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Test Launch Walkthrough: Get to know your new Total Toxic Burden and Organic Acids Labs!

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Webinar Boot Camp Series- Part 3 Objectives

1. Showcase *NEW* Toxic Exposures Questionnaire
2. Understand *NEW* Total Toxic Burden report layout
3. Interpretation of *NEW* NHANES reference ranges
4. Highlight *NEW* report comments
5. Showcase *NEW* Organic Acids report layout
6. Sneak Peek Environmental Toxin Guide

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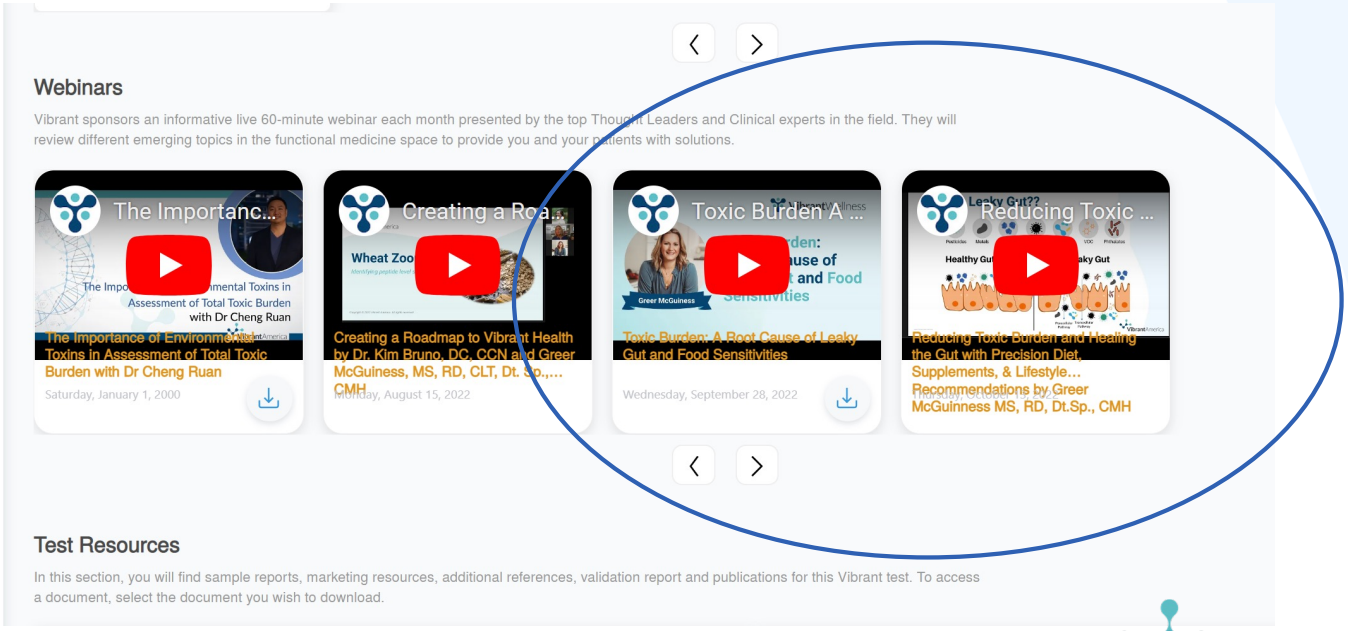
Webinar 1 and Webinar 2

1. Can still access the previous 2 webinars in the Vibrant Educational Portal
2. Slides
3. Handouts



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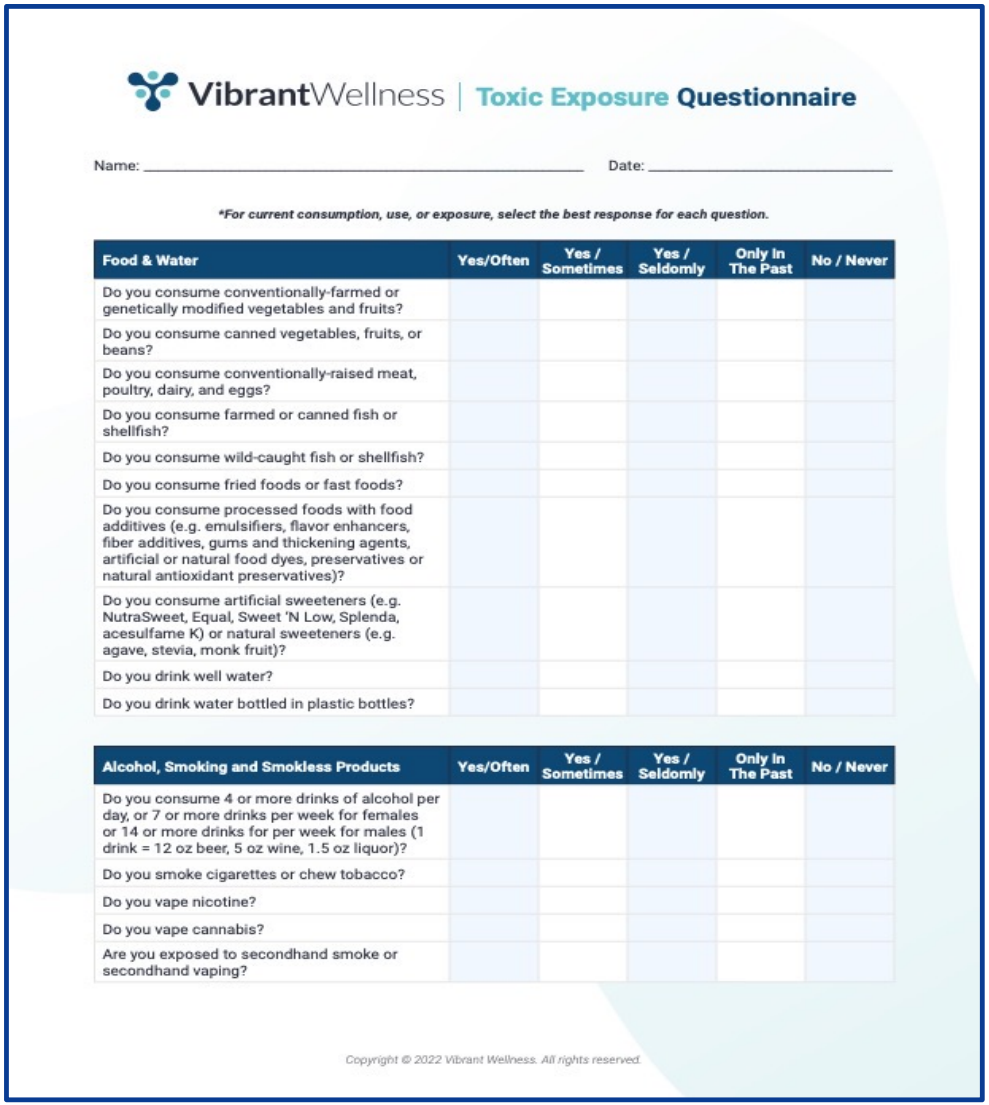
Toxic Exposure Questionnaire



VibrantWellness | Toxic Exposure Questionnaire

Name: _____ Date: _____

**For current consumption, use, or exposure, select the best response for each question.*

Food & Water	Yes/Often	Yes / Sometimes	Yes / Seldomly	Only in The Past	No / Never
Do you consume conventionally-farmed or genetically modified vegetables and fruits?					
Do you consume canned vegetables, fruits, or beans?					
Do you consume conventionally-raised meat, poultry, dairy, and eggs?					
Do you consume farmed or canned fish or shellfish?					
Do you consume wild-caught fish or shellfish?					
Do you consume fried foods or fast foods?					
Do you consume processed foods with food additives (e.g. emulsifiers, flavor enhancers, fiber additives, gums and thickening agents, artificial or natural food dyes, preservatives or natural antioxidant preservatives)?					
Do you consume artificial sweeteners (e.g. NutraSweet, Equal, Sweet 'N Low, Splenda, acesulfame K) or natural sweeteners (e.g. agave, stevia, monk fruit)?					
Do you drink well water?					
Do you drink water bottled in plastic bottles?					

Alcohol, Smoking and Smokless Products	Yes/Often	Yes / Sometimes	Yes / Seldomly	Only in The Past	No / Never
Do you consume 4 or more drinks of alcohol per day, or 7 or more drinks per week for females or 14 or more drinks for per week for males (1 drink = 12 oz beer, 5 oz wine, 1.5 oz liquor)?					
Do you smoke cigarettes or chew tobacco?					
Do you vape nicotine?					
Do you vape cannabis?					
Are you exposed to secondhand smoke or secondhand vaping?					

