



Lab Testing for Chiropractors

Who Am I?

I've been in practice in my home town since 1978. Graduated from University of Michigan College of Engineering. Then Palmer College of Chiropractic. Major focus includes Applied Kinesiology, Sacro Occipital Technique and applied nutrition. I utilize advanced testing of individual nutrient levels, hormones, gut and oral microbiomes, food intolerance, heavy metals, mold and other toxicities. My philosophy, based on engineering principles, is to treat the individual, not the disease by searching for root causes. Additionally my office uses low level laser, PEMF, ultrasound, traction, massage, extremity adjusting, chiropractic and Applied Kinesiology which focuses on muscles, movement and strength. We offer in-person as well as Zoom consultations. I particularly enjoy the challenge of difficult cases that have defied conventional diagnostics. I'm committed to carefully listening and collaborating including engaging AI tools for second opinions.

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Lab Testing for Chiropractors

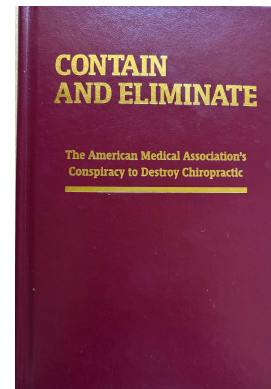
Michigan History 1978, 1980, 2010
Chester Wilk vs. AMA

Causes of the vertebral subluxation.

1. **Physical**
2. **Mental**
3. **Chemical**

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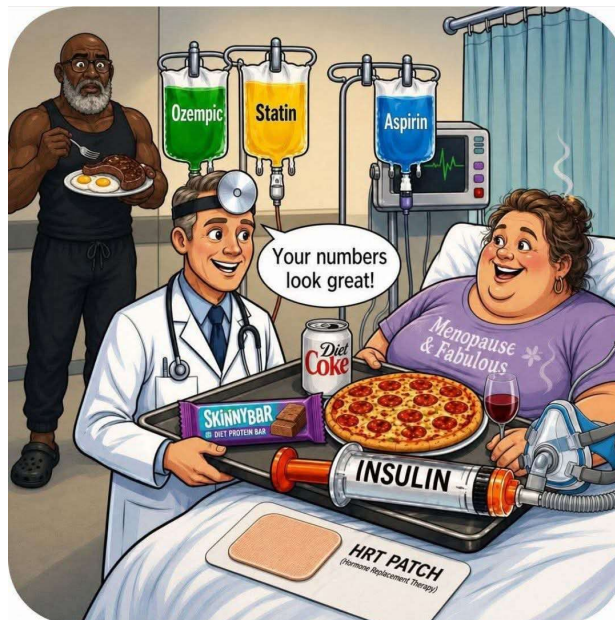
Lab Testing for Chiropractors



The Gleason Center
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Find the Root Cause

Add to the adjustment and uncover what's driving your patients' health concerns.

Many patients arrive with chronic symptoms, stacks of lab reports, imaging and more questions than answers.

Patients complain about the medical system.

How confident are you at interpreting the information they bringing to your office?

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- What are the most common complaints that we hear?

Pain

Fatigue

Indigestion

Inflammation

- Why should Chiropractors be aware of lab results?
- Is this patient's case in our area of expertise?
- What are the root causes?
- What is already known from existing labs and imaging?
- What additional studies should be done?
- Who should order them?

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History: What questions should we be asking?

- Medications
- Diet
- Sleep
- Exercise
- BM's, reflux, gas
- Dental health, root canals, metals, breath
- Menstrual, menopausal
- Surgeries
- Memory, mood
- Libido

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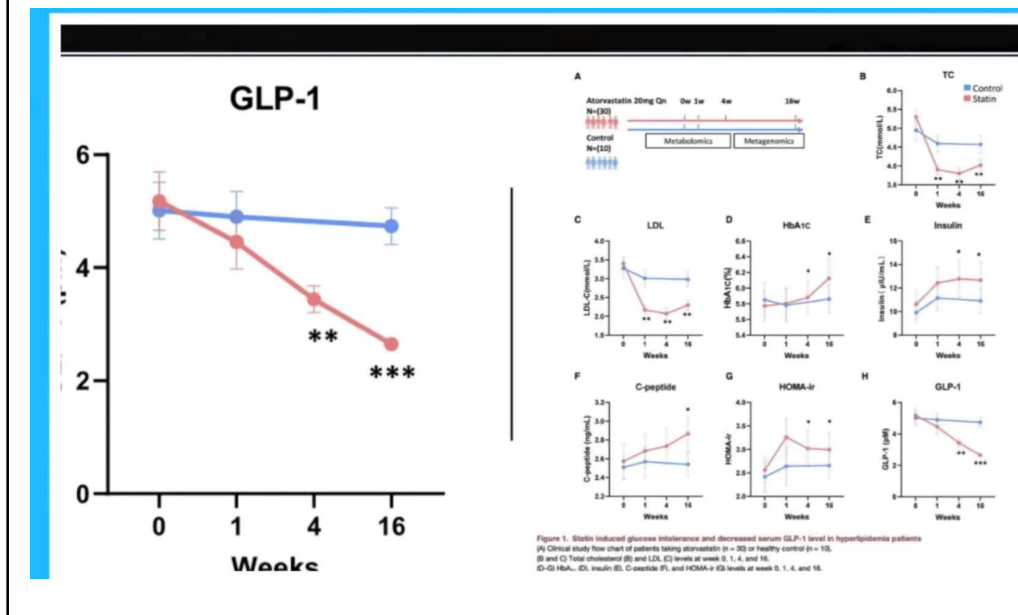


History: Medical diagnoses, medications?

- Commonly prescribed medications
- FAQ's
- What impact do meds have?
- Are side effects the very reason they are in our office?
- How do we mitigate medication side effects?
- How to have "The Conversation"

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Statin's Impact on Glucose and GLP-1



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Typical labs from annual physicals

- CBC
- CMP
- Lipids

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Basic add-ons that should be ordered

- HgbA1c
- Fasting Insulin
- GGT
- HS-CRP
- Ferritin
- Complete thyroid panel including Free T3 & T4
- Homocysteine
- Vitamin D

How to request them

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NAME: _____ AGE: _____ GENDER: ☐ Male ☐ Female

Medication Class & Name Examples	Medication Nutrient Depletion	Nutrient Repletion Suggestions
CARDIOVASCULAR		
☐ Statins atorvastatin (Lipitor), fluvastatin (Lescol), lovastatin (Mevacor, Altorcor), pravastatin (Pravachol), rosuvastatin (Crestor), simvastatin (Zocor)	Coenzyme Q10	☐ CoQ-10 100mg or CoQ-10 200mg
☐ ACE Inhibitors captopril (Capoten), enalapril (Vasotec), lisinopril (Prinivil, Zestril), quinapril (Accupril), ramipril (Altace)	Zinc	☐ Essential Multi or Zinc Pro
☐ Beta Blockers atenolol (Tenormin), metoprolol (Lopressor, Toprol XL), nadolol (Corgard), carvedilol (Coreg)	Coenzyme Q10	☐ CoQ-10 100mg or CoQ-10 200mg
☐ Calcium Channel Blockers amlodipine (Norvasc), nifedipine (Procardia, Adalat), nimodipine (Nimotop), nisoldipine (Sular)	Vitamin D	☐ Vitamin D3 5000 IU
☐ Cardiac Glycosides digoxin (Lanoxin, Digitek)	Magnesium, Potassium	☐ Essential Multi
☐ Potassium Supplements potassium chloride (Klor-Con)	B12	☐ Methyl Complete, B12 Methyl Pro or Mega B12 Folic Liquid
BLOOD SUGAR		
☐ Biguanides metformin (Glucophage)	Folic Acid, B12	Option 1 ☐ B Complex or Mega B12 Folic Option 2 ☐ Methyl Complete
☐ Sulfonylureas glyburide (DiaBeta, Glynase, Micronase), glipizide (Glipizide XL, Glucotrol), glimepiride (Amaryl)	Healthy Intestinal Bacteria, Coenzyme Q10	☐ CoQ-10 100mg or CoQ-10 200mg ☐ UltraBiotic Daily or Daily Multi-Strain (7 options available)
ANTACIDS/ANTIULCERATIVE		
☐ H2 Inhibitors famotidine (Pepcid), cimetidine (Tagamet), ranitidine (Zantac)	Folic Acid, B12, Vitamin D, Calcium, Iron, Zinc	☐ B Complex or Mega B12 Folic ☐ Vitamin D3 5000 ☐ Essential Multi
☐ Proton-pump Inhibitors omeprazole (Prilosec, Zegerid), lansoprazole (Prevacid), esomeprazole (Nexium), rabeprazole (Aciphex)	Beta-Carotene, B12, Folic Acid, Calcium, Zinc, Iron	Options: ☐ B Complex or Mega B12 Folic ☐ Essential Multi Option 2 ☐ Essential Multi
☐ Antacids Amphojel, Basjel, Aluminum Hydroxide plus Magnesium, Gaviscon-2, Gelusil, Maalox, Mylanta	Folic Acid, Vitamin D, Zinc, Calcium, Magnesium, Chromium, Iron	Option 1 ☐ B Complex or Mega B12 Folic ☐ Essential Multi Option 2 ☐ Vitamin D3 5000IU ☐ Essential Multi
ANTIDEPRESSANTS		
☐ Antidepressants doxepin (Anafranil), amoxapine (Asendin), doxepin HCl (Sinequan), imipramine (Tofranil)	Coenzyme Q10, Vitamin B2	☐ CoQ-10 100mg or CoQ-10 200mg ☐ B Complex or Mega B12 Folic
BONE		
☐ Bisphosphonates alendronate (Fosamax), risedronate (Actonel), bandronate (Boniva), etidronate (Difluronel), zoledronic acid (Reclast)	Calcium, Magnesium	☐ Bone Support with Magnesium

