DEMO DEMO

FINAL REPORT

Accession ID: 2367559335

Name: DEMO DEMO
Date of Birth: 1975-01-20
Biological Sex: Male
Age: 50
Height: 67 inches
Weight: 175 lbs
Fasting:

Telephone: 000-000-0000
Street Address:
Email:

Provider Information

Practice Name: DEMO CLIENT, MD
Provider Name: DEMO CLIENT, MD
Phlebotomist: 0

Telephone: 000-000-0000
Address: 3521 Leonard Ct, Santa Clara, CA 95054

Report Information

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

Specimen Information

Sample Type	Collection Time	Received Time	Report	Final Report Date
Urine 1st Morning	2025-01-15 07:58 (PDT)	2025-01-17 14:02 (PDT)	Hormone Zoomer - P2	2025-02-01 21:14 (PDT)
Urine 2nd Morning	2025-01-15 09:35 (PDT)	2025-01-17 14:02 (PDT)	Hormone Zoomer - P2	2025-02-01 21:14 (PDT)
Urine Evening	2025-01-15 18:40 (PDT)	2025-01-17 14:02 (PDT)	Hormone Zoomer - P2	2025-02-01 21:14 (PDT)
Urine Night	2025-01-15 22:59 (PDT)	2025-01-17 14:02 (PDT)	Hormone Zoomer - P2	2025-02-01 21:14 (PDT)

VibrantWellness
3521 Leonard Ct, Santa Clara, CA 95054
1-866-364-0963 | support@vibrant-america.com | www.vibrant-america.com

Hormone Zoomer

INTRODUCTION

Vibrant Wellness is pleased to present to you 'Hormone Zoomer', 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 Hormone Zoomer is a test to measure urinary hormones including estrogens, androgens, progestogens, endocrine disruptors, bone health and oxidative stress. The panel is designed to give a complete picture of an individual's levels of hormones and metabolites along with toxins that can affect hormone functionality and risk markers for bone health metabolites in urine.

Methodology:

The Vibrant Hormone Zoomer Panel uses Liquid Chromatography Tandem Mass Spectrometry methodology (LC-MS/MS) for quantitative detection of Cortisol and Cortisone metabolites, Melatonin, Endocrine Disruptors, Bone Health, Creatinine and Oxidative Stress markers and Gas Chromatography Tandem Mass Spectrometry (GC-MS/MS) for quantitative detection of Estrogens, Progesterone and Androgen metabolites in urine samples.

Interpretation of Report:

The report begins with the list of all adrenal hormones and illustrations, followed by the sex hormones along with corresponding illustrations. The hormones section is followed by endocrine disruptors and bone health metabolites. Reference ranges for each analyte have been established using a cohort of gender and menstrual phase matched 1000 apparently healthy individuals. Classification of Red indicates a result that is outside the reference range and the classification of Green denotes a result that is within the reference range. Additionally, the previous value (if available) is also indicated to help check for improvements every time the test is ordered.

The Vibrant Wellness platform provides tools for you to track and analyze your general wellness profile. Testing for the Urinary Hormones 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 these terms, you should 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 meant to be lifestyle choices for potential risk mitigation. Please consult your healthcare provider for medication, treatment, diet, exercise, or lifestyle management as appropriate. This product is not intended to diagnose, treat, or cure any disease or condition.

Please note:

Please Note: It is important that you discuss any modifications to your diet, exercise, and nutritional supplementation with your healthcare provider before making any changes. The Vibrant America Clinical Support team can only provide basic and generalized interpretation of hormone biomarkers and pathways. It is the Vibrant ordering provider's responsibility to provide comprehensive interpretation and individualized treatment recommendations for hormone lab test results.

Hormone Zoomer - Summary

Questionnaire Data

BACKGROUND

Date of Birth	1975-01-20	Bladder or prostate infection history in the last 12 months	NO
Biological sex	Male	Radical Prostatectomy	NO

BONE HEALTH AND TOXIN EXPOSURE

Bone density scan	YES	If yes, scan result	OSTEOPOROSIS
Experienced any fractures	NO	Exposed to toxic chemicals	NO

SYMPTOM HISTORY

Fatigue / Low Energy	None	Increased Body Fat / Weight Gain	None	Thinning or Loss of Hair	None
Decreased Sexual Desire (Libido)	Severe	Depression/Anxiety	None	Irritability or Mood Swings	None
Erectile Dysfunction	None	Poor sleep	None	Poor Concentration or Memory Problems	Moderate
Decreased Muscle Mass	Severe	Reduced physical performance	None		

MEDICAL BACKGROUND

MEDICAL HISTORY		COMORBIDITIES		FAMILY HISTORY	
Hypogonadism (low testosterone)	NO	Type 2 diabetes	YES	Cancer	N/A
		Liver disease	N/A	Prostate cancer/issues	N/A
		Obesity	N/A	Cardiovascular disease	YES
		Cardiovascular disease (heart attack, stroke, etc)	N/A	Cerebrovascular Disease	N/A
		Sleep apnea	N/A	SLE or Autoimmune	N/A
		Infertility issues	N/A	Venous Thrombus Embolism	N/A
		SLE or Autoimmune	N/A	Thyroid disease	N/A
		Prostate conditions (e.g., BPH, prostate cancer)	N/A	Hypertension	N/A
		Thyroid disease	N/A	Other	N/A
		Hypertension	N/A		
		Other	N/A		

TREATMENT CONSIDERATIONS

Hormone treatment preference	HRT	Sensitive skin (Affects certain forms of HRT)	NO
Undergoing HRT and/or taking any medications	NO	If yes, please list and provide necessary details:	-

ADDITIONAL INFORMATION

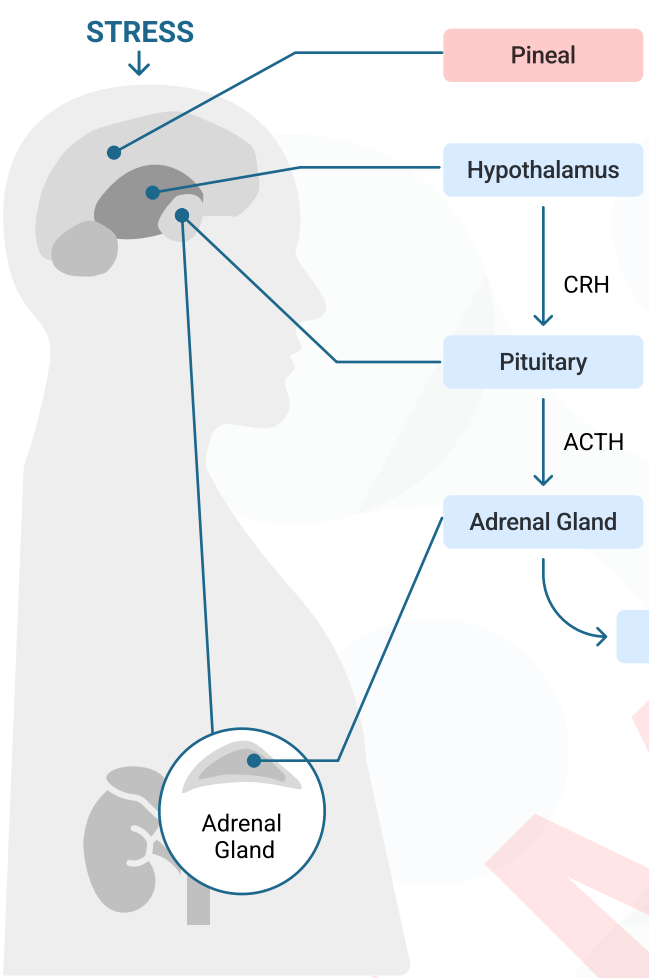
N/A

Patient Name: DEMO DEMO
Date of Birth: 1975-01-20 Accession ID: 2367559335
Service Date: 2025-01-15 07:58 (PDT)

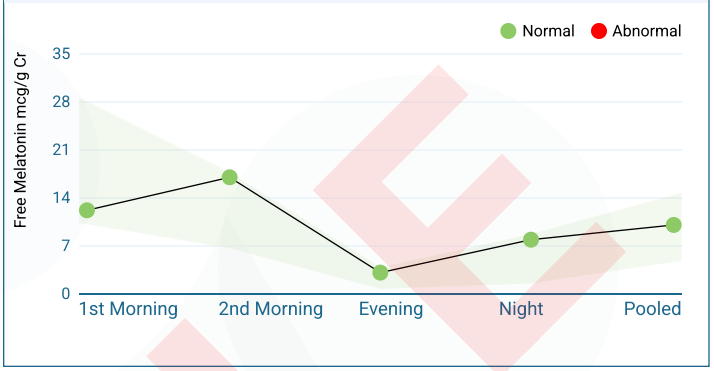
Hormone Zoomer - Summary

Adrenal Hormone

Moderate High / Low



URINARY DIURNAL MELATONIN MT6S



DHEA
9.01 - 92.66
59.74

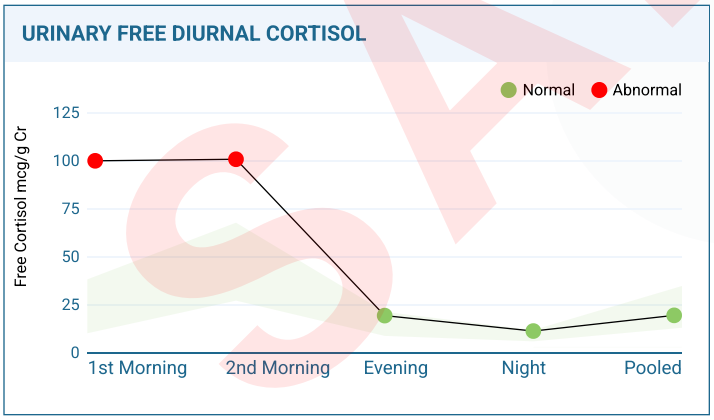
Cortisol → Metabolized Cortisol (THF+THE)
521.78 - 1941.96
1660.43

Cortisol/Cortisone

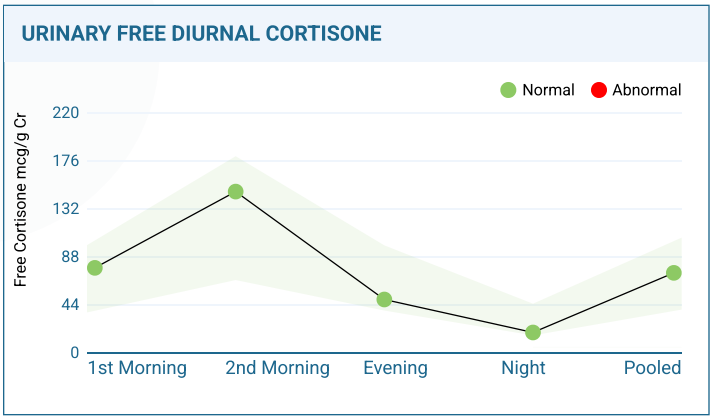
11β-HSD index measures the activity level of the 11β-HSD enzyme which maintains balance between active cortisol and inactive cortisone. Increased cortisol levels has been associated with conditions like metabolic syndrome and insulin resistance.