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Mycotoxins Specific Binding Agents

VibrantWellness | Mycotoxins: Specific Binding Agents

	Activated Carbon	Activated Charcoal	Alfalfa Fiber	Beta Glucan	Chole-styramine	Chlorella	Clays	Diatoma-ceous Earth	Fulvic Acid	Gluco-manna	Humic Acid	NAC	Probiotics	Spore Based Probiotics	Zeolites
Aflatoxin	X	X		X		X	X	X		X	X		X	X	X
Ochra-toxin	X	X		X	X		X	X		X	X	X	X	X	X
Zearale-none	X	X	X	X			X	X	X	X	X		X	X	X
Enniatin B1							X							X	
Fumon-isins (B1, B2, B3)	X	X		X	X		X	X		X			X	X	X
Citrinin & Dihydro-codei-none		X												X	
Patulin	X	X		X			X						X	X	
Gliotoxin							X					X		X	
Mycophe-nolic Acid		X			X		X							X	X
Chaeto-globosin A		X			X	X	X					X		X	
Macro-cyclic Trichoth-ecenes	X	X											X		
Fusarium Trichoth-ecenes	X	X	X	X	X		X	X		X	X	X	X	X	

Macrocyclic Trichothecenes: Isosatratoxin F, Riordin A, Riordin E, Riordin H, Riordine L-2. Satratoxin G, Satratoxin H, Verrucarin A, Verrucarin J

Fusarium Trichothecenes: DDeoxynivalenol (Vomitoxin/DON), Nivalenol, Diacetoxyscirpenol (DAS), T-2 Toxin

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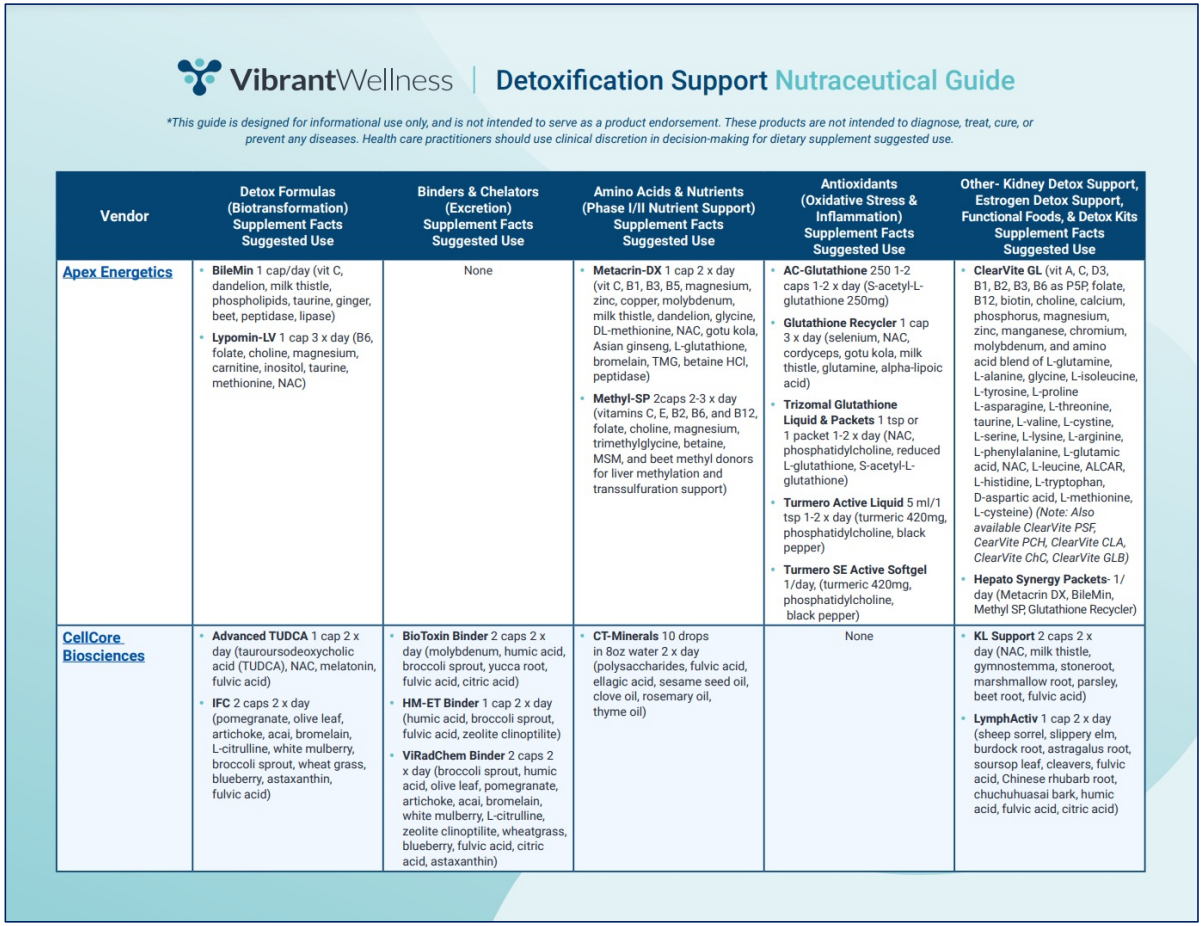
Detoxification Support Nutraceutical Guide



VibrantWellness | Detoxification Support Nutraceutical Guide

*This guide is designed for informational use only, and is not intended to serve as a product endorsement. These products are not intended to diagnose, treat, cure, or prevent any diseases. Health care practitioners should use clinical discretion in decision-making for dietary supplement suggested use.

Vendor	Detox Formulas (Biotransformation) Supplement Facts Suggested Use	Binders & Chelators (Excretion) Supplement Facts Suggested Use	Amino Acids & Nutrients (Phase I/II Nutrient Support) Supplement Facts Suggested Use	Antioxidants (Oxidative Stress & Inflammation) Supplement Facts Suggested Use	Other- Kidney Detox Support, Estrogen Detox Support, Functional Foods, & Detox Kits Supplement Facts Suggested Use
Apex Energetics	• **BileMin** 1 cap/day (vit C, dandelion, milk thistle, phospholipids, taurine, ginger, beet, peptidase, lipase) • **Lypomin-LV** 1 cap 3 x day (B6, folate, choline, magnesium, carnitine, inositol, taurine, methionine, NAC)	None	• **Metacrin-DX** 1 cap 2 x day (vit C, B1, B3, B5, magnesium, zinc, copper, molybdenum, milk thistle, dandelion, glycine, DL-methionine, NAC, gotu kola, Asian ginseng, L-glutathione, bromelain, TMG, betaine HCl, peptidase) • **Methyl-SP** 2caps 2-3 x day (vitamins C, E, B2, B6, and B12, folate, choline, magnesium, trimethylglycine, betaine, MSM, and beet methyl donors for liver methylation and transsulfuration support)	• **AC-Glutathione** 250 1-2 caps 1-2 x day (S-acetyl-L-glutathione 250mg) • **Glutathione Recycler** 1 cap 3 x day (selenium, NAC, cordyceps, gotu kola, milk thistle, glutamine, alpha-lipoic acid) • **Trizomal Glutathione Liquid & Packets** 1 tsp or 1 packet 1-2 x day (NAC, phosphatidylcholine, reduced L-glutathione, S-acetyl-L-glutathione) • **Turmero Active Liquid** 5 ml/1 tsp 1-2 x day (turmeric 420mg, phosphatidylcholine, black pepper) • **Turmero SE Active Softgel** 1/day, (turmeric 420mg, phosphatidylcholine, black pepper)	• **ClearVite GL** (vit A, C, D3, B1, B2, B3, B6 as P5P, folate, B12, biotin, choline, calcium, phosphorus, magnesium, zinc, manganese, chromium, molybdenum, and amino acid blend of L-glutamine, L-alanine, glycine, L-isoleucine, L-tyrosine, L-proline L-asparagine, L-threonine, taurine, L-valine, L-cystine, L-serine, L-lysine, L-arginine, L-phenylalanine, L-glutamic acid, NAC, L-leucine, ALCAR, L-histidine, L-tryptophan, D-aspartic acid, L-methionine, L-cysteine) *(Note: Also available ClearVite PSF, CearVite PCH, ClearVite CLA, ClearVite ChC, ClearVite GLB)* • **Hepato Synergy Packets**- 1/day (Metacrin DX, BileMin, Methyl SP, Glutathione Recycler)
CellCore Biosciences	• **Advanced TUDCA** 1 cap 2 x day (tauroursodeoxycholic acid (TUDCA), NAC, melatonin, fulvic acid) • **IFC** 2 caps 2 x day (pomegranate, olive leaf, artichoke, acai, bromelain, L-citrulline, white mulberry, broccoli sprout, wheat grass, blueberry, astaxanthin, fulvic acid)	• **BioToxin Binder** 2 caps 2 x day (molybdenum, humic acid, broccoli sprout, yucca root, fulvic acid, citric acid) • **HM-ET Binder** 1 cap 2 x day (humic acid, broccoli sprout, fulvic acid, zeolite clinoptilite) • **ViRadChem Binder** 2 caps 2 x day (broccoli sprout, humic acid, olive leaf, pomegranate, artichoke, acai, bromelain, white mulberry, L-citrulline, zeolite clinoptilite, wheatgrass, blueberry, fulvic acid, citric acid, astaxanthin)	• **CT-Minerals** 10 drops in 8oz water 2 x day (polysaccharides, fulvic acid, ellagic acid, sesame seed oil, clove oil, rosemary oil, thyme oil)	None	• **KL Support** 2 caps 2 x day (NAC, milk thistle, gymnostemma, stoneroot, marshmallow root, parsley, beet root, fulvic acid) • **LymphActiv** 1 cap 2 x day (sheep sorrel, slippery elm, burdock root, astragalus root, soursop leaf, cleavers, fulvic acid, Chinese rhubarb root, chuchuhuasai bark, humic acid, fulvic acid, citric acid)