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Medication Class & Name Examples	Medication Nutrient Depletion	Nutrient Repletion Suggestions
NARCOTICS/ANALGESICS		
☐ NSAIDs aspirin, celecoxib (Celebrex), diclofenac (Voltaren), ibuprofen (Motrin), ketorolac (Toradol), naproxen (Aleve, Naprosyn)	Folic Acid, Vitamin C, Iron	☐ Essential Multi with Iron
☐ Opiates hydrocodone (Vicodin), morphine (MS Contin, Kadian), oxycodone (Oxycontin, Percocet)	Folic Acid, Vitamin C, Iron, Potassium	☐ Essential Multi with Iron
RESPIRATORY		
☐ Beta-2 Adrenergic Receptor Antagonists proventil (Albuterol), budesonide+salmeterol (Advair), bithoterol (Formulair), levalbuterol (Xopenex)	Potassium, Calcium, Magnesium	☐ Essential Multi
ANTIBIOTICS		
☐ Antibiotics Levquin, Avelox, Ciprofloxacin, Noroxin, Trovan, Amoxicillin, Amoxil, Trimax, Penicillin, Erythromycin, Azithromycin, Biaxin, Zithromax	Biotin, B1, B2, B3, B6, B12, Zinc, Calcium, Magnesium, Potassium, Vitamin K, Healthy Intestinal Bacteria	Option 1 ☐ Essential Multi ☐ B Complex or Mega B12 Folic Option 2 ☐ Essential Multi ☐ UltraBiotic (7 options available) ☐ UltraBiotic (7 options available)
HORMONES		
☐ Conjugated Estrogens Premarin, Prempro, Oral Contraceptives, Estrace	B6, B12, Vitamin D, Calcium, Magnesium, Zinc, Folic Acid	Option 1 ☐ Essential Multi ☐ B Complex or Mega B12 Folic Option 2 ☐ Essential Multi
☐ Bio-Identical Hormones Estradiol, Estrin, Estrone	B6, B12, Vitamin D, Calcium, Magnesium, Zinc, Folic Acid	Option 1 ☐ Essential Multi ☐ B Complex or Mega B12 Folic Option 2 ☐ Essential Multi
ANTI-INFLAMMATORY		
☐ Corticosteroids Betamethasone (Celestone, Soluspan), hydrocortisone (Cortel), prednisone (Deltas, Sterasol)	Beta-Carotene, B6, Folic Acid, Vitamin C, Vitamin D, Calcium, Magnesium	☐ Essential Multi
DIURETICS		
☐ Loop Diuretics bumetanide (Bumex), furosemide (Lasix), ethacrynic acid (Edecrin)	B1, B6, Vitamin C, Calcium, Magnesium, Zinc, Potassium	Option 1 ☐ B Complex or Mega B12 Folic Option 2 ☐ Essential Multi
☐ Thiazide Diuretics Chlorthalidone (Hygroton), indapamide (Lozol), hydrochlorothiazide (Hydrodiuril), methylchlorothiazide (Enduron)	Magnesium, B1, B6, Phosphorus, Potassium, Zinc, Coenzyme Q10	Option 1 ☐ Essential Multi ☐ CoQ-10 100mg or CoQ-10 200mg Option 2 ☐ Essential Multi ☐ CoQ-10 100mg or CoQ-10 200mg
☐ Potassium Sparing Diuretics amilofide hydrochloride, spironolactone (Aldactone), triamterene (Dyrenium)	Calcium, Magnesium	☐ Bone Support with Magnesium
LAXATIVES		
☐ Laxatives with Bisacodyl Dulcolax, Correctol, Fenn-a-Mini, Carter's Little Pills	Calcium, Potassium	☐ Essential Multi

Information compiled from: Drug-Induced Nutrient Depletion Handbook 2nd Edition (Lact-Comp, Inc 2003) and Herb, Nutrient, and Drug Interactions Clinical Implications and Therapeutic Strategies (Mosby Elsevier 2008)

These supplements are recommended strictly to address any nutrient deficiency caused by these drugs and not intended as an alternative to drug therapy.

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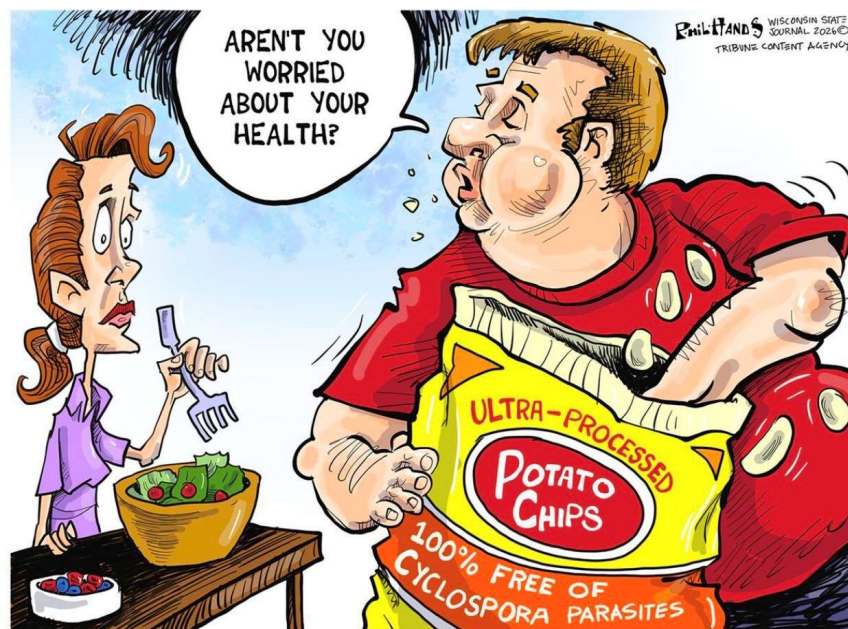
The Most Common Condition That We All See!!

Diabetes
Pre-diabetes
Metabolic Syndrome

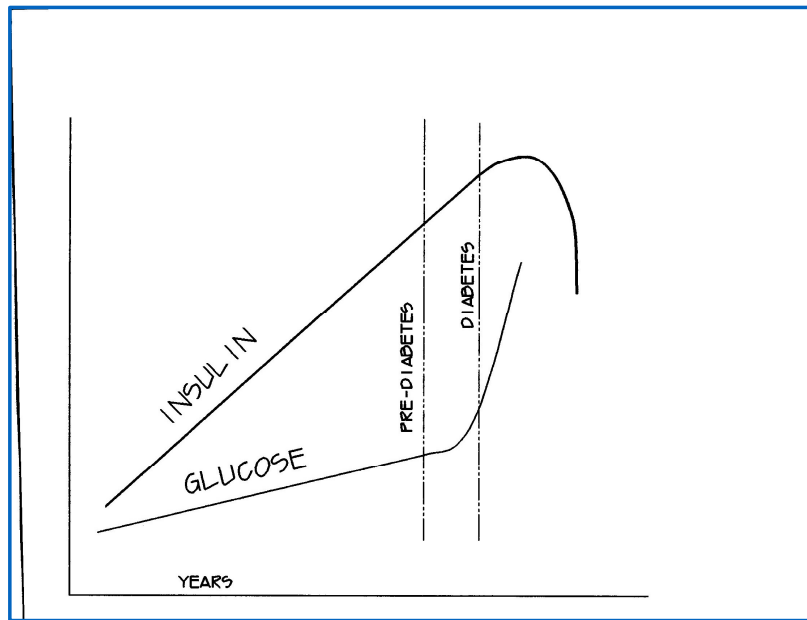
We are **all** on the **Diabetes Spectrum** because we eat the Standard American Diet (**SAD**).

