Gamma Tocopherol

Retinol

Alpha Tocopherol

Coenzyme Q10

Undercarboxylated osteocalcin

FAT-SOLUBLE VITAMINS℠

CPTs

Description	CPT #
Carotene	82380
Coenzyme Q10	82491
Gamma Tocopherol	82491
Vitamin A	84590
Vitamin D	82306
Vitamin E	84446
Vitamin K	83937

*Not currently available in New York
‡ABN Required

0033 Coenzyme Q10 Plus Vitamins Profile (A, E, and ß-Carotene)* ‡

Description:

Serum levels of the fat-soluble vitamins A and E, ß-carotene, and coenzyme Q10 are measures of total body status of these antioxidant nutrients.

Specimen Type:

Serum

TAT:

6-8 days

Method:

UPLC

Biomarkers Reported:

Beta Carotene

Coenzyme Q10

Gamma Tocopherol

Vitamin A

d-Alpha Tocopherol

Vitamin E

Coenzyme Q10 with Vitamins

NUTRITIONAL

CPTs

Description	CPT #
Carotene	82380
Coenzyme Q10	82491
**Gamma Tocopherol	82491
**Vitamin A	84590
**Vitamin E	84446

**Not on Coenzyme Assay
*Not currently available in New York
‡ABN Required

Oxidative Stress Analysis 2.0, Blood

Description:

Measures antioxidant reserve and enzyme function including: whole blood glutathione, total antioxidant capacity, redox balance, and the enzymes superoxide dismutase and glutathione peroxidase. Additionally, blood markers of damage measure lipid peroxides. Especially useful in cases of chronic fatigue, xenobiotic exposure, and chronic illnesses.

Specimen Type:

Blood

TAT:

7 days

Method:

Colorimetric, Enzymatic, TBARS, Turbidimetric

Biomarkers Reported:

Glucose
Lipid Peroxides
Cysteine
Cystine
Glutathione
Glutathione, Peroxidase
Sulfate
Superoxide dismutase (SOD)
Total Antioxidant Capacity, TAC

Oxidative Stress 2.0 - Blood

NUTRITIONAL

CPTs

Description	CPT #
Cysteine, Cystine x2*	82136
Cysteine/Sulfate Ratio	-
Cysteine/Cystine Ratio	-
Glutathione Peroxidase	84311
Glutathione (total free)	82978
Lipid Peroxides	84311
Sulfate, Serum	84311
Superoxide Dismutase (SOD)	84311
Total Antioxidant Capacity*	84311

*Not currently available in New York

Oxidative Stress Analysis 2.0, Urine*

Description:

Measures free radical damage, including 8-hydroxy-deoxyGuanosine (8-OHdG; oxidative damage to DNA) and lipid peroxides. Especially useful in cases of chronic fatigue, xenobiotic exposure, and chronic illness.

Specimen Type:

Urine

TAT:

7 days

Method:

LC-MS-MS

Biomarkers Reported:

8-OHdG
Glucose
Lipid Peroxides

Oxidative Stress 2.0 - Urine

NUTRITIONAL

CPTs

Description	CPT #
Lipid Peroxides, Urine	84311
8-OHdG	83520

*Not currently available in New York

Lipid Peroxides*

Description:

Lipid peroxides are the products of chemical damage done by oxygen-free radicals to the polyunsaturated fatty acids of cell membranes. This test is an assay of total thiobarbituric acid-reactive substances (TBARS) in serum using HPLC. The HPLC separation step isolates the TBARS from potential interfering compounds that can give false elevations in a simple colorimetric assay. The results provide a measure of total serum lipid peroxidation, an indicator of whole body free radical activity. High levels of lipid peroxides are associated with cancer, heart disease, stroke, and aging.

Specimen Requirements

Serum

TAT:

7 Days

Method:

HPLC

Biomarkers reported

Lipid peroxides

Lipid Peroxides - Blood

NUTRITIONAL

CPTs

Description	CPT #
Lipid peroxide	82491

*Not currently available in New York

Sulfate

Description:

Measures sulfate levels in serum.

Specimen Requirements

Serum

TAT:

7 Days

Method:

HPLC

Biomarkers reported

Sulfate

Sulfate

NUTRITIONAL

CPTs

Description	CPT #
Sulfate, Serum	84311

Glutathione

Description

Measures glutathione levels in serum.

Specimen Requirements

Whole Blood

TAT:

7 Days

Method:

HPLC

Biomarkers reported

Glutathione

Glutathione
NUTRITIONAL

CPTs

Description	CPT #
Glutathione, Whole Blood	82978

Cysteine

Description

Measures cysteine levels in serum.

Specimen Requirements

Serum

TAT:

7 Days

Method:

HPLC

Biomarkers reported

Cysteine

Cysteine
NUTRITIONAL

CPTs

Description	CPT #
Cysteine, Serum	84311

Vitamin Profiles Biomarkers Comparison Table

Biomarkers Reported	#0033 CoQ10+ Vit	#0031 VIT K	#0032* #0332 NY VIT D	#0036 FSV		
*Not Available in New York						
Vitamin A	•			•		
Alpha Tocopherol (VIT E)	•			•		
Gamma Tocopherol (VIT E)	•			•		
ß-Carotene	•			•		
Coenzyme Q10	•			•		
Undercarboxylated osteocalcin (VIT K)		•		•		
25-Hydroxyvitamin D, Total (VIT D)			•	•		
25-Hydroxyvitamin D3 (VIT D)			•	•		
25-Hydroxyvitamin D2 (VIT D)			•	•		
Retinol				•		

Oxidative Stress Profiles Biomarkers Comparison Table

*Not Available in New York					Oxidative Stress 2.0 (U)*	Oxidative Stress 2.0 (B)
8-OHdG					•	
Lipid Peroxides					•	•
Cysteine						•
Cystine						•
Cysteine/Sulfate Ratio						•
Cysteine/Cystine Ratio						•
Glutathione						•
Glutathione, Peroxidase (GPX)						•
Sulfate						•
Superoxide dismutase (SOD)						•
Total Antioxidant Capacity (TAC)						•

CV Health™

Description:

This profile analyzes blood and utilizes NMR fractionation technology. This allows for state-of-the-art lipid markers and independent risk factors to illuminate the clinical complexity of cardiovascular disease (CVD). Together, these markers provide a thorough assessment of cardiovascular health status, revealing the biochemical environment associated with inflammation, lipid deposits, endothelial dysfunction, and clotting factors underlying cardiovascular disease.

Includes: LDL-C, HDL-C, Triglycerides, Total Cholesterol, LDL-P, HDL-P, LDL-Size, Lipoprotein (a), hs C-Reactive Protein, Lp-PLA2, Homocysteine, Fibrinogen, and Insulin Resistance Score.

Specimen Type:

Blood

TAT:

7 days

Method:

Nephelometric, Chemiluminescent, NMR, Enzymatic, Immunoturbidimetric

Biomarkers Reported:

See Page 63

Add-on Test:

Vitamin D

CPTs

Description	CPT #
Lipoprotein (a)	83695
Homocysteine	83090
hs C-Reactive Protein	86141
Fibrinogen	85385
Quantification of Lipoprotein	83704
Lipid Panel	80061
Total Cholesterol	
HDL-C	
Triglycerides	
Lp-PLA2	83698

CV Health plus Genomics™*

Description:

This profile analyzes blood and utilizes NMR fractionation technology for state-of-the-art lipid markers and independent risk factors that illuminate the clinical complexity of cardiovascular disease (CVD) as well as a patient's genomic predisposition to cardiovascular diseases. Together, these markers provide a thorough assessment of cardiovascular health status, revealing the biochemical environment and cardiogenomic risk associated with inflammation, lipid deposits, endothelial dysfunction, and clotting factors underlying cardiovascular disease.

Includes: LDL-C, HDL-C, Triglycerides, Total Cholesterol, LDL-P, HDL-P, LDL-Size, Lipoprotein (a), hs C-Reactive Protein, Lp-PLA2, Homocysteine, Fibrinogen, and Insulin Resistance Score. Genomic markers include ApoE, MTHFR, Factor II, and Factor V (Leiden).