0.6 - 0.76
1.11

URINARY FREE DIURNAL CORTISOL



URINARY FREE DIURNAL CORTISONE



9.15 - 30.99
41.36
Total cortisol levels

Cortisol and Cortisone interconvert (11β-HSD)

15.27 - 40.91
19.26
Total cortisone levels

Hormone Zoomer - Summary

Adrenal Hormones

Test Name	Current	Previous	Result	Reference
b-Tetrahydrocortisol (b-THF) (mcg/g)	505.73		0 199 604	199.36-604.11
a-Tetrahydrocortisol (a-THF) (mcg/g)	28.59		0 18.3 59.7	18.32-59.71
b-Tetrahydrocortisone (b-THE) (mcg/g)	1126.11		0 304 1278	304.1-1278.14
Deoxycorticosterone (mcg/g)	0.44		0 0.64 2.18	0.65-2.18
Corticosterone (mcg/g)	27.56		0 3.65 10.1	3.66-10.12
DHEA (mcg/g)	59.74		0 9 92.6	9.01-92.66
DHEA-S (mcg/g)	122.26		0 20.6 142	20.69-142.22
Total Cortisol (mcg/g)	41.36		0 9.14 30.9	9.15-30.99
Total Cortisone (mcg/g)	19.26		0 15.2 40.9	15.27-40.91

COMMENTS

Deoxycorticosterone: Deoxycorticosterone (DOC) is a steroid hormone synthesized in the adrenal glands, playing an essential role in mineralocorticoid activity and functioning as a precursor to cortisol and aldosterone. Low levels of DOC in males may suggest adrenal insufficiency or dysregulation in the hypothalamic-pituitary-adrenal (HPA) axis, which can impact blood pressure regulation and electrolyte balance. Insufficient DOC can lead to symptoms such as fatigue, hypotension, and disturbances in fluid balance. Monitoring DOC levels is crucial for assessing adrenal function and diagnosing conditions that affect steroid synthesis, enabling targeted interventions to restore hormonal equilibrium and improve overall health. Understanding the dynamics of DOC in males is vital for identifying potential adrenal disorders and optimizing treatment strategies.

Corticosterone: Corticosterone, a steroid hormone produced by the adrenal glands, plays a crucial role as a precursor to aldosterone and may significantly impact memory and emotional regulation. Although its specific functions are still being explored, corticosterone is linked to the formation of emotional memories, particularly in fear response and long-term memory. Testing for corticosterone offers valuable insights into stress response, particularly in fetal stress during childbirth, where elevated levels can serve as a biomarker. Monitoring corticosterone levels can help assess adrenal function and its role in stress-related conditions, making it a useful tool for personalized health management and early intervention in both adults and infants.

Total Cortisol: Cortisol, widely known as the body's stress hormone is produced in the adrenal glands. Its levels are generally seen to peak in the morning and then decline throughout the day, reaching the lowest at night. Cortisol is seen to interact with every organ in the body and it is involved in various processes such as bringing about stress responses, regulation of blood sugar, blood pressure maintenance, regulation of metabolism, and aiding in combating infections. Cortisol levels are seen to increase in conditions of stress; however, if the levels remain high for too long then it can give rise to clinical implications. Testing cortisol levels help in assessing how well the pituitary and adrenal glands are functioning. High levels of cortisol can be indicative of Cushing syndrome, a disease that causes the overproduction of stress hormones by the adrenal glands. Symptoms associated with this condition include high blood pressure, high blood sugar, obesity, purple streaks on the abdomen, muscle wasting, acne, and osteoporosis. Additionally, factors such as depression, alcoholism, malnutrition, panic disorder, pregnancy, working night shift, and medications can alter cortisol levels.

SUPPLEMENT SUGGESTIONS

Liquorice(100 g/day): Liquorice increases deoxycorticosterone levels by inhibiting the enzyme 11β-hydroxysteroid dehydrogenase type 2, which converts active cortisol to its inactive form, cortisone. This inhibition leads to an accumulation of cortisol, which mimics mineralocorticoids like aldosterone. As a result, there is an upregulation of deoxycorticosterone, a precursor in the aldosterone synthesis pathway.

Hormone Zoomer - Summary

Adrenal Hormones

SUPPLEMENT SUGGESTIONS

Magnesium(350 mg/day): Magnesium supplements decrease cortisol by regulating the hypothalamic-pituitary-adrenal (HPA) axis, which controls stress response. Magnesium acts as a cofactor for enzymes involved in neurotransmitter synthesis, promoting GABA activity, and reducing excessive neuronal firing, which helps lower cortisol production. Additionally, magnesium enhances sleep quality, further reducing cortisol levels.

Vitamin C(1500 mg/day): Vitamin C supplementation decreases cortisol levels by reducing the secretion of cortisol in response to stress. It supports the adrenal glands, which produce cortisol, thereby improving their function and reducing excessive cortisol release. Additionally, vitamin C acts as an antioxidant, mitigating oxidative stress that can stimulate cortisol production.

Ashwagandha(600 mg/day): Ashwagandha or its root extract decreases cortisol by inhibiting the activity of the hypothalamic-pituitary-adrenal (HPA) axis, leading to reduced adrenal cortisol production. It enhances the resilience of the body to stress, promoting homeostasis and lowering cortisol levels. Additionally, ashwagandha's bioactive compounds modulate neurotransmitter activity, further aiding in stress reduction.

Tangeretin(200 mg/day): Tangeretin, a polymethoxylated flavone found in citrus peels, decreases cortisol levels by inhibiting the enzyme 11β-hydroxysteroid dehydrogenase type 1 (11β-HSD1), which converts inactive cortisone to active cortisol. This inhibition reduces the overall production of cortisol within tissues. Additionally, tangeretin's antioxidant properties may mitigate stress-induced cortisol secretion, further lowering cortisol levels in the body.

SUPPORTIVE SUPPLEMENT SUGGESTIONS *(ENHANCES SPECIFIC ASSOCIATED FUNCTIONS WITHOUT INFLUENCING MARKERS DIRECTLY)*

Ginger(4 g/day): Ginger appears to lower blood pressure by acting as a natural calcium channel blocker and dilating blood vessels through enhanced nitric oxide production and prostaglandin synthesis.

Magnesium(350 mg/day): Magnesium supplementation has been shown to be effective in reducing both systolic and diastolic blood pressure through mechanisms such as vasodilation, modulation of calcium influx, and regulation of vascular tone.

Potassium (3,400 mg/ day): Potassium relaxes the walls of the blood vessels, lowering blood pressure and protecting against muscle cramping through mechanisms such as promoting vasodilation, balancing sodium levels, and ensuring proper muscle function.

CoQ10(1,200 mg/day): CoQ10 has the potential to lower both systolic and diastolic blood pressure through mechanisms such as improving endothelial function, reducing oxidative stress, and enhancing nitric oxide production.

Vitamin D(600 IU/day): Vitamin D supplementation significantly lowers renin synthesis and blood pressure by modulating the renin-angiotensin-aldosterone system (RAAS), reducing inflammation, and improving endothelial function.

Diurnal Cortisol

Test Name	Current	Previous	Result	Reference
Free Cortisol (1st Morning) (mcg/g)	99.35		0 7.49 36.2	7.5-36.2
Free Cortisol (2nd Morning) (mcg/g)	100.19		0 24.8 66.4	24.9-66.4
Free Cortisol (Evening) (mcg/g)	16.90		0 6.09 18.9	6.1-18.9
Free Cortisol (Night) (mcg/g)	8.67		0 3.19 9.2	3.2-9.2
Free Cortisol (pooled) (mcg/g)	17.03		0 10.4 32.6	10.43-32.68

Diurnal Cortisol

COMMENTS

Free Cortisol (1st Morning): Cortisol, widely known as the body's stress hormone is produced in the adrenal glands. Its levels are generally seen to peak in the morning and then decline throughout the day, reaching the lowest at night. Cortisol is seen to interact with every organ in the body and it is involved in various processes such as bringing about stress responses, regulation of blood sugar, blood pressure maintenance, regulation of metabolism, and aiding in combating infections. Cortisol levels are seen to increase in conditions of stress; however, if the levels remain high for too long then it can give rise to clinical implications. Testing cortisol levels help in assessing how well the pituitary and adrenal glands are functioning. Assessing morning cortisol levels helps evaluate the adrenal glands' ability to produce sufficient cortisol for daily activities and stress management. In men, high morning cortisol levels may heighten anxiety, accelerate bone loss, and contribute to central obesity. Elevated cortisol levels can also indicate Cushing's syndrome, characterized by high blood pressure, high blood sugar, obesity, purple abdominal streaks, muscle wasting, acne, and osteoporosis. Factors such as depression, alcoholism, malnutrition, panic disorders, night shifts, and certain medications can also affect cortisol levels.

Free Cortisol (2nd Morning): Cortisol, widely known as the body's stress hormone is produced in the adrenal glands. Its levels are generally seen to peak in the morning and then decline throughout the day, reaching the lowest at night. Cortisol is seen to interact with every organ in the body and it is involved in various processes such as bringing about stress responses, regulation of blood sugar, blood pressure maintenance, regulation of metabolism, and aiding in combating infections. Cortisol levels are seen to increase in conditions of stress; however, if the levels remain high for too long then it can give rise to clinical implications. Testing cortisol levels help in assessing how well the pituitary and adrenal glands are functioning. Afternoon cortisol assessment helps determine whether the decline aligns with the expected diurnal pattern or if abnormalities, such as sustained elevated levels, indicate chronic stress or adrenal hyperactivity. In men, high afternoon cortisol levels may be associated with heightened stress, and elevate the risk of hypertension and cardiovascular disease.Elevated cortisol levels can also indicate Cushing's syndrome, characterized by high blood pressure, high blood sugar, obesity, purple abdominal streaks, muscle wasting, acne, and osteoporosis. Factors such as depression, alcoholism, malnutrition, panic disorders, night shifts, and certain medications can also affect cortisol levels.