The solution: Keto Fasting / LCHF Lifestyle

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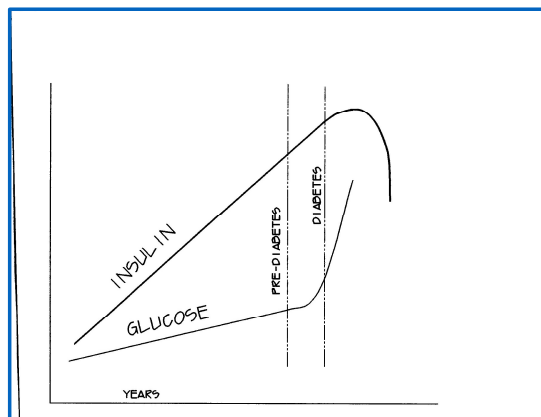
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Insulin's Impacts

- Inflammation
- Fluid retention
- Depletes minerals
- Weight loss resistance



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Classic Indicators

- Glucose > 90
- Hgb A1c > 5.6 (5.2)
- Trigs > 100
- HDL < 60
- GFR < 75
- Fasting insulin > 4.0
- HS-CRP > 1.0
- Liver enzymes ALT,AST,GGT, Alk Phos elevated

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Metabolic Syndrome

1. Abdominal fat waist size, Female>35", Male>40"
2. Low HDL, Female<50, Male<40
3. High Triglycerides >100 (conventional 150)
4. High BP> 135/85 **or on meds**
5. High fasting glucose >100 or **on meds**

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Conditions caused by elevated insulin

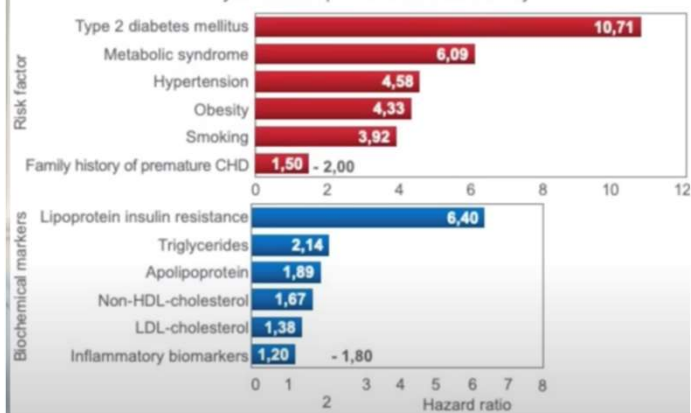
Eyes
Skin
Nerves
Kidneys
Heart
Blood vessels
Retina

Infections
Stroke
Heart attack
Cancer
NAFLD
E.D.
Hormone problems
PCOS

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HAZARD RATIOS FOR DEVELOPMENT OF CORONARY HEART DISEASE

21.4 year follow-up. Women's Health Study



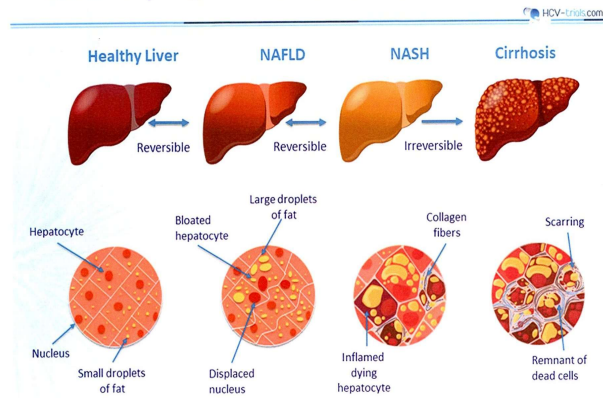
Open Heart 2021;8:e001680. doi: 10.1136/openhrt-2021-001680

Hazards ratio for Apo B: Women 1.75, Men 1.53
Apo B associated with T2D, HTN, Met Syn, Trigs

HR for Homocysteine 1.69

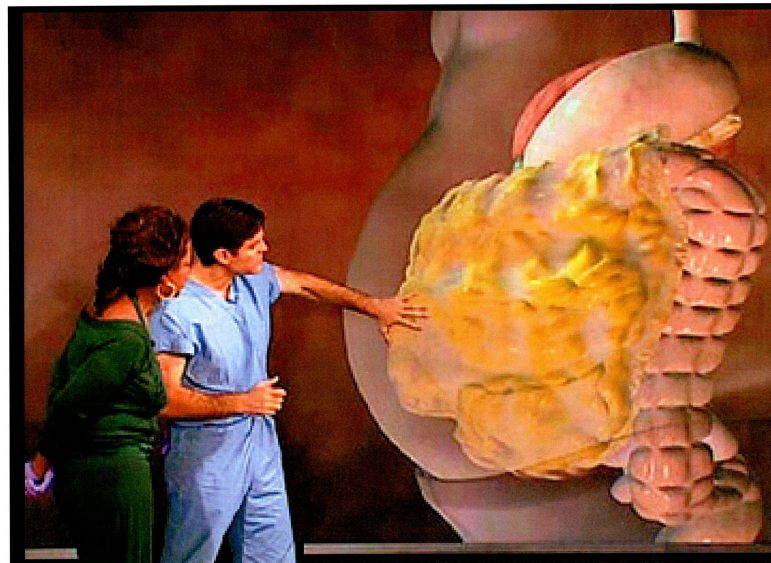
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NAFLD: progression of disease



Autoimmune
Cancer
Dementia
Heart Disease
Skin Problems
Kidney Disease

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Tell a Story: Automotive Metaphor

- Glucose = Speedometer reading at time of blood draw
- Hgb A1c = Average speed, *sometimes too fast or slow*
- Fasting insulin = Braking, *wasted fuel, overheated pads and rotors*
- Accelerator = ?

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- A total of 49 adults seeking nutritional guidance were assigned to either the KD (n = 23) or TRE (n = 26) group and were followed under professional supervision. The primary endpoint was the change in cardiovascular risk as assessed by the QRISK3 score, a validated 10-year cardiovascular disease risk estimator.

Key Findings:

QRISK3 score:

- KD - 39%
- TRE - 2%

BMI:

- KD - 12%
- TRE - 4%

Waist Circumference:

- KD - 11%
- TRE - 1.7%

HDL-C (good cholesterol):

- KD +12.7%
- TRE -2%

Systolic BP:

- KD -9%
- TRE -1.4%

HgbA1c:

- KD -8%
- TRE -1.6%

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90 days/30 Carbs per day
 11 females, 18-45 years old diagnosed with Type 2
 Diabetes with HbA1c >6.5

Average weight loss was 19.84 lbs.
 BP decreased from 134/89.9 to 123.3/82.6
 HbA1c decreased from 6.5 to 5.6
 HDL increased 43.1 to 52.3
 Triglycerides decreased 177.0 to 92.1
 Decreased Triglyceride to Cholesterol levels from 4.7 to 1.9

Study conducted by Brigham Young University, Journal of Diabetes Research, August 2019

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Ketosis; How do I do it? Find foods that you LOVE to eat!

Low Carb, Moderate Protein and High Fat.

1. Limit **Net carbs** to 20-50/day (net carbs= total - fiber)
2. **Grams of Protein** consumed should be around 80-100g for a woman on a 2,000 calorie diet and 120-130g for a male on an 2,600 calorie diet.
3. Eat high quality **plant and animal fats** to 60-80% of your diet
 - Organic, pastured eggs
 - Grass-fed meats
 - Avocados
 - Salmon, anchovies, sardines and supplement with Omega 3 oils
 - Olives and olive oil (Don't heat)
 - Butter from grass-fed animals
 - Coconut oil or MCT oil
 - Ghee (clarified butter)
 - Raw, soaked or home-roasted nuts like macadamias, walnuts and pecans
 - Seeds like sesame, hemp, cumin, pumpkin
4. Eat as many **veggies** as you want except starchy ones like potatoes and corn
5. No snacking or eating after supper
6. Allowable sweeteners include stevia and xylitol

Drastically reduce or Preferably Eliminate:

- Packaged, processed foods
- Fast food and most restaurants
- Processed fats, vegetable oils, deep fried foods
- Grains and beans
- Fruits, juices, dried fruits they contain lots of sugar
- Soft drinks; both regular and diet
- Alcohol

Intermittent Fasting (start slow)

- **Daily** eat within a 6-hour window
- **Weekly** do at least one 18-23 hour fast
- **Monthly** do at least one 2-5 day water-only fast
- If weight-loss is not the goal, drink bulletproof coffee as your breakfast (coffee or tea with butter, cream &/or coconut oil)
- Bone broth can be used as it does not interrupt ketosis

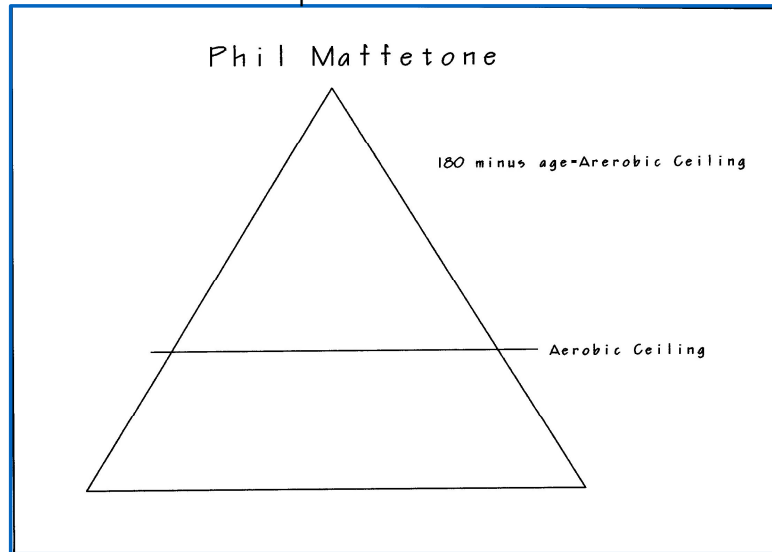
To track your intake use (www.cronometer.com/metrics)