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Don’t forget to STAND

- **S**upport- Support your patient and obtain a good history
- **T**esting-Identify the right testing for you patient
- **A**voidance- Avoid the toxins & foods that are impacting health
- **N**utrition-Improve diet diversity, identify proper nutrition meal plan
- **D**etox-Supplements and herbs to help detox and rebalance the system

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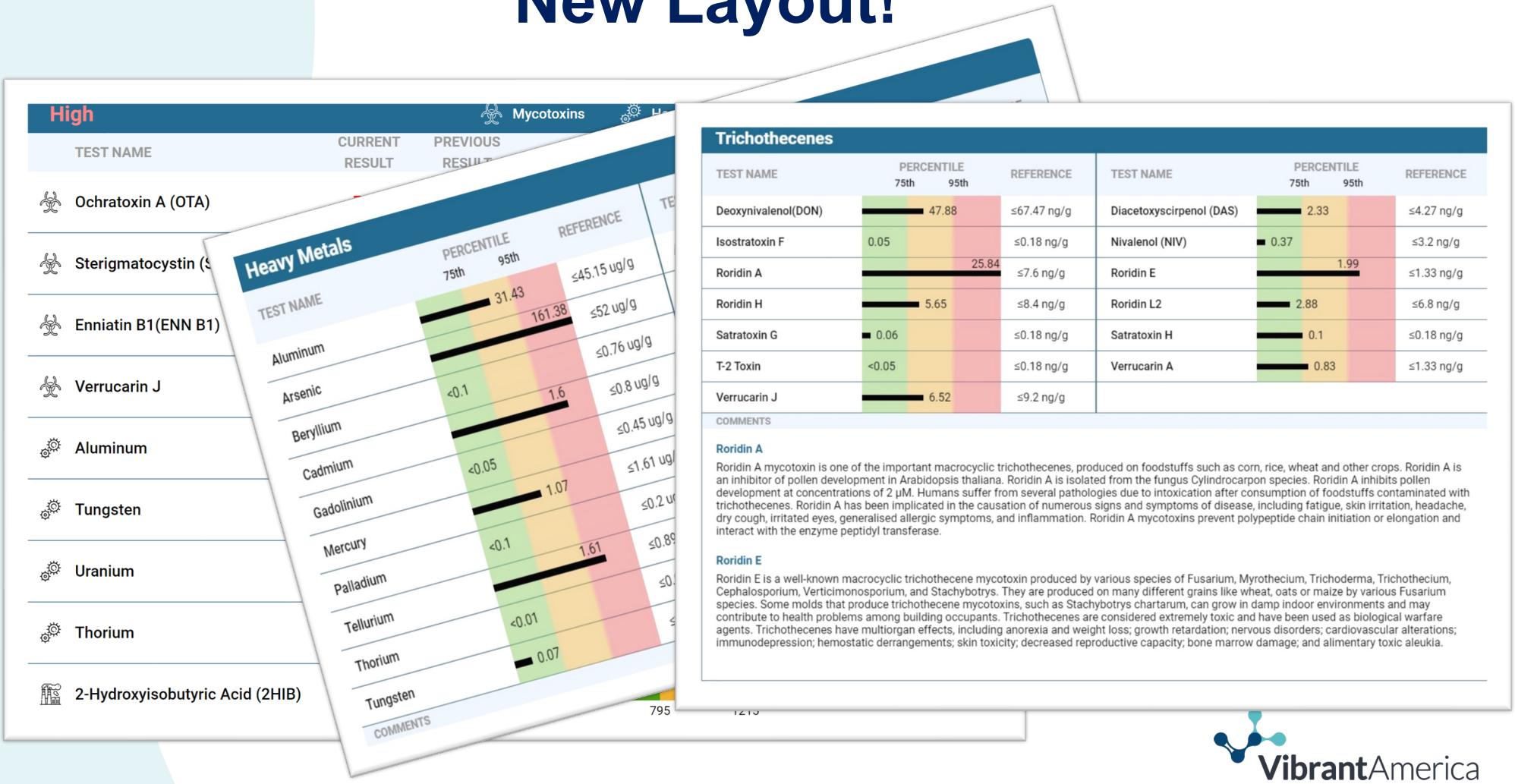
New Layout!



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Interpreting Reference Ranges

Vibrant Wellness is pleased to present to you, 'Mycotoxins panel', to help you make healthy lifestyle, dietary and treatment choices in consultation with your healthcare provider. It is intended to be used as a tool to encourage a general state of health and well-being.

The Vibrant Mycotoxins Panel is a test to identify and quantify the level of a large set of mycotoxins from both food and environmental molds present in your urine. The results are provided in 3 tables subgrouping the mycotoxins into Aflatoxins, Trichothecenes and Other Mycotoxins.

The report begins with the summary page which lists only the mycotoxins whose levels are >95th percentile (Red) and 75th-95th percentile (Yellow) of reference range, normalized to Urine creatinine levels. Additionally, the previous value is also indicated for your referral (if available). Following this section is the complete list of the mycotoxins and their absolute levels normalized to Creatinine in a quantile format along with the reference ranges. These levels are shown with three shades of color – Green, Yellow and Red. Reference ranges were determined using urine samples from 1000 apparently healthy individuals. The result in green corresponds to 0 to 75th percentile, the result in yellow corresponds to 75th to 95th percentile and the result in red corresponds to greater than 95th percentile of reference range. All content provided in the report are purely for informational purposes only and should not be considered medical advice. Any changes based on the information should made in consultation with your healthcare provider.

The Vibrant Wellness platform provides tools for you to track and analyze your general wellness profile. Testing for the Mycotoxins panel is performed by Vibrant America, a CLIA certified lab CLIA#:05D2078809. Vibrant Wellness provides and makes available this report and any related services pursuant to the Terms of Use Agreement (the "Terms") on its website at www.vibrant-wellness.com. By accessing, browsing, or otherwise using the report or website or any services, you acknowledge that you have read, understood, and agree to be bound by these terms. If you do not agree to accept these terms, you shall not access, browse, or use the report or website. The statements in this report have not been evaluated by the Food and Drug Administration and are only meant to be lifestyle choices for potential risk mitigation. Please consult your physician/dietitian for medication, treatment, or lifestyle management. This product is not intended to diagnose, treat, or cure any disease.

Pediatric ranges have not been established for this test. It is important that you discuss any modifications to your diet, exercise, and nutritional supplementation with your physician before making any changes.

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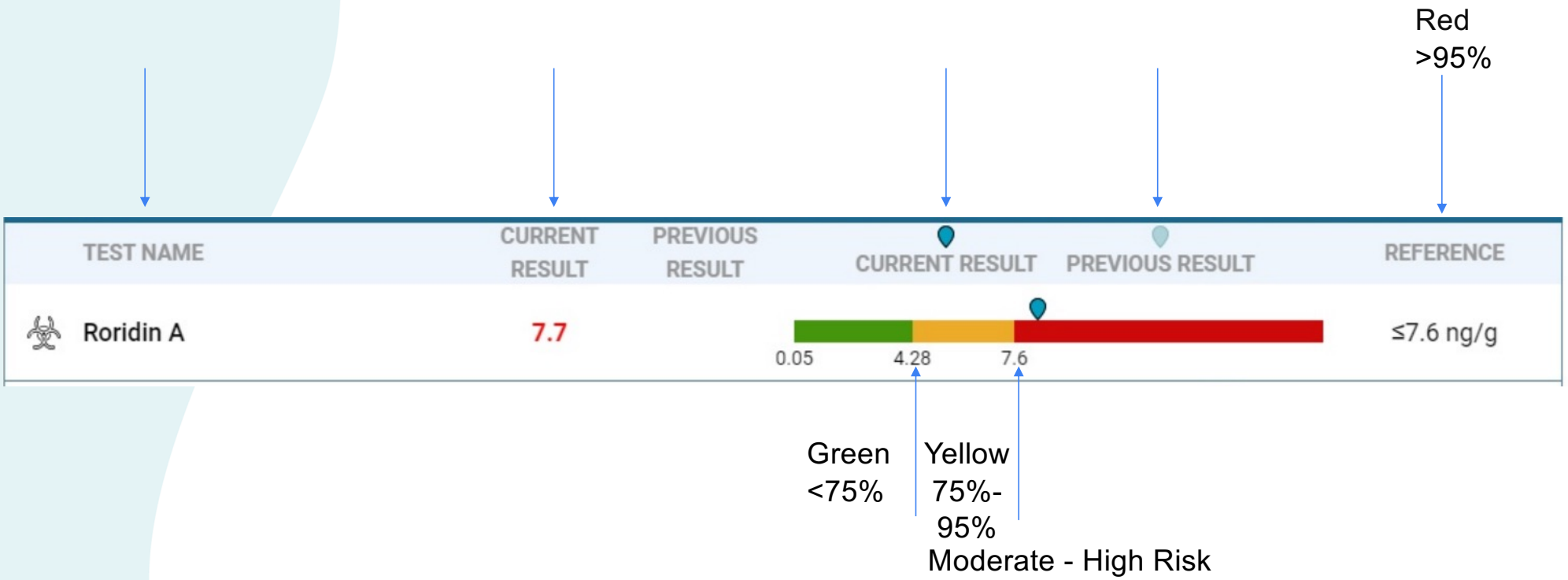
Interpreting Reference Range