Specimen Type:

Blood

TAT:

14 days

Method:

PCR, Nephelometric, Chemiluminescent, NMR, Enzymatic, Immunoturbidimetric

Biomarkers Reported:

See Page 63

CPTs

Description	CPT #
Lipoprotein (a)	83695
Homocysteine	83090
hs C-Reactive Protein	86141
Fibrinogen	85385
Quantification of Lipoprotein	83704
Lipid Panel	80061
Total Cholesterol	
HDL-C	
Triglycerides	
Lp-PLA2	83698
Genomic Markers	
ApoE	81401
Factor II	81240
Factor V	81241
MTHFR	81291

*Not currently available in New York

Comprehensive Cardiovascular Assessment*

Description:

Analyzes blood for levels of HDL, LDL, and total cholesterol, ratios, triglycerides, lipoprotein(a), homocysteine, apolipoprotein A1, apolipoprotein B, fibrinogen, and C-reactive protein.

Includes: Triglycerides,Total Cholesterol, HDL, LDL, Apolipoprotein A1, Apolipoprotein B, Lipoprotein(a), Homocysteine, Fibrinogen, C-Reactive Protein, ratios, and CV Index.

Specimen Type:

Blood

TAT:

10 days

Method:

Nephelometric, Enzymatic, Chemiluminescent, Immunoturbidimetric

Biomarkers Reported:

See Page 63

Comprehensive Cardiovascular

NUTRITIONAL

CPTs

Description	CPT #
Apolipoprotein A1	82172
Apolipoprotein B	82172
hs C-Reactive Protein	86141
Cholesterol, LDL	83721
Fibrinogen	85385
Homocysteine	83090
Lipid Panel	80061
Cholesterol, HD	
Cholesterol, Serum	
Triglycerides, Serum	
Lipoprotein (a)	83695

*Not currently available in New York

MetSyn Guide™*

Description:

This profile measures stages of pre-diabetes and progression toward type 2 diabetes mellitus (T2DM) or Cardio-Metabolic Syndrome, using metabolic, inflammatory, and lipid biomarkers. MetSyn Guide™ focuses on the importance of early assessment and correction of risk factors.

Specimen Type:

Blood/Serum

TAT:

7 days

Method:

Enzymatic, NMR, Luminex

Biomarkers Reported:

See Page 63

metSynguide™

CPTs

Description	CPT #
Quantification of Lipoprotein	83704
Lipid Panel	80061
Total Cholesterol	
HDL-C	
Triglycerides	
hs C-Reactive Protein	86141
Interleukin IL-6	82397
Interleukin IL-8	82397
TNFa	83516
Plasminogen Activator Inhibitor Type 1	83520
Glucose (Fasting)	82947
Adiponectin	83520
Insulin (Fasting)	83525
Proinsulin	84206
HOMA-IR	-
Hemoglobin A1c	83036
C-Peptide	84681
Leptin	83516

*Not currently available in New York

PreD Guide™*

Description:

This profile measures stages of pre-diabetes and progression towards type 2 diabetes mellitus (T2DM), using metabolic and inflammatory biomarkers.

PreD Guide focuses on the importance of early assessment and correction of risk factors.

Specimen Type:

Blood/Serum

TAT:

7 days

Method:

Luminex

Biomarkers Reported:

See Page 63

preDguide™

CPTs

Description	CPT #
hs C-Reactive Protein	86141
Interleukin IL-6	82397
Interleukin IL-8	82397
TNFa	83516
Plasminogen Activator Inhibitor Type 1	83520
Glucose (Fasting)	82947
Adiponectin	83520
Insulin (Fasting)	83525
Proinsulin	84206
HOMA-IR	-
Hemoglobin A1c	83036
C-Peptide	84681
Leptin	83516

*Not currently available in New York

Bone Resorption Assessment~

Description:

This simple, direct urinary test examines pyridinium crosslinks and deoxypyridinoline, useful in identifying current rate of bone loss, lytic bone disease, and efficacy of bone support therapies.

Specimen Type:

Urine

TAT:

10 days

Method:

Kinetic (Jaffe), EIA

Biomarkers Reported:

Creatinine

Deoxypyridinoline

Pyridinium Crosslinks

Bone Resorption Assessment
NUTRITIONAL

CPTs

Description	CPT #
Deoxypyridinoline	82523
Pyridinium Crosslinks	82523

~Not reimbursable by Medicare

0014 ADMA Profile (Asymmetric Dimethylarginine)*

Description:

Asymmetric Dimethylarginine (ADMA) is the principal endogenous inhibitor of nitric oxide synthase. Thus, it regulates rates of nitric oxide (NO) formation. Nitric oxide acts as a signal molecule in the nervous system, as a weapon against infections, as a regulator of blood pressure, and as a gate keeper of blood flow to the organs. Elevated ADMA is a risk factor for hypertension, cardiovascular disease, renal failure, and erectile dysfunction. Two factors that contribute to elevated ADMA are increased oxidative challenge and folic acid insufficiency.

Specimen Type:

Plasma

TAT:

7-14 days

Method:

LC/MS-MS

Biomarkers Reported:

Asymmetric
Dimethylarginine (ADMA)

Arginine

Arginine/ADMA ratio

ADMA℠
Asymmetric Dimethylarginine

CPTs

Description	CPT #
ADMA	82136

*Not currently available in New York

0088 Neopterin/Biopterin Profile*

Description:

Neopterin and biopterin are by-products of the redox reactions involving tetrahydrobiopterin (BH4). BH4 functions as a cofactor for the enzymes responsible for the production of monoamine neurotransmitters (epinephrine, norepinephrine, DOPA, serotonin), and as a cofactor in nitric oxide production. Low biopterin levels may reflect insufficient BH4 status.

Specimen Type:

Urine

TAT:

7-10 days

Method:

LC/MS-MS, Spectrophotometry

Biomarkers Reported:

Neopterin

Creatinine

Biopterin

neopterin biopterin™ profile

CPTs

Description	CPT #
Neopterin/Biopterin Mass Spectometry, Quant	83789
Creatinine	82570

*Not currently available in New York

Health Risk Profiles Biomarkers Comparison Table

Biomarkers Reported:	#0014 ADMA*	BONE	COMP CARDIO	CV HEALTH	CV HEALTH + GENV*	METSYN*	PRED*
*Not Available in New York							
Dna/Oxidative Stress Marker							
8-Hydroxy-2′-deoxyguanosine							
ADMA Profile							
Asymmetric Dimethylarginine (ADMA)	•						
Arginine	•						
Arginine/ADMA ratio	•						
Bone Resorption Assessment							
Pyridinium Crosslinks/Creatinine		•					
Deoxypyridinium		•					
Neopterin/Biopterin							
Neopterin							
Biopterin							
Neopterin/Biopterin Ratio							
Metabolic/Lipid Markers							
Total Cholesterol			•	•	•	•	
HDL Cholesterol			•	•	•	•	
LDL-Cholesterol			•	•	•	•	
Triglycerides			•	•	•	•	
Glucose						•	•
Insulin						•	•
Apolipoprotein A (Apo A-1)			•				
Apolipoprotein A (Apo B)			•				
HDL-Particle # (HDL-P)				•	•	•	
LDL-Particle # (LDL-P)				•	•	•	
LDL Size				•	•		
LDL-Small Particle #				•	•	•	
LDL-Large Particle #				•	•		
HDL L				•	•		
HDL Size				•	•		
LDL S				•	•		
VLDL L				•	•		
VLDL Size				•	•		
Adiponectin						•	•
C-Peptide						•	•
HOMA-IR						•	•
HbA1c						•	•
Leptin						•	•
Proinsulin						•	•
Lipoprotein(a) (Lp(a))			•	•	•		
Lipoprotein Ratios							
Total Cholesterol/HDL			•				
ApoB/ApoA-1			•				
Chronic Inflammatory Markers							
Average Inflammation Score						•	•
BMI						•	•
Fibrinogen			•	•	•		
c-Reactive protein (HS)(hs-CRP)			•	•	•	•	•
Insulin Resistance Score				•	•		•
Lp-PLA2 (PLAC)				•	•		
Interleukin IL-6						•	•
Interleukin IL-8						•	•
Plasminogen Activator Inhibitor Type (PAI-1)						•	•
Tumor Necrosis Factor Alpha (TNFa)						•	•
Homocysteine			•	•	•		
Genomics							
APOE					•		
Factor 2 (prothrombin)					•		
Factor 5 (Leiden)					•		
MTHFR					•		

Comprehensive Urine Elements Profile (Timed or 24-hour)* ~

Description:

This test measures urinary excretion of nutrient elements and toxic metals, including "classic" toxics such as lead, mercury, and arsenic. This is an ideal test for patients suspected of toxic element exposure as well as potential nutrient mineral wasting.

NOTE: Partial Panels cannot be ordered on this Profile.

