
dutchcases

DISCLAIMER

Please be aware that different healthcare providers may have varying approaches to lab testing and interpretation. The selection of specific tests, methodologies, and treatment recommendations can differ based on the provider's training, experience, and the individual needs of the patient. Providers should always use their best clinical judgment when making decisions for patient care.

The medical information in this case study is provided as an information resource only and is not to be used or relied on for any diagnostic or treatment purposes. This lecture contains general information about medical conditions and treatments. The information is not advice and should not be treated as such. This information is not intended to be patient education, does not create any patient-physician relationship, and should not be used as a substitute for professional diagnosis and treatment.

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dutch cases

Case 8: Rob

Male Sexual Dysfunction

Case 8: Rob, a 49-yo Male with Sexual Dysfunction

Chief Complaints

- Erectile dysfunction
- Inability to build muscle mass
- Exercise intolerance
- Fatigue
- Depression

PMHx

- Obesity, Metabolic syndrome
- Metabolic dysfunction-associated steatohepatitis (MASH)
- Essential hypertension
- Chronic low back pain

Medications: Lisinopril 20mg QD

Physical Exam

- 6’2”; 260 lbs.; BMI: 33.4
- BP 125/82 mm Hg (with medication)
- Pulse 78 bpm

Pertinent Serum Labs:

- Fasting glucose 120 mg/dL **(H)**; A1C: 6.2 **(H)**
- AST (SGOT) 40 IU/L, ALT (SGPT) 52 IU/L **(high-end)**
- Triglycerides: 280 mg/dL **(H)**, LDL 155 mg/dL **(H)**
- Total T: 325ng/dL **(low-end)**; E2 HS: 55 pg/ml **(H)**

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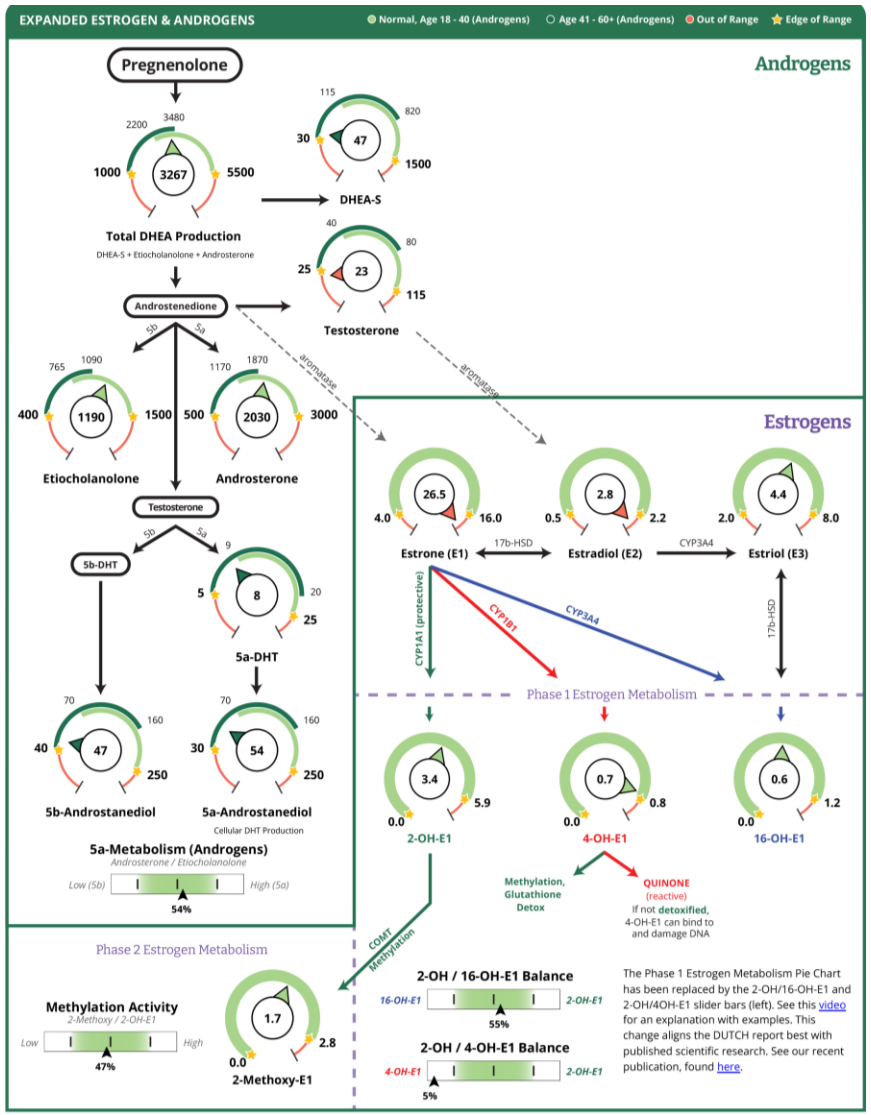

