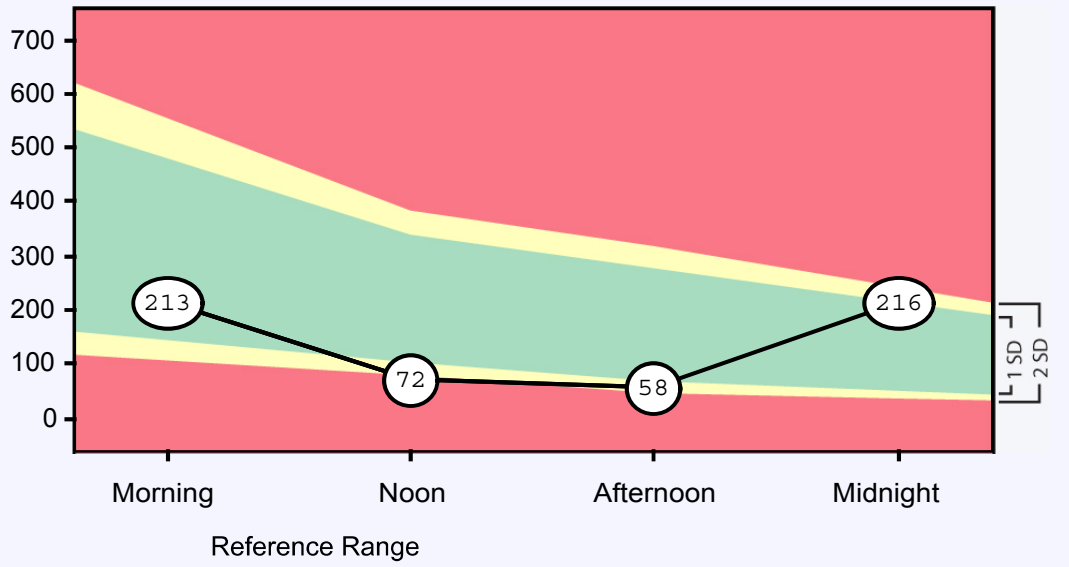
GENOVA DIAGNOSTICS

63 Zillicoa Street
Asheville, NC 28801

Patient: **SAMPLE PATIENT**
Age: 41
Sex: M
MRN:

Order Number:
Completed: July 25, 2006
Received: July 25, 2006
Collected: July 25, 2006

Salivary Testosterone



Reference Range

Morning:	110-513 pmol/L
Noon:	89-362 pmol/L
Afternoon:	66-304 pmol/L
Midnight:	52-239 pmol/L

The Reference Range for each day is a statistical interval representing 95% or 2 Standard Deviations (2 S.D.) of the reference population. One Standard Deviation (1 S.D.) is a statistical interval representing 68% of the reference population. Values between 1and 2 S.D. are not necessarily abnormal. Clinical Correlation is suggested.

Please note: Conversion calculation pg/ml=pMol/L / 3.47

Commentary

The performance characteristics of all assays have been verified by Genova Diagnostics, Inc. Unless otherwise noted with ◆ as cleared by the U.S. Food and Drug Administration, assays are For Research Use Only.

Commentary is provided to the practitioner for educational purposes, and should not be interpreted as diagnostic or treatment recommendations. Diagnosis and treatment decisions are the responsibility of the practitioner.

In the adult male, testosterone maintains the structure and function of the prostate, testes, seminal vesicles, and external male genitalia. In addition, testosterone affects lean body mass, bone density, hematopoiesis, libido and mood.

Testosterone level is below the reference range for sample 2.

Testosterone level is below the reference range for sample 3.

Decreased testosterone levels are associated with fatigue, depression, irritability, decreased libido, impotence, infertility, weight gain, gynecomastia, decreased muscle mass and strength, decreased hematocrit, diminishing body

Commentary

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For the patient:

This profile measures the levels of cortisol and DHEA and provides an evaluation of how cortisol levels differ throughout the day. Cortisol levels typically peak shortly after rising and are at their lowest after the onset of sleep.

Cortisol is involved in many important functions in your body, including the metabolism and utilization of proteins, carbohydrates and fats, your body's response to physiological or psychological stress, and the control of inflammation and proper blood sugar levels. Cortisol also helps maintain proper blood pressure, normal nerve and brain activity and normal heart and immune function. DHEA also plays a role in the metabolism of protein, carbohydrates and fats, and works with cortisol to help maintain proper blood sugar levels. DHEA helps regulate body weight, blood pressure and immune function, and is used by the body to make the hormones, testosterone and estradiol.

Too much or too little of cortisol or DHEA can lead to illness, and it is important that these two hormones be in balance with each other.

For the physician:

In this profile, the 7-9 AM cortisol level is within the reference range. Because cortisol levels are typically at their peak shortly after awakening, morning cortisol may be a good indicator of peak adrenal gland function. Morning cortisol levels within reference range suggest a component of normal adrenal function with regard to peak circadian activity.

The 11 AM-1 PM cortisol level is within the reference range. Mid-day cortisol levels may be a good indication of adaptive adrenal gland function since they represent the adrenal glands' response to the demands of the first few hours of the day. Mid-day cortisol levels within reference range suggest a component of normal adrenal function in regard to adaptive response.