Specimen Type:

Urine

TAT:

5-7 days

Method:

Chemiluminescent, RIA, ICP-MS, Kinetic (Jaffe)

Biomarkers Reported:

See Page 68

Comprehensive Urine Elements
NUTRITIONAL

CPTs

Description	CPT #
TOXIC	
Aluminum	82108
Cadmium	82300
Cesium	
Gadolinium	
Gallium	
Heavy Metals:	83015
Antimony	
Arsenic	
Barium	
Bismuth	
Mercury	
Lead	83655
Nickel	83885
Niobium	
Platinum	
Rubidium	
Thallium	
Thorium	
Tin	
Tungsten	
Uranium	

CPTs

Description	CPT #
NUTRIENT	
Calcium	82340
Chromium	
Cobalt	
Copper	
Iron	
Lithium	
Magnesium	83735
Manganese	
Molybdenum	
Potassium	
Selenium	
Strontium	
Sulfur	
Vanadium	
Zinc	
Miscellaneous	
Creatinine	

*Not currently available in New York
~Not reimbursable by Medicare

Toxic Element Clearance Profile (Timed or 24-Hour) *

Description:

This test measures urinary excretion of toxic metals, including 'classic' toxics such as lead, mercury, and arsenic. This is an ideal test for patients suspected of toxic element exposure.

NOTE: Partial Panels cannot be ordered on this Profile.

Specimen Type:

Urine

TAT:

7 days

Method:

Chemiluminescent, RIA, ICP-MS, Kinetic (Jaffe)

Biomarkers Reported:

See Page 68

Toxic Elements Clearance
NUTRITIONAL

CPTs

Description	CPT #
Aluminum	82108
Heavy Metals:	83015
Antimony	
Arsenic	
Barium	
Bismuth	
Mercury	
Cadmium	82300
Lead	83655
Nickel	83885

*Not currently available in New York

0022 Nutrient and Toxic Elements - Blood* ‡°

0037 Nutrient and Toxic Elements Profile NY - Blood ‡

Description:

Toxic elements and selenium are measured in whole blood while major and other trace nutrient elements are measured in erythrocytes. Erythrocyte concentrations are good indicators of body pools of essential elements such as magnesium, potassium, and zinc. Various regulatory agencies have deemed whole blood to be the preferred specimen for assessment of toxic element exposure to aluminum, arsenic, cadmium, lead and mercury.

Specimen Type:

RBCs

TAT:

7-14 days

Method:

ICP/MS

Biomarkers Reported:

See Page 68

Nutrient and Toxic Elements
NUTRITIONAL

CPTs

Description	CPT #
Aluminum	82108
Cadmium	82300
Calcium	82310
Copper	82525
Heavy Metal Screen	83015
**°Lead	83655
Magnesium	83735
Potassium	84132
Selenium	84255
Zinc	84630

**Not on 0037
*Not currently available in New York
‡ABN Required
°Not available in Ohio

0026 Toxic Metals - Whole Blood* ‡°

Description:

Increased exposure to toxic elements is generally reflected by levels in whole blood. This test shows levels of aluminum, arsenic, cadmium, lead, and mercury.

Specimen Type:

Whole Blood

TAT:

7-14 days

Method:

ICP/MS

Biomarkers Reported:

See Page 68

Toxic Metals - Whole Blood
NUTRITIONAL

CPTs

Description	CPT #
Aluminum	82108
Cadmium	82300
Heavy Metal Screen	83015
°*Lead	83655

*Not currently available in New York
‡ABN Required
°Not available in Ohio

Elemental Analysis, Packed Erythrocytes*~

Description:

Measures RBC intracellular concentrations of toxic elements and nutrient elements. Indicated for patients suspected of recent toxic element exposure and for evaluation of intracellular mineral nutrient status.

Specimen Type:

RBCs

TAT:

5-7 days

Method:

ICP-MS

Biomarkers Reported:

See Page 68

Elements - Packed Erythrocytes

NUTRITIONAL

CPTs

Description	CPT #
Cadmium	82300
Copper	82525
Heavy Metal Screen	83015
**°Lead	83655
Magnesium	83735
Manganese	83785
Potassium	84132
Zinc	84630

*Not currently available in New York
~Not reimbursable by Medicare

Element Profiles Biomarkers Comparison Table

	#0026*° TOX MET BLD	#0022*°/0037NY N/T ERYTH	COMP. URINE ELE*	ELE ANALYSIS PCKED ERYTH*	TOX ELEMENT. CLEARANCE*
* Not Available in New York °Not available in Ohio					
Nutrient Elements					
Calcium		•	•		
Chromium			•	•	
Cobalt			•		
Copper		•	•	•	
Iron			•		
Lithium			•		
Magnesium		•	•	•	
Manganese			•	•	
Molybdenum			•		
Phosphorus					
Potassium		•	•	•	
Selenium		•	•	•	
Sodium					
Sulfur			•		•
Vanadium			•	•	
Zinc		•	•	•	
Toxic Elements					
Aluminum	•	•	•		•
Arsenic	•	•	•	•	
Beryllium					
Cadmium	•	•	•	•	•
Gadolinium			•		•
Gallium			•		•
Lead*°	•	•	•	•	•
Mercury	•	•	•	•	•
Nickel			•		•
Niobium			•		•
Platinum			•		•
Rubidium			•		•
Thallium			•	•	•
Thorium			•		•
Tin			•	•	•
Tungsten			•		•
Uranium			•		•
Potentially Toxic and Rare Earth Elements					
Antimony			•	•	•
Barium			•		•
Bismuth			•		•
Cesium			•		•
Elements of Unknown Human Requirement					
Strontium			•		

Essence™ Hormone Tests

ENDOCRINOLOGY TESTING

Hormonal Health™

Description:

This test provides a focused overview of hormonal balance in both pre- and post-menopausal women, using a single serum sample to evaluate dynamics of the sex steroid metabolism that can profoundly affect a woman's health throughout her lifetime.

Specimen Type:

Serum

TAT:

7 days

Method:

EIA, Chemiluminescent, RIA

Biomarkers Reported:

16 alpha-hydroxyestrone
2-Hydroxyestrone
DHEA-S
Estradiol
Estriol
Estrone
Estrone Sulfate
Luteinizing Hormone (LH)
Progesterone
Prolactin
Sex Hormone Binding Globulin (SHBG)
Testosterone

CPTs

Description	CPT #
2-Hydroxyestrone (2-OHE-1)	82679
16a-Hydroxyestrone (16a-OHE1)	82679
DHEA-S	82627
Estradiol	82670
Estriol	82677
Estrone	82679
Estrone Sulfate	83519
Progesterone	84144
Sex Hormone-Binding Globulin (SHBG)	84270
Testosterone	84403

Possible Add-ons

Androstenedione	82157
Follicle Stimulating Hormone	83001
Luteinizing Hormone	83002
Prolactin	84146
Vitamin D	82306

Male Hormonal Health™*

Description:

This test provides a focused overview of hormonal balance in men, using a single serum sample to evaluate dynamics of the sex steroid metabolism that can profoundly affect a man's health throughout his lifetime.

Specimen Type:

Serum

TAT:

17 days

Method:

Chemiluminescent, LC/MS/MS, RIA, LC/MS

Biomarkers Reported:

DHEA-S
Dihydrotestosterone (DHT)
Estradiol
Free Testosterone
Insulin-Like Growth Factor 1 (IGF-1)
Luteinizing Hormone (LH)
Prostate Specific Antigen (PSA)
Sex Hormone Binding Globulin (SHBG)

CPTs

Description	CPT #
Estradiol	82670
Insulin-like Growth Factor 1 (IGF-1)	84305
Sex Hormone Binding Globulin	84270
DHEA-S	82627
Dihydrotestosterone (DHT)*	82651
Testosterone, Free	84402
Prostate Specific Antigen (PSA)	84153

Possible Add-ons

Androstenedione	82157
Follicle Stimulating Hormone	83001
Luteinizing Hormone	83002
Prolactin	84146
IGFBP-3	82397
Vitamin D	82306

*Not currently available in New York

Comprehensive Thyroid Assessment

Description:

Analyzes serum levels of TSH, free T4, free T3, reverse T3, anti-TG antibodies, and anti-TPO antibodies to assess central and peripheral thyroid function, as well as thyroid auto-immunity.

