JANICE NEDIN

FINAL REPORT

Accession ID: 2408216650

Name: JANICE NEDIN
Date of Birth: 06-07-1950
Gender: Female
Age: 74
Height:
Weight:
Fasting: UNKNOWN

Telephone: 14125839074
Street Address: 5544 WILKINS AVENUE PITTSBURGH, PA 15217
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Provider Information

Practice Name: Bio Energy Medical Center
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Report Information

Current Result | Previous Result | In Control | Moderate | Risk

Specimen Information

Sample Type	Collection Time	Received Time	Report	Final Report Date
Metal Free Urine	2024-09-02 15:00 (GMT)	2024-09-04 21:38 (GMT)	Total Tox Burden - P2	2024-09-13 00:37 (GMT)
			Mycotoxins - P4	2024-09-13 00:37 (GMT)
			Heavy Metals – Urine - P14	2024-09-10 00:32 (GMT)
			Environmental Toxins - P20	2024-09-10 00:27 (GMT)

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Patient Name: JANICE NEDIN
Date of Birth: 06-07-1950 Accession ID: 2408216650
Service Date: 2024-09-02 15:00 (GMT)

Total Tox Burden - Summary

High

Mycotoxins | Heavy Metals | Environmental Toxins

Test Name	Current	Previous	Result (75th / 95th)	Reference
2-Hydroxyisobutyric Acid (2HIB) (ug/g)	3877.32		795.93 / 1215.72	≤1215.72
2,2-bis(4-Chlorophenyl) acetic acid (DDA) (ug/g)	26.31		7.9 / 19	≤19
Bisphenol A (BPA)^ (ug/g)	20.11		2.12 / 5.09	≤5.09
Dimethylthiophosphate (DMTP)^ (ug/g)	70.30		5.91 / 33.7	≤33.7
Gadolinium (ug/g)	1.25		0.17 / 0.45	≤0.45
Lead^ (ug/g)	1.42		0.52 / 1.16	≤1.16
Nickel (ug/g)	13.22		6.37 / 12.13	≤12.13
Aflatoxin B1 (AFB1) (ng/g)	11.67		3.9 / 6.93	≤6.93
Aflatoxin G1 (ng/g)	14.58		3.68 / 6.53	≤6.53
Aflatoxin G2 (ng/g)	33.34		6.08 / 10.8	≤10.8
Diacetoxyscirpenol (DAS) (ng/g)	4.64		2.4 / 4.27	≤4.27
Dihydrocitrinone (ng/g)	25.91		9.3 / 16.53	≤16.53
Fumonisins B2 (ng/g)	23.11		4.05 / 7.2	≤7.2
Fumonisins B3 (ng/g)	24.92		6.08 / 10.8	≤10.8
Nivalenol (NIV) (ng/g)	5.09		1.8 / 3.2	≤3.2
Roridin L2 (ng/g)	8.51		3.83 / 6.8	≤6.8
Sterigmatocystin (STC) (ng/g)	0.78		0.3 / 0.53	≤0.53
Zearalenone (ZEN) (ng/g)	1.06		0.38 / 0.67	≤0.67

Suboptimal

Environmental Toxins

Test Name	Current	Previous	Result (75th / 95th)	Reference
Dimethyl phosphate (DMP)^ (ug/g)	22.97		9.1 / 33.6	≤33.6
Propylparaben^ (ug/g)	42.10		36.7 / 222	≤222
Tiglylglycine (TG) (ug/g)	0.18		0.09 / 3.24	≤3.24

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Patient Name: **JANICE NEDIN**
Date of Birth: **06-07-1950** Accession ID: **2408216650**
Service Date: **2024-09-02 15:00 (GMT)**

Total Tox Burden - Summary

Suboptimal

Mycotoxins | Heavy Metals | Environmental Toxins

Test Name	Current	Previous	Result (75th / 95th)	Reference
Triclosan (TCS)^ (ug/g)	184.18		29.9 / 358	≤358
Aluminum (ug/g)	40.39		17.83 / 45.15	≤45.15
Arsenic^ (ug/g)	44.11		11.9 / 52	≤52
Beryllium^ (ug/g)	0.53		0.2 / 0.76	≤0.76
Thallium^ (ug/g)	0.30		0.24 / 0.43	≤0.43
Gliotoxin (ng/g)	138.39		116.93 / 207.87	≤207.87

Creatinine

Test Name	Current	Previous	Result	Reference
Urine Creatinine (mg/mL)	0.29		0 / 0.24 / 2.16	0.25-2.16

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Mycotoxins

INTRODUCTION

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. The panel is designed to give a complete picture of an individual's levels of these mycotoxins in urine. The results are provided in 3 tables subgrouping the mycotoxins into Aflatoxins, Trichothecenes and Other Mycotoxins. Reference ranges were determined using urine samples from 1000 apparently healthy individuals.

Methodology:

The Vibrant Mycotoxins panel uses tandem mass spectrometry methodology (LC-MS/MS) for quantitative detection of mycotoxins in urine samples. Urine creatinine is measured using a kinetic colorimetric assay based on the Jaffé method. All mycotoxins are reported as the quantitative result normalized to urine creatinine to account for urine dilution variations.

Interpretation of Report:

The report begins with the summary page which lists only the mycotoxins whose levels are high or moderate based on the reference range. Additionally, the previous value is also indicated to help check for improvements every time the test is ordered. Following this section is the complete list of the mycotoxins results and their absolute levels are normalized with respect to Creatinine in a histogram format to enable a full overview along with the reference ranges. The level of the mycotoxin with reference range is shown with three shades of color – Green, Yellow and Red. The result in green corresponds to 0th to 75th percentile indicates mild (Low diet intake) exposure to the respective toxin. The result in yellow corresponds to 75th to 95th percentile indicates moderate exposure to the respective toxin whereas the result in red corresponding to greater than 95th percentile indicates high exposure to the respective toxin. All contents 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 the clinical 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 healthcare provider for medication, treatment, or lifestyle management. This product is not intended to diagnose, treat, or cure any disease.

Please note:

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 healthcare provider before making any changes.

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Mycotoxins - Summary

Aflatoxin

Test Name	Current	Previous	Result (75th: 3.9, 95th: 6.93)	Reference
Aflatoxin B1 (AFB1) (ng/g)	11.67			≤6.93

BACKGROUND

Aflatoxin B1 is a naturally occurring mycotoxin produced by certain molds, primarily Aspergillus flavus and Aspergillus parasiticus, which can contaminate various crops such as maize, peanuts, cottonseed, and tree nuts. It is highly toxic and carcinogenic, particularly affecting the liver, and is associated with an increased risk of liver cancer if ingested in significant amounts over time.

ASSOCIATED RISK

Aflatoxin B1 is a toxin which is shown to drastically affect the liver as it is implicated in Hepatitis B and hepatocarcinoma.

POSSIBLE SOURCES

Contaminated plant (such as peanuts, maize, or rice) and animal products (such as meat or dairy), Inhaling dust (generated during the handling and processing of contaminated crops and feeds such as cottonseed).

DETOX SUGGESTIONS

Detoxification of aflatoxin B1 involves utilizing activated charcoal (AC), which effectively binds to this mycotoxin, preventing its absorption in the gastrointestinal tract. Supporting phase 2 detoxification pathways with nutrients like N-acetyl cysteine (NAC), selenium, and vitamins C and E can further enhance the elimination of aflatoxin B1 metabolites.