Sex Hormones & Metabolites

TEST		RESULT	UNITS	NORMAL RANGE
Progesterone Metabolites (Urine)				
b-Pregnanediol	High end of range	370.6	ng/mg	75 - 400
a-Pregnanediol	High end of range	121.2	ng/mg	20 - 130
Estrogens and Metabolites (Urine)				
Estrone (E1)	Above range	26.48	ng/mg	4 - 16
Estradiol (E2)	Above range	2.84	ng/mg	0.5 - 2.2
Estriol (E3)	Within range	4.4	ng/mg	2 - 8
2-OH-E1	Within range	3.40	ng/mg	0 - 5.9
4-OH-E1	Within range	0.72	ng/mg	0 - 0.8
16-OH-E1	Within range	0.55	ng/mg	0 - 1.2
2-Methoxy-E1	Within range	1.74	ng/mg	0 - 2.8
2-OH-E2	Within range	0.52	ng/mg	0 - 1.2
4-OH-E2	High end of range	0.24	ng/mg	0 - 0.25
Total Estrogen	Above range	40.9	ng/mg	10 - 34
Metabolite Ratios (Urine)				
2-OH / 16-OH-E1 Balance	Within range	6.18	ratio	2.85 - 9.88
2-OH / 4-OH-E1 Balance	Below range	4.72	ratio	6.44 - 12.6
2-Methoxy / 2-OH Balance	Within range	0.51	ratio	0.4 - 0.7
Androgens and Metabolites (Urine)				
DHEA-S	Within range	46.7	ng/mg	30 - 1500
Androsterone	Within range	2030.3	ng/mg	500 - 3000
Etiocholanolone	Within range	1190.4	ng/mg	400 - 1500
Testosterone	Below range	22.53	ng/mg	25 - 115
5a-DHT	Within range	8.3	ng/mg	5 - 25
5a-Androstanediol	Within range	54.2	ng/mg	30 - 250
5b-Androstanediol	Within range	46.8	ng/mg	40 - 250
Epi-Testosterone	Within range	35.6	ng/mg	25 - 115

"Normal range" shown above refers to the overall range across all ranges, which lands between the stars on the dials. Age-dependent ranges are now included on the DUTCH dials on page 2.

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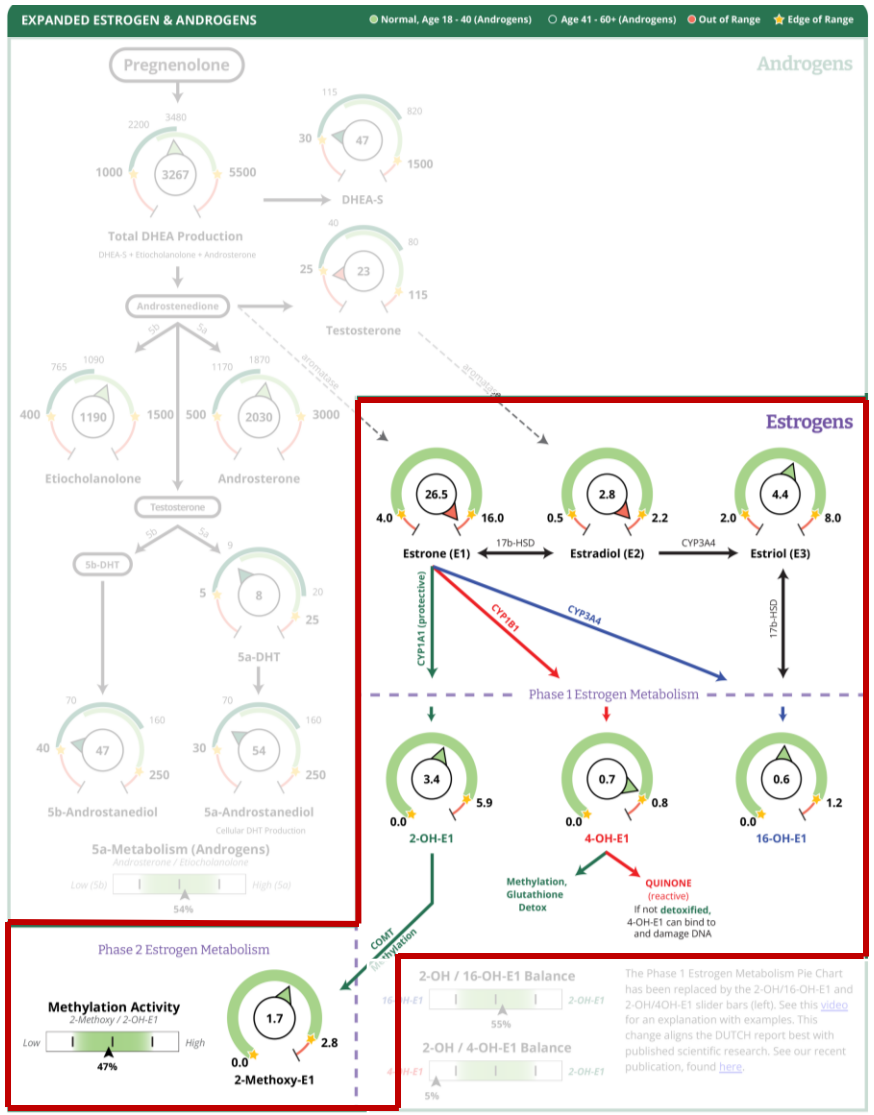