SUPPLEMENT SUGGESTIONS

Magnesium(350 mg/day): Magnesium supplements decrease cortisol by regulating the hypothalamic-pituitary-adrenal (HPA) axis, which controls stress response. Magnesium acts as a cofactor for enzymes involved in neurotransmitter synthesis, promoting GABA activity, and reducing excessive neuronal firing, which helps lower cortisol production. Additionally, magnesium enhances sleep quality, further reducing cortisol levels.

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Hormone Zoomer - Summary

Diurnal Cortisone

Test Name	Current	Previous	Result	Reference
Free Cortisone (1st Morning) (mcg/g)	74.50		0 32.6 95.8	32.7-95.8
Free Cortisone (2nd Morning) (mcg/g)	146.00		0 63.0 179	63.1-179.2
Free Cortisone (Evening) (mcg/g)	44.85		0 34.4 95.6	34.5-95.6
Free Cortisone (Night) (mcg/g)	13.92		0 11.1 40.9	11.2-40.9
Free Cortisone (pooled) (mcg/g)	69.82		0 35.3 102	35.38-102.88

Diurnal Melatonin

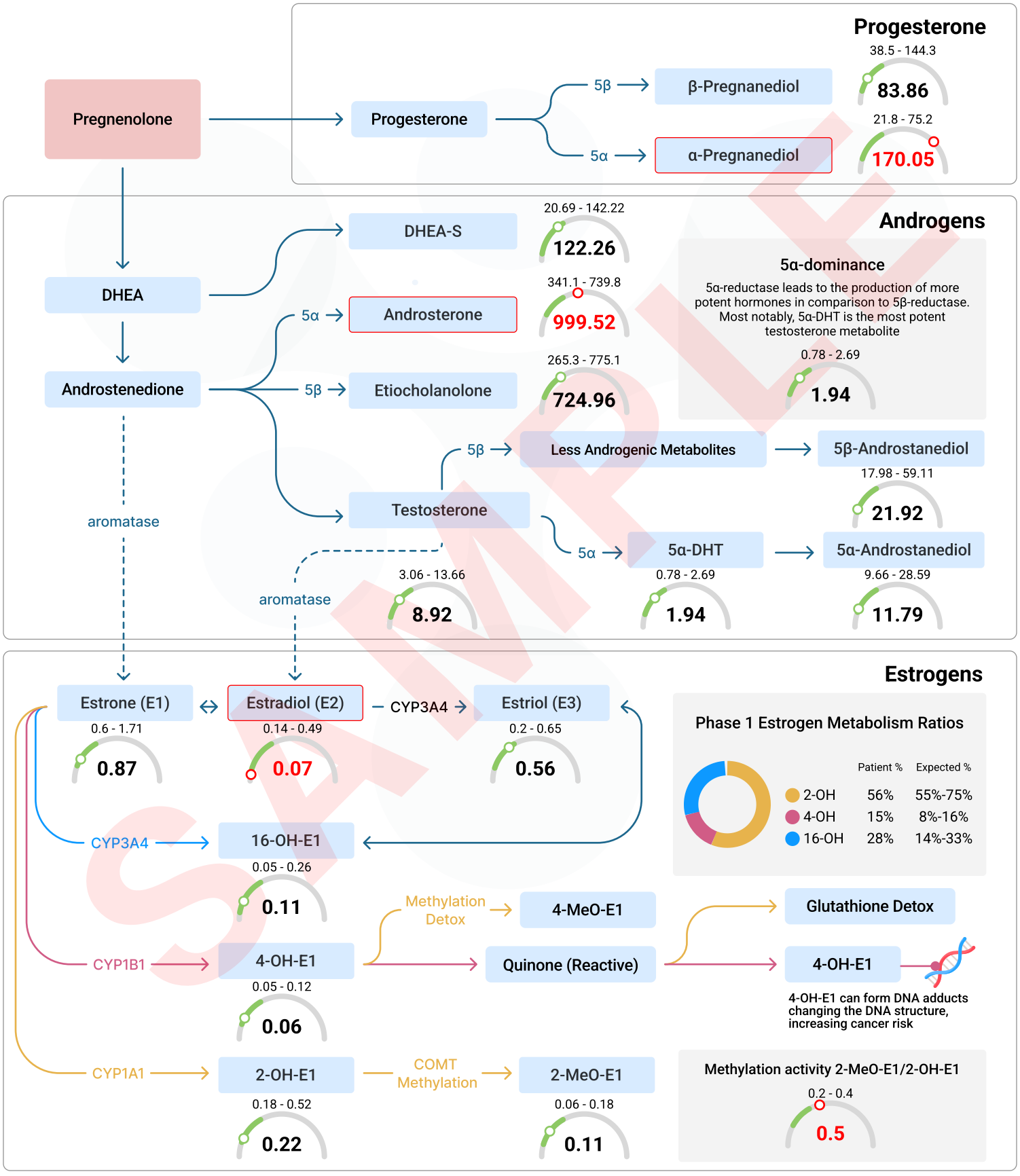
Test Name	Current	Previous	Result	Reference
Melatonin (1st Morning) (mcg/g)	12.03		0 10.1 28.6	10.2-28.6
Melatonin (2nd Morning) (mcg/g)	16.87		0 6.49 17.6	6.5-17.6
Melatonin (Evening) (mcg/g)	2.89		0 0.51 3.66	0.52-3.66
Melatonin (Night) (mcg/g)	7.72		0 1.31 8.55	1.32-8.55
Melatonin (pooled) (mcg/g)	9.88		0 4.63 14.6	4.64-14.6

Patient Name: DEMO DEMO
Date of Birth: 1975-01-20 Accession ID: 2367559335
Service Date: 2025-01-15 07:58 (PDT)

Hormone Zoomer - Summary

Sex Hormone - Urine

Moderate High / Low



Hormone Zoomer - Summary

Testosterone

Test Name	Current	Previous	Result	Reference
Testosterone (T) (mcg/g)	8.92		0 3.05 13.6	3.06-13.66
Epi-Testosterone (Epi-T) (mcg/g)	8.32		0 3.65 9.05	3.66-9.05
Androstenedione (mcg/g)	7.31		0 2.04 9.57	2.05-9.57
Androsterone (mcg/g)	999.52		0 341 739	341.1-739.8
Etiocholanolone (mcg/g)	724.96		0 265 775	265.3-775.1
5a-DHT (mcg/g)	1.94		0 0.77 2.69	0.78-2.69
5a,3a-Androstanediol (mcg/g)	11.79		0 9.65 28.5	9.66-28.59
5b-Androstanediol (mcg/g)	21.92		0 17.9 59.1	17.98-59.11

COMMENTS

Androsterone: Androsterone is a by-product of the breakdown of androgens. It displays weak androgenic properties. Androsterone sulfate is clinically recognized as one of the major androgen metabolites found in urine, in both males and females. It is made in the liver from the metabolism of testosterone. High levels of androsterone can arise due to DHEA supplementation, androgen-producing gonadal tumors, congenital adrenal hyperplasia, adult-onset adrenal hyperplasia, or serious illness.

SUPPORTIVE SUPPLEMENT SUGGESTIONS *(ENHANCES SPECIFIC ASSOCIATED FUNCTIONS WITHOUT INFLUENCING MARKERS DIRECTLY)*

Soy isoflavones(2.01 mg/day): Isoflavone supplementation has been shown to reduce circulating dihydrotestosterone (DHT) levels, which may help restore hormonal balance by reducing the androgen burden and subsequently lowering androsterone, a downstream metabolite.

Saw palmetto (320 mg/day): Saw palmetto extract, known to inhibit 5α-reductase, reduces DHT synthesis and has been linked to decreased prostatic cell proliferation, thereby addressing prostate-related symptoms.

Green tea (400 mg/day): Green tea supplementation has significantly reduced both testosterone and DHT levels in vivo, suggesting broader regulatory effects on androgen levels that may relieve symptoms like irritability, oily skin, and hair thinning.

Pumpkin seed(30 g/day): Pumpkin seed oil (PSO) exerts similar effects by inhibiting testosterone's conversion into DHT, offering support for men experiencing androgen-driven scalp issues and prostate discomfort.

Licorice(70 g/day): Licorice root extract, rich in phytoestrogens, can modulate testosterone activity, helping balance hormonal fluctuations that may manifest as fatigue or hair thinning.

Curcumin(250 mg curcumin): Curcumin suppress the expression of testosterone, DHT, 5α-reductase, estradiol (E2), and PSA, which not only helps in managing symptoms of benign prostatic hyperplasia (BPH) but also supports broader endocrine stability.

Banana flower extract(1g/day): Banana flower extract has been found to reduce oxidative stress and inhibit the expression of genes like SRD5A1, SRD5A2, and androgen receptor (AR)—all of which are involved in androgen metabolism and signaling—potentially improving scalp health and overall hormonal equilibrium.

Hormone Zoomer - Summary

Estrogen

Test Name	Current	Previous	Result	Reference
Estradiol (E2) (mcg/g)	0.07		0 0.13 0.49	0.14-0.49
Estrone (E1) (mcg/g)	0.87		0 0.59 1.71	0.6-1.71
Estriol (E3) (mcg/g)	0.56		0 0.19 0.65	0.2-0.65
Total Estrogen (mcg/g)	2.46		0 1.37 4.29	1.38-4.29
2-OH Estradiol (mcg/g)	0.11		0 0.03 0.15	0.04-0.15
2-OH Estrone (mcg/g)	0.22		0 0.17 0.52	0.18-0.52
4-OH Estradiol (mcg/g)	0.07		0 0.02 0.08	0.03-0.08
4-OH Estrone (mcg/g)	0.06		0 0.04 0.12	0.05-0.12
16a-OH Estrone (mcg/g)	0.11		0 0.04 0.26	0.05-0.26
2-MeO Estradiol (mcg/g)	0.04		0 0.01 0.05	0.02-0.05
2-MeO Estrone (mcg/g)	0.11		0 0.05 0.18	0.06-0.18
4-MeO Estradiol (mcg/g)	0.05		0 0.05	≤0.05
4-MeO Estrone (mcg/g)	0.03		0 0.05	≤0.05

COMMENTS

Estradiol (E2): Estradiol (E2), an estrogen steroid hormone, plays essential roles in male physiology despite being predominantly associated with female reproductive health. In males, E2 is secreted in moderate amounts by the testes throughout life and contributes to critical functions such as maintaining bone density, regulating mood, supporting libido, and facilitating spermatogenesis. Low levels of E2 in males can result in decreased bone density, increasing the risk of fractures, fatigue, mood swings, reduced libido, and infertility. Insufficient E2 levels may arise from conditions such as hypogonadism, rapid weight loss, hypothyroidism, or hypopituitarism. Chronic stress, excessive exercise, and certain medications may further suppress E2 levels. Since cholesterol is a precursor for hormone synthesis, low cholesterol levels may also contribute to reduced E2 production.