Test Name	Current	Previous	Result (75th: 3.68, 95th: 6.53)	Reference
Aflatoxin G1 (ng/g)	14.58			≤6.53

BACKGROUND

Aflatoxin G1 is a type of mycotoxin produced by certain molds, primarily Aspergillus flavus and Aspergillus parasiticus. It is closely related to aflatoxin B1 and exhibits similar toxic properties.

ASSOCIATED RISK

Aflatoxin G1 binds to DNA and can lead to DNA alterations. It is implicated in hepatocellular carcinoma. It can also cause hepatotoxicity, immunotoxicity, and teratogenicity.

POSSIBLE SOURCES

Contaminated plant (such as peanuts, maize, or rice) and animal products (such as meat or dairy), Inhaling dust (generated during the handling and processing of contaminated crops and feeds such as cottonseed).

DETOX SUGGESTIONS

To mitigate aflatoxin G1 effects, it is important to include a diet rich in antioxidants, stay hydrated, and consider liver-supporting supplements like milk thistle. Prevention through food safety practices is key, as there is no direct method to detoxify aflatoxin from the body.

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Mycotoxins - Summary

Aflatoxin

Test Name	Current	Previous	Result (75th: 6.08, 95th: 10.8)	Reference
Aflatoxin G2 (ng/g)	33.34			≤10.8

BACKGROUND

Aflatoxin G2 is a minor mycotoxin produced by the fungi species, Aspergillus nomiae, and Aspergillus flavus.

ASSOCIATED RISK

Aflatoxin G2 binds to DNA and can lead to DNA alterations. It is primarily implicated in hepatic diseases.

POSSIBLE SOURCES

Contaminated plant (such as peanuts, maize, or rice) and animal products (such as meat or dairy), Inhaling dust (generated during the handling and processing of contaminated crops and feeds such as cottonseed).

DETOX SUGGESTIONS

To mitigate aflatoxin G2 effects, it is important to include a diet rich in antioxidants, stay hydrated, and consider liver-supporting supplements like milk thistle. Prevention through food safety practices is key, as there is no direct method to detoxify aflatoxin from the body.

Other Mycotoxins

Test Name	Current	Previous	Result (75th: 9.3, 95th: 16.53)	Reference
Dihydrocitrinone (ng/g)	25.91			≤16.53

BACKGROUND

Dihydrocitrinone (DHC) is a metabolite derived from Citrinin (CTN), a mycotoxin produced by molds such as Aspergillus, Penicillium, and Monascus. CTN exposure is associated with nephropathy due to its ability to increase mitochondrial membrane permeability in the kidneys. Additionally, CTN has been identified as carcinogenic.

ASSOCIATED RISK

Exposure to DHC, as a metabolite of CTN, poses significant health risks, particularly related to nephropathy, or kidney damage. CTN's ability to disrupt mitochondrial function in renal cells contributes to nephrotoxicity. Moreover, CTN has carcinogenic properties, potentially increasing the risk of cancer upon exposure.

POSSIBLE SOURCES

DHC exposure occurs through contaminated grains, fruits, and spices, as well as via metabolic transformation of CTN in the body after ingestion.

DETOX SUGGESTIONS

Activated charcoal solutions act as adsorbents, binding the toxin in the gastrointestinal tract and enhancing its removal from the body through bowel excretion. Antioxidants help mitigate trichothecene-induced damage by combating reactive oxygen species production. A diet rich in probiotics, vitamins, nutrients, proteins, and lipids is effective in reducing trichothecene poisoning symptoms.

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Mycotoxins - Summary

Other Mycotoxins

Test Name	Current	Previous	Result (75th / 95th)	Reference
Fumonisins B2 (ng/g)	23.11		4.05 / 7.2	≤7.2

BACKGROUND

Fumonisins B2 is a mycotoxin produced by the fungi, Aspergillus niger, Fusarium fujikuro Fusarium moniliforme, Fusarium proliferatum, and Fusarium nygamai.

ASSOCIATED RISK

Fumonisin B2 can lead to a variety of toxic effects such as autophagy, apoptosis, neurotoxicity, immunotoxicity, reproductive toxicity, tissue and organ toxicity, and carcinogenicity [9]. Leukopenia, sepsis, bone marrow suppression, hemosiderosis, and multiple haemorrhages can be caused due to Fumonisin B2 intoxication

POSSIBLE SOURCES

Fumonisin B-infected maize.

DETOX SUGGESTIONS

Detoxification of mycotoxins including, Fumonisin B2 involves glutathione conjugation and glucuronidation. Nutrients like N-acetyl cysteine (NAC), vitamins C and E, selenium, and calcium D-glucarate aid in neutralizing and eliminating the toxin. Silybins from milk thistle enhance liver function, promoting glutathione conjugation via upregulation of glutathione S-transferase (GST).

Test Name	Current	Previous	Result (75th / 95th)	Reference
Fumonisins B3 (ng/g)	24.92		6.08 / 10.8	≤10.8

BACKGROUND

Fumonisins B3 is a mycotoxin produced by the fungi, Fusarium moniliforme, Fusarium proliferatum, and Fusarium nygamai.

ASSOCIATED RISK

Fumonisin B3 can lead to a variety of toxic effects such as autophagy, apoptosis, neurotoxicity, immunotoxicity, reproductive toxicity, tissue and organ toxicity, and carcinogenicity [9]. Leukopenia, sepsis, bone marrow suppression, hemosiderosis, and multiple haemorrhages can be caused due to Fumonisin B3 intoxication.

POSSIBLE SOURCES

Fumonisin B-infected maize.

DETOX SUGGESTIONS

Detoxification of mycotoxins including, Fumonisin B3 involves glutathione conjugation and glucuronidation. Nutrients like N-acetyl cysteine (NAC), vitamins C and E, selenium, and calcium D-glucarate aid in neutralizing and eliminating the toxin. Silybins from milk thistle enhance liver function, promoting glutathione conjugation via upregulation of glutathione S-transferase (GST).

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Mycotoxins - Summary

Other Mycotoxins

Test Name	Current	Previous	Result (75th / 95th)	Reference
Sterigmatocystin (STC) (ng/g)	0.78		0.3 / 0.53	≤0.53

BACKGROUND

Sterigmatocystin is a carcinogenic and mutagenic mycotoxin produced by various Aspergillus species.

ASSOCIATED RISK

Sterigmatocystin can induce oxidative stress, mitochondrial dysfunction, apoptosis, cell cycle arrest, as well as alteration of immune system function and activation of different signalling pathways [14]. Kidneys and liver are the two main organs affected by sterigmatocystin toxicity. Prolonged sterigmatocystin-intoxication can result in hepatocellular necrosis and haemo-rrhages in the liver, and hyaline degeneration, hemorrhages, and tubular necrosis in the kidneys.

POSSIBLE SOURCES

Corn, grains, soybeans, green coffee beans, nuts, spices, Contaminated brewed and dairy products such as cheese.

DETOX SUGGESTIONS

Detoxification of mycotoxins including, sterigmatocystin involves glutathione conjugation and glucuronidation. Nutrients like N-acetyl cysteine (NAC), vitamins C and E, selenium, and calcium D-glucarate aid in neutralizing and eliminating the toxin. Silybins from milk thistle enhance liver function, promoting glutathione conjugation via upregulation of glutathione S-transferase (GST).