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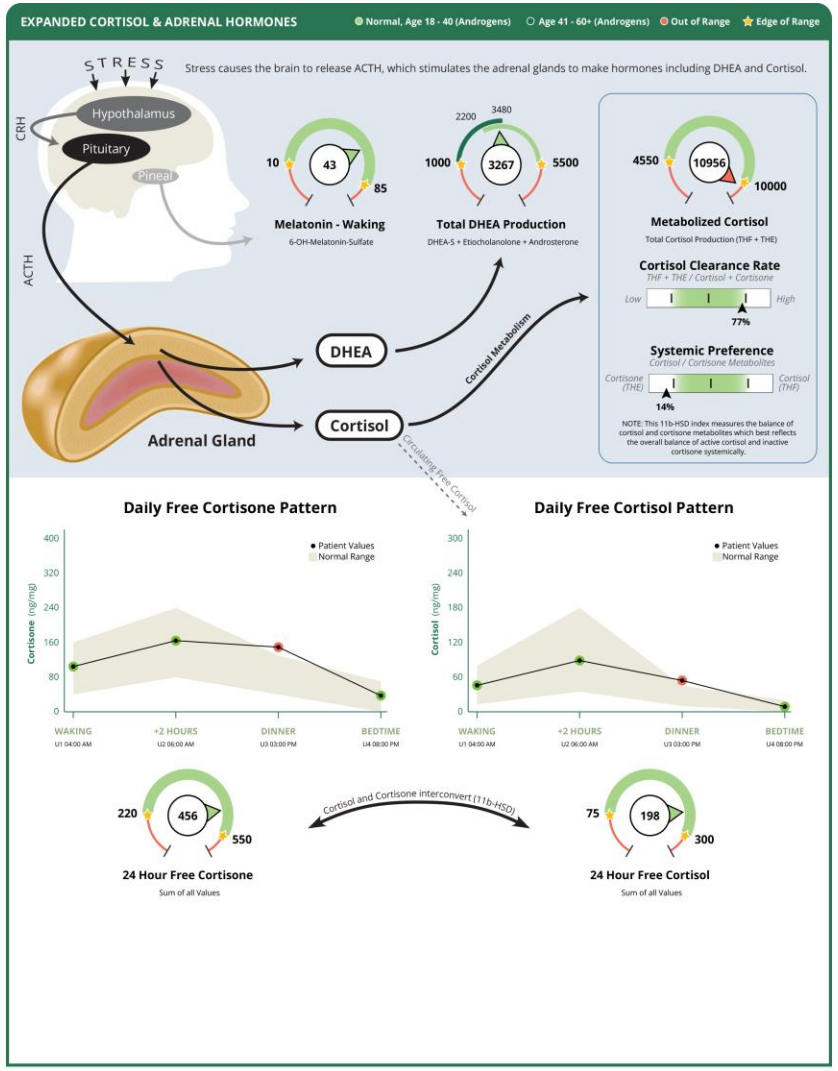