SUPPLEMENT SUGGESTIONS

Soy protein isolates(40g/d): Soy protein isolates contain phytoestrogens, particularly isoflavones, which can mimic estrogen by binding to estrogen receptors in the body. This binding stimulates the hypothalamus-pituitary-gonadal axis, leading to increased production of estradiol. Additionally, isoflavones may inhibit the metabolism of estradiol, further increasing its levels.

Hormone Zoomer - Summary

Progesterone

Test Name	Current	Previous	Result	Reference
Allopregnanolone (mcg/g)	7.13		0 0.3 1.32	0.31-1.32
3αDihydroprogesterone (mcg/g)	0.78		0 0.21 0.79	0.22-0.79
20αDihydroprogesterone (mcg/g)	1.01		0 0.52 3.05	0.53-3.05
b-Pregnanediol (mcg/g)	83.86		0 38.4 144	38.5-144.3
a-Pregnanediol (mcg/g)	170.05		0 21.7 75.2	21.8-75.2

COMMENTS

Allopregnanolone: Allopregnanolone, a key metabolite of progesterone, is a powerful neuroactive steroid with a wide range of effects on mental and emotional health. Known for its antidepressant, anxiolytic, and stress-reducing properties, it enhances the activity of the neurotransmitter GABA, promoting relaxation, mood balance, and improved sleep quality. Testing for allopregnanolone provides valuable insights into hormonal balance, especially in individuals facing mood disorders, stress-related conditions, or pregnancy-related complications, guiding more personalized approaches to mental and neurological health management.

a-Pregnanediol: α-Pregnanediol, a key metabolite of progesterone, plays an important role in evaluating hormonal balance in men. Though progesterone is often associated with female reproductive health, it is also produced in small amounts by the adrenal glands and testes in males. Progesterone supports spermiogenesis, modulates androgen production, and exerts neuroprotective effects. Monitoring urinary α-pregnanediol provides insights into progesterone metabolism and overall hormonal health in men. Elevated α-pregnanediol levels can indicate prolonged progesterone supplementation, stress, or adrenal hyperactivity. Assessing α-pregnanediol levels offers valuable information for understanding hormone-related issues, optimizing reproductive health, and guiding treatment decisions.

SUPPORTIVE SUPPLEMENT SUGGESTIONS *(ENHANCES SPECIFIC ASSOCIATED FUNCTIONS WITHOUT INFLUENCING MARKERS DIRECTLY)*

Vitamin D(600 IU/day): Vitamin D supplementation is associated with decreased depressive symptoms and anxiety, especially in individuals with deficiency. It plays a regulatory role in neuroinflammation, neuroplasticity, and serotonergic signaling.

Hormone Ratios

Test Name	Current	Previous	Result	Reference
2-MeO E1/2-OH E1	0.50		0 0.19 0.4	0.2-0.4
T/Epi-T	1.07		0 0.95 2.32	0.96-2.32
Cortisol/Cortisone (mcg/g)	1.11		0 0.59 0.76	0.6-0.76
Metabolized Cortisol (THF+THE) (mcg/g)	1660.43		0 521 1941	521.78-1941.96

COMMENTS

2-MeO E1/2-OH E1: 2-Hydroxyestrone (2-OH E1) is a naturally occurring catechol estrogen and a major metabolite of estrone while 2-methoxyestrone (2-MeO E1) is a naturally occurring methoxylated catechol estrogen and a metabolite of estrone that is formed by catechol O-methyltransferase (COMT) via the intermediate 2-OH E1. Methylation of 2-OH E1 by the enzyme COMT is beneficial as it gives rise to inert and harmless catechol estrogens. This prevents them from further oxidizing to more dangerous estrogen quinones that can form adducts with DNA, causing mutations that can lead to increased cancer risk. Thus, a lower 2-MeO E1/2-OH E1 ratio is related to a higher risk of breast cancer.

Hormone Zoomer - Summary

Hormone Ratios

COMMENTS

Cortisol/Cortisone: The body's stress hormone, cortisol, is produced by the adrenal glands. Only a small percentage of circulating cortisol is biologically active (free), while the majority of cortisol is inactive (due to the binding of cortisol to protein). Cortisone, a metabolite of cortisol, possess as an additional variable that assists in the diagnosis of various adrenal disorders, including abnormalities of 11-beta-hydroxy steroid dehydrogenase (11-beta HSD), the enzyme that converts cortisol to cortisone. A deficiency in this enzyme can result in increased levels of cortisol. The cortisol/cortisone ratio is a marker of cortisol metabolism and it also used to undertsand efficiency of the conversion of cortisol to cortisone by the 11-beta HSD enzyme.Patients with Cushing's syndrome, chronic stress, or 11-beta HSD deficiency generally have an elevated urinary cortisol/cortisone ratio.

SUPPLEMENT SUGGESTIONS

Vitamin D(600 IU/day): Vitamin D supplements decrease cortisol/cortisone levels by modulating the hypothalamic-pituitary-adrenal (HPA) axis, leading to reduced adrenal gland secretion of these hormones. This regulation involves vitamin D receptor (VDR) activation, which influences gene expression associated with cortisol production. Additionally, vitamin D's anti-inflammatory properties can indirectly lower cortisol levels by reducing systemic inflammation.

SUPPORTIVE SUPPLEMENT SUGGESTIONS *(ENHANCES SPECIFIC ASSOCIATED FUNCTIONS WITHOUT INFLUENCING MARKERS DIRECTLY)*

Soy isoflavones(2.01 mg/day): Soy isoflavones, such as genistein, inhibit the activity of aromatase, reducing estrogen synthesis. They also act as selective estrogen receptor modulators, which can decrease the formation of 4-OH estradiol. Additionally, they increase the expression of detoxification enzymes, promoting the metabolism and excretion of 4-OH estradiol.

Oxidative Stress

Test Name	Current	Previous	Result	Reference
8-hydroxy-2'-deoxyguanosine (8-OHdG) (mcg/g)	2.40		0 4.77	≤4.77

Creatinine

Test Name	Current	Previous	Result	Reference
Creatinine (1st Morning) (mg/ml)	0.80		0 0.24 2.16	0.25-2.16
Creatinine (2nd Morning) (mg/ml)	2.04		0 0.24 2.16	0.25-2.16
Creatinine (Evening) (mg/ml)	1.86		0 0.24 2.16	0.25-2.16
Creatinine (Night) (mg/ml)	1.14		0 0.24 2.16	0.25-2.16
Creatinine (pooled) (mg/ml)	1.46		0 0.24 2.16	0.25-2.16

Hormone Zoomer - Summary

Endocrine Disruptors

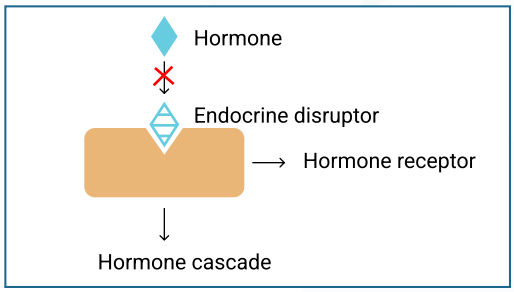
Test Name	Current	Previous	Result (75th: 1.65, 95th: 7.6)	Reference
Glyphosate (ug/g)	5.73			≤7.6

Glyphosate is a broad-spectrum systemic herbicide and crop desiccant. It is used to kill weeds, especially annual broadleaf weeds and grasses that compete with crops. Glyphosate interferes with the shikimate pathway, which exists in plants and microorganisms but not in the genomes of mammals, including humans. Exposure by breathing in spray mist from products containing glyphosate may cause irritation in the nose and throat, nausea, and vomiting. Studies report that glyphosate does not induce sensitization and shows no mutagenic, carcinogenic, or teratogenic activity. Hence, glyphosphate exhibits very low toxicity. However, recent studies have shown that glyphosate alters the levels of reporductive and thyroid hormones. Hence, it is essential to adopt relevant measures to remove this toxin from the body upon exposure.

HORMONE AFFECTED

Testosterone, T4

Agonist (mimics hormone function)



Mechanism

Hormone agonists mimic natural hormones by acting like them; they bind to hormone receptors and trigger similar biological responses. Endocrine-disrupting chemicals (EDCs) act as these mimics, potentially causing harmful effects; Studies indicate that glyphosate can disrupt the hypothalamic-pituitary-thyroid (HPT) axis, leading to increased serum levels of T4 while altering the expression of key regulatory genes involved in thyroid hormone synthesis. This disruption may mimic the effects of natural thyroid hormones, potentially leading to altered metabolic processes. Additionally, glyphosate may affect androgen signaling by interacting with androgen receptors, thereby mimicking the actions of testosterone. In vitro studies show that glyphosate can also activate estrogen receptors such as ERα. However, it does so without directly binding to these receptors, and the precise mechanism remains unclear.

SUPPLEMENT SUGGESTIONS

Vitamin E(22 IU/day): Vitamin E through its antioxidant properties protect cells from oxidative damage by neutralizing ROS generated during toxin exposure. It also enhances the activity of other antioxidants and improves hormonal balance, thereby mitigating reproductive and cellular dysfunction caused by endocrine disruptors.

Vitamin C(90 mg/day): Vitamin C mitigates glyphosate-induced toxicity by acting as a potent antioxidant, scavenging reactive oxygen species (ROS) and reducing oxidative stress in affected tissues. It also enhances the activity of detoxifying enzymes, promoting the elimination of glyphosate from the body. Additionally, vitamin C helps restore cellular health by maintaining redox balance and supporting immune function.