Specimen Type:

Serum

TAT:

7 days

Method:

Chemiluminescent, RIA

Biomarkers Reported:

Anti-TG

Anti-TPO

Free T3

Free T4

Reverse T3

TSH

Comprehensive Thyroid **Assessment**

CPTs

Description	CPT #
Free T3	84481
Free T4	84439
Reverse T3	84482
Anti-TG Antibodies, IgG	86800
Anti-TPO Antibodies, IgG	86376
TSH	84443

Estrogen Metabolism Assessment, Serum

Description:

This specialized sub-panel reveals the biodynamics of two key estrogen metabolites. Can be used as a focused follow-up to monitor clinical interventions (including hormone therapy, diet, and lifestyle changes).

Specimen Type:

Serum

TAT:

7 days

Method:

EIA

Biomarkers Reported:

16 alpha-hydroxyestrone

2-Hydroxyestrone

Creatinine

Estrogen Metabolism **Assessment**

CPTs

Description	CPT #
2-Hydroxyestrone	82679
16a-Hydroxyestrone	82679

Menopause Plus™*

Description:

In addition to the analysis of hormones included in Menopause, this advanced profile includes the Adrenocortex Stress Profile and the Comprehensive Melatonin Profile to reveal how the sex hormones are influenced by cortisol, DHEA, and melatonin.

Specimen Type:

Saliva

TAT:

7 days

Method:

LIA, EIA, RIA

Biomarkers Reported:

Cortisol

DHEA

Estradiol

Estriol

Estrone

Melatonin

Progesterone

Testosterone

CPTs

Description	CPT #
Estrone, Salivary x3	82679 x3
Estradiol, Salivary x3	82670 x3
Estriol, Salivary x3	82677 x3
Cortisol, Salivary x4	82530 x4
Testosterone, Salivary	84402
DHEA, Salivary	82626
Progesterone, Salivary x3	84144 x3
Melatonin, Salivary x3	83519 x3

*Not currently available in New York

Menopause™ *

Description:

Examines three saliva samples over a 5-day period to determine levels of ß-estradiol, estrone, estriol, progesterone, and testosterone for women who are menopausal.

Specimen Type:

Saliva

TAT:

7 days

Method:

LIA, EIA, RIA

Biomarkers Reported:

Estradiol

Estriol

Estrone

Progesterone

Testosterone

CPTs

Description	CPT #
Estrone, Salivary x3	82679 x3
Estradiol, Salivary x3	82670 x3
Estriol, Salivary x3	82677 x3
Testosterone, Salivary	84402
Progesterone, Salivary x3	84144 x3

*Not currently available in New York

Rhythm Plus™*

Description:

In addition to analysis of hormones included in Rhythm, this advanced profile includes the Adrenocortex Stress Profile and the Comprehensive Melatonin Profile to reveal how the sex hormones are influenced by cortisol, DHEA, and melatonin.

Specimen Type:

Saliva

TAT:

7 days

Method:

LIA, EIA, RIA

Biomarkers Reported:

Cortisol

DHEA

Estradiol

Melatonin

Progesterone

Testosterone

CPTs

Description	CPT #
Estradiol, Salivary x11	82670 x11
Cortisol, Salivary x4	82530 x4
Testosterone, Salivary	84402
DHEA, Salivary	82626
Progesterone, Salivary x11	84144 x11
Melatonin, Salivary x3	83519 x3

*Not currently available in New York

Rhythm™*

Description:

Analyzes 11 saliva samples over a 28-day period for the levels of ß-estradiol, progesterone, and testosterone, providing clues about menstrual irregularities, infertility, endometriosis, and other hormone-related conditions.

Specimen Type:

Saliva

TAT:

7 days

Method:

LIA

Biomarkers Reported:

Estradiol

Progesterone

Testosterone

CPTs

Description	CPT #
Estradiol, Salivary x11	82670 x11
Progesterone, Salivary x11	84144 x11
Testosterone, Salivary	84402

*Not currently available in New York

Menopause Check Plus*

Description:

This test examines one saliva sample to determine levels of DHEA, estradiol, estrone, estriol, progesterone, and testosterone for women who are menopausal.

Specimen Type:

Saliva

TAT:

7 days

Method:

LIA, EIA, RIA

Biomarkers Reported:

DHEA

Estradiol

Estriol

Estrone

Progesterone

Testosterone

Menopause Check Plus™

CPTs

Description	CPT #
DHEA	82626
Estradiol	82670
Estriol	82677
Estrone	82679
Progesterone	84144
Testosterone	84402

*Not currently available in New York

Male Hormones Plus™*

Description:

In addition to analysis of testosterone, Male Hormones Plus™ includes the Adrenocortex Stress Profile and the Comprehensive Melatonin Profile to reveal how testosterone is influenced by cortisol, DHEA, and melatonin.

Specimen Type:

Saliva

TAT:

7 days

Method:

LIA, EIA, RIA

Biomarkers Reported:

Cortisol

DHEA

Melatonin

Testosterone

Male Hormones Plus™

CPTs

Description	CPT #
Cortisol, Salivary x4	82530 x4
Testosterone, Salivary x4	84402 x4
DHEA, Salivary	82626
Melatonin, Salivary x3	83519 x3

*Not currently available in New York

One Day Hormone Check™*

Description:

An effective panel for checking key hormone levels during a 24-hour period. Additionally, this panel analyzes cortisol, DHEA, and determines the secretion pattern for melatonin.

Specimen Type:

Saliva

TAT:

7 days

Method:

LIA, EIA, RIA

Biomarkers Reported:

Cortisol

DHEA

Estradiol

Estriol

Estrone

Melatonin

Progesterone

Testosterone

CPTs

Description	CPT #
Estrone, Salivary	82679
Estradiol, Salivary	82670
Estriol, Salivary	82677
Testosterone, Salivary	84402
Progesterone, Salivary	84144
Cortisol, Salivary x4	82530 x4
DHEA, Salivary	82626
Melatonin, Salivary x3	83519 x3

*Not currently available in New York

Adrenocortex Stress Profile

Description:

Assays 4 saliva samples over a 24-hour period for levels of cortisol and DHEA. Imbalances in these hormones are associated with ailments ranging from obesity and chronic fatigue to immune deficiency and increased risk of cardiovascular disease.

Specimen Type:

Saliva

TAT:

7 days

Method:

LIA, EIA, RIA

Biomarkers Reported:

Cortisol

DHEA

CPTs

Description	CPT #
Cortisol, Salivary x4	82530 x4
DHEA, Salivary	82626

0043 Adrenal Stress Plus* ‡

Description:

The Adrenal Stress Profile uses a non-invasive salivary procedure to monitor the activity of the adrenal cortex and its ability to react to stress. The procedure monitors the circadian variation of the cortisol and DHEA-S levels. An increased cortisol level, a decreased DHEA-S level, or a decrease in the DHEA-S/cortisol ratio is an indication of a stressful physical or mental condition. Also measured in the Adrenal Stress Plus Profile are secretory IgA and antigliadin antibodies. Secretory IgA protects the gut from pathogenic material. During a high stress situation, levels of secretory IgA decrease. Thus, chronic cortisol elevation may be associated with high anti-gliadin antibodies due to intestinal hyperpermeability. Gliadin is a protein component found in wheat. When the adrenal stress profile indicates an inappropriate hormonal stress response, it is necessary to consider stress reduction along with diet, exercise, and nutritional supplementation to support adrenal gland activity. This will enhance the restoration of the physical barrier in the gut.

Specimen Type:

Saliva

TAT:

5-10 days

Method:

EIA

Biomarkers Reported:

Cortisol (4 timed measurements)
DHEA-S (2 timed measurements, averaged)
Secretory IgA
Antigliadin IgA

CPTs

Description	CPT#
Anti-gliadin	83520
Cortisol x4	82530 x4
DHEA-S	82627
Secretory IgA	82784

*Not currently available in New York
‡ABN required

Comprehensive Melatonin Profile*

Description:

Analyzes 3 saliva samples for the secretion pattern of this important hormone. Melatonin imbalance has been associated with Seasonal Affective Disorder, infertility, sleep disorders, and compromised immune function.

Specimen Type:

Saliva

TAT:

7 days

Method:

RIA

Biomarkers Reported:

Melatonin

CPTs

Description	CPT #
Melatonin, Salivary x3	83519 x3

*Not currently available in New York

0072 Gliadin Sensitivity Profile* ‡

Description:

The Gliadin Sensitivity Profile offers a simple, salivary collection measuring anti-gliadin antibody (AGA) and secretory immunoglobulin A (sIgA). AGA measures the body's response to gluten while SIgA defends against antigenic and infectious attacks at the mucosal surfaces.

