

# Pain Management

## Frequently Asked Questions

### Does pain impact the endocrine system?

Yes - acute pain enacts the endocrine system while chronic pain suppresses it over time. Both situations can render pain management ineffective. By clinical monitoring of hormones, the effects of chronic pain and the effects of therapy can be better tailored to provide optimal care.

**When a patient complains of the following: fatigue/lethargy, libido changes, and decreased effectiveness of medications – Hormone Replacement Therapy (HRT) may be indicated. Clinical symptoms such as depression, insomnia, hyperalgesia, allodynia, and opioid tolerance are often only a piece of the puzzle when treating a patient’s pain.**

#### Standard options for HRT

- Initial – DHEA or Pregnenolone
- Secondary
  - Men; Hydrocortisone, Testosterone
  - Women; Hydrocortisone, Testosterone, Estradiol
- Tertiary – If your efforts to normalize endocrine levels has proven unsuccessful, it may be necessary to refer a patient to a Hormone Replacement Clinic/ Endocrinologist.

### How often do I test my patients?

- Initial for baseline value.
- Upon patient complaint or new symptoms.
- Re-checking abnormal results.
- Upon medication change.
- Periodically with long term pain management patients.

#### Some Symptoms of Low Serum Hormone Levels

• Weakness	• Hyperalgesia
• Fatigue	• Impaired Analgesia
• Lethargy	• Impaired Mentation
• Depression	• Anorexia
• Decreased Libido	

If you have any additional questions please email us at [info@heliosdx.com](mailto:info@heliosdx.com) or contact your Sales Representative.

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### Which hormones can be affected by pain management?

- DHEA-S
- DHEA
- Cortisol
- Cortisone
- Testosterone
- Estradiol
- DHT
- Vitamin D3
- Estrone

### Hormones for Serum Levels Testing And Replacement

Hormone/Laboratory Test	Reference (normal) Range	Starting Replacement Dosage
Cortisol	4-22 mcg/dL	Hydrocortisone 5-10mg, BID*
DHEA	Female: 23-266 mcg/dL Male: 70-495 mcg/dL	25-50 mg, BID
Estradiol	Female: Premenopausal - 19-57 pg/mL Postmenopausal - <31 pg/mL Male: <39 pg/mL	0.5-1.0 mg/d
Pregnenolone	Female: Premenopausal - 7-88 ng/dL Postmenopausal - 15-111 ng/dL Male: 13-208 ng/dL	25-50 mg, BID
Progesterone	Female: Premenopausal - 1.0-21.3 ng/mL Postmenopausal - <0.5 ng/mL Male: <1.4 ng/mL	25-50 mg/d
Testosterone	Female: 2-45 ng/dL Male: 250-827 ng/dL	Females: use about 1/4 dose for males Males: Use a commercial testosterone replacement therapy and follow label.

Source: Quest Diagnostics

Hydrocortisone converts cortisol, therefore, hydrocortisone is the most commonly used preparation to replace low levels.

\*BID, twice daily

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