The 3-5 PM cortisol level is within the reference range. Afternoon cortisol levels may be a good indication of the adrenal glands' ability to help regulate blood sugar, since they represent a postprandial sample. Afternoon levels within the reference range suggest normal adrenal function, especially in the area of glycemic control.

The 10 PM-12 AM cortisol level is within the reference range. Late-night cortisol levels may be a good indication of baseline adrenal gland function since they typically represent the lowest level during the day. Normal late-night cortisol levels suggest normal adrenal function with regard to baseline circadian activity.

DHEA is within the reference range. Proper levels contribute to the ideal metabolism of proteins, carbohydrates and fats, including efficient glycemic control.

The ratio of DHEA to cortisol is normal. This ratio indicates a relative balance of the adrenal output of androgens and cortisol. Both of the hormones are released in response to ACTH from the pituitary and a normal ratio indicates a balanced function of the hypothalamic-pituitary-adrenal axis.

A pattern showing both cortisol and DHEA levels within the reference range suggests normal function of the zona fasciculata and the zona reticularis at this time. This pattern is consistent with a normal response to physiological or psychological stress and a normal relationship between the glucose conservation, gluconeogenic and catabolic activity of cortisol, and the glycolytic and anabolic activity of DHEA.

Adrenocortex Stress Profile (Saliva)

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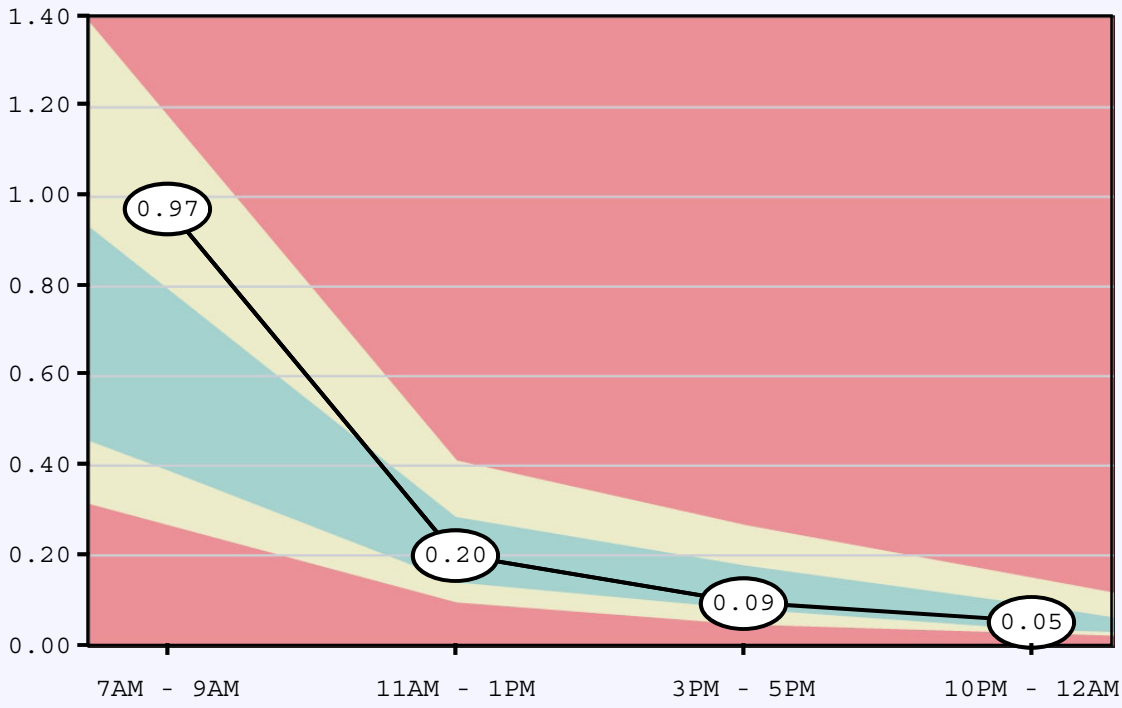
Salivary Cortisol and DHEA



Cortisol◆

Reference Range

1 Hour After Rising
7AM - 9AM:
0.27-1.18 mcg/dL

11AM - 1PM:
0.10-0.41 mcg/dL

3PM - 5PM:
0.05-0.27 mcg/dL

10PM - 12AM:
0.03-0.14 mcg/dL

Hormone	Reference Range	Reference Range
DHEA 7am - 9am	212	71-640 pg/mL
DHEA: Cortisol Ratio/10,000	219	115-1,188

Commentary

Please note that effective October 2007 reference ranges for the following analytes have changed. Cortisol: 1 Hour After Rising from 0.27-2.06 to 0.27-1.18 mcg/dL; 11AM-1PM from 0.03-0.77 to 0.10-0.41 mcg/dL; 3PM-5PM from 0.03-0.56 to 0.05-0.27 mcg/dL; 10PM-12AM from 0.03-0.50 to 0.03-0.14 mcg/dL. DHEA: 1 Hour After Rising from 14-277 to 71-640 pg/mL. DHEA/Cortisol Ratio (X10,000): from 35-435 to 115-1188.