Specimen Type:

Saliva

TAT:

5-10 days

Method:

EIA

Biomarkers Reported:

Secretory IgA

Anti-gliadin IgA

GLIADIN SENSITIVITY PROFILE℠

CPTs

Description	CPT #
Anti-gliadin IgA	83520
Secretory IgA	82784

*Not currently available in New York
‡ABN Required

Complete Hormones™*

Description:

This test is the most comprehensive urinary hormone metabolism evaluation designed to assist in the prevention and treatment of hormone-related symptoms and conditions. Can be done as FMV or 24-hour collection. A 24-hour collection is recommended for patients supplementing with bio-identical hormones.

Specimen Type:

Urine

TAT:

21 days

Method:

GC-MS, Kinetic (Jaffe), EIA, ICP-MS

Biomarkers Reported:

11-Hydroxy-androsterone

11-Hydroxy-etiocholanolone

11-Keto-androsterone

11-Keto-etiocholanolone

16 alpha-hydroxyestrone

2-Hydroxyestrone

2-Methoxyestrone

4-Hydroxyestrone

4-Methoxyestrone

Androstanediol

Androsterone

Creatinine

DHEA

Estradiol

Estriol

Estrone

Etiocholanolone

Pregnanediol

Pregnanetriol

Specific Gravity

Testosterone

Tetrahydrocortisol, THF

Tetrahydrocortisone, THE

Tetrahydrodeoxycortisol

allo-Tetrahydrocortisol, a-THF

Complete Hormones™

CPTs

Description	CPT #
Estrone	82679
Estradiol	82670
Estriol	82677
2-Hydroxyestrone	82679
4-Hydroxyestrone	82679
2-Methoxyestrone	82679
4-Methoxyestrone	82679
16a-Hydroxyestrone 2:16 Ratio	82679 -
2-Methoxyestrone/2-Hydroxyestrone Ratio	-
Pregnanediol	84135
Androstanediol	82542
Testosterone	84403
allo-Tetrahydrocortisol, a-THF	83491
Pregnanetriol	84138
Tetrahydrocortisol, THF	83491
Tetrahydrocortisone, THE	83491
Tetrahydrodeoxycortisol, THS	82634
17-Hydroxy-corticosteroids, Total	-
DHEA	82626
Etiocholanolone	82696
11-Hydroxy-androsterone	83593
11-Hydroxy-etiocholanolone	83593
11-Keto-androsterone	83593
11-Keto-etiocholanolone	83593
17-Ketosteroids, Total	-
Anabolic/Catabolic Balance	-
E/A: 5-a/5-aRatio	-
11-a-HSD Index	-

Possible Add-ons

Triiodothyronine, T3	84480
Cortisol, Free (24 Hr)	82530

*Not currently available in New York

Complete Male Hormones™*

Description:

This test analyzes key urinary markers, providing insights into a wide range of disorders, from reduced libido and muscle mass to cardiovascular disease. A 24-hour collection is recommended for patients supplementing with bio-identical hormones.

Specimen Type:

Urine

TAT:

21 days

Method:

GC-MS, Kinetic (Jaffe), EIA, ICP-MS

Biomarkers Reported:

11-Hydroxy-androsterone
11-Hydroxy-etiocholanolone
11-Keto-androsterone
11-Keto-etiocholanolone
16 alpha-hydroxyestrone
2-Hydroxyestrone
2-Methoxyestrone
4-Hydroxyestrone
4-Methoxyestrone
Androstanediol
Androsterone
Creatinine
DHEA
Estradiol
Estriol
Estrone
Etiocholanolone
Pregnanediol
Pregnanetriol
Specific Gravity
Testosterone
Tetrahydrocortisol, THF
Tetrahydrocortisone, THE
Tetrahydrodeoxycortisol
allo-Tetrahydrocortisol, a-THF

Complete Male Hormones™

CPTs

Description	CPT #
11-Hydroxy-androsterone	83593
11-Hydroxy-etiocholanolone	83593
11-Keto-androsterone	83593
11-Keto-etiocholanolone	83593
16 alpha-hydroxyestrone	82679
2-Hydroxyestrone	82679
2-Methoxyestrone	82679
4-Hydroxyestrone	82679
4-Methoxyestrone	82679
Androstanediol	82542
Androsterone	82160
DHEA	82626
Estradiol	82670
Estriol	82677
Estrone	82679
Etiocholanolone	82696
Pregnanediol	84135
Pregnanetriol	84138
Testosterone	84403
Tetrahydrocortisol, THF	83491
Tetrahydrocortisone, THE	83491
Tetrahydrodeoxycortisol , THS	82634
allo-Tetrahydrocortisol, a-THF	83491
17-Ketosteriods (total)	
Anabolic/Catabolic Balance	
E/A : 5α/5-α Ratio	
11-α-HSD Index	
Possible Add-ons	
Triioddothyronine	84480
Cortisol, Free	82530

*Not currently available in New York

Essential Estrogens™*

Description:

This test provides a focused overview of estrogen balance in both pre- and post-menopausal women, using a single urine sample to evaluate dynamics of sex steroid metabolism. A 24-hour collection can be used for women supplementing with bioidentical hormones.

Specimen Type:

Urine

TAT:

21 days

Method:

GC-MS, Kinetic (Jaffe), EIA

Biomarkers Reported:

16 alpha-hydroxyestrone

2-Hydroxyestrone

2-Methoxyestrone

4-Hydroxyestrone

4-Methoxyestrone

Creatinine

Estradiol

Estriol

Estrone

CPTs

Description	CPT #
Estrone	82679
Estradiol	82670
Estriol	82677
2-Hydroxyestrone	82679
4-Hydroxyestrone	82679
2-Methoxyestrone	82679
4-Methoxyestrone	82679
16a-Hydroxyestrone	82679
2:16 Ratio	
2-Methoxyestrone: 2-Hydroxyestrone Ratio	

Possible Add-ons

Triioddothyronine	84480
Cortisol, Free	82530

*Not currently available in New York

Estrogen Metabolism Assessment, Urine

Description:

This test assesses hydroxyestrogens in urine, providing a rapid, convenient way to evaluate clinical interventions (including hormone therapy, diet, and lifestyle changes) aimed at optimizing estrogen metabolism.

Specimen Type:

Urine

TAT:

21 days

Method:

EIA, Kinetic (Jaffe)

Biomarkers Reported:

16 alpha-hydroxyestrone

2-Hydroxyestrone

Creatinine

CPTs

Description	CPT #
Creatinine	82570
2-Hydroxyestrone	82679
16 a-hydroxyestrone	82679
2:16 Ratio	-

Possible Add-ons

Bone Resorption Assessment	
Deoxypyridinoline, Urine	82523
Pyridinium Crosslink, Urine	82523

0142 Estronex Profile* ‡

0145 Estronex Profile with Bone Resorption Assay* ‡

Description:

The balance of anti- and pro-carcinogenic metabolites of estrogen may be investigated with this profile that measures the 2-, 4-, and 16-alpha- hydroxyderivatives of estrone and the 2- and 4-methoxyestrones. This panel provides comprehensive functional information about phase I and phase II estrogen biotransformation. Certain imbalances in biotransformation have been associated with increased risk of carcinogenesis. If the 2/16 ratio is too low, the use of foods or supplements containing I3C or DIM can stimulate hepatic P450 enzymes to increase the favorable 2-hydroxy derivatives. Improving methylation activity can increase the favorable 2- and 4-methoxyestrones.

