



# Adrenal Thyroid Profile 24hr Urine



46-50 Coombe Road  
New Malden  
Surrey KT3 4QF

63 Zillicoa Street  
Asheville, NC 28801 USA

Patient: **Order Number:**  
DOB: Completed:  
Sex: M Received:  
MRN: Collected:

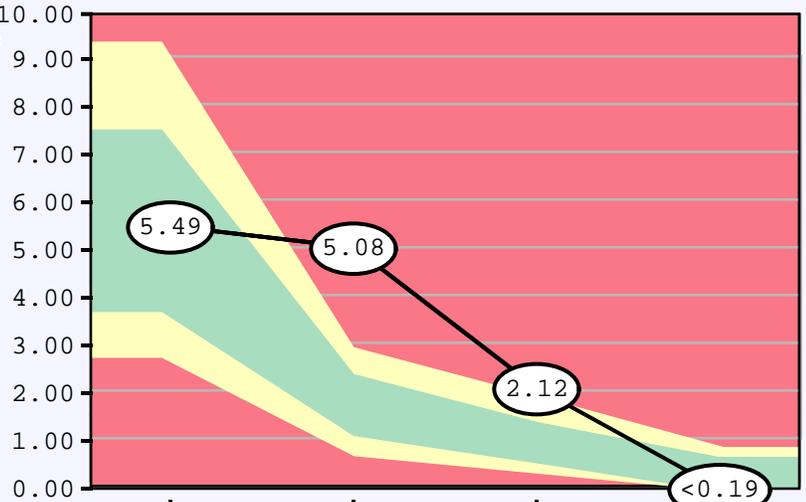
## Salivary Cortisol and DHEA

### Cortisol Levels

Sample 1 Post Awakening	5.49	
Sample 2 (+ 4 - 5 Hours)	5.08	H
Sample 3 (+ 4 - 5 Hours)	2.12	H
Sample 4 (Prior to Sleep)	<0.19	
Sum of Cortisol	NR	

Reference Range (nmol/L)

2.68-9.30
0.75-2.93
0.36-1.88
<=0.94



### DHEA Level

DHEA : Cortisol Ratio	0.40	H	0.05-0.32
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Sample	Reference Range (nmol/L)
Sample 1	2.68-9.30
Sample 2	0.75-2.93
Sample 3	0.36-1.88
Sample 4	<=0.94

**Cortisol Reference Limits - nmol/L**

Hormones	Reference Range (nmol/L)
DHEA Sample 1 (am)	2.20 (0.25-2.22)

Testing performed by Genova Diagnostics, Inc. 63 Zillicoa St., Asheville, NC 28801-0174

## Urine T3 Results

Analyte	Result	Units	Normal Range
T3 - Triiodothyronine (RIA)	3.47	nmol/24h	0.61-3.38



Urine T3 testing performed by BIOMNIS (ISO 15189:2012 accreditation 493519904)

## Commentary

Please note urine T3 & T4 testing reference ranges and result units have been changed.

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Please note the cortisol reference ranges have been updated due to a change in the assay manufacturer.

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.

Cortisol reference ranges are based on samples collected over one day during the following time periods (+/- 2hrs):

#1: 7AM - 9AM

#2: 11AM - 1PM

#3: 3PM - 5PM

#4: 10PM - 12PM

Results for samples collected outside the recommended time period should be interpreted with caution as the stated reference range may not apply.

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, Sample 1 (Post awakening) 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.

Sample 2 cortisol level is above 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. High mid-day cortisol levels suggest a degree of adrenal hyperfunction with hyper-reactive adaptive response, most commonly to stress. Other possible causes of high salivary cortisol include heavy exercise, pregnancy, hypoglycaemia, smoking, obesity, depression, alcoholism, and if significantly elevated, adrenal hyperplasia or Cushing's syndrome.

Sample 3 cortisol level is above the reference range. Afternoon cortisol levels may be a good indication of glycaemic control exerted by the adrenal gland since they represent a postprandial sample. High afternoon levels suggest a degree of adrenal hyperfunction with increased adrenal assistance in glycaemic control. Other possible causes of high salivary cortisol include stress, heavy exercise, pregnancy, smoking, obesity, depression, alcoholism, or if significantly elevated, adrenal hyperplasia and Cushing's syndrome.

Sample 4 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

### Commentary

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 glycaemic control.

An increased secretion of DHEA relative to cortisol can represent a normal response to acute stress. Elevation of the DHEA: cortisol ratio may be associated with exogenous DHEA administration, acne, panic disorders and polycystic ovary syndrome.

Free T3 (FT3) is measured to be above the reference range. FT3 measures the biologically active fraction of total T3, the majority of which is bound by protein carriers in the serum and is therefore inactive. T3 is 3-5 times as physiologically active as T4, and 80% of the circulating T3 is from the peripheral conversion of T4 predominately in the liver and kidney.