Organic Acid Tests (OATs)

TEST		RESULT	UNITS	NORMAL RANGE
Nutritional Organic Acids (Urine)				
Vitamin B12 Marker - May be deficient if high				
Methylmalonate (MMA)	Within range	0.9	ug/mg	0 - 3.5
Vitamin B6 Markers - May be deficient if high				
Xanthurenate	Within range	0.68	ug/mg	0.2 - 1.9
Kynurenate	Above range	7.3	ug/mg	1 - 6.6
Biotin Marker - May be deficient if high				
b-Hydroxyisovalerate	Within range	12.1	ug/mg	0 - 18
Glutathione Marker - May be deficient if high				
Pyroglutamate	Within range	44.6	ug/mg	38 - 83
Gut Marker - Potential gut putrefaction or dysbiosis if high				
Indican	Within range	70.2	ug/mg	0 - 131
Neuro-Related Markers (Urine)				
Dopamine Metabolite				
Homovanillate (HVA)	Within range	5.9	ug/mg	4 - 16
Norepinephrine/Epinephrine Metabolite				
Vanilmandelate (VMA)	Within range	4.6	ug/mg	2.5 - 7.5
Neuroinflammation Marker				
Quinolinate	Within range	7.5	ug/mg	0 - 12.5
Additional Markers (Urine)				
Melatonin - Waking				
6-OH-Melatonin-Sulfate	Within range	43.2	ng/mg	10 - 85
Oxidative Stress / DNA Damage				
8-Hydroxy-2-deoxyguanosine (8-OHdG)	Within range	2.7	ng/mg	0 - 8.8

- The kynurenate is above the range. This may indicate a vitamin B6 deficiency. B6 is essential for phase 2 methylation (estrogen detoxification), neurotransmitter synthesis, and other key metabolic processes. Tryptophan taken within 72 hours before testing can also raise kynurenate without indicating a true B6 deficiency.

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Case 8: Male Sexual Dysfunction: Goals of Treatment

Goals of Treatment

DUTCH Test Goals

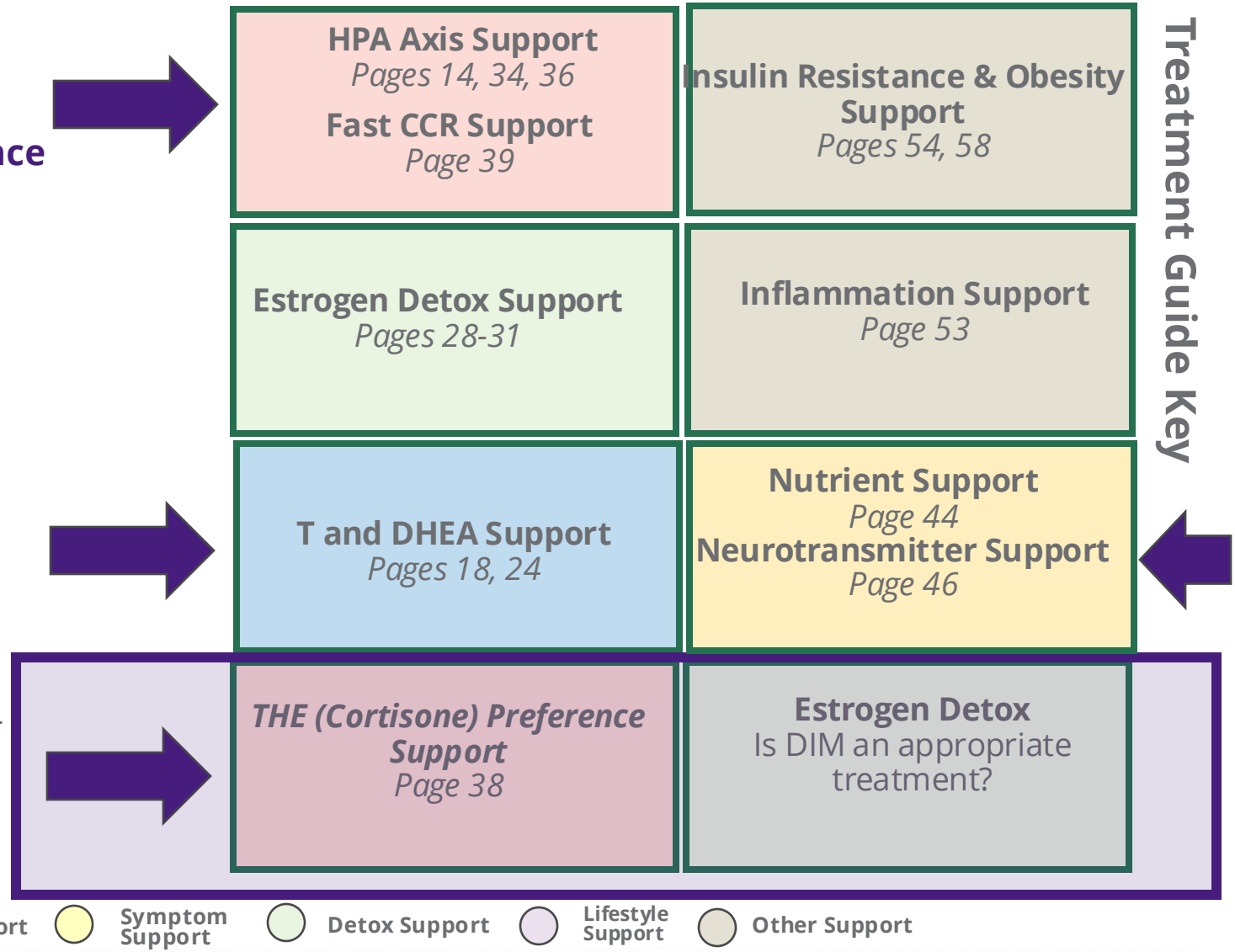
- Increase testosterone, **promote anabolic balance**
- Decrease estrogens
- **Increase phase 1 estrogen clearance**
- Support estrogen detox (2/4 balance)
- Reduce Metabolized Cortisol and CCR
- Replenish B6
- Improve Systemic Preference (THE vs THF)