Test Name	Current	Previous	Result (75th / 95th)	Reference
Zearalenone (ZEN) (ng/g)	1.06		0.38 / 0.67	≤0.67

BACKGROUND

Zearalenone is a mycotoxin produced by several species of Fusarium fungi. The primary producer of zearalenone is Fusarium graminearum while the additional producers include F. culmorum, F. verticillioides (F. moniliforme), F. sporotrichioides, F. semitectum, F. equiseti, and F. oxysporum.

ASSOCIATED RISK

Zearalenone and its metabolites can actively bind to estrogen receptors, resulting in various changes in the reproductive organs. As zearalenone can competitively combine with estrogen receptors to disrupt estrogenic signaling, it has been reported to have adverse effects on the female reproduction system. It can also affect the male reproductive system by exerting negative effects on sperm cell, Sertoli cells, and Leydig cells.

POSSIBLE SOURCES

Maize, improperly stored animal feeds and grains.

DETOX SUGGESTIONS

Activated charcoal (AC) has been shown to bind zearalenone, facilitating its elimination from the body. To optimize detoxification, AC should be taken separately from food, medication, or supplements. Supporting liver function with calcium D-glucarate and providing antioxidant support with selenium and vitamins C and E can aid in the detoxification process, while minimizing the risk of nutrient depletion.

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Mycotoxins - Summary

Other Mycotoxins

Test Name	Current	Previous	Result (75th / 95th)	Reference
Gliotoxin (ng/g)	138.39		116.93 / 207.87	≤207.87

BACKGROUND

Gliotoxin is a mycotoxin produced by the fungi, Aspergillus fumigatus, Eurotium chevalieri, Gliocladium fimbriatum, and several Trichoderma and Penicillium species.

ASSOCIATED RISK

Gliotoxin can promote immunosuppression by inhibiting or interfering with the activation of transcription factors that are involved in T-cell activation. Gliotoxin can penetrate and impair the integrity of the human blood-brain barrier which can have severe neurological implications. Gliotoxin can have adverse effects on the kidney and liver too.

POSSIBLE SOURCES

Indoors, in buildings with water damage or in damp properties with water leaks and poor ventilation, Spores produced by gliotoxin-producing molds.

DETOX SUGGESTIONS

Detoxification of mycotoxins including, Gliotoxin involves glutathione conjugation and glucuronidation. Nutrients like N-acetyl cysteine (NAC), vitamins C and E, selenium, and calcium D-glucarate aid in neutralizing and eliminating the toxin. Silybins from milk thistle enhance liver function, promoting glutathione conjugation via upregulation of glutathione S-transferase (GST).

Trichothecenes

Test Name	Current	Previous	Result (75th / 95th)	Reference
Diacetoxyscirpenol (DAS) (ng/g)	4.64		2.4 / 4.27	≤4.27

BACKGROUND

Diacetoxyscirpenol (DAS), also known as anguidine, is a type A trichothecene mycotoxin primarily produced by Fusarium fungi. Trichothecenes are known as major contaminants of cereals and cereal-containing foods.

ASSOCIATED RISK

Toxic effects of DAS include immune suppression, cytotoxic, skin necrosis, hemorrhage, anemia, granulocytopenia, oral epithelial lesions, hematopoietic, alimentary toxic aleukia (ATA), hypotension, coagulopathy. DAS has mainly been reported in various cereal grains (principally wheat, sorghum, maize, barley, and oats) and cereal products, but also in potato products, soybeans, and coffee. DAS has been found to co-occur with many other mycotoxins in grains and grain-based products. DAS are recognised as having multiple inhibitory effects on eukaryote cells, including inhibition of protein, DNA, and RNA synthesis; inhibition of mitochondrial function; effects on cell division; and membrane effects.

POSSIBLE SOURCES

Agricultural products worldwide and persists in products after processing.

DETOX SUGGESTIONS

Detoxification of mycotoxins including, DAS involves glutathione conjugation and glucuronidation. Nutrients like N-acetyl cysteine (NAC), vitamins C and E, selenium, and calcium D-glucarate aid in neutralizing and eliminating the toxin. Silybins from milk thistle enhance liver function, promoting glutathione conjugation via upregulation of glutathione S-transferase (GST).

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Mycotoxins - Summary

Trichothecenes

Test Name	Current	Previous	Result	Reference
Nivalenol (NIV) (ng/g)	5.09		75th 95th; 1.8 3.2	≤3.2

BACKGROUND

Nivalenol (NIV) is a mycotoxin produced by Fusarium fungi, commonly found in wheat and corn. Its ingestion poses health risks, including potential digestive disorders and toxicity in animals.

ASSOCIATED RISK

Exposure to Nivalenol (NIV) induces cytotoxic effects, particularly in human-derived cell lines such as Caco-2 and IPEC-J2, altering cell proliferation and potentially leading to gastrointestinal disturbances. Moreover, the co-occurrence of multiple mycotoxins in foodstuffs, including NIV, may exacerbate cytotoxicity, complicating risk assessment and necessitating further research into common toxin combinations.

POSSIBLE SOURCES

Nivalenol exposure primarily occurs through the consumption of contaminated wheat and corn products.

DETOX SUGGESTIONS

Activated charcoal (AC) can adsorb NIV, aiding in its elimination from the body. To prevent potential nutrient depletion, AC should be taken separately from food, medication, or supplements. Additionally, supporting liver function with silybins from milk thistle and providing antioxidant support with vitamins C and E can assist in detoxification.

Test Name	Current	Previous	Result	Reference
Roridin L2 (ng/g)	8.51		3.83 6.8	≤6.8

BACKGROUND

Roridin L2, a fungal metabolite and biosynthetic precursor of Satratoxin G, is associated with molds, including black mold, and is often found in contaminated structures.

ASSOCIATED RISK

Although Roridin L2 itself exhibits minimal in vitro or in vivo toxicity, its presence in contaminated structures raises concerns for building occupants. Inhalation of airborne Roridin L2 molecules, along with other mycotoxins, including Satratoxin G, can contribute to health issues in individuals exposed to mold-infested environments.

POSSIBLE SOURCES

Roridin L2 is produced by molds, including black mold, commonly found in contaminated structures. Roridin L2 and other mycotoxin molecules are lightweight and easily airborne, making them inhalable by building occupants.

DETOX SUGGESTIONS

Detoxification strategies for Roridin L2 include the use of activated charcoal solutions as adsorbents to bind the toxin in the gastrointestinal tract and facilitate its removal through bowel excretion. Additionally, antioxidants can mitigate trichothecene-induced damage by combating the production of reactive oxygen species. A diet rich in probiotics, vitamins, nutrients, proteins, and lipids aids in reducing symptoms of trichothecene poisoning.