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SUMMARY

Red
>95%

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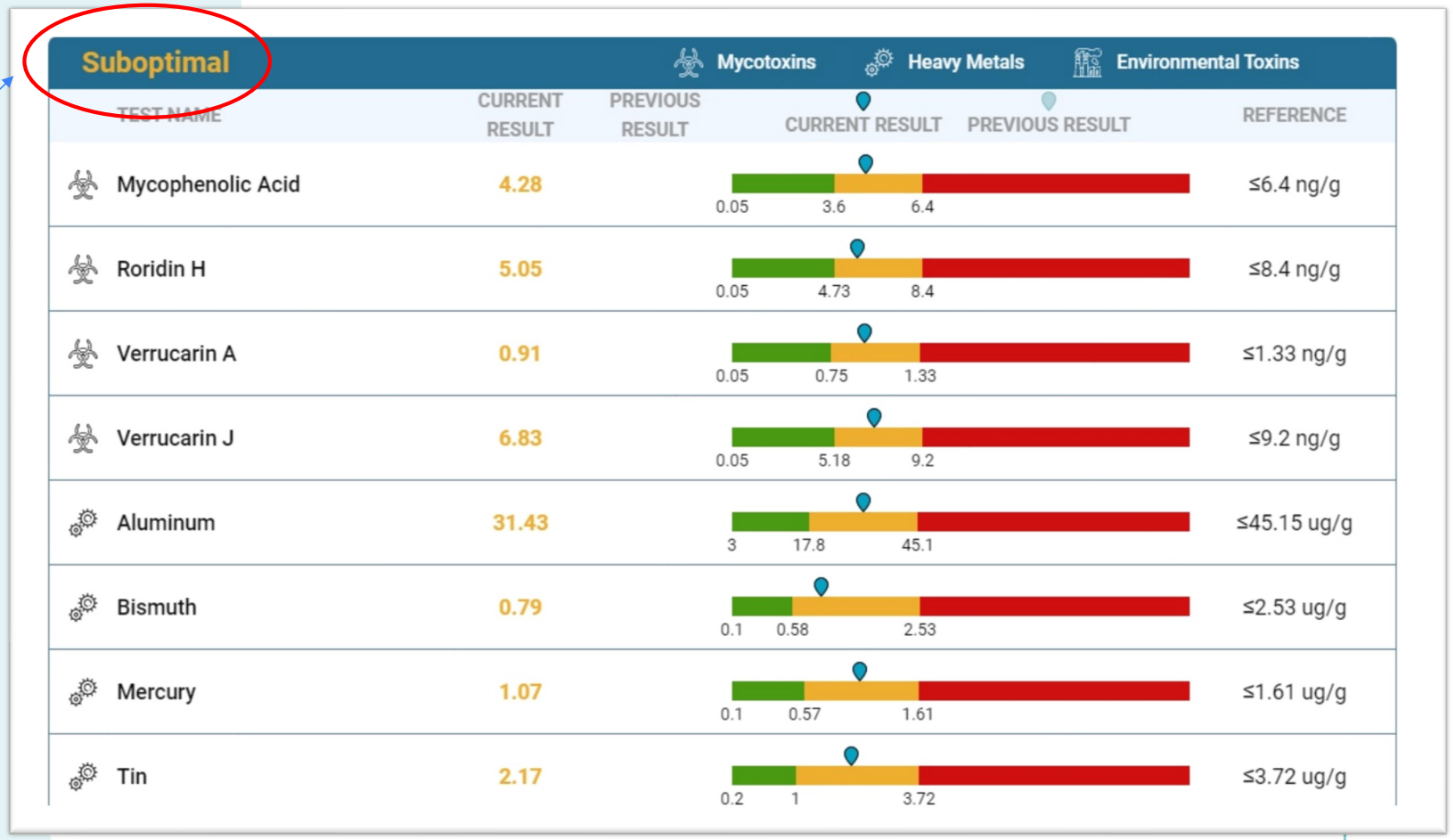
Yellow
75%-
95%



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What is NHANES?

CDC Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

National Report on Human Exposure to Environmental Chemicals

BIOMONITORING DATA TABLES FOR ENVIRONMENTAL CHEMICALS >>

The *National Report on Human Exposure to Environmental Chemicals* is a series of ongoing assessments of the U.S. population's exposure to environmental chemicals using biomonitoring. The *Report* presents nationally representative and cumulative biomonitoring data gathered from 1999-2000 through 2017-2018.

The *Report* provides information using individual and pooled blood or urine samples tested by Centers for Disease Control and Prevention (CDC) scientists in the Division of Laboratory Sciences. The samples are from people who took part in CDC's National Health and Nutrition Examination Survey (NHANES). Because of NHANES' study design, the measurements of chemicals in participants are representative of exposures in the U.S. civilian population.

The *Report* does not provide health or toxicity information, state- or community-specific data, specific product or environmentally related information, regulatory guidelines or recommendations.

BIOMARKER GROUPS

Reported in CDC's National Report on Human Exposure to Environmental Chemicals | www.cdc.gov/exposurereport/

Biomarker Groups	NHANES* Cycle 1999-2000	2001-2002	2003-2004	2005-2006	2007-2008	2009-2010	2011-2012	2013-2014	2015-2016	2017-2018
Adducts of Hemoglobin			●	●				●,+	●	
Tobacco Alkaloids and Metabolites	●	●	●	●	●	●	●	●,+	●,+	●
Tobacco-Specific Nitrosamines (TSNAs)					●	●	●	●		
Volatile N-Nitrosamines (VNAs)								●,+		
Disinfection By-Products		●	●	●	●	●	●	●	●	●
Personal Care and Consumer Product Chemicals and Metabolites			●	●	●	●	●	●	●	
Flame Retardant Metabolites							●	●	●	●
Fungicides and Metabolites			●	●	●	●				
Herbicides and Metabolites	●	●	●	●	●	●	●	●		
Sulfonyl Urea Herbicides			●	●	●					
Insect Repellent and Metabolites					●	●	●	●	●	
Neonicotinoid Insecticides									●	
Carbamate Pesticide Metabolites	●	●	●							
Organophosphorus Insecticides: Specific Metabolites	●	●	●	●	●	●	●	●		
Organophosphorus Insecticides: Dialkyl Phosphate Metabolites	●	●	●	●	●		●		●	●
Pyrethroid Metabolites	●	●	●	●	●	●	●	●		
Organochlorine Pesticide Metabolites: Urine			●	●	●	●				
Organochlorine Pesticides and Metabolites: Serum	●	●	●	▲	▲	▲	▲	▲	▲	
Polybrominated Diphenyl Ethers and PBB 153			●	▲	▲	▲	▲	▲	▲	

● Individual data^ ✚ Individual data from a special sample of smokers and non-smokers† ▲ Pooled data§

CDC Centers for Disease Control and Prevention National Center for Environmental Health

* NHANES: National Health and Nutrition Examination Survey, www.cdc.gov/nchs/nhanes/

^ Derived from whole blood, serum, or urine.

† Beginning with NHANES 2011-2012, a special sample was selected for measurement of certain groups of chemicals associated with tobacco smoke exposure. The special sample consists of a nationally representative sample of adult nonsmokers and all adults who reported being current cigarette smokers.

§ Pooled samples are used when larger sample volumes are needed to improve the sensitivity of the measurements and to reduce the number of samples being analyzed, balancing the cost of the analysis against a low frequency of detectable results.

Last updated: September 1, 2022

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Heavy Metals- NEW NHANES Ranges

Heavy Metals (Creatinine)	Antimony
Heavy Metals (Creatinine)	Arsenic
Heavy Metals (Creatinine)	Barium
Heavy Metals (Creatinine)	Beryllium
Heavy Metals (Creatinine)	Cadmium
Heavy Metals (Creatinine)	Cesium
Heavy Metals (Creatinine)	Lead
Heavy Metals (Creatinine)	Mercury
Heavy Metals (Creatinine)	Platinum
Heavy Metals (Creatinine)	Thallium
Heavy Metals (Creatinine)	Tin
Heavy Metals (Creatinine)	Tungsten
Heavy Metals (Creatinine)	Uranium

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Heavy Metals

Heavy Metals (Creatinine)

