PHENO TEST™ FOR TARGETED WEIGHT LOSS

PHENOMIX SCIENCES

Clinical Test Report

Patient			
Name	Sex	Date of Birth
Jane Doe	Female	08/11/87
Patient ID	Height	Weight
10-259-0472	5 ft 6 in	173 lbs
Fasting Status	Age	BMI
Unknown	31	28

Specimen		
Collection Date	Specimen ID	
10/10/18	1001011000001	
Collection Time	Report Type	
08:57 AM	Original	
Received Date	Report Date	
10/11/18	10/12/18	

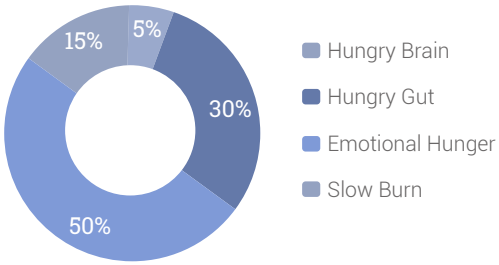
Provider	
Institution/Account Name	
Uptown Obesity Clinic	
Provider Name	
Dr. James Smith	
Client ID	
093295	

Diagnosis:
Dominant: Emotional Hunger (50%)
Secondary: Hungry Gut (30%)

Treatment Considerations:
Treatment plan oriented around counseling to reduce emotional and stress eating with medication to help quell appetite between healthy meals. Plan detailed on PhenoTest Portal.

Prognosis:
Highly treatable

Jane Doe´s Phenotest Results
By Phenomix Sciences



About Obesity Phenotypes:

Hungry Brain (50%): The brain's inability to determine when a meal is over is the main cause of obesity with this phenotype, which is also known as abnormal satiation. The good news is that, once this is acknowledged, you can implement strategies to help limit your intake during meals. Different interventions work by targeting neurotransmitters that are related to brain-gut signaling and your doctor can help you determine if these are right for you.

Hungry Gut (30%): Feeling hungry sooner or in periods between meals is frequently caused by your stomach and gut sending empty signals to your brain; this is also known as abnormal satiety. Helping the gut to know to wait is the key to reducing weight with this phenotype and some interventions are designed to help block these early hungry signals.

Emotional Hunger (15%): People who respond to this phenotype tend to seek food as a reaction to negative or positive emotions; this is also known as emotional eating. Once you improve your ability to manage these emotions, you're on the right track for weight reduction. Cognitive therapy and medications that address some of the underlying emotions can be very helpful and lead to weight loss for individuals with this phenotype.

Slow Burn (5%): With this phenotype, your metabolic rate is lower than normal; this is also known as abnormal energy expenditure. Understanding the underlying condition that is making your energy expenditure inefficient is essential to address this problem. In this phenotype, most effective strategy for weight reduction is to increase activity and implementing an effective exercise routine.

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Test Results

The following test results were produced from the samples submitted to and analyzed by Phenomix Sciences, LLC. These sesults were interpreted and annotated according to obesity phenotype with applicable treatment considerations. Other clinical factors are not considered.

Genomic Analysis

Gene	rs ID	HGVS	Genotype Result
FTO	rs9939609	NG_012969.1:g.87653T>A	Homozygous TT
UCP3	rs1626521	NG_011515.1:g.10944C>T	Homozygous CC
5-HT2CR	rs3813929	NG_012082.2:g.4963C>T	Heterozygous CT
GNB3	rs5443	NG_009100.1:g.10501C>T	Homozygous CC
ADRA2a	rs1800544	NG_012020.1:g.4714G>C	Homozygous CC
MC4R	rs17782313	NC_000018.9:g.57851097T>C	Heterozygous CT

Metabolomic Analysis

Analyte	Result	Reference Interval
cystathionine1	3 µmol/L	0 - 5 µmol/L
Glycine	120 µmol/L	120 - 450 µmol/L
Valine	300 µmol/L	100 - 300 µmol/L
serotonin	220 ng/mL	50-220 ng/mL
glutamicacid	10 µmol/L	10 - 120 µmol/L
tryptophan	30 µmol/L	30 - 100 µmol/L
histidine	50 µmol/L	50 - 110 µmol/L
methylhistidine1	70 µmol/L	70 - 120 µmol/L
methionine	14 µmol/L	14 - 50 µmol/L
isocaproic	0 µmol/L	0 - 0 µmol/L
hydroxylysine2	4 µmol/L	0 - 5 µmol/L
ethanolamine	2 µmol/L	0 - 15 µmol/L
hydroxyproline	5 µmol/L	0 - 55 µmol/L
gamma.amino.n.butyricacid	µmol/L	0 - 2 µmol/L
threonine	55 µmol/L	60 - 200 µmol/L
alpha.aminoadipicacid	1 µmol/L	0 - 3 µmol/L
sarcosine	5 µmol/L	0 - 5 µmol/L
Arginine	45 µmol/L	40 - 160 µmol/L
Proline	99 µmol/L	90 - 330 µmol/L
Ghrelin	400 µmol/L	520 - 700 pg/mL
PYY	40 µmol/L	30-120 pg/mL

Methodology and Limitations

Analytical results were produced using tests developed and validated by Phenomix Sciences, LLC, a clinical laboratory located at 9876 Main Street Suite 100 Minneapolis, MN 55405. These tests have not been cleared or approved by the U.S. Food and Drug Administration. Phenomix is certified under CLIA-88 and accredited by the College of American Pathologists as qualified to perform high-complexity testing. This tested is used for clinical purposes and should not be regarded as investigational or for research.

Quantitative metabolomic analysis is performed by extracting analytes from serum or plasma and then detecting using liquid chromatography mass spectrometry (LC-MS). The concentrations of each analyte are established by comparison of their ion intensity to that of their respective internal standards. Assays may be subject to general interference by factors such as inhibitors. Results of amino acid profiling should be interpreted in the context of clinical presentation, as well as other laboratory tests. Frozen serum and plasma may be diagnostic, however, certain amino acids may be falsely elevated or low than actual physiological conditions.

Qualitative genomic analysis is performed by extracting genomic DNA from whole blood, PCR amplification and detection of variants using hydrolysis probe-based chemistry (Thermo Fisher or LGC Biosearch Technologies). Assays may be subject to general interference by factors such as inhibitors and low quality or quantity of DNA. When present, the interferences typically yield no result rather than an inaccurate one. Infrequent polymorphisms in primer or probe binding regions may also affect testing and could produce an erroneous call or assay failure.

Test results may be inaccurate for individuals who have undergone or are receiving non-autologous blood transfusions, tissue, and/or organ transplant therapies. Although rare, results could also be impacted by other factors not addressed above such as laboratory error.

Due to the complexity of interpreting genetic results, such as those that may carry a probabilistic risk of disease, patients and providers should consider the benefits of consulting with trained genetic counseling professional when appropriate.