Hormone Zoomer - Summary

Endocrine Disruptors

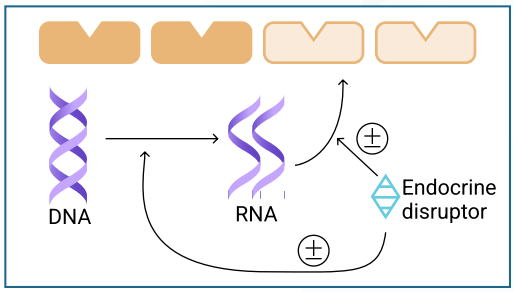
Test Name	Current	Previous	Result (75th / 95th)	Reference
Bisphenol A (BPA) (ug/g)	5.06		2.12 / 5.09	≤5.09

BPA is an organic synthetic compound used as a starting material for the synthesis of plastics and epoxy resins. 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. BPA is an endocrine disruptor and causes fertility problems as well as impotence in males. BPA binds to estrogen and androgen receptors and can disrupt their signalling. They also regulate DNA methylation and gene expression, and interacts with transcription factors. Accumulation of BPA in the body can affect hormonal function, potentially leading to endocrine disorders and other diseases, which necessitates its elimination to minimize this risk.

HORMONE AFFECTED

T4, T3, TSH, Dihydrotestosterone, Testosterone

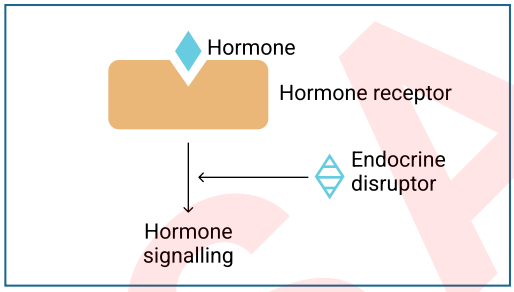
Modifies Receptor Expression



Mechanism

Hormone receptors play a crucial role in how hormones affect the body, and the number of these receptors can influence hormone signaling. Endocrine-disrupting chemicals (EDCs) can interfere with this system by changing the levels of hormone receptors, how they are taken up by cells, and their breakdown, which can ultimately disrupt hormonal signaling; BPA can change the expression of thyroid hormone receptors, leading to abnormal signaling of hormones like T4 and T3. Additionally, thyroid hormones (THs) can influence androgen receptors (ARs), affecting the levels of hormones such as testosterone and dihydrotestosterone. Animal studies show that BPA also alters receptors for other hormones like estrogen, vasopressin, and oxytocin, impacting brain function. Furthermore, BPA has been found to reduce the breakdown of estrogen receptor β (Erβ) in lab studies, potentially causing imbalanced hormonal responses.

Blocks hormone signaling

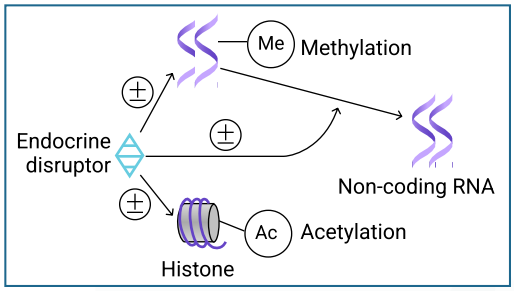


Mechanism

Hormones communicate with cells by binding to specific receptors, triggering a series of responses inside the cell. Endocrine-disrupting chemicals (EDCs) can interfere with these hormone signals and the reactions that follow. They affect different receptors, including those that respond to neurotransmitters and hormones; for instance, BPA disrupts calcium signaling triggered by low glucose levels in animal studies (ionotropic receptors). A key player in this process is the steroid receptor coactivator 1 (SRC1), which helps hormones attach to their receptors. BPA promotes the interaction of SRC1 with estrogen receptors (ERα and ERβ) and the thyroid-hormone receptor β (SRC1 is essential for boosting the binding of hormones to these receptors). Research has shown that BPA increases the amount of SRC1 in animal studies and cell lines, including breast cancer cells. Additionally, BPA has been identified as an antagonist of thyroid hormone action, inhibiting T3 binding to its receptor and thus disrupting its signaling pathway. Additionally, BPA affects the androgen receptor's ability to bind testosterone and dihydrotestosterone, potentially altering their biological effects. This interference can lead to reduced efficacy of hormonal actions mediated by these receptors.

Endocrine Disruptors

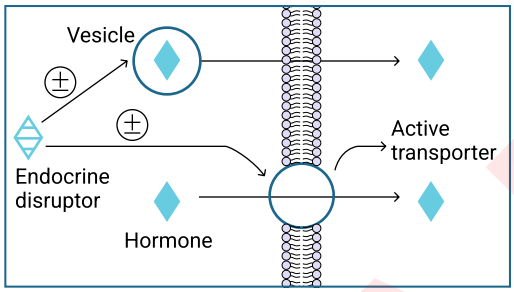
Epigenetic modification of hormone producing cells



Mechanism

Hormones influence development by changing how genes are expressed through processes like DNA modifications, which include adding chemical tags to DNA (DNA methylation), changing the structure of proteins that help package DNA (histone modifications), and regulating non-coding RNA activity. Endocrine disrupting chemicals (EDCs) can interfere with these hormone functions by either blocking hormones from making these changes or by causing alterations in the epigenetic processes that affect hormone action, such as changing how hormone receptors work or disrupting gene transcription. EDCs can also influence non-coding RNA expression; Bisphenol A (BPA) can change microRNA levels in Sertoli cells, placental cells, and breast cancer cell lines. BPA exposure has been shown to induce the production of HOX antisense intergenic RNA (HOTAIR) in human breast cancer cells. The endocrine receptor-binding area of HOTAIR is modified when exposed to BPA, resulting in specific changes to histone proteins (like trimethylation of lysine 4 on histone 3, known as H3K4), which happens due to the action of particular enzymes. Furthermore, exposure to BPA during development can increase the trimethylation of genes, leading to long-lasting effects on gene expression. BPA exposure has been shown to alter microRNA levels that regulate genes responsive to thyroid hormones. This disruption can lead to long-lasting changes in how thyroid hormones exert their effects on target tissues.

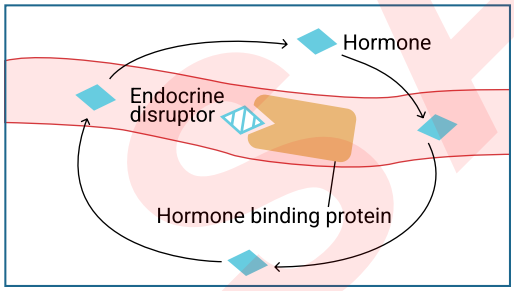
Hormone transport



Mechanism

Steroid hormones, like estrogen and androgens, can easily move across cell membranes due to their lipophilic nature. Other hormones like thyroid hormones are selectively transported in and out of the cell. Both the free and selective movement of hormones in and out of the cells are disrupted by endocrine-disrupting chemicals or EDCs; EDCs like BPA can disrupt the transport of T4 and T3 into cells by interfering with specific membrane transporters. This disruption affects the availability of these hormones at the cellular level and can lead to altered metabolic functions. BPA also disrupts the transport of calcium into pancreatic β-cells in animal models which reduces insulin secretion.

Affects hormone distribution & levels in circulation



Mechanism

Hormones are constantly circulating in the blood at low concentrations. They are either free (not bound to any protein) or bound to serum binding proteins. Endocrine disrupting chemicals or EDCs interfere with distribution and circulating of hormones by displacing the hormones from serum binding proteins thereby affecting their bioavailability and delivery to tissues; Studies have shown that BPA exposure can reduce circulating levels of testosterone and dihydrotestosterone in both humans and animal models. Additionally, BPA has been linked to changes in circulating levels of thyroid hormones due to its interference with binding proteins that transport these hormones in the bloodstream

SUPPLEMENT SUGGESTIONS

P. integerrima(0.5 g/day): This extract may alleviate BPA-induced toxicity by enhancing the activity of detoxifying enzymes, such as cytochrome P450, glutathione S-transferase, and glucuronosyltransferase, which facilitate the metabolism and elimination of BPA from the body.

Endocrine Disruptors

SUPPLEMENT SUGGESTIONS

Green Tea(2 cups/day): The polyphenols in green tea, particularly epigallocatechin gallate (EGCG), exhibit antioxidant properties that scavenge reactive oxygen species (ROS) and reduce oxidative stress caused by BPA, thus protecting cellular integrity.

Soy-rich Diet(25 g/day): Isoflavones found in soy, such as genistein, can modulate estrogenic activity and reduce BPA's endocrine-disrupting effects by competing with BPA for binding sites on estrogen receptors, mitigating its toxic impact on hormonal balance.

Grape Juice (Gb)(150 ml/day): Red grape juice contains resveratrol and other polyphenols that counteract BPA-induced apoptosis and oxidative stress by modulating apoptotic pathways and enhancing mitochondrial function, thereby promoting cell survival.

KRG (Korean Red Ginseng)(1 g/day): KRG is known to enhance antioxidant defenses and reduce inflammation through its ginsenosides, which can mitigate oxidative stress and protect against BPA-induced cellular damage in various tissues.

Ginseng(1 g/day): Ginseng extracts possess adaptogenic properties that help stabilize cellular responses to stressors like BPA by enhancing antioxidant enzyme activity and reducing inflammation, thereby protecting cells from oxidative damage.

Resveratrol (RSV)(100 mg/day): Resveratrol has been shown to exert protective effects against BPA toxicity by activating sirtuins, which play a role in cellular stress resistance and mitochondrial function, effectively reducing oxidative damage.

Luteolin(100 mg/day): This flavonoid exhibits strong antioxidant properties that can scavenge ROS generated by BPA exposure, thereby reducing oxidative stress and inflammation in affected tissues.

Lycopene(6 mg/day): Lycopene acts as an antioxidant that can inhibit lipid peroxidation and protect against BPA-induced cellular damage by neutralizing free radicals and modulating inflammatory responses.

AS IV (Astragalus Saponin IV)(100 mg/day): AS IV has been shown to mitigate BPA toxicity through its ability to enhance antioxidant enzyme activities and reduce inflammation, thus supporting cellular health under oxidative stress conditions.