Remember, this is not some fad diet. It is the way of eating that humans have evolved with. It is a return to a normal metabolic state. We recommend several books for those who want more information. *Keto Clarity* by Jimmy Moore, *Bacon and Butter*, *The Ultimate Ketogenic Diet Cookbook* by Colby Richoux, and *The Complete Guide to Fasting* by Jason Fung, MD

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Optimal Exercise



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Resources

Dr Jason Fung, MD

- IDM web site
- The Fasting Method, \$39/mo, \$390/yr

The Complete Guide to Fasting

The Obesity Code

The Diabetes Code

Why Vegans Have Smaller Brains

Jimmy Moore

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Resource list

- The Gleason Center, Facebook Keto/Carnivore Tribe page for live videos, etc.
- Christopher Palmer, MD [Brain Energy](#) see on Metabolic Mind and Jordan Peterson podcasts
- Georgia Ede, MD [Change Your Diet, Change Your Brain](#) see on Metabolic Mind and YouTube
- Shawn Baker, MD [The Carnivore Diet](#) see on Joe Rogan and Jordan Peterson
- Paul Saladino, MD [The Carnivore Code](#) see on YouTube
- Kevin Stock, DDS Get on his daily email list
- Anthony Chaffee, MD
- [Metabolic Mind](#) podcast on Spotify
- Jason Fung, MD Nephrologist [The Complete Guide to Fasting](#) and YouTube
- Norman Doidge, MD [The Brain's Way of Healing](#)
- Jimmy Moore, [Keto Clarity](#)
- [Sacred Cow](#) by Rodgers and Wolf
- [Cows Save the Planet](#) by Judith D. Schwartz
- [The Paleocardiologist](#) by Jack Wolfson, DO
- [Why Vegans Have Smaller Brains](#) and How Cows are the Answer to Global Warming

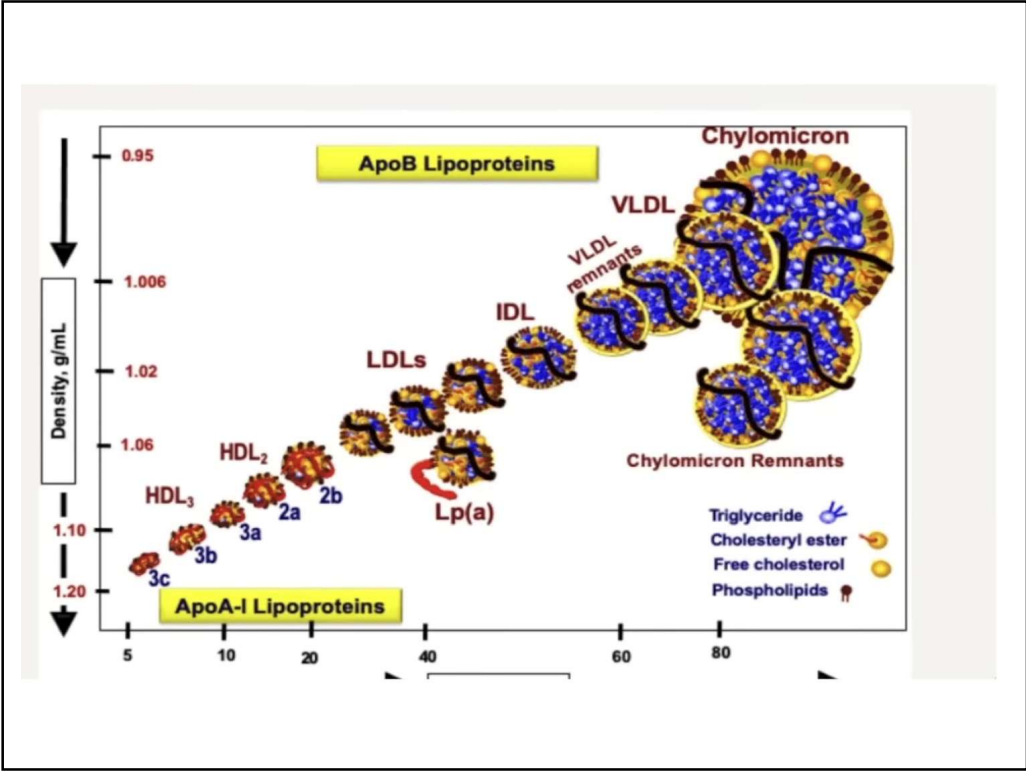
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Tests that help to determine root-cause(s)

- Advanced lipid testing (NMR)
- Individual Optimal Nutrition test (ION)
- PCR testing for GI function (GI-MAP)
- Oral microbiome testing (SIMPLY)
- Vaginal microbiome testing
- Mold testing (MycoTox)
- Urinary heavy metal testing
- MRT food histamine reactions

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Advanced lipid testing

- (NMR from Labcorp)
- Particle size testing

Patient ID:
Specimen ID:
DOB:
Age:
Sex:
Patient Report
Account Number:
Ordering Physician:
labcorp

Ordered Items: **NMR Lipoprofile+Lipids+IR+Gph; Please note**

Date Collected:
Date Received:
Date Reported:
Fasting:

NMR Lipoprofile+Lipids+IR+Gph

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
LDL Particle Number TM				
LDL-P TM	991	Low Moderate Borderline-High High Very High	nmol/L	<1000 1000 - 1299 1300 - 1599 1600 - 2000 > 2000
Lipids TM				
A LDL-C (NIN Calc) TM	118 High	Optimal Above optimal Borderline High Very high	mg/dL	0-99 < 100 100 - 129 130 - 159 160 - 189 > 189
HDL-C TM	100		mg/dL	>39
Triglycerides TM	78		mg/dL	0-149
A Cholesterol, Total TM	231 High		mg/dL	100-199
LDL and HDL Particles TM				
HDL-P (Total) TM	49.6		nmol/L	>=30.5
Small LDL-P TM	232		nmol/L	<=527
LDL Size TM	21.4		nm	>=20.5
** INTERPRETATIVE INFORMATION ** PARTICLE CONCENTRATION AND SIZE --Lower CVD Risk Higher CVD Risk--> LDL AND HDL PARTICLES Percentile in Reference Population HDL-P (total) High 75th 50th 25th Low >34.9 34.9 30.5 26.7 <26.7 Small LDL-P Low 25th 50th 75th High <117 117 527 839 >839 LDL Size <-Large (Pattern A)-> <-Small (Pattern B)-> 22.0 20.5 20.5 19.9				
Comment TM Small LDL-P and LDL Size are associated with CVD risk, but not after LDL-P is taken into account.				
Insulin Resistance/Diab. Risk TM				
A Large VLDL-P TM	3.5 High		nmol/L	<=2.7
Small LDL-P TM	232		nmol/L	<=527
Large HDL-P TM	15.5		nmol/L	>=4.8
VLDL Size TM	45.0		nm	<=46.6
LDL Size TM	21.4		nm	>=20.8
HDL Size TM	9.9		nm	>=9.2
Insulin Resistance Score TM				

labcorp Date Created and Stored: Final Report Page 1 of 3

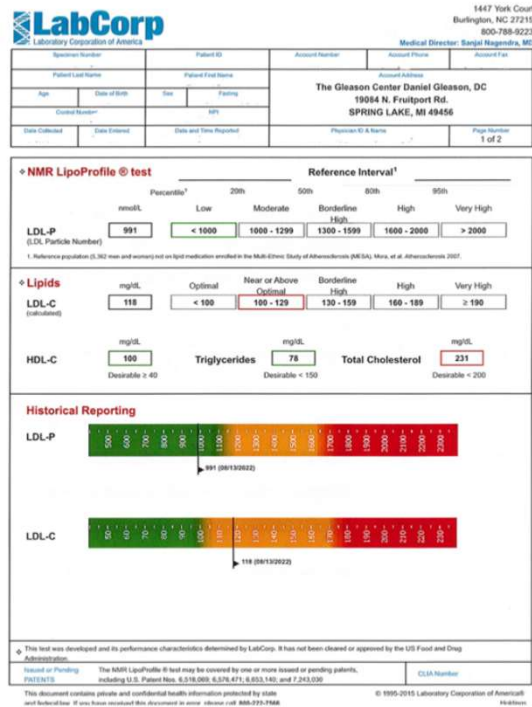
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Advanced lipid testing