Creatinine

Test Name	Current	Previous	Result	Reference
Urine Creatinine (mg/mL)	0.29		0 0.24 2.16	0.25-2.16

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Mycotoxins

Aflatoxin

Test Name	Current	Previous	Result (75th / 95th)	Reference
Aflatoxin B1 (AFB1) (ng/g)	11.67		3.9 / 6.93	≤6.93
Aflatoxin B2 (AFB2) (ng/g)	1.97		4.58 / 8.13	≤8.13
Aflatoxin G1 (ng/g)	14.58		3.68 / 6.53	≤6.53
Aflatoxin G2 (ng/g)	33.34		6.08 / 10.8	≤10.8
Aflatoxin M1 (ng/g)	0.25		3.6 / 6.4	≤6.4

Other Mycotoxins

Test Name	Current	Previous	Result (75th / 95th)	Reference
Chaetoglobosin A (CHA) (ng/g)	12.23		17.93 / 31.87	≤31.87
Citrinin (CTN) (ng/g)	1.34		7.05 / 12.53	≤12.53
Dihydrocitrinone (ng/g)	25.91		9.3 / 16.53	≤16.53
Enniatin B1(ENN B1) (ng/g)	0.06		0.13 / 0.22	≤0.22
Fumonisins B1 (ng/g)	2.48		3.45 / 6.13	≤6.13
Fumonisins B2 (ng/g)	23.11		4.05 / 7.2	≤7.2
Fumonisins B3 (ng/g)	24.92		6.08 / 10.8	≤10.8
Gliotoxin (ng/g)	138.39		116.93 / 207.87	≤207.87
Mycophenolic Acid (ng/g)	0.15		3.6 / 6.4	≤6.4
Ochratoxin A (OTA) (ng/g)	3.50		3.83 / 6.8	≤6.8
Patulin (ng/g)	1.20		6.53 / 11.6	≤11.6
Sterigmatocystin (STC) (ng/g)	0.78		0.3 / 0.53	≤0.53
Zearalenone (ZEN) (ng/g)	1.06		0.38 / 0.67	≤0.67

Trichothecenes

Test Name	Current	Previous	Result (75th / 95th)	Reference
Deoxynivalenol(DON) (ng/g)	25.99		37.95 / 67.47	≤67.47

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Mycotoxins

Trichothecenes

Test Name	Current	Previous	Result (75th / 95th)	Reference
Diacetoxyscirpenol (DAS) (ng/g)	4.64		2.4 / 4.27	≤4.27
Nivalenol (NIV) (ng/g)	5.09		1.8 / 3.2	≤3.2
Roridin A (ng/g)	3.20		4.28 / 7.6	≤7.6
Roridin E (ng/g)	0.10		0.75 / 1.33	≤1.33
Roridin L2 (ng/g)	8.51		3.83 / 6.8	≤6.8
Satratoxin G (ng/g)	0.09		0.1 / 0.18	≤0.18
Satratoxin H (ng/g)	<0.05		0.1 / 0.18	≤0.18
T-2 Toxin (ng/g)	0.07		0.1 / 0.18	≤0.18
Verrucarin A (ng/g)	0.63		0.75 / 1.33	≤1.33
Verrucarin J (ng/g)	3.38		5.18 / 9.2	≤9.2

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Risk and Limitations

This test has been developed and its performance characteristics determined by Vibrant America LLC., a CLIA and CAP certified lab. These assays have not been cleared or approved by the U.S. Food and Drug Administration.

Mycotoxins do not demonstrate absolute positive and negative predictive values for mold related illnesses. Clinical history must be incorporated into the diagnostic determination. Quantification of mycotoxins in urine is not FDA-recognized diagnostic indicator of mold exposure.

Mycotoxins testing is performed at Vibrant America, a CLIA certified laboratory and utilizes ISO-13485 developed technology. Vibrant America has effective procedures in place to protect against technical and operational problems. However, such problems may still occur. Examples include failure to obtain the result for a specific mycotoxin due to circumstances beyond Vibrant's control. Vibrant may re-test a sample in order to obtain these results but upon re-testing the results may still not be obtained. As with all medical laboratory testing, there is a small chance that the laboratory could report incorrect results. A tested individual may wish to pursue further testing to verify any results.

The information in this report is intended for educational purposes only. While every attempt has been made to provide current and accurate information, neither the author nor the publisher can be held accountable for any errors or omissions.

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Heavy Metals – Urine

INTRODUCTION

Vibrant Wellness is pleased to present to you, 'Heavy Metals 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 Heavy Metals is a test to measure levels of Heavy Metals that someone might be exposed to. The panel is designed to give a complete picture of an individual's levels of these metals in urine. Reference ranges were determined based on NHANES data (cdc.gov/nhanes) if available and other reference ranges are established based on urine samples from 1000 apparently healthy, unprovoked, unmedicated and unsupplemented individuals.

Methodology:

The Vibrant Heavy metals uses Inductively coupled plasma mass spectrometry (ICP-MS) for quantitative detection of heavy metals in urine. Urine creatinine is measured using a kinetic colorimetric assay based on the Jaffé method. All heavy metals are reported as the quantitative result normalized to urine creatinine to account for urine dilution variations.

Interpretation of Report:

The report begins with the summary page which lists only the heavy metals whose levels are high or moderate based on the reference range. Additionally, the previous value is also indicated to help check for improvements every time the test is ordered. Following this section is the complete list of the heavy metals and their absolute levels are normalized with respect to Creatinine in a histogram format to enable a full overview along with the reference ranges. The level of the heavy metals with reference range is shown with three shades of color – Green, Yellow and Red. The result in green corresponds to 0th to 75th percentile indicates mild exposure to the respective heavy metal. The result in yellow corresponds to 75th to 95th percentile indicates moderate exposure to the respective heavy metal whereas the result in red corresponding to greater than 95th percentile indicates high exposure to the heavy metal. All contents 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 the clinical provider.

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Please note:

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 healthcare provider before making any changes.

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Heavy Metals – Urine - Summary

Heavy Metals

Test Name	Current	Previous	Result (75th / 95th)	Reference
Gadolinium (ug/g)	1.25		0.17 / 0.45	≤0.45

POSSIBLE SOURCES

Injecting gadolinium into the bloodstream for MRI is the main source of exposure.

ASSOCIATED RISK

Gadolinium's toxicity exerts a depressant effect on various bodily systems, manifesting in symptoms such as hypertension, tachycardia, abdominal pain, throat irritation, facial edema, and dry mouth.

DETOX SUGGESTIONS

Gadolinium is typically detoxified or removed from the body through chelation therapy. Chelating agents, such as diethylenetriamine pentaacetic acid (DTPA) or ethylenediaminetetraacetic acid (EDTA), are administered either orally or intravenously. These agents bind tightly to the gadolinium molecules, forming a complex that can be excreted through urine.

Test Name	Current	Previous	Result (75th / 95th)	Reference
Lead^ (ug/g)	1.42		0.52 / 1.16	≤1.16

POSSIBLE SOURCES

Leaded gasoline, smelting of lead and its combustion, pottery, boat building, lead-based painting, lead-containing pipes, battery recycling, grids, pigments, and printing of books.

ASSOCIATED RISK

Lead, a highly toxic metal, affects nearly every organ, targeting the brain and central nervous system, leading to coma, convulsions, and death. Children are especially vulnerable, experiencing impaired brain development, reduced IQ, and behavioral issues. Lead exposure also causes anemia, hypertension, kidney problems, immunotoxicity, and reproductive issues, often attributed to alterations in brain proteins.

DETOX SUGGESTIONS

Once lead enters the body, it tends to accumulate in bones, posing a challenge for removal. Chelation therapy offers a solution by employing medications capable of binding to and extracting toxic metals from the body. These drugs function by chelating to metals present in the bloodstream and facilitating their elimination through urine or stool.