Test name	In Control	High Risk	In Control Range	High Risk Range	Previous ()
Urine Creatinine (mg/ml)	0.47		0.25~2.16	≤0.24 ≥2.17	
Aluminum (ug/g)	49.87		≤54.00	≥54.01	
Antimony (ug/g)	<0.02		≤0.78	≥0.79	
Arsenic (ug/g)	99.22		≤116.00	≥116.01	
Barium (ug/g)		18.86	≤6.90	≥6.91	
Beryllium (ug/g)	0.48		≤0.90	≥0.91	
Bismuth (ug/g)	0.19		≤14.90	≥14.91	
Cadmium (ug/g)	1.31		≤1.50	≥1.51	
Cesium (ug/g)		21.53	≤9.90	≥9.91	
Gadolinium (ug/g)	0.13		≤0.39	≥0.40	
Lead (ug/g)	1.25		≤4.40	≥4.41	
Mercury (ug/g)	0.20		≤3.90	≥3.91	
Nickel (ug/g)		54.07	≤11.90	≥11.91	
Palladium (ug/g)	<0.10		≤0.20	≥0.21	
Platinum (ug/g)	<0.05		≤0.99	≥1.00	
Tellurium (ug/g)		1.35	≤0.79	≥0.80	
Thallium (ug/g)	<0.10		≤0.80	≥0.81	
Thorium (ug/g)	0.08		≤0.50	≥0.51	
Tin (ug/g)		13.79	≤9.90	≥9.91	
Tungsten (ug/g)	0.43		≤0.99	≥1.00	
Uranium (ug/g)		0.23	≤0.13	≥0.14	

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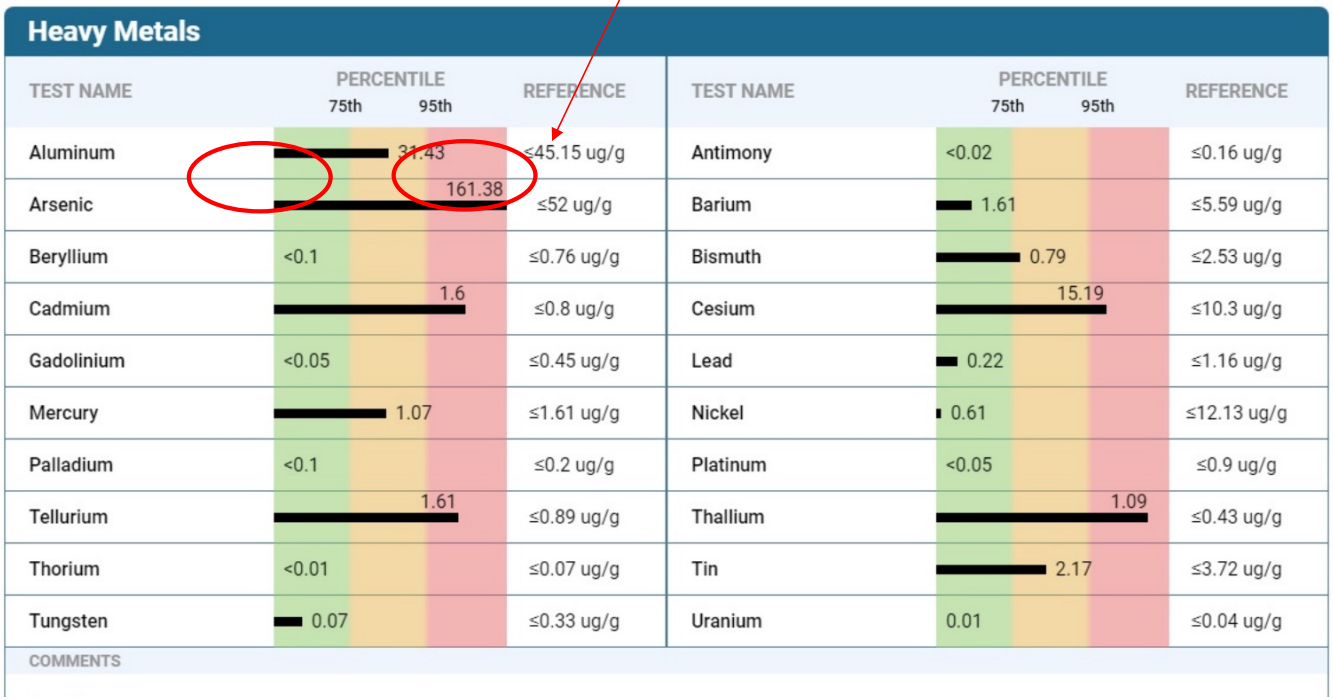
Heavy Metals

Red >95 %



Heavy Metals

TEST NAME	PERCENTILE 75th 95th	REFERENCE	TEST NAME	PERCENTILE 75th 95th	REFERENCE
Aluminum	31.43	≤45.15 ug/g	Antimony	<0.02	≤0.16 ug/g
Arsenic	161.38	≤52 ug/g	Barium	1.61	≤5.59 ug/g
Beryllium	<0.1	≤0.76 ug/g	Bismuth	0.79	≤2.53 ug/g
Cadmium	1.6	≤0.8 ug/g	Cesium	15.19	≤10.3 ug/g
Gadolinium	<0.05	≤0.45 ug/g	Lead	0.22	≤1.16 ug/g
Mercury	1.07	≤1.61 ug/g	Nickel	0.61	≤12.13 ug/g
Palladium	<0.1	≤0.2 ug/g	Platinum	<0.05	≤0.9 ug/g
Tellurium	1.61	≤0.89 ug/g	Thallium	1.09	≤0.43 ug/g
Thorium	<0.01	≤0.07 ug/g	Tin	2.17	≤3.72 ug/g
Tungsten	0.07	≤0.33 ug/g	Uranium	0.01	≤0.04 ug/g

COMMENTS

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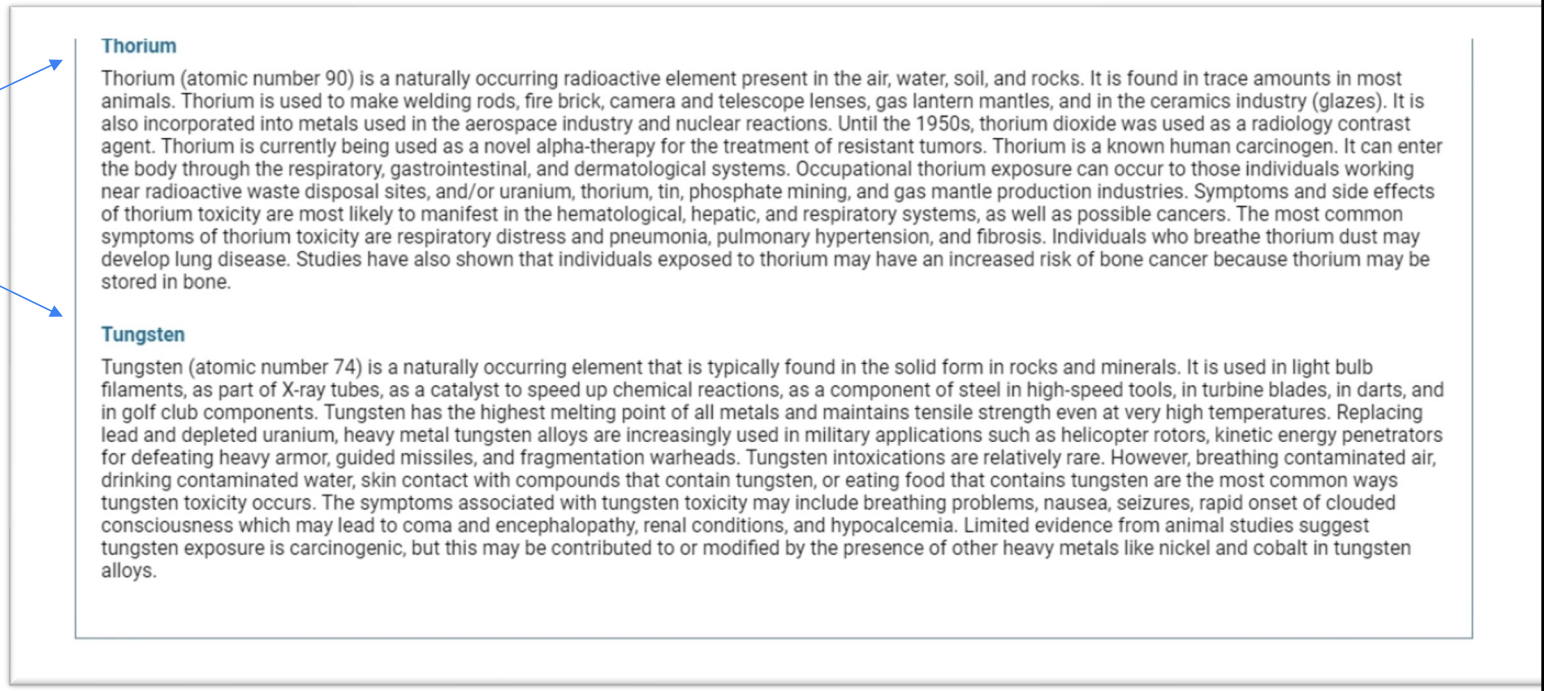
Report Comment Updates

Lab Report Comment Updates!