Genistein(40 mg/day): As a phytoestrogen, genistein can compete with BPA for estrogen receptors, reducing the endocrine-disrupting effects of BPA while also providing antioxidant benefits that protect against oxidative stress.

Curcumin(500 mg/day): Curcumin exhibits potent anti-inflammatory and antioxidant properties that can counteract the harmful effects of BPA by reducing oxidative stress and modulating signaling pathways involved in inflammation.

Centella asiatica (600 mg/day): Centella asiatica enhances wound healing and skin health by promoting collagen synthesis and angiogenesis, primarily through its active compounds like asiaticoside, which stimulate fibroblast proliferation and improve blood circulation.

Vitamin D3(600 IU/day): Vitamin D3 supports calcium absorption and bone health while modulating immune function. It also plays a role in reducing inflammation and may improve mood and cognitive function through its effects on neurotransmitter synthesis.

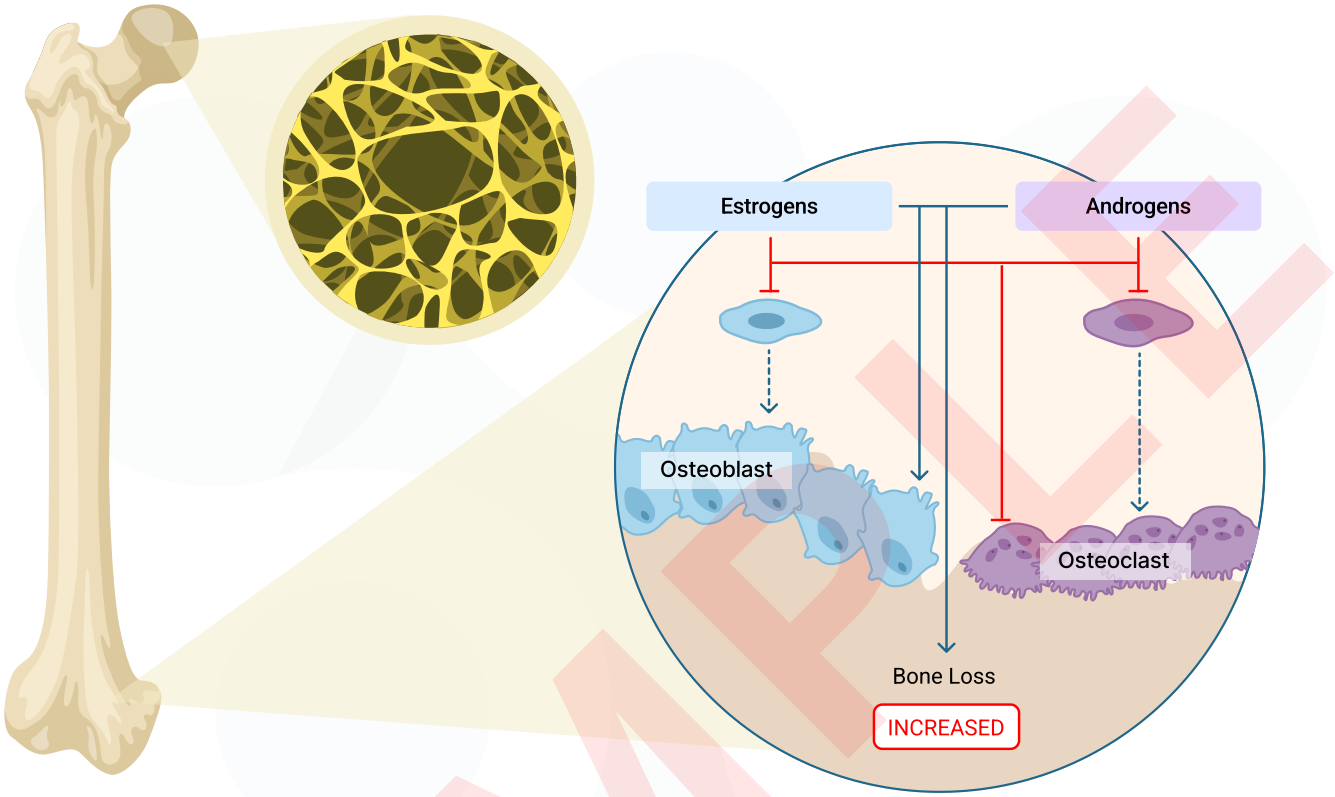
Hormone Zoomer - Summary

Endocrine Disruptors

Test Name	Current	Previous	Result (75th / 95th)	Reference
Perchlorate (PERC) (ug/g)	1.41		4.89 / 10.7	≤10.7
Atrazine (ug/g)	0.02		0.02 / 0.05	≤0.05
Monoethyl Phthalate (MEP) (mcg/g)	3.09		5.9 / 678.89	≤5.9
Mono-2-ethylhexyl phthalate (MEHP) (ug/g)	0.06		2.73 / 8.47	≤8.47
Mono-(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP) (ug/g)	0.39		14.1 / 37.7	≤37.7
Mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP) (ug/g)	1.18		8.99 / 23.4	≤23.4
Methylparaben (ug/g)	2.29		180 / 653	≤653
Propylparaben (ug/g)	0.12		36.7 / 222	≤222
Butylparaben (ug/g)	0.07		0.25 / 4.39	≤4.39
Ethylparaben (ug/g)	0.62		5.41 / 99.3	≤99.3
Triclosan (TCS) (ug/g)	12.14		29.9 / 358	≤358

Hormone Zoomer - Summary

Bone Health



Test Name	Current	Previous	Reference	Test Name	Current	Previous	Reference
Deoxypyridinoline (DPD) (nmol/mmol)	16.82			Pyridinoline (PYD) (nmol/mmol)	23.93		

COMMENTS

Deoxypyridinoline (DPD): Deoxypyridinoline (DPD) is a molecule that provides structural stiffness to collagen type I found in bones. It stabilizes collagen by forming crosslinks between individual collagen peptides. Crosslinked collagen is broken down during bone resorption, and DPD crosslinks are released into circulation. DPD is excreted through urine and is recognized as an important biomarker of bone collagen degradation. Hormones such as estrogen and testosterone play a crucial role in maintaining bone health by regulating bone formation and resorption. An imbalance in these hormones, such as decreased testosterone levels in men, can lead to increased bone loss and a higher risk of osteoporosis and fractures. This makes assessing bone health essential, with high levels of DPD in urine potentially indicating osteoporosis, Paget's disease, or hyperthyroidism.

SUPPLEMENT SUGGESTIONS

Calcium(1500 mg/day): Calcium supplementation reduces bone resorption by inhibiting osteoclast activity, leading to decreased collagen breakdown. Calcium MCHC is a more bioavailable form of calcium and includes phosphorus, collagen and other minerals and is a preferred version for better absorption. This supplementation lowers the release of deoxypyridinoline (DPD) into circulation. As a result, urinary DPD levels, a marker of bone degradation, decreases.

Soy flavones(56 mg/day): Soy isoflavones decrease urinary deoxypyridinoline (DPD) by inhibiting bone resorption through estrogen receptor activation, leading to reduced osteoclast activity. This suppression decreases collagen breakdown, lowering DPD levels. Additionally, isoflavones promote bone formation, further reducing bone turnover.

Bone Health

SUPPLEMENT SUGGESTIONS

RNAse-enriched-Lactoferrin (R-ELF)(125 mg/day): RNAse-enriched-Lactoferrin (R-ELF) inhibits osteoclast activity, reducing bone resorption and consequently lowering urinary deoxypyridinoline (DPD), a marker of collagen breakdown. R-ELF also promotes osteoblast differentiation, enhancing bone formation.

Genistein(54 mg/day): Genistein decreases urinary deoxypyridinoline (DPD) by inhibiting osteoclast activity, leading to reduced bone resorption. It modulates estrogen receptors and promotes osteoblast differentiation, enhancing bone formation. This dual action lowers collagen degradation markers like DPD in urine.

Hormone Zoomer - Summary

Suggestions

Adrenal Hormones

SUPPLEMENTS

Liquorice 100 g/day

Liquorice increases deoxycorticosterone levels by inhibiting the enzyme 11β-hydroxysteroid dehydrogenase type 2, which converts active cortisol to its inactive form, cortisone. This inhibition leads to an accumulation of cortisol, which mimics mineralocorticoids like aldosterone. As a result, there is an upregulation of deoxycorticosterone, a precursor in the aldosterone synthesis pathway.

Magnesium 350 mg/day

Magnesium supplements decrease cortisol by regulating the hypothalamic-pituitary-adrenal (HPA) axis, which controls stress response. Magnesium acts as a cofactor for enzymes involved in neurotransmitter synthesis, promoting GABA activity, and reducing excessive neuronal firing, which helps lower cortisol production. Additionally, magnesium enhances sleep quality, further reducing cortisol levels.

Vitamin C 1500 mg/day

Vitamin C supplementation decreases cortisol levels by reducing the secretion of cortisol in response to stress. It supports the adrenal glands, which produce cortisol, thereby improving their function and reducing excessive cortisol release. Additionally, vitamin C acts as an antioxidant, mitigating oxidative stress that can stimulate cortisol production.

Ashwagandha 600 mg/day

Ashwagandha or its root extract decreases cortisol by inhibiting the activity of the hypothalamic-pituitary-adrenal (HPA) axis, leading to reduced adrenal cortisol production. It enhances the resilience of the body to stress, promoting homeostasis and lowering cortisol levels. Additionally, ashwagandha's bioactive compounds modulate neurotransmitter activity, further aiding in stress reduction.

Tangeretin 200 mg/day

Tangeretin, a polymethoxylated flavone found in citrus peels, decreases cortisol levels by inhibiting the enzyme 11β-hydroxysteroid dehydrogenase type 1 (11β-HSD1), which converts inactive cortisone to active cortisol. This inhibition reduces the overall production of cortisol within tissues. Additionally, tangeretin's antioxidant properties may mitigate stress-induced cortisol secretion, further lowering cortisol levels in the body.

Ginger 4 g/day

Ginger appears to lower blood pressure by acting as a natural calcium channel blocker and dilating blood vessels through enhanced nitric oxide production and prostaglandin synthesis.

Magnesium 350 mg/day

Magnesium supplementation has been shown to be effective in reducing both systolic and diastolic blood pressure through mechanisms such as vasodilation, modulation of calcium influx, and regulation of vascular tone.