Test Name	Current	Previous	Result (75th / 95th)	Reference
Nickel (ug/g)	13.22		6.37 / 12.13	≤12.13

POSSIBLE SOURCES

Contaminated food, jewelry, cosmetics, keys, cell phones, paper clips, electrical equipment, alloy, orthodontic braces, eyeglass frames, and clothing fasteners.

ASSOCIATED RISK

Nickel toxicity poses a significant risk, leading to allergies, cardiovascular and kidney diseases, lung fibrosis, nasal and lung cancer, along with symptoms such as low blood pressure, muscle tremors, nausea, vomiting, haemorrhages, heart attacks, oral and/or intestinal cancer, and kidney dysfunction.

DETOX SUGGESTIONS

Chelation therapy utilizing agents such as EDTA (ethylenediaminetetraacetic acid) or DMSA (dimercaptosuccinic acid) facilitates the removal of nickel from the body by binding to the metal ions and aiding in their excretion via urine or feces. These chelating agents work by forming stable complexes with nickel, thereby reducing its toxicity. Additionally, antioxidants like vitamin C play a crucial role in mitigating oxidative stress induced by nickel exposure, supporting overall detoxification processes.

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Heavy Metals – Urine - Summary

Heavy Metals

Test Name	Current	Previous	Result (75th / 95th)	Reference
Aluminum (ug/g)	40.39		17.83 / 45.15	≤45.15

POSSIBLE SOURCES

Aluminium exposure occurs primarily through ingestion, inhalation, and dermal contact. Common sources include contaminated food and water, aluminium-containing medications, antiperspirants, and occupational settings such as aluminium smelting plants and construction sites where aluminium-containing materials are used.

ASSOCIATED RISK

Exposure to aluminium presents both acute and chronic health risks. Acute effects may include respiratory irritation, coughing, and headache. Prolonged exposure can lead to neurotoxicity, resulting in symptoms such as memory loss, confusion, and muscle weakness. Furthermore, aluminium exposure has been associated with various neurological disorders, including Alzheimer's disease. Chronic ingestion or inhalation of aluminium may contribute to bone diseases such as osteoporosis and has been implicated in renal dysfunction.

DETOX SUGGESTIONS

Chelation therapy utilizing agents such as deferoxamine and deferiprone can aid in removing aluminium from the body by binding to the metal ions and facilitating their excretion through urine. Additionally, dietary supplements rich in silicon, such as silica-rich mineral waters and horsetail extract, may assist in reducing aluminium absorption and promoting its elimination.

Test Name	Current	Previous	Result (75th / 95th)	Reference
Arsenic^ (ug/g)	44.11		11.9 / 52	≤52

POSSIBLE SOURCES

Ingestion, inhalation, contaminated drinking water, dermal exposure, industrial manufacturing, food preservative, smoking, food grown in arsenic-contaminated soils, and cosmetics.

ASSOCIATED RISK

Acute arsenic poisoning includes diarrhea, vomiting, abdominal pain, muscle cramping, and numbness and tingling of extremities. Conversely, chronic exposure to arsenic is associated with severe health implications including skin, bladder, and lung cancer, heart attack, pulmonary disease, cardiovascular diseases, kidney failure, and diabetes.

DETOX SUGGESTIONS

Chelation therapy is commonly used for arsenic detoxification. Dimercaptosuccinic acid (DMSA) and dimercaptopropanesulfonic acid (DMPS) are chelating agents that bind to arsenic, facilitating its excretion through urine. These agents are administered orally and are effective in removing arsenic from the body. [18] Additionally, antioxidants such as selenium may help mitigate arsenic toxicity by reducing oxidative stress and promoting detoxification processes.

Test Name	Current	Previous	Result (75th / 95th)	Reference
Beryllium^ (ug/g)	0.53		0.2 / 0.76	≤0.76

POSSIBLE SOURCES

Contaminated food, water, and soil, airborne particles, and skin contact.

ASSOCIATED RISK

Acute effects of beryllium exposure include inflammation of the lungs, acute pneumonitis, cough, chest pain, dyspnea, and pneumonia, while chronic effects encompass sarcoid-like granulomata mainly in the lungs, berylliosis, chronic pneumonitis, and reproductive and developmental defects such as stillbirth, pre-term delivery, and small-for-gestational-age infants. Additionally, beryllium acts as a skin irritant and can cause conjunctivitis, rhinitis, and pharyngitis.

DETOX SUGGESTIONS

DMPS, known as dimercaptopropane-sulfonic acid, acts swiftly as a chelating agent for heavy metal detoxification. Within 24 hours, up to 80% of the compound can be excreted, primarily through the kidneys and partially through bile. [5] Glutathione, an antioxidant with a strong affinity for heavy metals, aids in neutralizing and eliminating these toxins from the body. Its supplementation is beneficial during detoxification processes, replenishing the antioxidant levels depleted during heavy metal detoxification.

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Heavy Metals – Urine - Summary

Heavy Metals

Test Name	Current	Previous	Result	Reference
Thallium^ (ug/g)	0.30		75th 95th; 0.24 0.43	≤0.43

POSSIBLE SOURCES

Contaminated food, water, soil, and air, cigarette smoke, occupational exposure, hazardous wastes.

ASSOCIATED RISK

Thallium toxicity affects the liver, kidneys, heart, and nervous system, leading to a range of symptoms including fever, gastrointestinal issues, delirium, convulsions, and coma. Chronic exposure may result in gastrointestinal disturbances, skin and nail changes, nerve damage, heart, liver, and kidney damage, bone marrow depression, and neurological disorders such as hallucinations and dementia. Thallium can also disrupt protein bonds and cause DNA damage.

DETOX SUGGESTIONS

To detoxify thallium from the body, consumption of potassium every day and potassium-rich foods may be beneficial. Additionally, using Prussian Blue, which binds to thallium in the intestines, prevents absorption and promotes excretion of thallium via stool.

Creatinine

Test Name	Current	Previous	Result	Reference
Urine Creatinine (mg/mL)	0.29		0 0.24 2.16	0.25-2.16

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Patient Name: **JANICE NEDIN**
Date of Birth: **06-07-1950** Accession ID: **2408216650**
Service Date: **2024-09-02 15:00 (GMT)**

Heavy Metals – Urine

Heavy Metals

Test Name	Current	Previous	Result (75th / 95th)	Reference
Aluminum (ug/g)	40.39		17.83 / 45.15	≤45.15
Antimony^ (ug/g)	0.04		0.07 / 0.16	≤0.16
Arsenic^ (ug/g)	44.11		11.9 / 52	≤52
Barium^ (ug/g)	<1		2.33 / 5.59	≤5.59
Beryllium^ (ug/g)	0.53		0.2 / 0.76	≤0.76
Bismuth (ug/g)	<0.1		0.58 / 2.53	≤2.53
Cadmium^ (ug/g)	0.23		0.29 / 0.8	≤0.8
Cesium^ (ug/g)	5.82		6.37 / 10.3	≤10.3
Gadolinium (ug/g)	1.25		0.17 / 0.45	≤0.45
Lead^ (ug/g)	1.42		0.52 / 1.16	≤1.16
Mercury^ (ug/g)	0.25		0.57 / 1.61	≤1.61
Nickel (ug/g)	13.22		6.37 / 12.13	≤12.13
Palladium (ug/g)	<0.1		0.15 / 0.2	≤0.2
Platinum^ (ug/g)	<0.05		0.1 / 0.9	≤0.9
Tellurium (ug/g)	0.13		0.42 / 0.89	≤0.89
Thallium^ (ug/g)	0.30		0.24 / 0.43	≤0.43
Thorium (ug/g)	<0.01		0.02 / 0.07	≤0.07
Tin^ (ug/g)	<0.2		1 / 3.72	≤3.72
Tungsten^ (ug/g)	<0.04		0.12 / 0.33	≤0.33
Uranium^ (ug/g)	0.01		0.02 / 0.04	≤0.04

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Heavy Metals – Urine

Risk and Limitations

This test has been developed and its performance characteristics determined and validated by Vibrant America LLC., a CLIA and CAP certified lab. These assays have not been cleared or approved by the U.S. Food and Drug Administration. Vibrant Wellness provides additional contextual information on these tests and provides the report in more descriptive fashion.

