Sample Report

Patient Name: John Doe
Dr/Clinic: Care
Accession #: 23059

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The adrenals are, simplistically, the body's stress response glands. They respond to any stressor whether it is physical (heat, pain), physiologic (infection, disease) or emotional (danger, trauma). The functional state of one's adrenal glands, while influenced in quite complex ways, is a result of both the immediate and current level of stressors, the long term effects of intense or persistent stressors one has experienced, and one's individual ability to respond or tolerate the effects of those stressors.
In general, as stress becomes chronic, cortisol levels first rise followed by DHEA levels. As stress continues without relief or balance, DHEA levels tend to fall first followed by cortisol levels. This reflects the more significant physiologic role that cortisol plays in maintaining health.

Interpretation

Laboratory tests must always be interpreted in the context of patient history and examination. Stress analysis is an essential part of this investigation.

1. Normal Cortisol, Normal DHEA

In general this is an indication of proper adaptation to both chronic and acute stressors. In the context of a patient with very long-standing stressors (years) it can indicate either good coping/adaptation methods, or represent hormone levels "dropping through" normal ranges on the way to depleted levels after having been overstimulated (high cortisol, high DHEA) for many years. Careful stress analysis, adrenal restoration measures and a follow up test in two to three months are indicated.

2. Low Cortisol, Low DHEA

Considered by some as "adrenal exhaustion" this is generally a state of insufficient production of adrenal hormones after multiple years of persistent stressors with insufficient coping mechanisms. Patients usually present with fatigue, poor energy and immune system hypofunction. They may exhibit chronic anxiety. In some patients this represents impaired response to shorter-term stressors (i.e. overreactivity to short term stress). Adrenal support and restoration measures, as well as identification and balancing of major stressors are indicated.
This state should not be confused with Addison's disease, which is near absence of adrenal hormones, and is a medical emergency.

3. High Cortisol, High DHEA

This is the state of adrenal overstimulation. In most individuals after a continual period of imbalanced and unrelieved stressors (stressors>relaxers) adrenal levels begin to rise. Cortisol levels tends to rise more rapidly earlier than DHEA as it is a more immediate responder to stress. A search for persistent conscious and hidden or occult stressors with effective remediation is in order. Chronic pain and illness, panic and anxiety disorders, childhood abuse or family dysfunction, food or environmental allergies, reactive hypoglycemia or glucose intolerance are amongst conditions to be considered.
If no major stressors can be identified, further adrenal analysis (urinary metanephrines, VMA, adrenal imaging) are indicated. If levels are excessively elevated, hormone secreting tumors as well as the patient's or physicians use of exogenous adrenal hormones (prednisone, medrol, adrenal extract) should be investigated.

4. High Cortisol, Normal DHEA

In general cortisol responds more rapidly to stressors than DHEA. This usually indicates an acute stress response adaptation. If stressors cannot be elucidated and/or reversed, follow up in 2 – 3 months is indicated. If cortisol levels are exceedingly high, adrenal tumors must be excluded. The use of exogenous steroids (cortisone, cortisol, DHEA, adrenal extract) or adrenal stimulants (caffeine, nicotine, cocaine, PCP) should be investigated.

5. High Cortisol, Low DHEA

This is a relatively rare scenario. But this pattern would indicate a state of long standing stressors depleting adrenal reserves in the face of an acute stressor causing excess cortisol response. Investigation into acute stressors (illness, trauma) is warranted, as are adrenal support protocols. One must also inquire about the use of adrenal supplements or exogenous corticosteroid use.

6. Low Cortisol, High DHEA

This is a also a relatively rare scenario, but in general indicates excessive adrenal fatigue along with the use of exogenous DHEA. It might also represent a recent and/or rapid plunge of cortisol levels after having been excessively elevated from overstimulation over a long period of time.

7. Low Cortisol, Normal DHEA

This generally indicates falling levels of both cortisol and DHEA from excessive stimulation/secretion over long periods of time. It can also reflect the effects of exogenous use of DHEA in low cortisol, low DHEA states after several months of DHEA supplementation.

8. Normal Cortisol, High DHEA

This state can represent a variety of clinical scenarios; hence follow up monthly until a pattern is established would be indicated.
These readings can be seen with excessive use of exogenous DHEA in the face of normal adrenal functioning. It can also reflect a more rapid fall in cortisol levels than DHEA after excessive adrenal stimulation has led to elevations of both DHEA and cortisol.

9. Normal Cortisol, Low DHEA

This generally reflects the "pre-exhaustion" or "pre-adrenal fatigue" states. Usually, DHEA levels fall before cortisol levels are reduced. This is usually a result of inability to balance chronic stressors or poor adaptation to intensive acute stressors. Stress analysis and adrenal support and restorative measures are exceedingly important. Recheck in one month is important.

Salivary Adrenal Hormone Panel

Circadian Cortisol Measurement:

Reference Range

Time	High	Low	Results	Indications
Morning	23	14	***27***	High
Noon	7	4	**15**	High
Afternoon	6	4	***18***	High
Midnight	3	1	**10**	High
DHEA-S	13	4	**6**	Normal