Thorium

Thorium (atomic number 90) is a naturally occurring radioactive element present in the air, water, soil, and rocks. It is found in trace amounts in most animals. Thorium is used to make welding rods, fire brick, camera and telescope lenses, gas lantern mantles, and in the ceramics industry (glazes). It is also incorporated into metals used in the aerospace industry and nuclear reactions. Until the 1950s, thorium dioxide was used as a radiology contrast agent. Thorium is currently being used as a novel alpha-therapy for the treatment of resistant tumors. Thorium is a known human carcinogen. It can enter the body through the respiratory, gastrointestinal, and dermatological systems. Occupational thorium exposure can occur to those individuals working near radioactive waste disposal sites, and/or uranium, thorium, tin, phosphate mining, and gas mantle production industries. Symptoms and side effects of thorium toxicity are most likely to manifest in the hematological, hepatic, and respiratory systems, as well as possible cancers. The most common symptoms of thorium toxicity are respiratory distress and pneumonia, pulmonary hypertension, and fibrosis. Individuals who breathe thorium dust may develop lung disease. Studies have also shown that individuals exposed to thorium may have an increased risk of bone cancer because thorium may be stored in bone.

Tungsten

Tungsten (atomic number 74) is a naturally occurring element that is typically found in the solid form in rocks and minerals. It is used in light bulb filaments, as part of X-ray tubes, as a catalyst to speed up chemical reactions, as a component of steel in high-speed tools, in turbine blades, in darts, and in golf club components. Tungsten has the highest melting point of all metals and maintains tensile strength even at very high temperatures. Replacing lead and depleted uranium, heavy metal tungsten alloys are increasingly used in military applications such as helicopter rotors, kinetic energy penetrators for defeating heavy armor, guided missiles, and fragmentation warheads. Tungsten intoxications are relatively rare. However, breathing contaminated air, drinking contaminated water, skin contact with compounds that contain tungsten, or eating food that contains tungsten are the most common ways tungsten toxicity occurs. The symptoms associated with tungsten toxicity may include breathing problems, nausea, seizures, rapid onset of clouded consciousness which may lead to coma and encephalopathy, renal conditions, and hypocalcemia. Limited evidence from animal studies suggest tungsten exposure is carcinogenic, but this may be contributed to or modified by the presence of other heavy metals like nickel and cobalt in tungsten alloys.

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Environmental Toxins- NHANES

Environmental Toxins	2,4-Dichlorophenoxyacetic Acid (2,4-D)
Environmental Toxins	Perchlorate
Environmental Toxins	Diethyldithiophosphate (DEDTP)
Environmental Toxins	Dimethyldithiophosphate (DMDTP)
Environmental Toxins	Diethylthiophosphate (DETP)
Environmental Toxins	Dimethylphosphate (DMP)
Environmental Toxins	Diethylphosphate (DEP)
Environmental Toxins	Dimethylthiophosphate (DMTP)
Environmental Toxins	Atrazine
Environmental Toxins	Atrazine mercapturate
Environmental Toxins	3-Phenoxybenzoic Acid (3PBA)
Environmental Toxins	mono-2-ethylhexyl phthalate (MEHP)
Environmental Toxins	mono-(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP)
Environmental Toxins	mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)
Environmental Toxins	Mono-ethyl phthalate (MEtP)
Environmental Toxins	Methylparaben
Environmental Toxins	Propylparaben
Environmental Toxins	Butylparaben
Environmental Toxins	Ethylparaben
Environmental Toxins	N-acetyl-S-(2-carbamoylethyl)-cysteine (NAE)
Environmental Toxins	N-Acetyl (2-Cyanoethyl) Cysteine (NACE)
Environmental Toxins	N-Acetyl (2,Hydroxypropl) Cysteine (NAHP)
Environmental Toxins	N-Acetyl (3,4-Dihydroxybutyl) Cysteine (NADB)
Environmental Toxins	2-Hydroxyethyl Mercapturic Acid (HEMA)
Environmental Toxins	N-Acetyl Propyl Cysteine (NAPR)
Environmental Toxins	Bisphenol A (BPA)
Environmental Toxins	Triclosan
Environmental Toxins	2-Methylhippuric Acid (2MHA)
Environmental Toxins	Phenylglyoxylic Acid (PGO)
Environmental Toxins	N-acetyl phenyl cysteine (NAP)

- Vibrant Tests 39 Analytes
- 31 NHANES Reference ranges

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Environmental Toxins

Environmental Toxins - High

Test Name	In Control	Moderate	High	Current Level	Previous Level
Atrazine (mcg/g)	≤0.02	0.03~0.05	≥0.06	0.23	
N-Acetyl (2,Hydroxypropl) Cysteine (NAHP) (mcg/g)	≤5.00	5.01~429.99	≥430.00	1125.59	
N-Acetyl (3,4-Dihydroxybutyl) Cysteine (NADB) (mcg/g)	≤7.50	7.51~478.29	≥478.30	491.89	
Tiglylglycine (TG) (mcg/g)	≤0.10	0.11~11.29	≥11.30	44.49	
Bisphenol A (BPA) (mcg/g)	≤3.20	3.21~10.80	≥10.81	42.77	
4-Methylhippuric Acid (4MHA) (mcg/g)	≤74.00	74.01~792.29	≥792.30	2075.30	

Environmental Toxins - Moderate

Test Name	In Control	Moderate	High	Current Level	Previous Level
Glyphosate (mcg/g)	≤0.75	0.76~2.29	≥2.30	1.44	
Mono-ethyl phthalate (MEtP) (mcg/g)	≤305.00	305.01~1478.22	≥1478.23	1341.90	
4-Nonylphenol (mcg/g)	≤0.50	0.51~4.82	≥4.83	1.82	

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Parabens

TEST NAME	PERCENTILE 75th	PERCENTILE 95th	REFERENCE	TEST NAME	PERCENTILE 75th	PERCENTILE 95th	REFERENCE
Butylparaben	0.154		≤4.39 mcg/g	Ethylparaben	4.466		≤99.3 mcg/g
Methylparaben	211.13		≤653 mcg/g	Propylparaben	31.822		≤222 mcg/g

Pesticides

TEST NAME	PERCENTILE 75th	PERCENTILE 95th	REFERENCE	TEST NAME	PERCENTILE 75th	PERCENTILE 95th	REFERENCE
2,2-bis(4-Chlorophenyl) acetic acid (DDA)	9.422		≤19 mcg/g	3-Phenoxybenzoic Acid (3PBA)	0.425		≤5.44 mcg/g
Diethyl phosphate (DEP)	0.396		≤15.7 mcg/g	Diethyldithiophosphate (DEDTP)	0.094		≤0.3 mcg/g
Diethylthiophosphate (DETP)	0.42		≤3.92 mcg/g	Dimethyl phosphate (DMP)	3.973		≤33.6 mcg/g
Dimethyldithiophosphate (DMDTP)	4.251		≤6.12 mcg/g	Dimethylthiophosphate (DMTP)	3.517		≤33.7 mcg/g

Phthalates

TEST NAME	PERCENTILE 75th	PERCENTILE 95th	REFERENCE	TEST NAME	PERCENTILE 75th	PERCENTILE 95th	REFERENCE
mono-(2-ethyl-5-hydroxyhexyl) phthalate	650.667		≤37.7 mcg/g	mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)	4.696		≤23.4 mcg/g
mono-2-ethylhexyl phthalate (MEHP)	1.948		≤8.47 mcg/g	Mono-ethyl phthalate (MEtP)	228.96		≤541 mcg/g
Monoethyl Phthalate (MEP)	5.674		≤5.9 mcg/g				

COMMENTS

Green
<75%

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Mycotoxins

Mycotoxins Summary

Mycotoxins - High

Test Name	Species Name	In Control	Moderate	High	Current Level	Previous Level
Gliotoxin (ng/g)	Aspergillus	≤155.90	155.91~311.80	≥311.81	888.71	
Mycophenolic Acid (ng/g)	Aspergillus, Penicillium	≤4.80	4.81~9.60	≥9.61	18.63	
diacetoxyscirpenol (DAS) (ng/g)	Fusarium	≤3.20	3.21~6.40	≥6.41	17.73	

Mycotoxins - Moderate

Test Name	Species Name	In Control	Moderate	High	Current Level	Previous Level
Aflatoxin B2 (ng/g)	Aspergillus	≤6.10	6.11~12.20	≥12.21	12.12	
Ochratoxin A (ng/g)	Aspergillus, Penicillium	≤5.10	5.11~10.20	≥10.21	5.20	
Verrucarin J (ng/g)	Stachybotrys chartarum	≤6.90	6.91~13.80	≥13.81	7.82	

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Mycotoxins

VibrantWellness
Vibrant Wellness | 1360 Bayport Ave, San Carlos, CA 94070
1(866) 364-0963 | support@vibrant-america.com | www.vibrant-wellness.com

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
Last Name	First Name	Female	Date Of Birth	2205140043	2022-09-27

Trichothecenes

TEST NAME	PERCENTILE (75th / 95th)	REFERENCE
Verrucarin A	0.84	≤1.33 ng/g
Nivalenol (NIV)	1.84	≤3.2 ng/g
T-2 Toxin	0.09	≤0.18 ng/g
Satratoxin H	0.07	≤0.18 ng/g
Roridin A	9.21	≤7.6 ng/g
Roridin L2	3.57	≤6.8 ng/g
Roridin E	0.58	≤1.33 ng/g

TEST NAME	PERCENTILE (75th / 95th)	REFERENCE
Deoxynivalenol(DON)	3.38	≤67.47 ng/g
Diacetoxyscirpenol (DAS)	1.79	≤4.27 ng/g
Satratoxin G	0.05	≤0.18 ng/g
Isostratoxin F	0.1	≤0.18 ng/g
Roridin H	0.94	≤8.4 ng/g
Verrucarin J	1.07	≤9.2 ng/g

COMMENTS

Roridin A

Roridin A mycotoxin is one of the important macrocyclic trichothecenes, produced on foodstuffs such as corn, rice, wheat and other crops. Roridin A is an inhibitor of pollen development in Arabidopsis thaliana. Roridin A is isolated from the fungus Cylindrocarpon species. Roridin A inhibits pollen development at concentrations of 2 µM. Humans suffer from several pathologies due to intoxication after consumption of foodstuffs contaminated with trichothecenes. Roridin A has been implicated in the causation of numerous signs and symptoms of disease, including fatigue, skin irritation, headache, dry cough, irritated eyes, generalised allergic symptoms, and inflammation. Roridin A mycotoxins prevent polypeptide chain initiation or elongation and interact with the enzyme peptidyl transferase.