Heavy Metals Toxins panel does not demonstrate absolute positive and negative predictive values for any condition. Its clinical utility has not been fully established. Clinical history and current symptoms of the individual must be considered by the healthcare provider prior to any interventions. Test results should be used as one component of a healthcare provider's clinical assessment.

Heavy Metals Panel testing is performed at Vibrant America, a CLIA and CAP certified laboratory. Vibrant America has effective procedures in place to protect against technical and operational problems. However, such problems may still occur. Examples include failure to obtain the result for a specific test due to circumstances beyond Vibrant's control. Vibrant may re-test a sample to obtain these results but upon re-testing the results may still not be obtained. As with all medical laboratory testing, there is a small chance that the laboratory could report incorrect results. A tested individual may wish to pursue further testing to verify any results.

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Vibrant Wellness makes no claims as to the diagnostic or therapeutic use of its tests or other informational materials. Vibrant Wellness reports and other information do not constitute medical advice and are not a substitute for professional medical advice. Please consult your healthcare practitioner for questions regarding test results, or before beginning any course of medication, supplementation, or dietary changes.

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Environmental Toxins

INTRODUCTION

Vibrant Wellness is pleased to present to you, 'Environmental Toxins 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 Environmental Toxins Panel is a test to measure levels of Environmental Toxins that someone might be exposed to. The panel is designed to give a complete picture of an individual's levels of these toxins in urine. The panel is sub-grouped into Pesticides, Phthalates, Parabens, Acrylic, Alkyl phenols and Volatile Organic Compounds. Reference ranges for tests flagged with ^ were determined based on NHANES data (cdc.gov/nhanes) if available and other reference ranges are established based on urine samples from 1000 apparently healthy individuals.

Methodology:

The Vibrant Environmental Toxins panel uses tandem mass spectrometry methodology (LC-MS/MS) for quantitative detection of toxins in urine samples. Urine creatinine is measured using a kinetic colorimetric assay based on the Jaffé method. All environmental toxins are reported as the quantitative result normalized to urine creatinine to account for urine dilution variations.

Interpretation of Report:

The report begins with the summary page which lists only the environmental toxins whose levels are high or moderate in the reference range. Additionally, the previous value is also indicated to help check for improvements every time the test is ordered. Following this section is the complete list of the environmental toxins and their absolute levels are normalized with respect to Creatinine in a histogram format to enable a full overview along with the reference ranges. The level of the environmental toxins is shown with three shades of color – Green, Yellow and Red. The result in green corresponds to 0th to 75th percentile indicates mild exposure to the respective toxin. The result in yellow corresponds to 75th to 95th percentile indicates moderate exposure to the respective toxin whereas the result in red corresponding to greater than 95th percentile indicates high exposure to the respective toxin. All contents provided in the report are purely for informational purposes only and should not be considered medical advice. Any changes based on the information should be made in consultation with the clinical provider.

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Please note:

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 healthcare provider before making any changes.

Environmental Toxins - Summary

Environmental phenols

Test Name	Current	Previous	Result (75th / 95th)	Reference
Bisphenol A (BPA)^ (ug/g)	20.11		2.12 / 5.09	≤5.09

BACKGROUND

BPA is one of the highest volume of chemicals produced worldwide. It is a starting material for the synthesis of plastics. BPA-based plastic is clear and tough, and is made into plastic bottles including water bottles, sports equipment, CDs, and DVDs. Epoxy resins containing BPA are used to line water pipes, as coatings on the inside of many food and beverage cans and in making thermal paper such as that used in sales receipts.

ASSOCIATED RISK

Exposure to Bisphenol A cause fertility problems, male impotence, heart disease and other conditions. BPA is a xenoestrogen, exhibiting estrogen-mimicking, hormone-like properties that raise concern about its suitability in some consumer products and food containers.

POSSIBLE SOURCES

The main source of BPA contamination in humans is through food, primarily driven by the exposure of animals and raw materials to BPA, the accumulation of BPA in the environment, and the contact of food with polymers containing this substance. Inhalation is the second main source of exposure. BPA can accumulate in household dust and be inhaled.

DETOX SUGGESTIONS

The detoxification mechanism for BPA involves sweating, as facilitated by infrared and steam sauna sessions. Sweating allows BPA to be released from the body through the skin.

Test Name	Current	Previous	Result (75th / 95th)	Reference
Triclosan (TCS)^ (ug/g)	184.18		29.9 / 358	≤358

BACKGROUND

Triclosan (TCS) is an antibacterial and antifungal agent present in some consumer products, including toothpaste, soaps, detergents, toys, and surgical cleaning treatments.

ASSOCIATED RISK

TCS has been linked to an increased risk of food allergies, adding to concerns about its potential health effects. Furthermore, TCS has been identified as a weak endocrine disruptor, suggesting its ability to interfere with hormonal balance. Notably, prenatal exposure to triclosan has been associated with elevated cord testosterone levels in infants, highlighting its potential impact on early development and hormonal regulation. Exposure to this toxin has been linked to early kidney injury, an elevated risk of chronic kidney disease (CKD), and the potential for end-stage renal disease (ESRD). It is also responsible for inducing hepatic toxicity, renal toxicity, intestinal damage, and impairment of thyroid function.

POSSIBLE SOURCES

Exposure to triclosan occurs through skin absorption during activities like handwashing and showering, as well as through ingestion via tooth brushing, mouthwash, and swallowing, with additional potential sources including consuming plants grown in sewage sludge-treated soil and fish exposed to triclosan.

DETOX SUGGESTIONS

Incorporating binders like charcoal or clay-based products aids in reducing toxin levels by effectively binding and eliminating environmental toxins from the body. These substances encapsulate toxins, such as heavy metals and pollutants, facilitating their removal and potentially reducing zonulin levels, which contribute to a leaky gut (16). Supplementing with antioxidants like glutathione is essential for protecting cells from oxidative damage induced by environmental toxins. Glutathione, the body's primary antioxidant and detoxifier, plays a crucial role in combating harmful free radicals, supporting Phase II detoxification pathways, and preventing deficiency-related health issues.