- (NMR from Labcorp)
- Particle size testing

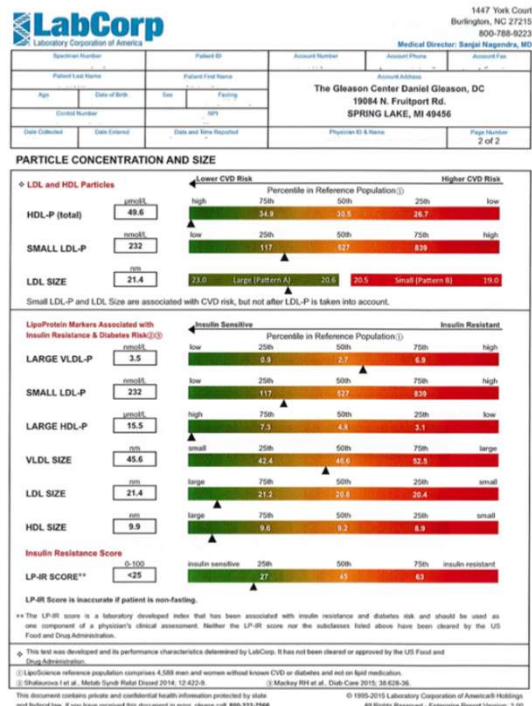


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Advanced lipid testing

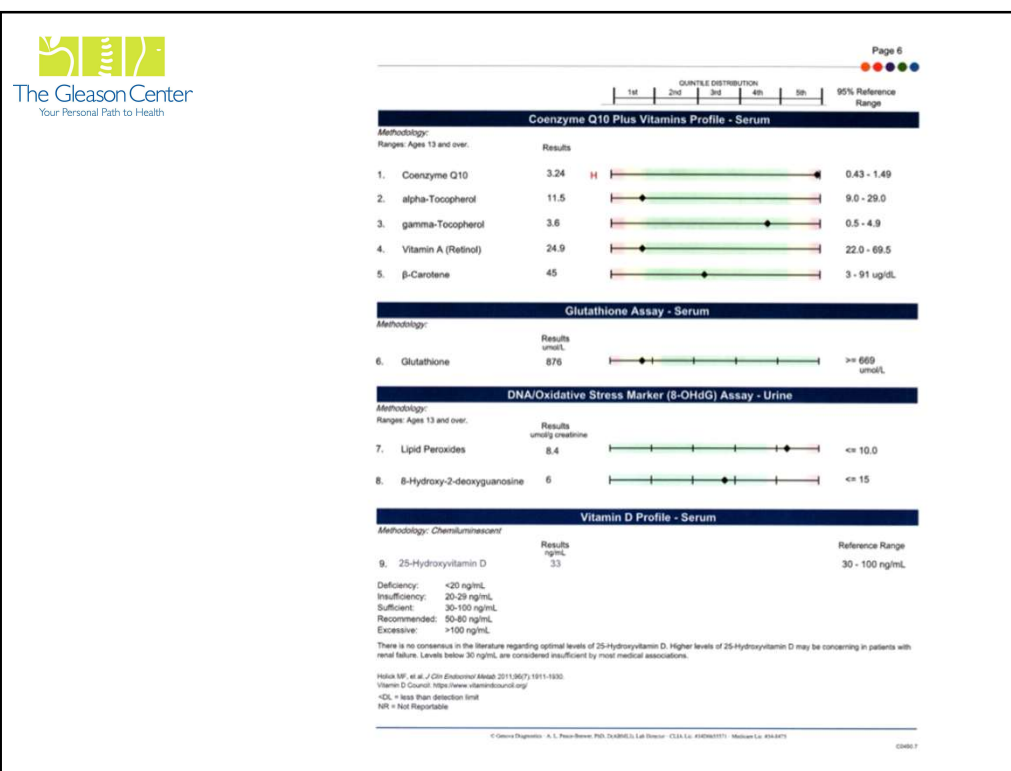
- (NMR from Labcorp)
- Particle size testing



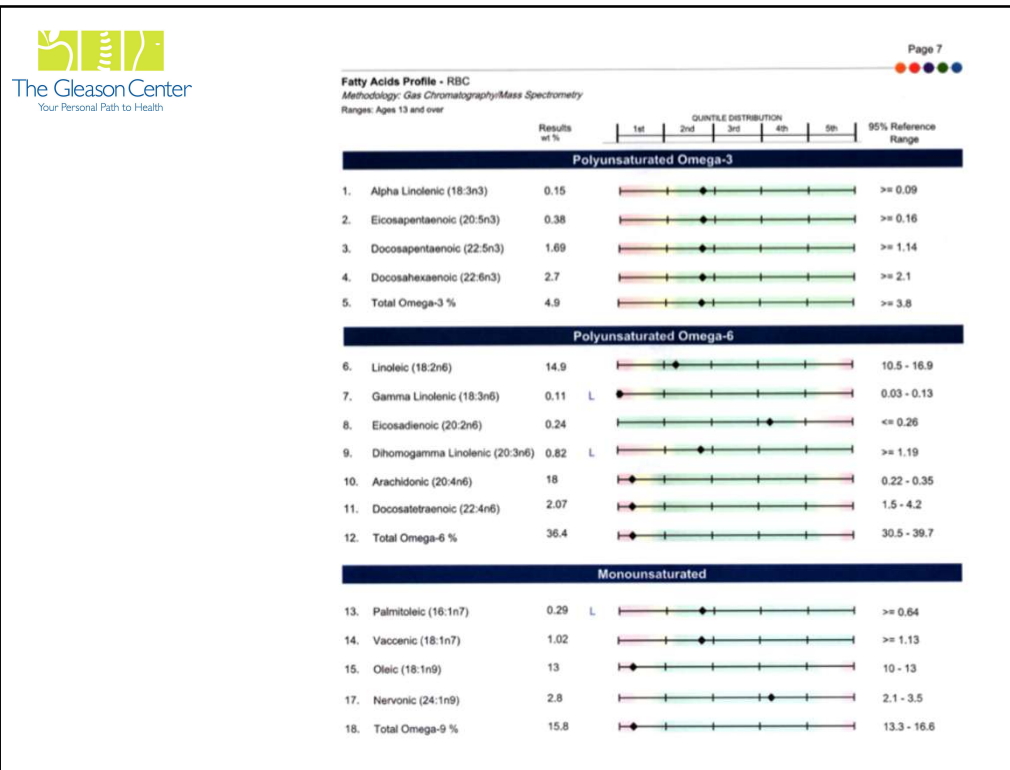
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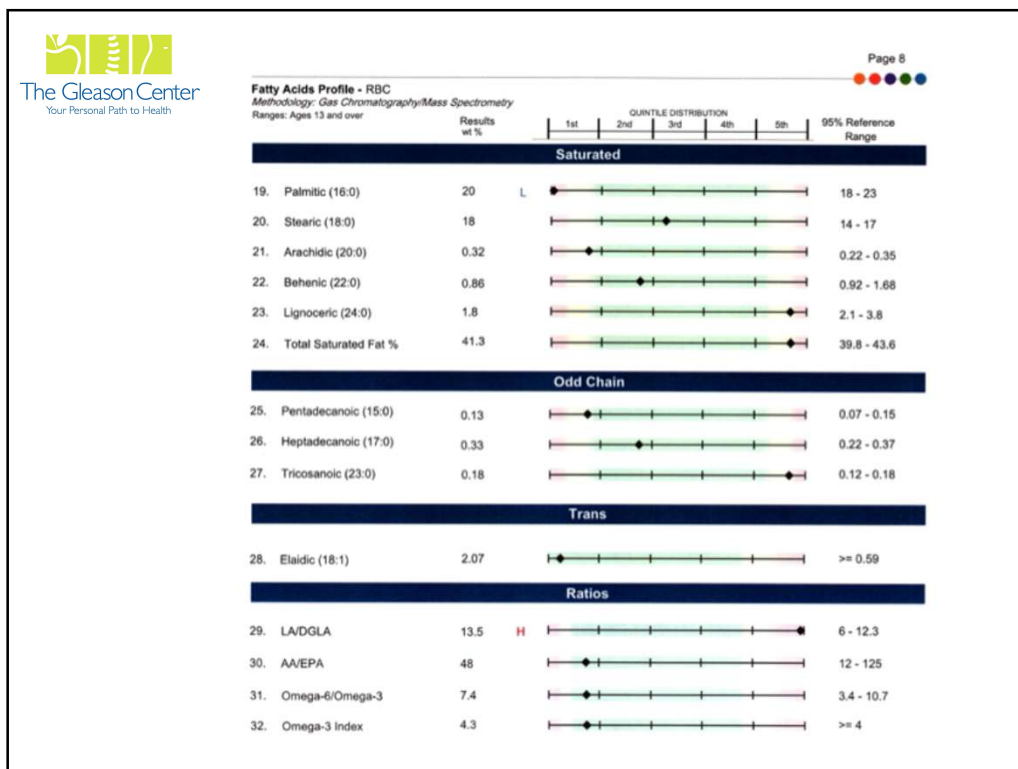
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Carnivore Foods List from The Carnivore Code author Paul Saladino, MD