Specimen Type:

Urine

TAT:

7 - 10 days

Method:

UPLC Tandem Mass Spectrometry

Biomarkers Reported:

2-hydroxyestrogens (2-OHE

2-methoxyestrone (2-OMeE1)

2-hydroxyestrone (2-OHE1)

4-methoxyestrone (4-OMeE1)

2-hyroxyestradiol (2-OHE2)

2-OHE:16α-OHE1 Ratio

4-hydroxyestrone (4-OHE1)

2-OHE:2-OMeE1 Ratio

16α-hydroxyestrone (16α-OHE1)

Creatinine

CPTs

Description	CPT #
Estradiol	82670
Estrone	82679 X 5
Creatinine	82570
with 0145	
Collagen	82523

*Not currently available in New York
‡ABN Required

Stand-Alone Endocrine Testing

Prostate Specific Antigen (PSA)

Specimen Type:

Serum

T3

Specimen Type:

Serum

Add-Ons
ENDOCRINOLOGY PROFILES

A. Hormonal Health

B. Male Hormonal Health

C. Comprehensive Thyroid Assessment

D. Estrogen Metabolism Assess - Serum

E. Insulin-Like Growth Factor Type 1

F. Menopause Plus

G. Menopause

H. Rhythm Plus

I. Rhythm

J. Menopause Check Plus

K. Male Hormones Plus

L. One Day Hormone Check

M. Adrenocortex Stress Profile

N. Comprehensive Melatonin Profile

O. 0243 Adrenal Stress Plus Profile

P. 0072 Gliadin Sensitivity Profile

Q. Estrogen Metabolism Assessment - Urine

R. Complete Hormones

S. Complete Male Hormones

T. Essential Estrogens

U. 0142 Estronex Profile

Endocrine Profiles Biomarkers Comparison Table

Biomarkers	A	B*	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
*Not Available in New York																					
11-Hydroxy-androsterone																		•	•		
11-Hydroxy-etiocholanolone																		•	•		
11-Keto-androsterone																		•	•		
11-Keto-etiocholanolone																		•	•		
16α-hydroxyestrone (16α-OHE1)	•			•													•	•	•	•	•
17- Ketosteroids, Total																		•	•		
17-Hydroxysteroids, Total																		•	•		
2-hydroxyestrogens (2-OHE)																	•	•			
2-hydroxyestrone (2-OHE1)	•			•														•	•	•	•
2-hyroxyestradiol (2-OHE2)																					•
2-methoxyestrone (2-OMeE1)																		•	•	•	•
2-OHE:16α-OHE1 Ratio	•			•													•	•	•	•	•
2-OHE:2-OMeE1 Ratio																		•	•		•
4-Methoxyestrone/4-Hydroxyestrone Ratio																			•	•	
4-hydroxyestrone (4-OHE1)																		•	•	•	•
4-methoxyestrone (4-OMeE1)																		•	•	•	•
allo-Tetrahydrocortisol, a-THF																		•	•		
Anabolic/Catabolic Balance																		•	•		
Androstanediol																		•	•		
Androsterone																		•	•		
Anti-TG			•																		
Anti-TPO			•																		
Antigliadin IgA															•	•					
Cortisol						•		•			•	•	•		•			•	•	•	
Creatinine																	•				
DHEA-S	•	•				•		•		•	•	•	•		•			•	•		
Dihydrotestosterone (DHT)		•																			
Estradiol	•	•				•	•	•	•	•		•						•	•	•	
Estriol	•					•	•			•		•						•	•	•	
Estrone	•					•	•			•		•						•	•	•	
Estrone Sulfate	•																				
Etiocholanolone																		•	•		
Free androgen index	•																				
Melatonin						•		•			•	•		•							
Pregnanediol																		•	•		
Pregnanetriol																		•	•		
Progesterone	•					•	•	•	•	•		•									
Prostate specific antigen (PSA)		•																			
Secretory IgA															•	•					
Sex hormone binding globulin	•	•																			
Somatomedin (IGF-1)		•			•																
T3			•															•	•	•	
T4			•																		
Testosterone, total	•	•				•	•	•	•	•	•	•						•	•		
Tetrahydrocortisol, THF																		•	•		
Tetrahydrocortisone, THE																		•	•		
Tetrahydrodeoxycortisol																		•	•		
TSH			•																		

GENOMICS TESTING

CardioGenomicPlus® Profile*~

Description:

Evaluates genetic variations, called single nucleotide polymorphisms (SNPs), in genes that modulate blood pressure regulation, lipid balance, nutrient metabolism, inflammation, and oxidative stress.

Specimen Type:

Buccal Swab

TAT:

21 days

Method:

Pyrosequencing

Biomarkers Reported:

AGTR1 (angiotensin II receptor-1)
APOE (Apolipoprotein E)
CETP (choletseryl ester transfer protein)
Factor 2 (prothrombin)
Factor 5 (Leiden)
GNB3 (guanine nucleotide-binding protein)
GP3a
MTHFR (methylenetetrahydrofolate reductase)
PAI-1
SELE (selection E)

GENOVATIONS®
CARDIOGENOMIC

SNPs

Description	SNPs
Cholesterol Regulation and Atherosclerosis	
Apolipoprotein E	APOE
Cholesteryl ester transfer protein	CETP
Selectin E	SELE
Methylation	
Methylenetetrahydrofolate reductase	MTHFR
Hypertension	
Guanine nucleotide-binding protein	GNB3
Angiotensin II receptor–1	AGTR1
Coagulation	
Prothrombin	Factor 2
Leiden	Factor 5
Plasminogen activator inhibitor-1	PAI-1
Glycoprotein 3	GP3a

*Not currently available in New York
~Not reimbursable by Medicare

DetoxiGenomic® Profile*~

Description:

Evaluates SNPs associated with increased risk of impaired detoxification capacity especially when exposed to environmental toxins. It also identifies individuals potentially susceptible to adverse drug reactions.

Specimen Type:

Buccal Swab

TAT:

21 days

Method:

Pyrosequencing

Biomarkers Reported:

COMT V158M
CYP 1B1 N453S
CYP1A1*2A
CYP1A1*2C
CYP1B1 L432V
CYP2A6*2
CYP2C19*2
CYP2C19*3
CYP2C9*2
CYP2C9*3
CYP2D6*3
CYP3A4*15
CYP3A4*1B
CYP3A4*3
GSTM1
GSTP1
NAT 1 R187Q
NAT 1 R64W
NAT 2 G286E
NAT 2 I114T
NAT 2 K268R
NAT 2 R197Q
NAT 2 R64Q
SOD 1 A4V
SOD 1 G93A
SOD-2
(Superoxide dismutase -2)

GENOVATIONS®
DETOXIGENOMIC

SNPs

Description	SNPs
PHASE I	
Cytochrome P-450	CYP1A1 CYP1B1 CYP2A6 CYP2D6 CYP2E1 CYP2C9 CYP1C19 CYP3A4
PHASE II: Conjugation of Toxins and Elimination	
Methylation	
Catechol-O-methyltransferase	COMT
Acetylation	
N-acetyl transferase	NAT1 NAT2
Glutathione Conjugation	
Glutathione-s transferase	GSTM1 GSTP1
Oxidative Protection	
Superoxide dismutase	SOD1 SOD2

*Not currently available in New York
~Not reimbursable by Medicare

EstroGenomic® Profile*~

Sub Panel Estrogen Metabolism *~

Description:

Evaluates genetic variations, called single nucleotide polymorphisms (SNPs), in genes that modulate estrogen metabolism, coagulation, cardiovascular disease, and osteoporosis.

Specimen Type:

Buccal Swab

TAT:

21 days

Method:

Pyrosequencing

Biomarkers Reported:

APOE
COMT
CYP1A1
CYP1B1
Factor 2
Factor 5
GP3a
GSTM1
GSTP1
IL-6
MTHFR
PAI-1
TNF - alpha
VDR (Vitamin D3 receptor

GENOVATIONS®
ESTROGENOMIC

SNPs

Description	SNPs
Estrogen Metabolism	
	CYP1A1
	CYP1B1
Catechol-O-methyl transferase	COMT
M1 and P1	GST
HyperCoagulation	
Glycoprotein 3	GP3a
Plasminogen activator inhibitor-1	PAI-1
Prothrombin	Factor 2
Leiden	Factor 5
Cardiovascular	
Apolipoprotein E	APOE
C677T & A1298C polymorphisms	MTHFR
308 G-A polymorphism	TNF-α
174 G-C polymorphism	IL-6
Osteoporosis	
308 G-A polymorphism	TNF-α
174 G-C polymorphism	IL-6

*Not currently available in New York
~Not reimbursable by Medicare

ImmunoGenomic® Profile*~

Description:

Evaluates genetic variations in genes that modulate immune and inflammatory activity. These variations can affect balance between cell (Th-1) and humoral (Th-2) immunity, trigger potential defects in immune system defense, and stimulate mechanisms underlying chronic, overactive inflammatory responses.

Specimen Type:

Buccal Swab

TAT:

21 days

Method:

Pyrosequencing

Biomarkers Reported:

IL-10 (interleukin - 10)
IL-13 (interleukin - 13)
IL-1B (interleukin - 1 beta)
IL-4 (interleukin -4)
IL-6 (interleukin - 6)
TNF - alpha (tumor necrosis factor - alpha)

GENOVATIONS®
IMMUMOGENOMIC

SNPs

Description	SNPs
Chronic Inflammation	
Interleukin-1beta	IL-1ß
Th-1 Cytokines (Viral Infection & Cancer)	
Tumor necrosis factor-α	TNF-α
Th-2 Cytokines (Allergy, Asthma, and Atopy)	
Interleukin-4	IL-4
Interleukin-6	IL-6
Interleukin-10	IL-10
Interleukin-13	IL-13

*Not currently available in New York
~Not reimbursable by Medicare

NeuroGenomic® Profile*~

Description:

Evaluates single nucleotide polymorphisms (SNPs) in genes that modulate methylation, glutathione conjugation, oxidative protection and the potential to evaluate vascular oxidation.