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Creatinine

Total Toxins Summary

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1(866) 364-0963 | support@vibrant-america.com | www.vibrant-wellness.com

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
Last Name	First Name	Female	Date Of Birth	2205140043	2022-09-27

Urine Creatinine

TEST NAME	CURRENT RESULT	PREVIOUS RESULT	CURRENT RESULT / PREVIOUS RESULT	REFERENCE
Urine Creatinine	0.55		0.05 0.24 2.16	0.25-2.16 mg/ml

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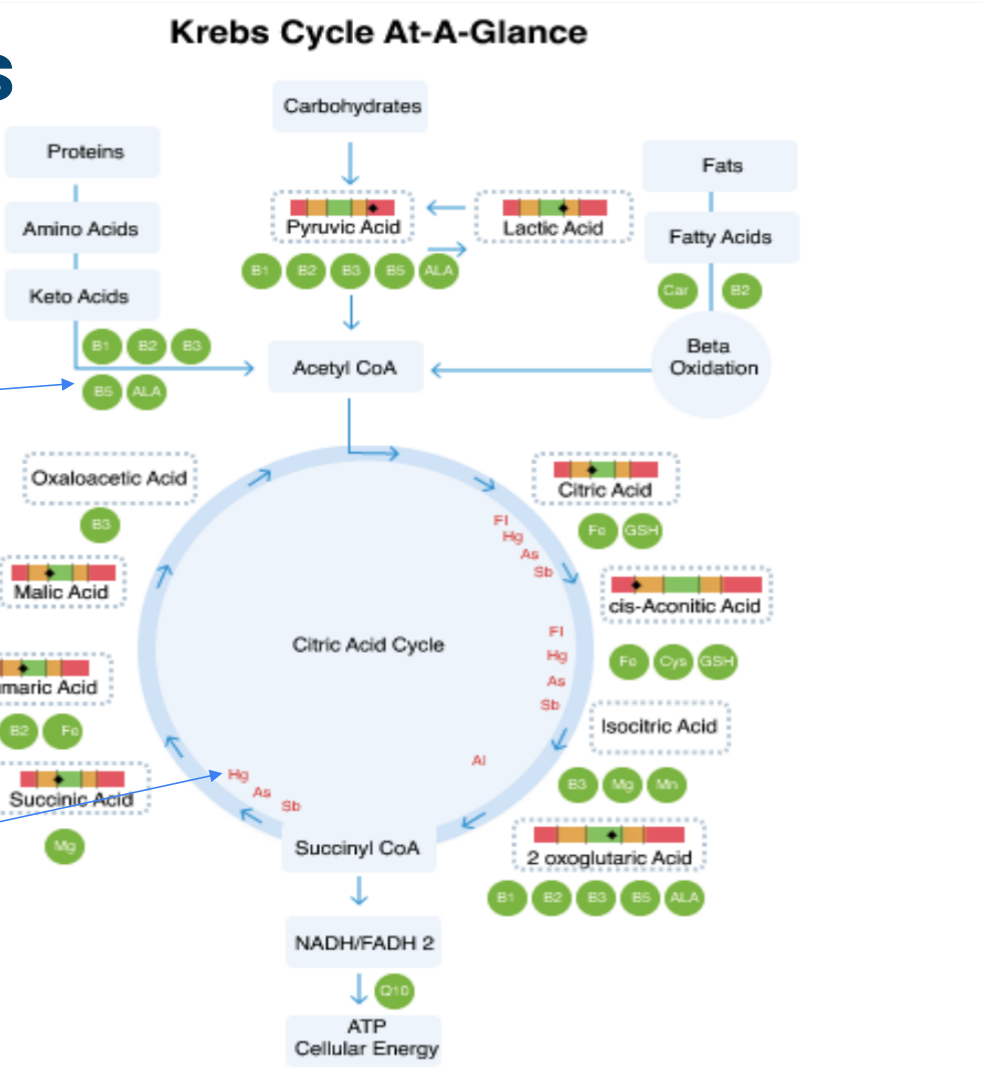
Organic Acids



Nutrient Co-Factors

Quintile Ranges

Heavy Metal Interference

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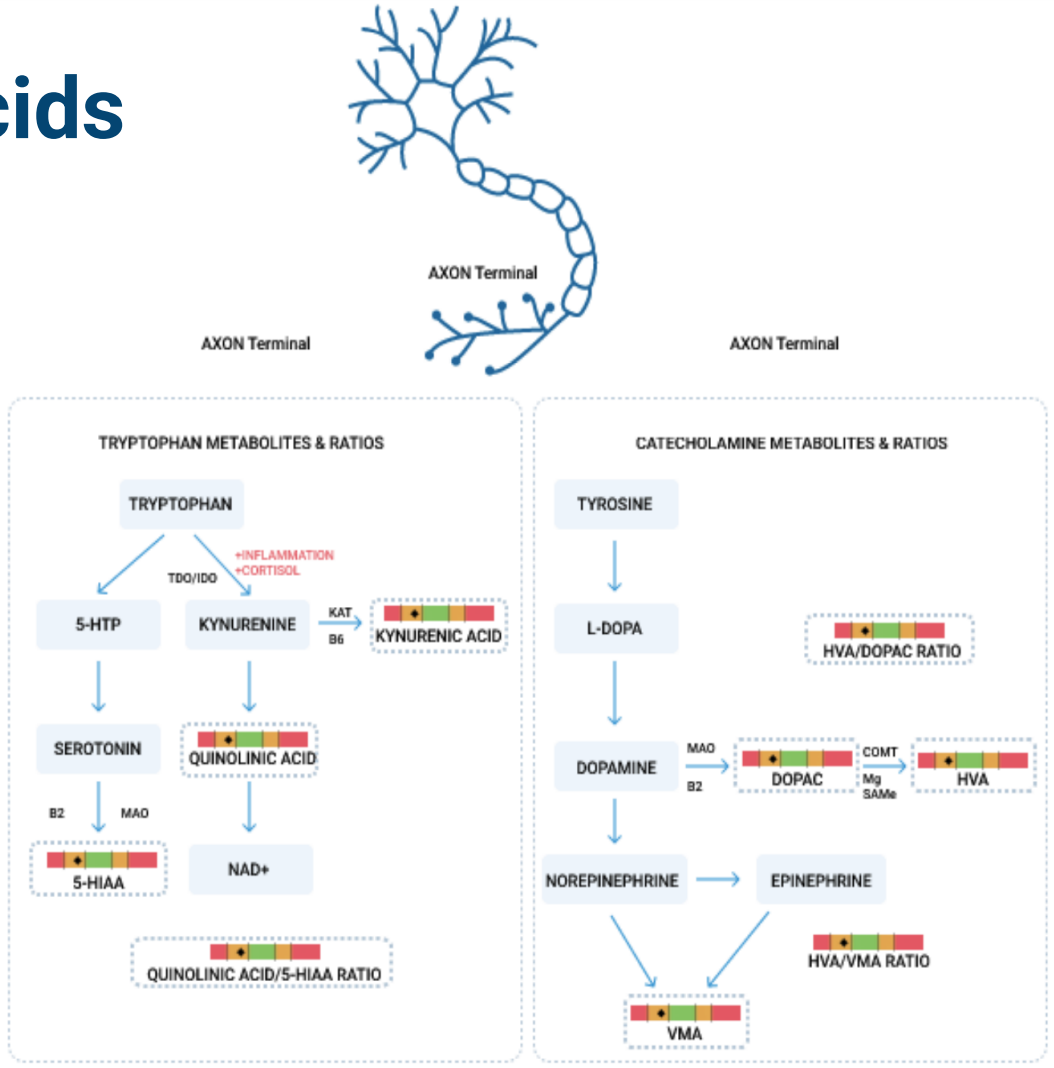
Organic Acids