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Environmental Toxins - Summary

Herbicides

No markers are outside the normal reference range

Mitochondrial Marker

Test Name	Current	Previous	Result (75th / 95th)	Reference
Tiglylglycine (TG) (ug/g)	0.18		0.09 / 3.24	≤3.24

BACKGROUND

Tiglylglycine (TG) is associated with both mitochondrial and/or genetic disorders. It is a specific metabolite that plays a crucial role in the diagnosis of a rare genetic disorder known as '3-Hydroxyisobutyryl-CoA Hydrolase (HIBCH) Deficiency.' HIBCH deficiency is an inborn error in isoleucine metabolism, leading to the accumulation of isoleucine metabolites, including TG, in the urine of affected individuals

ASSOCIATED RISK

Mutations of mitochondrial DNA can be triggered by toxins, infections, inflammation, and nutritional deficiencies. Mitochondrial dysfunction has been linked with aging, diabetes, autism, chronic fatigue syndrome, PD and Alzheimer's syndromes. The presence of elevated levels of TG in the urine serves as a biomarker for HIBCH deficiency. This disorder is associated with various clinical manifestations, including microcephaly, epilepsy, choreoathetoid movements, ophthalmologic disorders, progressive neurodegeneration, psychomotor retardation or regression, hearing impairment, and even cardiomyopathy. Unfortunately, the disease can lead to a significantly shortened lifespan for some individuals

POSSIBLE SOURCES

β-ketothiolase deficiency is a rare genetic disorder characterized by the inability to properly metabolize certain compounds, including isoleucine and its derivatives. Therefore, individuals with β -ketothiolase deficiency usually excrete TG in excess amounts.

DETOX SUGGESTIONS

Tiglylglycine (TG) can be detoxified from the body through enzymatic breakdown pathways in the liver, where it is metabolized into smaller molecules that can be excreted through urine. Adequate hydration and a balanced diet rich in nutrients that support liver function can aid in the efficient removal of TG from the body.

Other Markers

No markers are outside the normal reference range

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Environmental Toxins - Summary

Parabens

Test Name	Current	Previous	Result (75th / 95th)	Reference
Propylparaben^ (ug/g)	42.10		36.7 / 222	≤222

BACKGROUND

Propylparaben belongs to the paraben family and is often used in water-based cosmetics, such as creams, lotions, shampoos, and bath products. It is also used as a food additive and has also been shown to have anti-fungal and anti-microbial properties. Propylparaben is generally recognized as safe for food and cosmetic antibacterial preservation.

ASSOCIATED RISK

Although parabens are generally considered safe when used in low percentages, a study claimed to have found a link between parabens and breast cancer. Parabens are potential endocrine disruptors due to their ability to mimic estrogen. Environmental exposure to propylparaben might elevate blood pressure levels and increase the risk of high blood pressure.

POSSIBLE SOURCES

Exposure typically occurs through ingestion of foods and medications and dermal application of personal care products.

DETOX SUGGESTIONS

Hydration, exercise, and a diet abundant in whole foods are pivotal in supporting the body's innate detoxification mechanisms, potentially aiding in the reduction of paraben exposure. However, it is important to note that while these strategies are beneficial for overall health, there's limited scientific evidence directly addressing the elimination of parabens from the body.

Pesticides

Test Name	Current	Previous	Result (75th / 95th)	Reference
2,2-bis(4-Chlorophenyl) acetic acid (DDA) (ug/g)	26.31		7.9 / 19	≤19

BACKGROUND

DDT metabolism in humans yields 2,2-bis (4-chlorophenyl) acetic acid (DDA) as the principal urinary metabolite and potential exposure biomarker. DDT is a persistent organic pollutant that is readily adsorbed to soils and sediments, which can act both as sinks and as long-term sources of exposure. DDT was a commonly used pesticide for insect control. DDT was used to control malaria and typhus.

ASSOCIATED RISK

DDT is an endocrine disruptor and indicates possible disruption in semen quality, menstruation, gestational length, and duration of lactation. Chronic exposure to DDT will build up in areas of the body with high lipid content and can affect reproductive capabilities and the embryo or fetus. It is considered likely to be a human carcinogen, especially for breast cancer. DDE is a metabolite of DDT and is excreted as DDA in the urine

POSSIBLE SOURCES

DDT can be absorbed by humans through inhalation of gaseous and particulate phases, direct dermal contact, ingestion of contaminated substances, and exposure to contaminated soil or products.

DETOX SUGGESTIONS

DDT can accumulate in the body and have been associated with adverse health effects. Sweating induced by infrared and steam sauna sessions can help eliminate pesticides from the body. As with other toxins, sweating allows pesticides to be excreted through the skin.

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Environmental Toxins - Summary

Pesticides

Test Name	Current	Previous	Result (75th: 5.91, 95th: 33.7)	Reference
Dimethylthiophosphate (DMTP)^ (ug/g)	70.30			≤33.7

BACKGROUND

Dimethylthiophosphate (DMTP) is a metabolite of organophosphates, which are one of the most common causes of poisoning worldwide and are frequently intentionally used as pesticides.

ASSOCIATED RISK

Even at low levels, organophosphates may be hazardous to the nervous system, especially for foetuses and young children. Repeated or prolonged exposure may induce impaired memory and concentration, disorientation, severe depression, irritability, confusion, headache, speech difficulties, delayed reaction times, nightmares, sleepwalking, drowsiness, or insomnia. Organophosphates function by inhibiting the action of cholinesterase enzymes in nerve cells. An influenza-like condition with headache, nausea, weakness, loss of appetite, and malaise. Organophosphates and their metabolite, DMTP, generate oxidative stress, which in turn induces genomic instability through DNA damage. Alterations in genomic stability have been implicated in aging. Thus, DMTP may accelerate ageing owing to its contribution to genomic instability, which is a hallmark of aging.

POSSIBLE SOURCES

They can enter the body through the lungs or skin, or by eating contaminated food.

DETOX SUGGESTIONS

To detoxify DMTP from the body, focus on increasing water intake to promote urinary excretion, consume foods rich in sulfur-containing compounds like garlic and onions to support liver detoxification pathways, and consider consulting a healthcare professional for guidance on specific detox protocols.

Test Name	Current	Previous	Result (75th: 9.1, 95th: 33.6)	Reference
Dimethyl phosphate (DMP)^ (ug/g)	22.97			≤33.6

BACKGROUND

Dimethyl phosphate (DMP) indicates exposure to an organophosphate insecticide. Organophosphates function by inhibiting the action of cholinesterase enzymes in nerve cells.

ASSOCIATED RISK

Even at low levels, organophosphates may be hazardous to the nervous system, especially for foetuses and young children. Repeated or prolonged exposure may induce impaired memory and concentration, disorientation, severe depression, irritability, confusion, headache, speech difficulties, delayed reaction times, nightmares, sleepwalking, drowsiness, or insomnia, an influenza-like condition with headache, nausea, weakness, loss of appetite, and malaise.

POSSIBLE SOURCES

They can enter the body through the lungs or skin, or by eating contaminated food.

DETOX SUGGESTIONS

To detoxify DMP from the body, focus on increasing water intake to promote urinary excretion, consume foods rich in sulfur-containing compounds like garlic and onions to support liver detoxification pathways, and consider consulting a healthcare professional for guidance on specific detox protocols.

Phthalates

No markers are outside the normal reference range

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Environmental Toxins - Summary

Volatile organic compounds

Test Name	Current	Previous	Result (75th / 95th)	Reference
2-Hydroxyisobutyric Acid (2HIB) (ug/g)	3877.32		795.93 / 1215.72	≤1215.72

BACKGROUND

2-Hydroxyisobutyric Acid (2HIB) is most often the result of exposure to methyl tertiary-butyl ether (MTBE) or ethyl tertiary butyl ether (ETBE), which are gasoline additives used as octane enhancers. MTBE has been found to pollute large quantities of groundwater when gasoline with MTBE is spilled or leaked at gas stations.