Specimen Type:

Buccal Swab

TAT:

21 days

Method:

Invader

Biomarkers Reported:

GSTM1 (Glutathione-s transferase, M, isoforum)

GSTP1 (Glutathione-s transferase, P, isoforum)

MTHFR (methylenetetrahydrofolate reductase)

SOD-2 (Superoxide dismutase -2)

GENOVATIONS®
NEUROGENOMIC

SNPs

Description	SNP
Methylation	
Methylenetetrahydrofolate reductase	MTHFR
	COMT
Detoxification	
Glutathione-s transferase, M, isoforum	GSTM
Glutathione-s transferase, P, isoforum	GSTP
Oxidative Protection	
Superoxide dismutase -2	SOD-2

*Not currently available in New York
~Not reimbursable by Medicare

Genovations® A la carte SNPs*~

Description:

The following SNPs are available for individual ordering. There is a base price for ordering any SNP listed below plus the cost of each individual SNP ordered.

Specimen Type:

Buccal Swab

TAT:

21 days

Method:

Invader

Biomarkers Reported:

GSTP1 (I104V + A113V)

COMT (V158M)

SOD2 (A16V)

GSTM1

IL-10

TNFA

IL-6

IL-1B

VDR

MTHFR (C677T)

MTHFR Combined (A1298C + C677T)

APO E (C112R + R158C)

CETP (TAQ1B + D422G + RSAI)

PAI-1

GP3a

GENOVATIONS®
A LA CARTE SNPS

Description
GSTP1 (I104V + A113V)
COMT (V158M)
SOD2 (A16V)
GSTM1
IL-10
TNFA
IL-6
IL-1B
VDR
MTHFR (C677T)
MTHFR Combined (A1298C + C677T)
APO E (C112R + R158C)
CETP (TAQ1 + D422G + RSAI)
PAI-1
GP3a

*Not currently available in New York
~Not reimbursable by Medicare

Genomic Profiles Biomarkers Comparison Table

Biomarkers	CARDIO*	ESTRO*	IMMUNO*	DETOX*	NEURO*
*Not Available in New York					
ApoE (apoliprotein E)	•	•			
CETP (cholesteryl ester transfer protein)	•				
SELE (selectin E)	•				
MTHFR (methylenetetrahydrofolate reductase)	•	•			•
GNB3 (guanine nucleotide-binding protein)	•				
AGTR1 (angiotensin II receptor–1)	•				
Factor 2 (prothrombin)	•	•			
Factor 5 (Leiden)	•	•			
PAI-1 (Plasminogen activator inhibitor-1)	•	•			
GP3a (Glycoprotein 3)	•	•			
COMT (catechol-O-methyltransferase)		•		•	•
TNF-a (tumor necrosis factor-alpha)		•	•		
IL-1ß (interleukin-1beta)			•		
IL-4 (interleukin-4)			•		
IL-6 (interleukin-6)		•	•		
IL-10 (interleukin-10)			•		
IL-13 (interleukin-13)			•		
CYP1A1 (Cytochrome P-450)		•		•	
CYP2A6 (Cytochrome P-450)				•	
CYP2C19 (Cytochrome P-450)				•	
CYP1B1 (Cytochrome P-450)		•		•	
CYP2D6 (Cytochrome P-450)				•	
CYP2C9 (Cytochrome P-450)				•	
CYP3A4 (Cytochrome P-450)				•	
NAT1 (N-acetyl transferase -1)				•	
NAT2 (N-acetyl transferase -2)				•	
GSTM1 (Glutathione-s transferase, M, isoforum)		•		•	•
GSTP1 (Glutathione-s transferase, P, isoforum)		•		•	•
SOD1 (superoxide dismutase -1)				•	
SOD2 (superoxide dismutase -2)				•	•

ENVIRONMENTAL

ENVIRONMENTAL TESTING

1765 Toxic Effects CORE (Chemical Occurrence & Related Exposure)*‡

Description:

The Toxic Effects CORE profile evaluates exposures to the six most common classes of toxic chemicals that are widespread in the environment and – within each class – the measurement of the individual compounds that are most frequently found to be problematic. This comprehensive screening profile for Toxic Body Burden allows the clinician to customize therapeutic interventions and efficiently modify therapies as toxicity levels respond.

Specimen Type:

Serum/Whole Blood/Urine

TAT:

10 - 14 days

Method:

LC-MS-MS, Tandem Mass Spectometry, Gas Chromatography/Mass Spectometry

Biomarkers Reported:

See Page 96 - 97

Toxic Effects CORE℠

CPTs

Description	CPT #
Cholesterol	82465
Chlorinated Hydrocarbons	82441
Triglycerides	84478
Volatiles	84600
Bisphenol A	82542
Organophosphates	82542
Phthalates and Parabens	83789
Creatinine	82570

*Not currently available in New York
‡ABN Required

0060 Porphyrins Profile*‡

Description:

The Porphyrins Profile evaluates the biomarkers of toxicity. Patterns of specific porphyrin elevations in urine may serve as functional markers of toxicity from toxic metals, such as mercury, lead, or arsenic, or other organic chemicals. The Porphyrins Profile measures seven porphyrins, total porphyrins, and two ratios to help you differentiate heavy metal toxicity, as well as monitor therapy in your patient.

Specimen Type:

Urine

TAT:

10 - 14 days

Method:

LC-MS-MS

Biomarkers Reported:

See Page 96 - 97

Porphyrins
ENVIRONMENTAL

CPTs

Description	CPT #
Porphyrin	84120
Creatinine	82570

*Not currently available in New York
‡ABN Required

0760 Chlorinated Pesticides Profile*‡

Description:

Chlorinated pesticides do not degrade well and are persistent in our environment. These poisons store in adipose tissues and bioaccumulate over a patient's lifetime. Chlorinated pesticides can cause a range of illnesses from allergies and asthma to cardiovascular disease and cancer. The Chlorinated Pesticides Profile helps determine a patient's exposure to these toxins, which can assist with treatment planning and to help achieve patient wellness.

Specimen Type:

Serum/Whole Blood

TAT:

10 - 14 days

Method:

Gas Chromatography/Mass Spectrometry

Biomarkers Reported:

See Page 96 - 97

Chlorinated Pesticides
ENVIRONMENTAL

CPTs

Description	CPT #
Cholesterol	82465
Chlorinated Hydrocarbons	82441
Triglycerides	84478

*Not currently available in New York
‡ABN Required

0761 Polychlorinated Biphenyls (PCBs) Profile*‡

Description:

The PCBs Profile measures nine common PCBs that are shown to cause health problems with neurobehavioral and immune system development. Such problems may include psychomotor and behavioral problems, allergies, obesity, fatigue, and even some cancers. PCBs are stored in fatty tissues and bioaccumulate over a patient's lifetime.

Specimen Type:

Serum

TAT:

7 - 10 days

Method:

Gas Chromatography/Mass Spectrometry

Biomarkers Reported:

See Page 96 - 97

PCBs
ENVIRONMENTAL

CPTs

Description	CPT #
Cholesterol	82465
Chlorinated Hydrocarbons	82441
Triglycerides	84478

*Not currently available in New York
‡ABN Required

0762 Volatile Solvents Profile*‡

Description:

Volatile solvents may cause symptoms ranging from blood disorders to muscular weakness and atrophy. These toxins may also be the underlying cause of many illnesses such as diabetes, fibromyalgia, brain fog, and mood disorders, to name a few. The Volatile Solvents Profile measures exposure to common volatile solvents in our working and living environments. Awareness of toxicity from volatile solvents can assist in treatment planning to help achieve wellness.

Specimen Type:

Whole Blood

TAT:

7 - 10 days

Method:

Gas Chromatography/Mass Spectrometry

Biomarkers Reported:

See Page 96 - 97

Volatile Solvents
ENVIRONMENTAL

CPTs

Description	CPT #
Volatiles	84600

*Not currently available in New York
‡ABN Required

0740 Phthalates & Parabens Profile*‡

Description:

Phthalates and parabens are known as xenoestrogens, which bind to estrogen receptors and disrupt the endocrine system. Knowing a patient's body burden of phthalates and parabens can assist in creating treatment plans to help achieve patient wellness.