NEW
Neurotransmitter
Pathways



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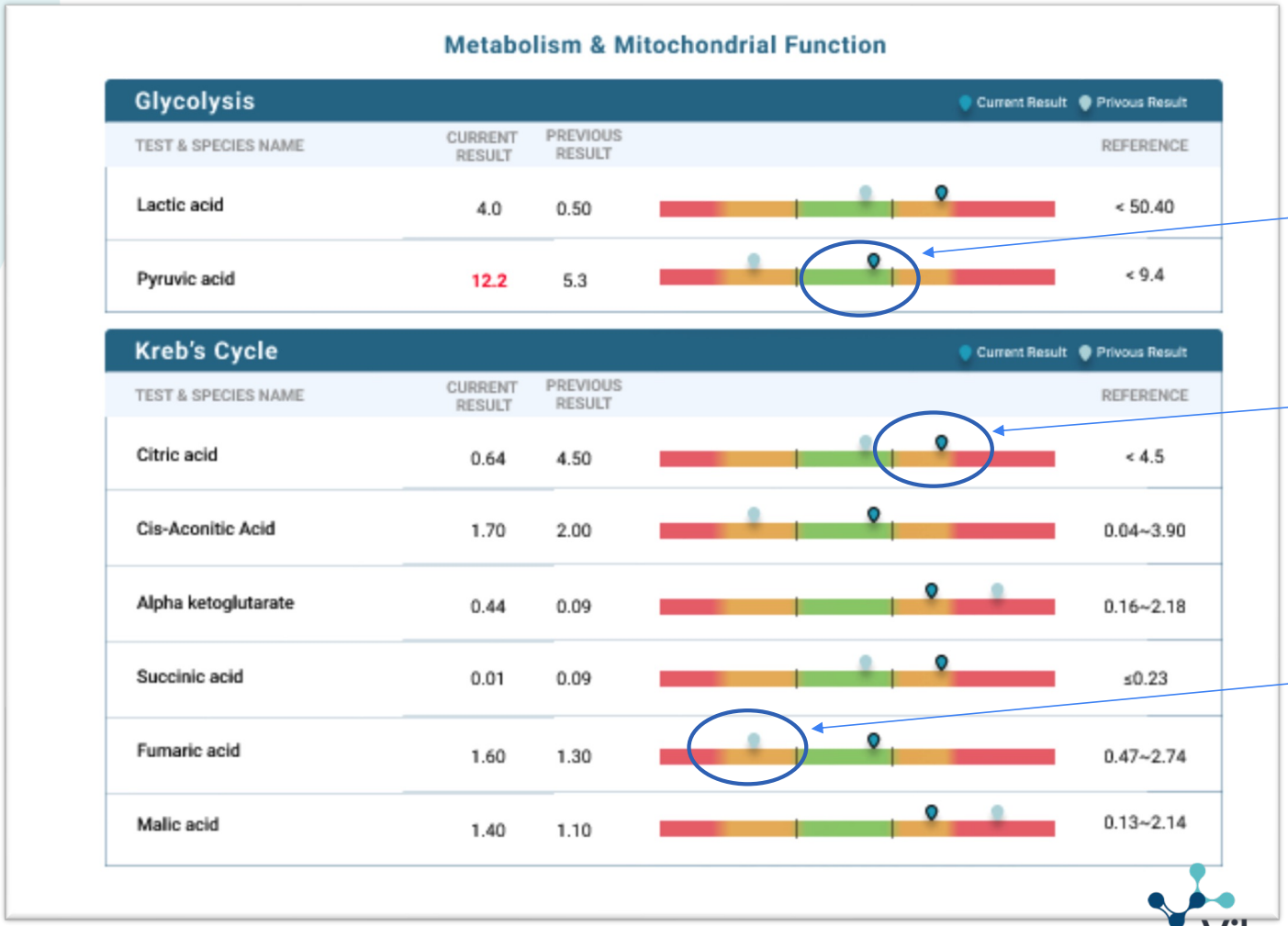
Organic Acids



Metabolism & Mitochondrial Function

Glycolysis

Current Result Privous Result

TEST & SPECIES NAME	CURRENT RESULT	PREVIOUS RESULT	REFERENCE
Lactic acid	4.0	0.50	< 50.40
Pyruvic acid	12.2	5.3	< 9.4

Kreb's Cycle

Current Result Privous Result

TEST & SPECIES NAME	CURRENT RESULT	PREVIOUS RESULT	REFERENCE
Citric acid	0.64	4.50	< 4.5
Cis-Aconitic Acid	1.70	2.00	0.04~3.90
Alpha ketoglutarate	0.44	0.09	0.16~2.18
Succinic acid	0.01	0.09	≤0.23
Fumaric acid	1.60	1.30	0.47~2.74
Malic acid	1.40	1.10	0.13~2.14

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Sneak Peak

Environmental Toxins Guide

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Sneak Peak

Phthalates

Markers tested: MEP, MEHP, MEOHP

CATEGORIZATION

Metabolite: Monoethyl Phthalate (MEP), Mono-2-ethylhexyl phthalate (MEHP), Mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)

Parent Chemicals:

- MEP is a metabolite of diethyl phthalate (DEP)
- MEHP and MEOHP are metabolites of Di(2-ethylhexyl) Phthalate (DEHP)

Category: **Phthalates**

GENERAL INFO

- CDC researchers have found that phthalate exposure is widespread in the US[97]
- Adult women have higher levels of urinary metabolites compared to men, likely due to body care product use[97]

EXPOSURE & SOURCES

- Absorption: Occurs via dermal absorption predominantly, oral ingestion and some inhalation

Sources of phthalates:

- Personal care products such as soaps, shampoos, nail polish, fragrances, deodorant hair sprays, cosmetics[97]
  - DEP is the most common phthalate in these products because of the fragrance[98]
- Products made with polyvinyl chloride plastics (PVC): Wall coverings, tablecloths, vinyl flooring, furniture upholstery, shower curtains, garden hoses, pool liners, rainwear, baby dolls, inflatable toys, shoes, automobile upholstery, toothbrush, sheathing for wire/cables, medical tubing, blood storage bags[97,99]
  - DEHP is the most commonly used phthalate to make PVC products[98]
- Lubricating oils, insecticides, aspirin[100]
- Medical procedures such as blood transfusions, kidney dialysis, catheter use, respirator use[101]
- Ingestion of contaminated foods due to migration of plastics from storage or processing or contaminated water[101]
- Hand to mouth behavior may increase exposure to phthalates, especially in children[97]
- Ambient air can contain higher phthalates, especially indoors with recent paint use or floor installation[101]

PHYSIOLOGICAL EFFECTS

- EPA categorizes DEHP as a possible human carcinogen[99]
- DEP and DEHP are listed in California's proposition 65 as a reproductive and developmental toxicant[98]
- Animal studies of DEHP exposure show potential developmental toxicity, birth defects, decreased fertility, increased lung and liver weights from chronic inhalation, liver tumors[101]

GENERAL CONSIDERATIONS

- Limit consuming foods from plastic packaging and limit microwaving plastic containers
- Avoid products that use the #3 in the universal recycling symbol, with the V or PVC listed[98]

- Opt for PVC and phthalate free products
- Limit hand-to-mouth contact with products containing phthalates
- Assess body care products for phthalates
- Request phthalate free tubing and medical bags when necessary
- Consider an air purifier
- Consider a water filter

DETOXIFICATION CONSIDERATIONS

- Detoxification: MEHP is formed from hydrolytic cleavage of DEHP by DEHP hydrolases; oxidation reactions predominantly by CYP2C91, CYP2C92 and CYP2C19 can convert MEPH to other metabolites such as MEOHP[102]
  - DEP undergoes hydrolysis to form the metabolite MEP[103]
- Phase 2: Glucuronidation[104]; glucuronide conjugates of MEHP and MEHP metabolites can also be formed and excreted[102]
- Excretion: Urine and feces are the main routes of excretion
  - Induce sweating to facilitate elimination of phthalates[105]
  - Estimated half-life of urinary elimination in humans is roughly 2-8 hours for DEHP[102]

Please see recommendations at the end of the interpretive guide to support and upregulate corresponding detoxification & excretion pathways

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Sneak Peak

OVERVIEW OF DETOXIFICATION PHASES & ELIMINATION

1

PHASE 1 DETOXIFICATION:

Functionalization- Adds a reactive site to the lipid soluble toxic compound. Uses the Cytochrome P450 enzyme system and other enzymes involving a variety of reactions (hydrolysis, oxidation, reduction, etc.).

2

PHASE 2 DETOXIFICATION:

Conjugation- Adds a water-soluble group to the reactive site formed from phase 1 to make the toxin more water soluble and to prepare it for excretion.

3

PHASE 3 DETOXIFICATION:

The anti-porter system is a transport system that moves conjugated metabolites formed from phase 2 detoxification out of cells and also plays a role in efflux of toxins pre-biotransformation

4

EXCRETION:

Eliminates the toxin out of the body:

- Bile to stools
- Kidney to urine
- Exhalation from lungs
- Skin through sweat

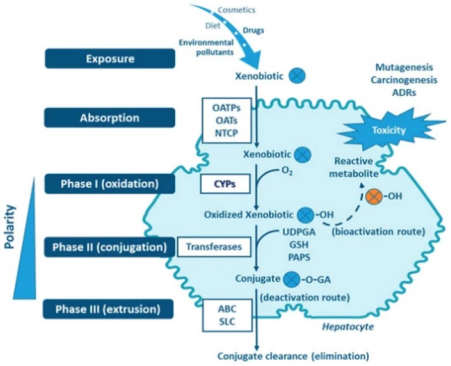

Image reference[142]

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Thank you!

Questions?

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Clinical Lab Educator