ASSOCIATED RISK

Long term exposure to MTBE or ETBE may link to hepatic, kidney, central nervous system toxicity, and even cancer.

POSSIBLE SOURCES

In addition, MTBE and ETBE are volatile and may be inhaled or absorbed through the skin by drivers during fueling or from exhaust exposure.

DETOX SUGGESTIONS

To detoxify 2HIB from the body, focus on increasing water intake to promote urinary excretion and supporting liver function through a nutrient-rich diet high in antioxidants and foods that aid liver detoxification pathways. Regular exercise can also enhance overall detoxification processes by stimulating circulation and lymphatic drainage.

Creatinine

Test Name	Current	Previous	Result	Reference
Urine Creatinine (mg/mL)	0.29		0 / 0.24 / 2.16	0.25-2.16

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Environmental Toxins

Environmental phenols

Test Name	Current	Previous	Result (75th / 95th)	Reference
4-Nonylphenol (ug/g)	0.11		0.42 / 2.06	≤2.06
Bisphenol A (BPA)^ (ug/g)	20.11		2.12 / 5.09	≤5.09
Triclosan (TCS)^ (ug/g)	184.18		29.9 / 358	≤358

Herbicides

Test Name	Current	Previous	Result (75th / 95th)	Reference
2,4-Dichlorophenoxyacetic Acid (2,4-D)^ (ug/g)	0.34		0.5 / 1.55	≤1.55
Atrazine ^ (ug/g)	0.01		0.02 / 0.05	≤0.05
Atrazine mercapturate^ (ug/g)	0.01		0.02 / 0.05	≤0.05
Glyphosate (ug/g)	0.02		1.65 / 7.6	≤7.6

Mitochondrial Marker

Test Name	Current	Previous	Result (75th / 95th)	Reference
Tiglylglycine (TG) (ug/g)	0.18		0.09 / 3.24	≤3.24

Other Markers

Test Name	Current	Previous	Result (75th / 95th)	Reference
Diphenyl Phosphate (DPP) (ug/g)	0.15		1.1 / 3.7	≤3.7
N-acetyl-S-(2-carbamoylethyl)-cysteine^ (ug/g)	2.01		82 / 199	≤199
Perchlorate (PERC)^ (ug/g)	0.82		4.89 / 10.7	≤10.7

Parabens

Test Name	Current	Previous	Result (75th / 95th)	Reference
Butylparaben^ (ug/g)	0.12		0.25 / 4.39	≤4.39
Ethylparaben ^ (ug/g)	0.08		5.41 / 99.3	≤99.3
Methylparaben^ (ug/g)	39.74		180 / 653	≤653
Propylparaben^ (ug/g)	42.10		36.7 / 222	≤222

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Patient Name: JANICE NEDIN
Date of Birth: 06-07-1950 Accession ID: 2408216650
Service Date: 2024-09-02 15:00 (GMT)

Environmental Toxins

Pesticides

Test Name	Current	Previous	Result (75th / 95th)	Reference
2,2-bis(4-Chlorophenyl) acetic acid (DDA) (ug/g)	26.31		7.9 / 19	≤19
3-Phenoxybenzoic Acid (3PBA)^ (ug/g)	0.04		1.01 / 5.44	≤5.44
Diethyl phosphate (DEP)^ (ug/g)	1.31		3.2 / 15.7	≤15.7
Diethyldithiophosphate (DEDTP)^ (ug/g)	0.02		0.17 / 0.3	≤0.3
Diethylthiophosphate (DETP)^ (ug/g)	0.49		1.24 / 3.92	≤3.92
Dimethyl phosphate (DMP)^ (ug/g)	22.97		9.1 / 33.6	≤33.6
Dimethyldithiophosphate (DMDTP)^ (ug/g)	0.36		0.67 / 6.12	≤6.12
Dimethylthiophosphate (DMTP)^ (ug/g)	70.30		5.91 / 33.7	≤33.7

Phthalates

Test Name	Current	Previous	Result (75th / 95th)	Reference
Mono-(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP)^ (ug/g)	13.40		14.1 / 37.7	≤37.7
Mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)^ (ug/g)	5.11		8.99 / 23.4	≤23.4
Mono-2-ethylhexyl phthalate (MEHP)^ (ug/g)	0.97		2.73 / 8.47	≤8.47
Mono-ethyl phthalate (MEtP)^ (ug/g)	3.93		94.2 / 541	≤541

Volatile organic compounds

Test Name	Current	Previous	Result (75th / 95th)	Reference
2-Hydroxyethyl Mercapturic Acid (HEMA)^ (ug/g)	0.07		1.7 / 4.75	≤4.75
2-Hydroxyisobutyric Acid (2HIB) (ug/g)	3877.32		795.93 / 1215.72	≤1215.72
2-Methylhippuric Acid (2MHA)^ (ug/g)	6.08		77.9 / 248	≤248
3-Methylhippuric Acid (3MHA) (ug/g)	4.08		64.8 / 612.83	≤612.83
4-Methylhippuric Acid (4MHA) (ug/g)	5.21		65.51 / 752.72	≤752.72
N-Acetyl (2-Cyanoethyl) Cysteine (NACE)^ (ug/g)	0.07		5.28 / 256	≤256
N-Acetyl (2,Hydroxypropyl) Cysteine (NAHP)^ (ug/g)	11.24		101 / 403	≤403

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Environmental Toxins

Volatile organic compounds

Test Name	Current	Previous	Result (75th / 95th)	Reference
N-Acetyl (3,4-Dihydroxybutyl) Cysteine^ (ug/g)	0.36		374 / 583	≤583
N-Acetyl (Propyl) Cysteine (NAPR)^ (ug/g)	0.73		11.3 / 46.1	≤46.1
N-acetyl phenyl cysteine (NAP)^ (ug/g)	0.02		1.29 / 3.03	≤3.03
Phenyl glyoxylic Acid (PGO)^ (ug/g)	108.48		285 / 518	≤518

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Risk and Limitations

This test has been developed and its performance characteristics determined by Vibrant America LLC., a CLIA certified lab. These assays have not been cleared or approved by the U.S. Food and Drug Administration.

Vibrant Environmental Toxins panel does not demonstrate absolute positive and negative predictive values for any condition. Its clinical utility has not been fully established. Clinical history and current symptoms of the individual must be considered by the healthcare provider prior to any interventions. Test results should be used as one component of a physician's clinical assessment.

Environmental Toxins Panel testing is performed at Vibrant America, a CLIA certified laboratory and utilizes ISO-13485 developed technology. Vibrant America has effective procedures in place to protect against technical and operational problems. However, such problems may still occur. Examples include failure to obtain the result for a specific toxin due to circumstances beyond Vibrant's control. Vibrant may re-test a sample in order to obtain these results but upon re-testing the results may still not be obtained. As with all medical laboratory testing, there is a small chance that the laboratory could report incorrect results. A tested individual may wish to pursue further testing to verify any results.

The information in this report is intended for educational purposes only. While every attempt has been made to provide current and accurate information, neither the author nor the publisher can be held accountable for any errors or omissions.

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