Potassium 3,400 mg/ day

Potassium relaxes the walls of the blood vessels, lowering blood pressure and protecting against muscle cramping through mechanisms such as promoting vasodilation, balancing sodium levels, and ensuring proper muscle function.

CoQ10 1,200 mg/day

CoQ10 has the potential to lower both systolic and diastolic blood pressure through mechanisms such as improving endothelial function, reducing oxidative stress, and enhancing nitric oxide production.

Vitamin D 600 IU/day

Vitamin D supplementation significantly lowers renin synthesis and blood pressure by modulating the renin-angiotensin-aldosterone system (RAAS), reducing inflammation, and improving endothelial function.

Hormone Zoomer - Summary

Suggestions

Diurnal Cortisol

SUPPLEMENTS

Magnesium 350 mg/day

Magnesium supplements decrease cortisol by regulating the hypothalamic-pituitary-adrenal (HPA) axis, which controls stress response. Magnesium acts as a cofactor for enzymes involved in neurotransmitter synthesis, promoting GABA activity, and reducing excessive neuronal firing, which helps lower cortisol production. Additionally, magnesium enhances sleep quality, further reducing cortisol levels.

Vitamin C 1500 mg/day

Vitamin C supplementation decreases cortisol levels by reducing the secretion of cortisol in response to stress. It supports the adrenal glands, which produce cortisol, thereby improving their function and reducing excessive cortisol release. Additionally, vitamin C acts as an antioxidant, mitigating oxidative stress that can stimulate cortisol production.

Ashwagandha 600 mg/day

Ashwagandha or its root extract decreases cortisol by inhibiting the activity of the hypothalamic-pituitary-adrenal (HPA) axis, leading to reduced adrenal cortisol production. It enhances the resilience of the body to stress, promoting homeostasis and lowering cortisol levels. Additionally, ashwagandha's bioactive compounds modulate neurotransmitter activity, further aiding in stress reduction.

Tangeretin 200 mg/day

Tangeretin, a polymethoxylated flavone found in citrus peels, decreases cortisol levels by inhibiting the enzyme 11β-hydroxysteroid dehydrogenase type 1 (11β-HSD1), which converts inactive cortisone to active cortisol. This inhibition reduces the overall production of cortisol within tissues. Additionally, tangeretin's antioxidant properties may mitigate stress-induced cortisol secretion, further lowering cortisol levels in the body.

Testosterone

SUPPLEMENTS

Soy isoflavones 2.01 mg/day

Isoflavone supplementation has been shown to reduce circulating dihydrotestosterone (DHT) levels, which may help restore hormonal balance by reducing the androgen burden and subsequently lowering androsterone, a downstream metabolite.

Saw palmetto 320 mg/day

Saw palmetto extract, known to inhibit 5α-reductase, reduces DHT synthesis and has been linked to decreased prostatic cell proliferation, thereby addressing prostate-related symptoms.

Green tea 400 mg/day

Green tea supplementation has significantly reduced both testosterone and DHT levels in vivo, suggesting broader regulatory effects on androgen levels that may relieve symptoms like irritability, oily skin, and hair thinning.

Pumpkin seed 30 g/day

Pumpkin seed oil (PSO) exerts similar effects by inhibiting testosterone's conversion into DHT, offering support for men experiencing androgen-driven scalp issues and prostate discomfort.

Licorice 70 g/day

Licorice root extract, rich in phytoestrogens, can modulate testosterone activity, helping balance hormonal fluctuations that may manifest as fatigue or hair thinning.

Curcumin 250 mg curcumin

Curcumin suppress the expression of testosterone, DHT, 5α-reductase, estradiol (E2), and PSA, which not only helps in managing symptoms of benign prostatic hyperplasia (BPH) but also supports broader endocrine stability.

Banana flower extract 1g/day

Banana flower extract has been found to reduce oxidative stress and inhibit the expression of genes like SRD5A1, SRD5A2, and androgen receptor (AR)—all of which are involved in androgen metabolism and signaling—potentially improving scalp health and overall hormonal equilibrium.

Hormone Zoomer - Summary

Suggestions

Estrogen

SUPPLEMENTS

Soy protein isolates 40g/d

Soy protein isolates contain phytoestrogens, particularly isoflavones, which can mimic estrogen by binding to estrogen receptors in the body. This binding stimulates the hypothalamus-pituitary-gonadal axis, leading to increased production of estradiol. Additionally, isoflavones may inhibit the metabolism of estradiol, further increasing its levels.

Progesterone

SUPPLEMENTS

Vitamin D 600 IU/day

Vitamin D supplementation is associated with decreased depressive symptoms and anxiety, especially in individuals with deficiency. It plays a regulatory role in neuroinflammation, neuroplasticity, and serotonergic signaling.

Hormone Ratios

SUPPLEMENTS

Vitamin D 600 IU/day

Vitamin D supplements decrease cortisol/cortisone levels by modulating the hypothalamic-pituitary-adrenal (HPA) axis, leading to reduced adrenal gland secretion of these hormones. This regulation involves vitamin D receptor (VDR) activation, which influences gene expression associated with cortisol production. Additionally, vitamin D's anti-inflammatory properties can indirectly lower cortisol levels by reducing systemic inflammation.

Soy isoflavones 2.01 mg/day

Soy isoflavones, such as genistein, inhibit the activity of aromatase, reducing estrogen synthesis. They also act as selective estrogen receptor modulators, which can decrease the formation of 4-OH estradiol. Additionally, they increase the expression of detoxification enzymes, promoting the metabolism and excretion of 4-OH estradiol.

Endocrine Disruptors

SUPPLEMENTS

Vitamin E 22 IU/day

Vitamin E through its antioxidant properties protect cells from oxidative damage by neutralizing ROS generated during toxin exposure. It also enhances the activity of other antioxidants and improves hormonal balance, thereby mitigating reproductive and cellular dysfunction caused by endocrine disruptors.

Vitamin C 90 mg/day

Vitamin C mitigates glyphosate-induced toxicity by acting as a potent antioxidant, scavenging reactive oxygen species (ROS) and reducing oxidative stress in affected tissues. It also enhances the activity of detoxifying enzymes, promoting the elimination of glyphosate from the body. Additionally, vitamin C helps restore cellular health by maintaining redox balance and supporting immune function.

P. integerrima 0.5 g/day

This extract may alleviate BPA-induced toxicity by enhancing the activity of detoxifying enzymes, such as cytochrome P450, glutathione S-transferase, and glucuronosyltransferase, which facilitate the metabolism and elimination of BPA from the body.

Green Tea 2 cups/day

The polyphenols in green tea, particularly epigallocatechin gallate (EGCG), exhibit antioxidant properties that scavenge reactive oxygen species (ROS) and reduce oxidative stress caused by BPA, thus protecting cellular integrity.

Hormone Zoomer - Summary

Suggestions

Endocrine Disruptors

SUPPLEMENTS

Soy-rich Diet 25 g/day

Isoflavones found in soy, such as genistein, can modulate estrogenic activity and reduce BPA's endocrine-disrupting effects by competing with BPA for binding sites on estrogen receptors, mitigating its toxic impact on hormonal balance.

Grape Juice (Gb) 150 ml/day

Red grape juice contains resveratrol and other polyphenols that counteract BPA-induced apoptosis and oxidative stress by modulating apoptotic pathways and enhancing mitochondrial function, thereby promoting cell survival.

KRG (Korean Red Ginseng) 1 g/day

KRG is known to enhance antioxidant defenses and reduce inflammation through its ginsenosides, which can mitigate oxidative stress and protect against BPA-induced cellular damage in various tissues.

Ginseng 1 g/day

Ginseng extracts possess adaptogenic properties that help stabilize cellular responses to stressors like BPA by enhancing antioxidant enzyme activity and reducing inflammation, thereby protecting cells from oxidative damage.

Resveratrol (RSV) 100 mg/day

Resveratrol has been shown to exert protective effects against BPA toxicity by activating sirtuins, which play a role in cellular stress resistance and mitochondrial function, effectively reducing oxidative damage.

Luteolin 100 mg/day

This flavonoid exhibits strong antioxidant properties that can scavenge ROS generated by BPA exposure, thereby reducing oxidative stress and inflammation in affected tissues.

Lycopene 6 mg/day

Lycopene acts as an antioxidant that can inhibit lipid peroxidation and protect against BPA-induced cellular damage by neutralizing free radicals and modulating inflammatory responses.

AS IV (Astragalus Saponin IV) 100 mg/day

AS IV has been shown to mitigate BPA toxicity through its ability to enhance antioxidant enzyme activities and reduce inflammation, thus supporting cellular health under oxidative stress conditions.

Genistein 40 mg/day

As a phytoestrogen, genistein can compete with BPA for estrogen receptors, reducing the endocrine-disrupting effects of BPA while also providing antioxidant benefits that protect against oxidative stress.

Curcumin 500 mg/day

Curcumin exhibits potent anti-inflammatory and antioxidant properties that can counteract the harmful effects of BPA by reducing oxidative stress and modulating signaling pathways involved in inflammation.

Centella asiatica 600 mg/day

Centella asiatica enhances wound healing and skin health by promoting collagen synthesis and angiogenesis, primarily through its active compounds like asiaticoside, which stimulate fibroblast proliferation and improve blood circulation.

Vitamin D3 600 IU/day

Vitamin D3 supports calcium absorption and bone health while modulating immune function. It also plays a role in reducing inflammation and may improve mood and cognitive function through its effects on neurotransmitter synthesis.

Hormone Zoomer - Summary

Suggestions

Bone Health

SUPPLEMENTS

Calcium 1500 mg/day

Calcium supplementation reduces bone resorption by inhibiting osteoclast activity, leading to decreased collagen breakdown. Calcium MCHC is a more bioavailable form of calcium and includes phosphorus, collagen and other minerals and is a preferred version for better absorption. This supplementation lowers the release of deoxypyridinoline (DPD) into circulation. As a result, urinary DPD levels, a marker of bone degradation, decreases.

Soy flavones 56 mg/day

Soy isoflavones decrease urinary deoxypyridinoline (DPD) by inhibiting bone resorption through estrogen receptor activation, leading to reduced osteoclast activity. This suppression decreases collagen breakdown, lowering DPD levels. Additionally, isoflavones promote bone formation, further reducing bone turnover.

