

## PROVIDER HANDOUT

# Adrenal Function Profile

## Saliva Testing of Cortisol

### The Problem

Many individuals today suffer from an impaired ability of the adrenal glands to mount a response to stress. This condition stems from various factors including chronic stress (e.g. marital, financial, job stress) sleep deprivation, excess caffeine and carbohydrates, chronic pain, extreme exercise and a generally unbalanced life style. Also known as "adrenal burnout" or "adrenal fatigue" the problem manifests with a constellation of symptoms ranging from chronic fatigue to infertility. Given the pace of modern, multi-tasking life, everyone is at risk, but the problem is more prevalent among medical professionals, police officers, executives and teachers.

### Purpose

The adrenal glands produce cortisol, one of the key stress response hormones, 24 hours a day, although output varies throughout the day in a predictable fashion. Cortisol output is highest upon waking and declines steadily through the day, reaching its lowest point at night. Individuals with adrenal fatigue have a flattened cortisol profile; with loss of the morning surge. This diurnal variation of cortisol can be readily mapped using saliva sampling.

### Hormones Tested

Cortisol can be collected once in the morning or twice a day (morning and bedtime). If levels are out of range and symptoms warrant, it is advisable to further evaluate diurnal adrenal function. In this case, four specimens are acquired: morning (within hour of waking), before lunch, before dinner and before bedtime. Saliva is particularly well suited for measurement of cortisol because there is no anticipatory rise in cortisol as is the case for venipuncture. Due to its non-invasive nature, saliva is increasingly recognized as the method of choice for assessing adrenal function.

### Recommended Reading:

"Adrenal Fatigue: The 21st Century Stress Syndrome by James Wilson ND DC PhD.

*What it is and how to recover energy, immune resistance, vitality and enjoyment of life.*

The End of Stress As We Know It by Bruce McEwen

*While some stress is inevitable, being "stressed out" isn't. In fact we can learn to rechannel the powerful stress activators in our lives to make us more resilient.*

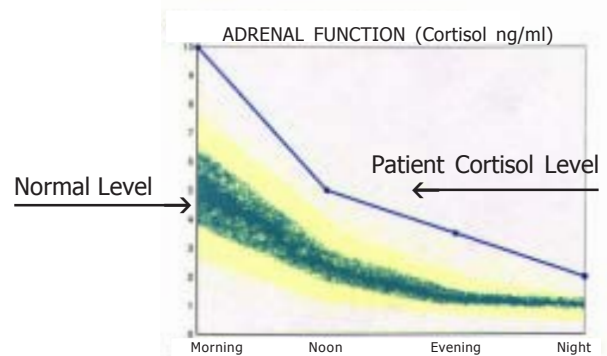


### Candidates for Adrenal Function

Individuals experiencing symptoms of morning and/or evening fatigue, increased susceptibility to infection, poor recovery from exercise, allergies and chemical sensitivity, unstable blood sugar, "burned out" feeling, insomnia, apathy, depressed mood and low sex drive.

### Benefits

The main benefit of salivary cortisol testing for practitioners will be to screen patients who present with symptoms consistent with adrenal fatigue. These patients rarely improve on their own and may visit numerous providers until the correct diagnosis is made; hence this is a meaningful service to provide. Most clinicians make this diagnosis based solely on medical history and examination, but patients appreciate objective testing which demonstrates that something is definitely wrong, and not "all in their head." Saliva testing assists practitioners to identify individuals with quantifiable adrenal imbalance and to optimize their treatment.



Example above illustrates chronically high cortisol - a reflection of extreme stress - which (particularly in combination with low androgens) impacts biochemical pathways that lead to accelerated bone loss.



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