The performance characteristics of all assays have been verified by Genova Diagnostics, Inc. Unless otherwise noted

Comprehensive Melatonin Profile

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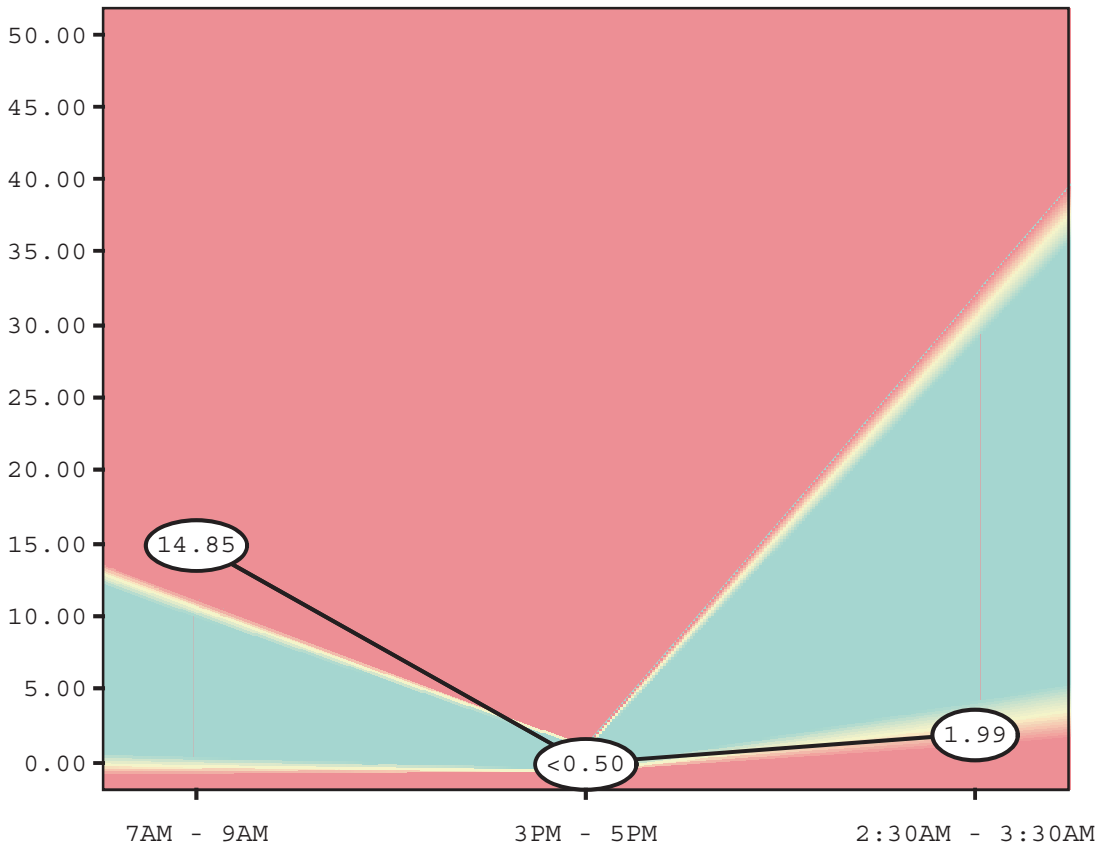
SAMPLE REPORT

Salivary Melatonin



Reference Range

7AM - 9AM:	<=10.50 pg/mL
3PM - 5PM:	<=0.88 pg/mL
2:30AM - 3:30AM:	2.53-30.67 pg/mL

This test has been developed and its performance characteristics determined by GSDL, Inc. It has not been cleared or approved by the U.S. Food and Drug Administration.

Commentary

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Melatonin: pg/mL x 4.3 = pmol/L

The 7-9 AM melatonin level is elevated, but the 2:30-3:30 AM level is low.

High morning melatonin levels are often present in individuals with Seasonal Affective Disorder. This may be due to prolonged nocturnal production of melatonin, and/or late onset of its production. High melatonin levels may bring about inhibition of ovulation in women as well as decreased body temperature. High melatonin has been noted in the manic phase of bipolar mood disorder. Many antidepressant drugs may stimulate melatonin production, including fluvoxamine (Luvox), desipramine, and most MAO inhibitors.

Drugs that deplete melatonin include beta blockers, NSAIDS, steroids, nicotine, alcohol, caffeine, sleep aids and anti-anxiety medications. Fluoxetine (Prozac) may lower melatonin levels. Low melatonin may contribute to insomnia, sleep-wake disorders, or PMS. Some forms of depression are associated with low melatonin levels. Low levels have also been implicated in increased risk for coronary heart disease.

This profile reveals a disturbance in the circadian rhythm of melatonin. This may influence other hormones such as thyroid, testosterone, and estrogen. As well as playing a crucial role in sleep-wake cycles, melatonin influences other vital functions including cardiovascular and antioxidant protection, endocrine function, immune regulation and body temperature.