(Other doctors working with the Carnivore diet include Shawn Baker, Kevin Stock, and Anthony Chaffee)

Optimal Carnivore

Eat only:

- Beef
- Venison
- Pasture-raised Pork and Bacon
- Pasture-raised Chicken and Turkey
- Bacon
- Wild-caught fish (Salmon, Cod, Trout)
- Bone broth collagen
- Organ meats
- Corn/soy-free eggs *if tolerated*.
- Aged low-lactose dairy *if tolerated*.
- Water and salt

Stage one Carnivore-ish (Low toxicity) All above plus:

- Tallow/Suet
- Avocados
- Olives
- Cucumbers, Pumpkin, Winter squash without skins or seeds

Stage two Carnivore-ish (More toxicity) All above plus:

- Raw organic honey
- A2 dairy
- Tree ripened sweet fruit (Plums, Peaches, Pear, Citrus, Fig)

Stage three Carnivore-ish (Medium toxicity) All above plus:

- White rice
- Sweet potato/yams (O)
- Carrots (O)
- Sauerkraut/pickles
- Artichoke hearts
- Herbs: Rosemary, Thyme, Basil, Dill, Mint, Parsley
- Coconut & oil
- Olive oil
- Avocado oil
- Low-metal fish: Wild-caught Salmon, Sardines, Anchovies, Shellfish

Tips for Success

Electrolytes: Mix the following in a 6-8oz glass of water; 1 scoop of Biotics Research *Potassium-HIP* (potassium citrate), 1-2 capsules of DaVinci *Magnesium Citrate* (depending on looseness of stools), 2 capsules of Pure Encapsulations *Calcium (citrate)*, and a pinch of Himalayan or Redmond's sea salt.

BM Support:

- If Constipated add more fats and fatty cuts of meat &/ or magnesium supplements
- If too loose reduce fats and fatty meats and reduce magnesium supplements
- If too fullness after eating use Betaine HCL &/or Pancreatic enzyme supplements

Transitioning:

As there will be a significant change in bowel flora due to feeding your "Good Bugs" a very different diet, you may need to supplement with a probiotic. We suggest *Probiotic Synergy* from Designs for Health.

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Highly toxic foods to be avoided:

Spinach (O)
 Beets (O)
 Onions (O)
 Coffee
 Chocolate (O)
 Asparagus
 Lettuce/salad greens (O)
 Nuts (O)
 Grains (O)
 (O) designates oxalates

Brassica
 • Kale
 • Broccoli
 • Cauliflower
 • Brussel sprouts
 • Cabbage
 • Horseradish
 • Radishes
 • Watercress
 • Bok Choy
 Seed oils:
 • Corn
 • Canola
 • Sunflower
 • Safflower
 • Soybean
 • Peanut
 Seeds
 • Chia
 • Flax
 • Hemp
 • Poppy
 • Pumpkin
 • Sesame
 • Sunflower
 Spices
 • Caraway
 • Cinnamon
 • Cloves
 • Coriander
 • Cumin
 • Mustard
 • Nutmeg
 • Pepper

Legumes:
 • Peas
 • Green beans
 • Soybeans
 • Kidney beans
 • Lentils
 • Peanuts
 Celery (O)
 Brown rice (O)
 Mushrooms (O)
 Cassava (O)
 Alliums:
 • Onion
 • Garlic
 • Leeks
 • Chives
 • Scallions
 Nightshades:
 • Tomato
 • White Potato
 • Eggplant
 • Peppers (chili, serrano, cayenne, etc.)
 • Goji berries
 Sweeteners
 Stevia
 Sucralose
 Aspartame

Questions: Call the office at 616-846-6410

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 The Gleason Center
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GI function (GI-MAP from DSL)

Diagnostic Solutions Laboratory

5884 Sholen Rd, Ste 101 | Alpharetta GA 30005
 877-485-5338

Patient: Ina Sample
 Collected: 08/02/2022
 DOB: 07/11/1981
 Gender: M

Accession: 00000000-0001
 Received: 08/02/2022
 Completed: 8/17/2022
 Ordered by: Diane Farhi, MD

DNA STOOL ANALYSIS BY QUANTITATIVE PCR

GI-MAP
 GI Microbial Assay Plus

YOUR PERSONALIZED REPORT

PATHOGENS

The GI-MAP® includes pathogens (bacterial, parasitic and viral) commonly known to cause gastroenteritis. Note that not all individuals with positive findings will present with symptoms. Many factors, including the health of the individual (such as immune health, digestive function, and microbiome balance), the transient nature of most pathogens, and the presence and expression of virulence factors, all contribute to pathogen virulence and individual symptoms.

BACTERIAL PATHOGENS	Result	Reference
<i>Campylobacter</i>	< dl	< 1.00e3
<i>C. difficile</i> Toxin A	1.21e5 High †	< 1.00e3
<i>C. difficile</i> Toxin B	2.27e5 High †	< 1.00e3
<i>Enterohemorrhagic E. coli</i>	< dl	< 1.00e3
<i>E. coli</i> O157	< dl	< 1.00e3
Enteroinvasive <i>E. coli</i> /Shigella	< dl	< 1.00e2
Enterotoxigenic <i>E. coli</i> LT/ST	< dl	< 1.00e3
Shiga-like Toxin <i>E. coli</i> stx1	< dl	< 1.00e3
Shiga-like Toxin <i>E. coli</i> stx2	< dl	< 1.00e3
<i>Salmonella</i>	< dl	< 1.00e4
<i>Vibrio cholerae</i>	< dl	< 1.00e5
<i>Yersinia enterocolitica</i>	4.46e3	< 1.00e5
PARASITIC PATHOGENS		
<i>Cryptosporidium</i>	< dl	< 1.00e6
<i>Entamoeba histolytica</i>	< dl	< 1.00e4
<i>Giardia</i>	< dl	< 5.00e3
VIRAL PATHOGENS		
Adenovirus 40/41	< dl	< 1.00e10
Norovirus GI/II	< dl	< 1.00e7

KEY: Results are reported as genome equivalents per gram of stool, which is a standard method for estimating the number of microbes measured per gram of stool, based on qPCR analysis of DNA samples.

Results are expressed in standard scientific notation. For example, a reported result of 3.5e7 is equivalent to 3.5 x 10⁷ microbes per gram, which equals 35,000,000 (35 million) microbes per gram of stool.

< dl represents results below detectable limit.

The assays were developed and/or the performance characteristics determined by Diagnostic Solutions Laboratory.

CLIA# 11D-2097795
 Medical Director - Diane Farhi, MD

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GI function (GI-MAP from DSL)

Patient: Ima Sample Accession: 00000000-0001 

HELICOBACTER PYLORI		
H. PYLORI & VIRULENCE FACTORS	Result	Reference
Helicobacter pylori	2.90e3 High ↑	< 1.00e3
Virulence Factor, babA	Positive	Negative
Virulence Factor, cagA	Positive	Negative
Virulence Factor, dupA	Negative	Negative
Virulence Factor, iceA	Negative	Negative
Virulence Factor, oipA	Negative	Negative
Virulence Factor, vacA	Negative	Negative
Virulence Factor, vrbB	Positive	Negative
Virulence Factor, vtrD	Positive	Negative

COMMENSAL/KEYSTONE BACTERIA		
COMMENSAL BACTERIA	Result	Reference
<i>Bacteroides fragilis</i>	8.90e10	1.6e9 - 2.5e11
<i>Bifidobacterium</i> spp.	1.89e10	> 6.7e7
<i>Enterococcus</i> spp.	2.45e7	1.9e5 - 2.0e8
<i>Escherichia</i> spp.	2.14e8	3.7e6 - 3.8e9
<i>Lactobacillus</i> spp.	6.55e6	8.6e5 - 6.2e8
<i>Enterobacter</i> spp.	2.07e6	1.0e5 - 5.0e7
<i>Akkermansia muciniphila</i>	<dl L	1.0e1 - 8.2e6
<i>Faecalibacterium prausnitzii</i>	5.66e5	1.0e3 - 5.0e8
<i>Roseburia</i> spp.	7.91e5 L	5.0e7 - 2.0e10
BACTERIAL PHYLA		
<i>Bacteroidetes</i>	1.21e12	8.6e11 - 3.3e12
<i>Firmicutes</i>	4.70e10 L	5.7e10 - 3.0e11
<i>Firmicutes:Bacteroidetes</i> Ratio	0.04	< 1.0

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GI function (GI-MAP from DSL)