Blood Lab Goals

- Reduce glucose, A1C, TGs, LDL
- Optimize liver enzymes
- Normalize total testosterone to 500-1000 ng/dL

Lifestyle Goals

- Weight loss diet and back-safe exercise



HPO Axis Support | HPA Axis Support | Other Hormone support | OATs Support | Symptom Support | Detox Support | Lifestyle Support | Other Support

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Sample Treatment Plan:

Medications

- **Consider** GLP-1 agonist
  - **For weight loss if resistant to lifestyle changes**
- **Consider** Metformin 500mg BID
  - **To reduce blood sugars as a first-line option, improve CCR**
- **Consider** Testosterone therapy
  - **To increase T levels and improve symptoms; to support muscle building and reduce catabolic hormone balance.**
- **Consider** aromatase inhibitors 1-2 times weekly if taking testosterone therapy
  - **To prevent T therapy from increasing estrogen levels**

Supplements

- **Consider** DIM 100-200mg BID
  - **To reduce estrogen levels, improve the 2OH/4OH ratio, and promote faster estrogen clearance.**
- **Consider** supplemental fiber
  - **To reduce enterohepatic reabsorption of estrogen**
- **Consider** NAC 1200-1800 mg/day **to neutralize oxidative stress, reduce 4-OH genotoxicity**

Diet

- **Consider an** anti-inflammatory, **protein-forward** weight-loss diet for 4-6 weeks and slowly reintroduce foods at the end of the protocol
  - **To reduce weight and strain on back and reduce inflammation-related pain**
  - **Protein forward to support muscle maintenance.**

Lifestyle

- Consider back-safe movement, 5-6 days a week (swimming, stationary bike, yoga, core strength training)
- **Emphasis should be on improving mobility first, then introduction of heavier weight, and improvement of VO2 max. Supports muscle building even when in catabolic hormone balance.**

Referrals

- **Refer** for sleep study if weight loss resistant
- **Refer** to Registered Dietitian familiar with functional medicine for accountability with diet
- **Refer** to fitness consultant familiar with Functional Range Conditioning, weightlifting and exercise
  - **For weight loss**

■ DUTCH Dozen ■ Advanced Insights

Polling Question

Polling Question:

What was the key finding that influenced your treatment plan the most?

A. Low testosterone

B. High estrogen

C. High Metabolized cortisol and fast cortisol clearance rate (CCR)

D. Low 2-OH/4-OH balance

Reflection:

How did the Advanced Insights influence your plan?

Case 8: Male Sexual Dysfunction: Sample Treatment Plan

1. How do you know your treatment plan is working?

2. When would you retest?

3. Which DUTCH panel would you order?

Thank You!

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