Specimen Type:

Urine

TAT:

10 - 14 days

Method:

LC-MS-MS, Tandem Mass Spectrometry

Biomarkers Reported:

See Page 96 - 97

Phthalates & Parabens
ENVIRONMENTAL

CPTs

Description	CPT #
Phthalates and Parabens	83789
Creatinine	82570

*Not currently available in New York
‡ABN Required

0763 Organophosphates Profile*‡

Description:

The Organophosphates Profile measures six dialkyl phosphates from a simple urine sample and indicates exposure levels to organophosphate pesticides and insecticides. These toxins may be an underlying cause of health issues including neurodevelopment and immune system disorders, ADD/ADHD, impaired memory, mood disorders, and increased risk of Alzheimer's disease and cancer. Awareness of toxicity can assist in treatment planning to help achieve wellness goals.

Specimen Type:

Urine

TAT:

14 days

Method:

Gas Chromatography/Mass Spectrometry

Biomarkers Reported:

See Page 96 - 97

Organophosphates
ENVIRONMENTAL

CPTs

Description	CPT #
Organophosphates	82542
Creatinine	82570

*Not currently available in New York
‡ABN Required

0764 Bisphenol A (BPA) Profile*‡

Description:

The Bisphenol A Profile determines exposure to bisphenol A, triclosan, and 4-nonylphenol which are considered endocrine disruptors and are found in many of the products we use every day. Exposure to endocrine disruptors may play a role in obesity, adult onset diabetes, hormonal and neurological development disorders, and thyroid disruption. Awareness of toxicity can assist in treatment planning to help achieve wellness. This easy-to-use profile consists of a simple urine collection.

Specimen Type:

Urine

TAT:

14 days

Method:

Gas Chromatography/Mass Spectrometry

Biomarkers Reported:

See Page 96 - 97

Bisphenol A
ENVIRONMENTAL

CPTs

Description	CPT #
Bisphenol A	82542
Creatinine	82570

*Not currently available in New York
‡ABN Required

Toxic Effects Combination Profiles

1760 Combo Profile: Chlorinated Pesticides and PCBs (includes 0760 and 0761)*‡

1761 Combo Profile: Chlorinated Pesticides, PCBs, Volatile Solvents (includes 0760, 0761, 0762)*‡

1763 Combo Profile: BPA, Phthalates & Parabens, Organophosphates (includes 0740, 0763, 0764)*‡

1764 Combo Profile: BPA and Phthalates & Parabens (includes 0740 and 0764)*‡

See Individual Profiles for TATs, Methodologies, and Biomarkers

Toxic Effects profiles

CPTs

Description	CPT #
1760	
Cholesterol	82465
Chlorinated Hydrocarbons	82441
Triglycerides	84478
for 1761	
Cholesterol	82465
Chlorinated Hydrocarbons	82441
Triglycerides	84478
Volatiles	84600
for 1763	
Bisphenol A & Organophosphates	82542
Phthalates and Parabens	83789
Creatinine	82570
for 1764	
Bisphenol A	82542
Phthalates and Parabens	83789
Creatinine	82570

*Not currently available in New York
*Not currently available in New York
‡ABN Required

Environmental Profiles Biomarkers Comparison Table	#1675 CORE*	#0060 Porp*	#0740 PP*	#0760 CP*	#0761 PCB*	#0762 VS*	#0763 OP*	#0764 BPA*	#1760 CP/PCB*	#1761 CP/PCB/ VS*	#1763 BPA/PP/ OP*	#1764 BPA/PP*
*Not Available in New York												
0060 Porphyrins												
Uroporphyrin I and III		•										
Heptacarboxyporphyrin		•										
Hexacarboxyporphyrin		•										
Pentacarboxyporphyrin		•										
Precoproporphyrin		•										
Coproporphyrin I		•										
Coproporphyrin III		•										
Total porphyrins		•										
Pre/Uro I & III Ratio		•										
Copro I/Copro III Ratio		•										
#0740 Phthalates and Parabens												
Mono-ethyl phthalate (MEtP)	•		•								•	•
Mono-2-ethylhexyl phthalate (MEHP)	•		•								•	•
Mono-(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP)	•		•								•	•
Mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)	•		•								•	•
Methylparaben	•		•								•	•
Ethylparaben	•		•								•	•
Propylparaben	•		•								•	•
Butylparaben	•		•								•	•

Environmental Profiles Biomarkers Comparison Table	#1675 CORE*	#0060 Porp*	#0740 PP*	#0760 CP*	#0761 PCB*	#0762 VS*	#0763 OP*	#0764 BPA*	#1760 CP/PCB*	#1761 CP/PCB/ VS*	#1763 BPA/PP/ OP*	#1764 BPA/PP*
*Not Available in New York												
0760 Chrlorinated Pesticides												
Hexachlorobenzene (HCB)	•			•					•	•		
Heptachlor Epoxide	•			•					•	•		
Oxychlordane	•			•					•	•		
trans-Nonachlor	•			•					•	•		
DDE	•			•					•	•		
DDT	•			•					•	•		
Dieldrin	•			•					•	•		
Mirex	•			•					•	•		
Endosulfan Sulfate	•			•					•	•		
Cholesterol				•	•				•	•		
Triglycerides				•	•				•	•		
Total Lipids				•	•				•	•		
0761 PCBs												
Dioxin-like Polychlorinated Biphenyls												
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	•				•				•	•		
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	•				•				•	•		
2,3,3',4,4',5-Hexachlorobiphenyl (PCB 156)	•				•				•	•		
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	•				•				•	•		
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	•				•				•	•		
Non-dioxin-like Polychlorinated Biphenyls												
2,4,4',5-Tetrachlorobiphenyl (PCB 74)	•				•				•	•		
2,2',4,4',5,5'-Hexachlorobiphenyl (PCB 153)	•				•				•	•		
2,2',3,4,4',5,5'-Heptachlorobiphenyl (PCB 180)	•				•				•	•		
Cholesterol				•	•				•	•		
Triglycerides				•	•				•	•		
Total Lipids				•	•				•	•		
0762 Volatile Solvents												
Benzene	•					•				•		
Ethylbenzene	•					•				•		
Iso-octane	•					•				•		
m,p-Xylene	•					•				•		
o-Xylene	•					•				•		
Styrene	•					•				•		
Toulene	•					•				•		
Hexane	•					•				•		
2-methylpentane	•					•				•		
3-methylpentane	•					•				•		
0763 Organophosphates												
Atrazine	•						•				•	
Dimethylthiophosphate (DMTP)	•						•				•	
Dimethyldithiophosphate (DMDTP)	•						•				•	
Atrazine Marcapturate	•						•				•	
Diethylthiophosphate (DETP)	•						•				•	
Diethyldithiophosphate (DEDTP)	•						•				•	
0764 Bisphenol A (BPA)												
Bisphenol A	•							•			•	•
Triclosan	•							•			•	•
4-Nonylphenol	•							•			•	•

Directory of Laboratory Testing Services 2014

The Genova Diagnostics Advantage

Our comprehensive line of functional assessments:

- Provides Fully Licensed and Certified Laboratory Services
- Saves Practitioner Time with Easy-to-Read Test Results
- Features Rapid Turnaround
- Includes Support for Practitioner and Patient
- Offer practitioner, patient, and insurance billing options

Visit us anytime on the web at **www.GDX.net** or call **800-522-4762** Monday through Friday, 8:30 am to 6:30 pm (Eastern Time) to order tests or for more information about our services.

Accreditation

Genova Diagnostics is fully licensed federally under Clinical Laboratory Improvement Amendments (CLIA) and certified by Medicare (all states), and by New York State.

This Directory of Laboratory Testing Services includes Test Descriptions, Specimen Requirements, Possible Add-Ons, Turn-around Times, Individual Listings of all Components, and their CPT Codes.

TAT is analytic Turn-Around Time. Results will be available in specified calendar days (or less) from the date samples are received; please add 2 to 4 days for report delivery. To inquire about electronic availability of test results, please contact Client Services at 800-522-4762.

Due to the possibility of regulatory and/or Methodology changes, Kits, CPT codes, biomarkers, laboratory policies, and any additional information provided in this directory are subject to change without prior notification. Please contact us for the latest information.

KEY

*	Not currently available in New York
~	Not reimbursable by Medicare
‡	ABN required
°	Not available in Ohio

GENOVA DIAGNOSTICS

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