RNAse-enriched-Lactoferrin (R-ELF) 125 mg/day

RNAse-enriched-Lactoferrin (R-ELF) inhibits osteoclast activity, reducing bone resorption and consequently lowering urinary deoxypyridinoline (DPD), a marker of collagen breakdown. R-ELF also promotes osteoblast differentiation, enhancing bone formation.

Genistein 54 mg/day

Genistein decreases urinary deoxypyridinoline (DPD) by inhibiting osteoclast activity, leading to reduced bone resorption. It modulates estrogen receptors and promotes osteoblast differentiation, enhancing bone formation. This dual action lowers collagen degradation markers like DPD in urine.

Patient Name: DEMO DEMO
Date of Birth: 1975-01-20 Accession ID: 2367559335
Service Date: 2025-01-15 07:58 (PDT)

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Adrenal Hormones	Current	Previous	Result	Reference
b-Tetrahydrocortisol (b-THF) (mcg/g)	505.73		0 199 604	199.36-604.11
a-Tetrahydrocortisol (a-THF) (mcg/g)	28.59		0 18.3 59.7	18.32-59.71
b-Tetrahydrocortisone (b-THE) (mcg/g)	1126.11		0 304 1278	304.1-1278.14
Deoxycorticosterone (mcg/g)	0.44		0 0.64 2.18	0.65-2.18
Corticosterone (mcg/g)	27.56		0 3.65 10.1	3.66-10.12
DHEA (mcg/g)	59.74		0 9 92.6	9.01-92.66
DHEA-S (mcg/g)	122.26		0 20.6 142	20.69-142.22
Total Cortisol (mcg/g)	41.36		0 9.14 30.9	9.15-30.99
Total Cortisone (mcg/g)	19.26		0 15.2 40.9	15.27-40.91

Diurnal Cortisol	Current	Previous	Result	Reference
Free Cortisol (1st Morning) (mcg/g)	99.35		0 7.49 36.2	7.5-36.2
Free Cortisol (2nd Morning) (mcg/g)	100.19		0 24.8 66.4	24.9-66.4
Free Cortisol (Evening) (mcg/g)	16.90		0 6.09 18.9	6.1-18.9
Free Cortisol (Night) (mcg/g)	8.67		0 3.19 9.2	3.2-9.2
Free Cortisol (pooled) (mcg/g)	17.03		0 10.4 32.6	10.43-32.68

Diurnal Cortisone	Current	Previous	Result	Reference
Free Cortisone (1st Morning) (mcg/g)	74.50		0 32.6 95.8	32.7-95.8
Free Cortisone (2nd Morning) (mcg/g)	146.00		0 63.0 179	63.1-179.2
Free Cortisone (Evening) (mcg/g)	44.85		0 34.4 95.6	34.5-95.6
Free Cortisone (Night) (mcg/g)	13.92		0 11.1 40.9	11.2-40.9
Free Cortisone (pooled) (mcg/g)	69.82		0 35.3 102	35.38-102.88

Diurnal Melatonin	Current	Previous	Result	Reference
Melatonin (1st Morning) (mcg/g)	12.03		0 10.1 28.6	10.2-28.6

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Diurnal Melatonin	Current	Previous	Result	Reference
Melatonin (2nd Morning) (mcg/g)	16.87		0 6.49 17.6	6.5-17.6
Melatonin (Evening) (mcg/g)	2.89		0 0.51 3.66	0.52-3.66
Melatonin (Night) (mcg/g)	7.72		0 1.31 8.55	1.32-8.55
Melatonin (pooled) (mcg/g)	9.88		0 4.63 14.6	4.64-14.6

Testosterone	Current	Previous	Result	Reference
Testosterone (T) (mcg/g)	8.92		0 3.05 13.6	3.06-13.66
Epi-Testosterone (Epi-T) (mcg/g)	8.32		0 3.65 9.05	3.66-9.05
Androstenedione (mcg/g)	7.31		0 2.04 9.57	2.05-9.57
Androsterone (mcg/g)	999.52		0 341 739	341.1-739.8
Etiocholanolone (mcg/g)	724.96		0 265 775	265.3-775.1
5a-DHT (mcg/g)	1.94		0 0.77 2.69	0.78-2.69
5a,3a-Androstanediol (mcg/g)	11.79		0 9.65 28.5	9.66-28.59
5b-Androstanediol (mcg/g)	21.92		0 17.9 59.1	17.98-59.11

Estrogen	Current	Previous	Result	Reference
Estradiol (E2) (mcg/g)	0.07		0 0.13 0.49	0.14-0.49
Estrone (E1) (mcg/g)	0.87		0 0.59 1.71	0.6-1.71
Estriol (E3) (mcg/g)	0.56		0 0.19 0.65	0.2-0.65
Total Estrogen (mcg/g)	2.46		0 1.37 4.29	1.38-4.29
2-OH Estradiol (mcg/g)	0.11		0 0.03 0.15	0.04-0.15
2-OH Estrone (mcg/g)	0.22		0 0.17 0.52	0.18-0.52
4-OH Estradiol (mcg/g)	0.07		0 0.02 0.08	0.03-0.08
4-OH Estrone (mcg/g)	0.06		0 0.04 0.12	0.05-0.12
16a-OH Estrone (mcg/g)	0.11		0 0.04 0.26	0.05-0.26

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Estrogen	Current	Previous	Result	Reference
2-MeO Estradiol (mcg/g)	0.04		0 0.01 0.05	0.02-0.05
2-MeO Estrone (mcg/g)	0.11		0 0.05 0.18	0.06-0.18
4-MeO Estradiol (mcg/g)	0.05		0 0.05	≤0.05
4-MeO Estrone (mcg/g)	0.03		0 0.05	≤0.05

Progesterone	Current	Previous	Result	Reference
Allopregnanolone (mcg/g)	7.13		0 0.3 1.32	0.31-1.32
3αDihydroprogesterone (mcg/g)	0.78		0 0.21 0.79	0.22-0.79
20αDihydroprogesterone (mcg/g)	1.01		0 0.52 3.05	0.53-3.05
b-Pregnanediol (mcg/g)	83.86		0 38.4 144	38.5-144.3
a-Pregnanediol (mcg/g)	170.05		0 21.7 75.2	21.8-75.2

Hormone Ratios	Current	Previous	Result	Reference
2-MeO E1/2-OH E1	0.50		0 0.19 0.4	0.2-0.4
T/Epi-T	1.07		0 0.95 2.32	0.96-2.32
Cortisol/Cortisone (mcg/g)	1.11		0 0.59 0.76	0.6-0.76
Metabolized Cortisol (THF+THE) (mcg/g)	1660.43		0 521 1941	521.78-1941.96

Oxidative Stress	Current	Previous	Result	Reference
8-hydroxy-2'-deoxyguanosine (8-OHdG) (mcg/g)	2.40		0 4.77	≤4.77

Creatinine	Current	Previous	Result	Reference
Creatinine (1st Morning) (mg/ml)	0.80		0 0.24 2.16	0.25-2.16
Creatinine (2nd Morning) (mg/ml)	2.04		0 0.24 2.16	0.25-2.16
Creatinine (Evening) (mg/ml)	1.86		0 0.24 2.16	0.25-2.16
Creatinine (Night) (mg/ml)	1.14		0 0.24 2.16	0.25-2.16
Creatinine (pooled) (mg/ml)	1.46		0 0.24 2.16	0.25-2.16

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Endocrine Disruptors	Current	Previous	Result	Reference
Glyphosate (ug/g)	5.73		0 1.65 7.6	≤7.6
Bisphenol A (BPA) (ug/g)	5.06		0 2.12 5.09	≤5.09
Perchlorate (PERC) (ug/g)	1.41		0 4.89 10.7	≤10.7
Atrazine (ug/g)	0.02		0 0.02 0.05	≤0.05
Monoethyl Phthalate (MEP) (mcg/g)	3.09		0 5.9 678	≤5.9
Mono-2-ethylhexyl phthalate (MEHP) (ug/g)	0.06		0 2.73 8.47	≤8.47
Mono-(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP) (ug/g)	0.39		0 14.1 37.7	≤37.7
Mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP) (ug/g)	1.18		0 8.99 23.4	≤23.4
Methylparaben (ug/g)	2.29		0 180 653	≤653
Propylparaben (ug/g)	0.12		0 36.7 222	≤222
Butylparaben (ug/g)	0.07		0 0.25 4.39	≤4.39
Ethylparaben (ug/g)	0.62		0 5.41 99.3	≤99.3
Triclosan (TCS) (ug/g)	12.14		0 29.9 358	≤358

Bone Health	Current	Previous	Result	Reference
Deoxypyridinoline (DPD) (nmol/mmol)	16.82		0 2.59 8.7	2.6-8.7
Pyridinoline (PYD) (nmol/mmol)	23.93		0 20 40	20-40

Risk and Limitations

This test has been developed and its performance characteristics determined and validated 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 Wellness provides additional contextual information on these tests and provides the report in more descriptive fashion.

Hormone Zoomer testing is performed at Vibrant America and utilizing 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.

Tested individuals should not change their diet, physical activity, or any medical treatments they are currently using based on the results without consulting their personal health care provider. 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. Tested individuals may find their experience is not consistent with Vibrant's selected peer reviewed scientific research findings of relative improvement for study groups. Science in this area is still developing, and many personal health factors affect diet and health. Since subjects in the scientific studies referenced in this report may have had personal health and other factors different from those of tested individuals, results from these studies may not be representative of the results experienced by tested individuals. Further, some recommendations may or may not be attainable, depending on the tested individual's physical ability or other personal health factors. A limitation of this testing is that many of these scientific studies may have been performed in selected populations only. The interpretations and recommendations are done in the context of these studies, but the results may or may not be relevant to tested individuals of different or mixed ethnicities. Please note that pediatric ranges have not been established for these tests. Interference studies have not been established for individuals on immunosuppressive drugs.

Based on test results and other medical knowledge of the tested individual, health care providers might consider additional independent testing, or consult another health care provider or a genetic counselor. The suggested supplements and dosages in this report are based on current research and are not intended as medical advice. Individual needs may vary, and these suggestions should not replace professional medical guidance. Consult with a qualified healthcare provider before starting any new supplement regimen, especially if you have pre-existing health conditions or are taking medications. For specific scientific references supporting these suggestions, please contact our support team.

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 with questions regarding test results, or before beginning any course of supplementation, dietary or lifestyle changes.