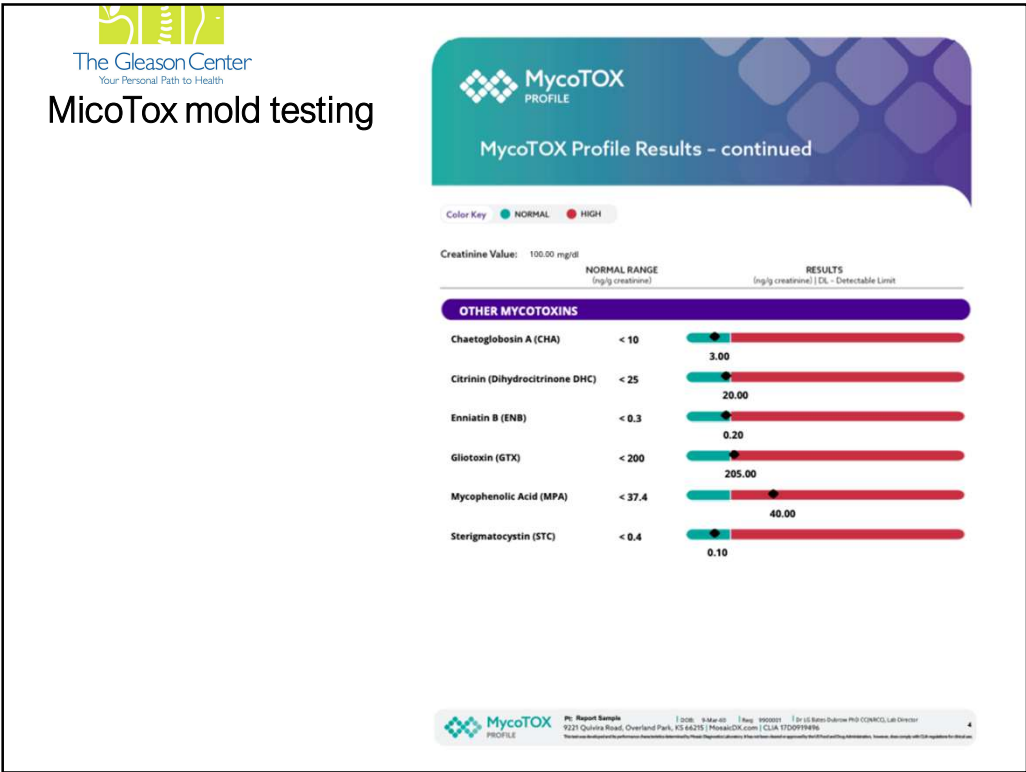
Patient: Ima Sample Accession: 00000000-0001 

OPPORTUNISTIC/OVERGROWTH MICROBES		
DYSBIOTIC & OVERGROWTH BACTERIA	Result	Reference
<i>Bacillus</i> spp.	2.56e5	< 1.76e6
<i>Enterococcus faecalis</i>	1.81e3	< 1.00e4
<i>Enterococcus faecium</i>	< dl	< 1.00e4
<i>Morganella</i> spp.	< dl	< 1.00e3
<i>Pseudomonas</i> spp.	< dl	< 1.00e4
<i>Pseudomonas aeruginosa</i>	< dl	< 5.00e2
<i>Staphylococcus</i> spp.	< dl	< 1.00e4
<i>Staphylococcus aureus</i>	3.83e2	< 5.00e2
<i>Streptococcus</i> spp.	< dl	< 1.00e3
COMMENSAL OVERGROWTH MICROBES		
<i>Desulfovibrio</i> spp.	1.84e3	< 7.98e8
<i>Methanobacteriaceae</i> (family)	1.24e8	< 3.38e8
INFLAMMATORY & AUTOIMMUNE-RELATED BACTERIA		
<i>Citrobacter</i> spp.	< dl	< 5.00e6
<i>Citrobacter freundii</i>	< dl	< 5.00e5
<i>Klebsiella</i> spp.	< dl	< 5.00e3
<i>Klebsiella pneumoniae</i>	< dl	< 5.00e4
<i>M. avium</i> subsp. <i>paratuberculosis</i>	< dl	< 5.00e3
<i>Proteus</i> spp.	< dl	< 5.00e4
<i>Proteus mirabilis</i>	< dl	< 1.00e3
COMMENSAL INFLAMMATORY & AUTOIMMUNE-RELATED BACTERIA		
<i>Enterobacter</i> spp.	2.07e6	< 5.00e7
<i>Escherichia</i> spp.	2.14e8	< 3.80e9
<i>Fusobacterium</i> spp.	2.56e7	< 1.00e8
<i>Prevotella</i> spp.	3.86e7	< 1.00e8
FUNGI/YEAST		
FUNGI/YEAST	Result	Reference
<i>Candida</i> spp.	4.53e4 High ↑	< 5.00e3
<i>Candida albicans</i>	< dl	< 5.00e2
<i>Geotrichum</i> spp.	< dl	< 3.00e2
<i>Microsporidium</i> spp.	< dl	< 5.00e3
<i>Rhodotorula</i> spp.	< dl	< 1.00e3
VIRUSES		
VIRUSES	Result	Reference
Cytomegalovirus	< dl	< 1.00e5
Epstein-Barr Virus	< dl	< 1.00e7

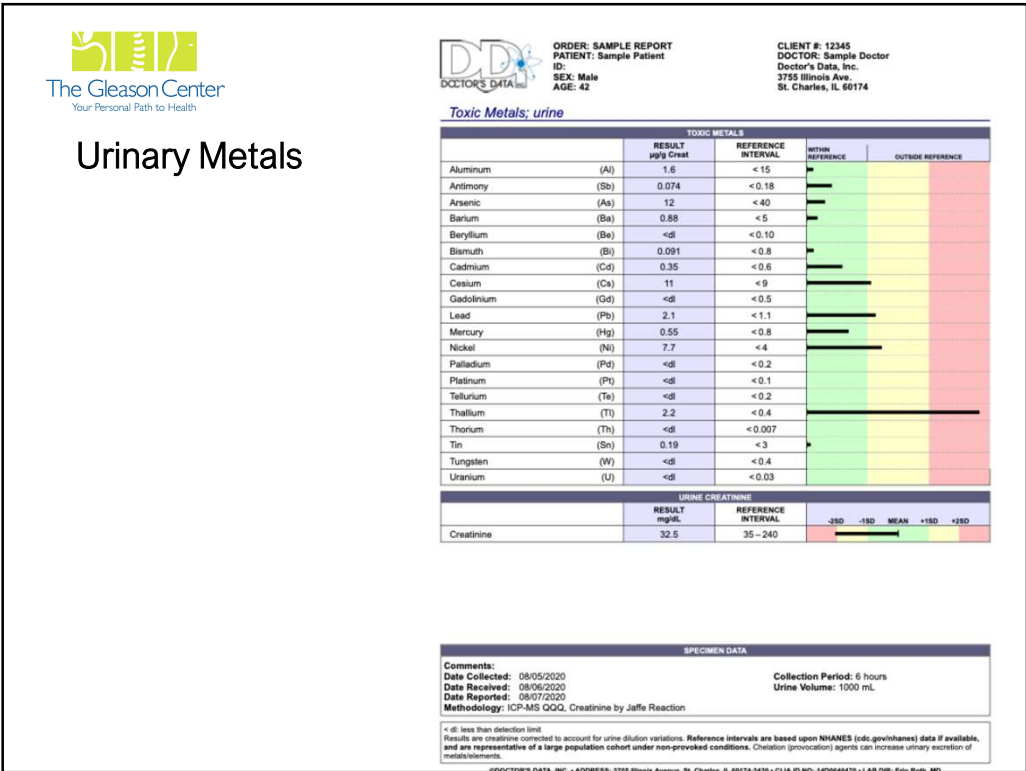
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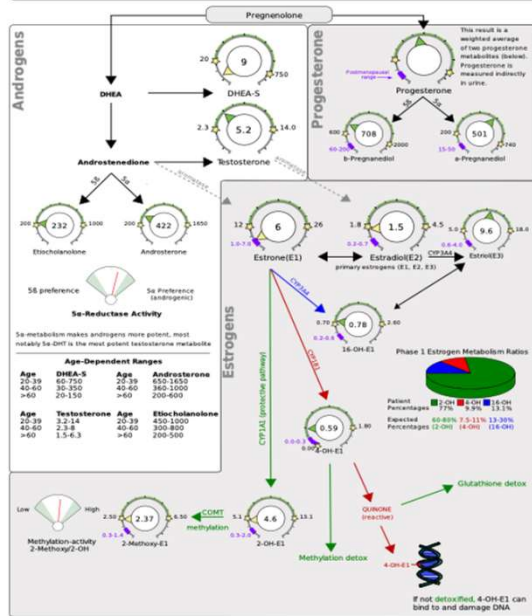
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Steroid Hormones (DUTCH)

Hormone metabolite results from the previous page are presented here as they are found in the steroid cascade. See the Provider Comments for more information on how to read the results.



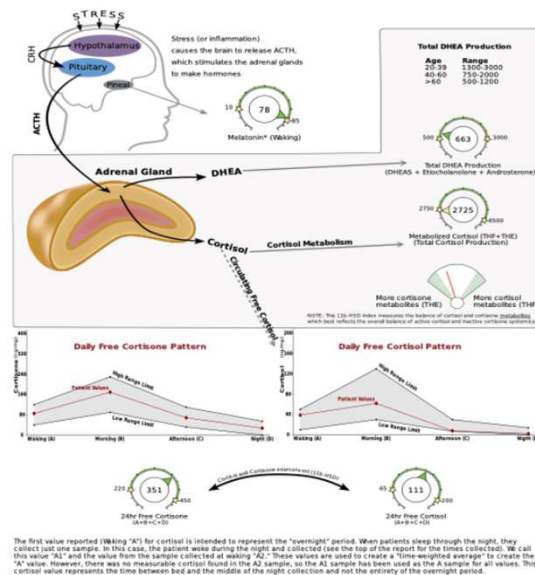
Precision Analytical (Dawn Hui, Ph.D., Lab Director)
3138 Riverside Street #313C
Methuen, MA 01844

Female Sample Report
FINAL REPORT
06/20/2022

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Steroid Hormones (DUTCH)



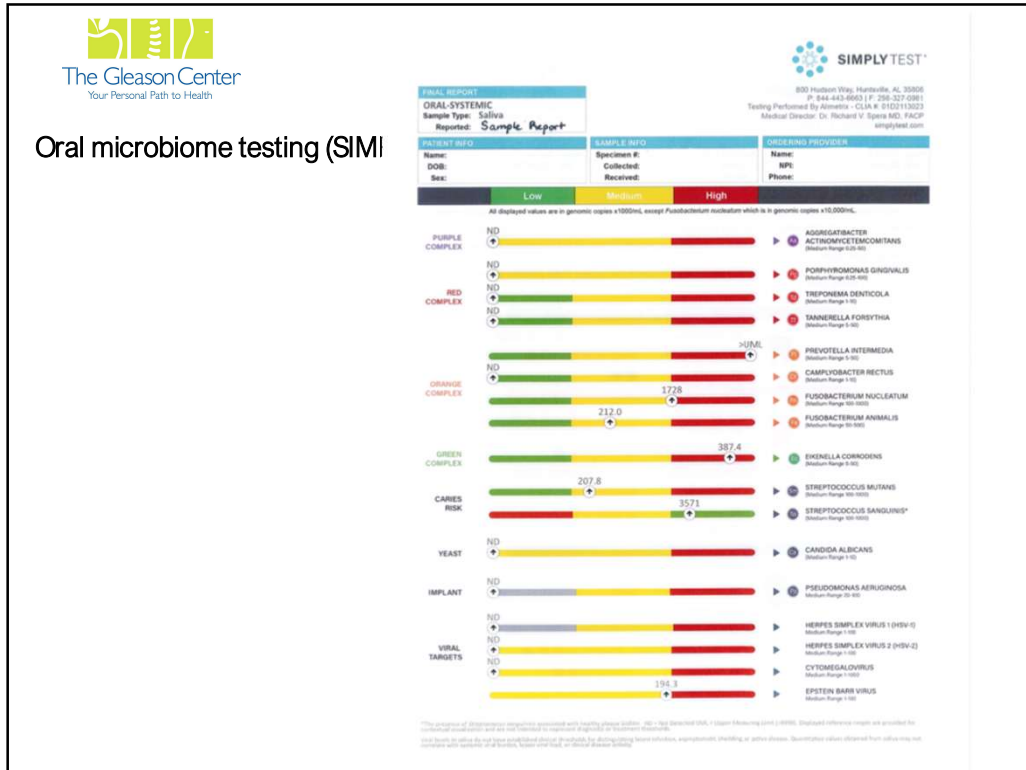
The first value reported (Waking "A") for cortisol is intended to represent the "overnight" period. When patients sleep through the night, they collect just one sample. In this case, the patient woke during the night and collected (see the top of the report for the times collected). We call this value "A1" and the value from the sample collected at waking "A2". These values are used to create a "time-weighted average" to create the "A" value. However, there was no measurable cortisol found in the A2 sample, so the A1 sample has been used as the A sample for all values. This cortisol value represents the time between bed and the middle of the night collection and not the entirety of the overnight period.

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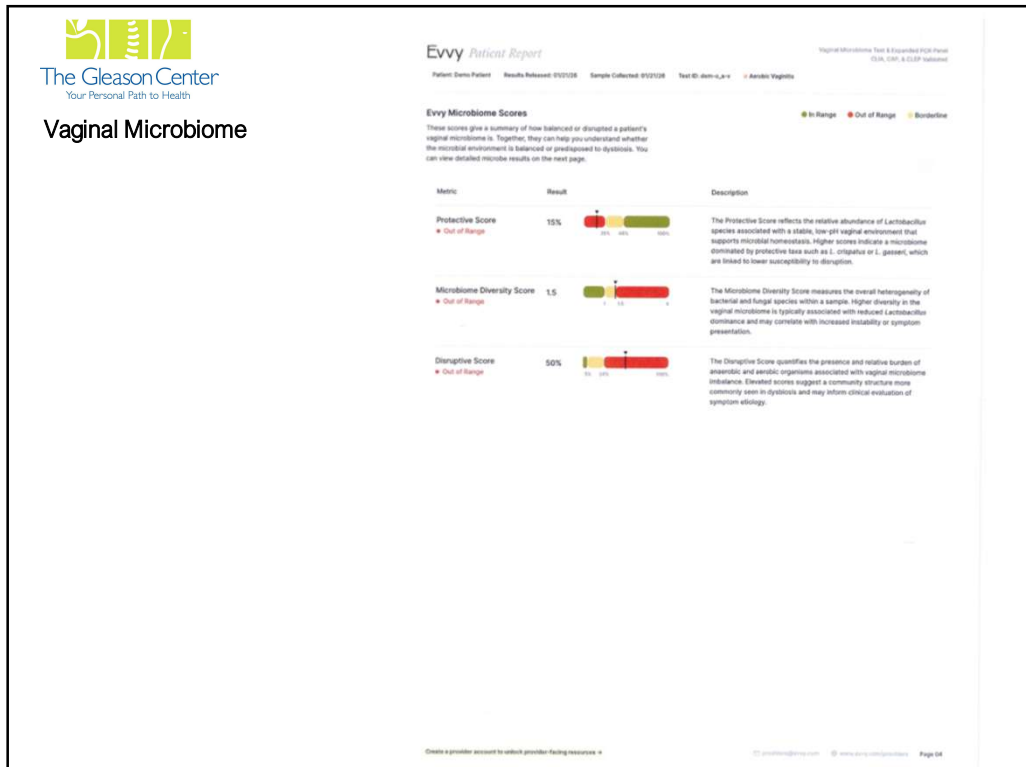
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The Gleason Center
Your Personal Path to Health

Vaginal Microbiome

Evvy Patient Report

Patient: Demo Patient Results Released: 01/21/26 Sample Collected: 01/21/26 Test ID: dem-a-v Aerobic Vaginitis

Vaginal Microbiome Test & Expanded PCR Panel
Q1A, CAP, & CLAP Included

Microbes Detected

This table shows detected microbes in the patient's vaginal microbiome (across mNGS and PCR results). PCR looks for specific microbes at a much lower threshold, so it's possible for a microbe to be detected on a PCR test, but not mNGS.

Protective Disruptive Variable Unknown

Microbe Name	Relative Abundance	Research Associations	Microbe Descriptions
Protective Lactobacillus iners	35.00%	UTI prevention, Vaginal health, health, Beneficial to women	Lactobacillus iners (L. iners) is the most common lactobacilli found in the vaginal microbiome and is often considered a transitional species. It can appear during shifts between a less protective and a more optimal microbiome and may coexist with disruptive bacteria. While L. iners produces lactic acid and can help limit pathogen growth, it does not seem to provide the same level of protection as L. crispatus, which is more effective at maintaining a low, protective vaginal pH. As a result, L. iners dominance may signal that the microbiome is in flux rather than fully optimized.
Disruptive Enterococcus faecalis	25.00%	Ces triage pregnancy, Pouch, Infectious disease, Herpes, Staphylococcus, UTI	Enterococcus faecalis (E. faecalis) are Gram positive aerobic bacteria frequently found in the gut and vagina of healthy women. That said, this microbe also prevalent in women diagnosed with aerobic vaginitis (AV), UTIs, and bacterial vaginosis (BV).
Disruptive Streptococcus agalactiae (group B)	15.00% PCR Detected	Ces triage pregnancy, Aerobic Vaginitis	Streptococcus agalactiae (S. agalactiae), also known as Group B Streptococcus (GBS), is a common microbe that rarely causes infections in healthy adults -- it has been observed in about 25% of pregnant women. That said, during pregnancy, it can be something to talk to your doctor about.
Protective Lactobacillus crispatus	15.00%	Good health, Positive pregnancy outcomes, Antiparasitic Effects, Cervical Infections	Lactobacillus crispatus (L. crispatus) are widely regarded as the most protective bacteria found in the vaginal microbiome. It promotes a healthy and stable environment by lowering pH, producing bacteriocins (which helps kill pathogens), taking up space (leaving less space for pathogens to adhere), and reducing inflammation.