

Cortisol Information Sheet

What is Cortisol?

Cortisol is a steroid hormone that is predominantly produced in the adrenal gland. It is widely known as the body's stress hormone, but also influences various other functions throughout the body (1).

What are the roles of cortisol?

Cortisol is released in response to low blood sugar and stress, and can influence nearly every organ system. It helps to increase blood sugar through gluconeogenesis (synthesis of 'new' glucose), and is involved in the metabolism of fat, protein, and carbohydrates. It also suppresses the immune system and inflammatory response, helps control blood pressure, is involved in memory formation, and decreases bone formation (1).

What is the link between cortisol and stress?

Stress is a natural response to a perceived threat. It results in a surge of hormones, including cortisol. Cortisol increases blood glucose levels, enhances the brain's use of glucose, and reduces non-essential functions. Usually, cortisol levels return to normal after the threat has passed. However, in long-term stressful situations, the persistently elevated levels of cortisol can increase the risk of various health complications, including anxiety, depression, digestive problems, weight gain, and insomnia (3).

What are normal cortisol levels?

Blood concentrations of cortisol differ during the day, with higher levels typically occurring in the morning. Reference ranges provided by the Endocrine Society are 5-25 µg/dL at 8am and 2-14 µg/dL at 4pm (2).

What is the link between cortisol and metabolic syndrome?

Metabolic syndrome (MetS) refers to a range of metabolic derangements, including insulin resistance, hypertension, high glucose and triglycerides, low HDL-cholesterol, and abdominal obesity. MetS increases the risk of type 2 diabetes and cardiovascular disease (4). Although the primary mechanism of MetS is insulin resistance, research also suggests that slightly elevated cortisol is another contributing factor towards the development of MetS (5).

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How can I control my cortisol levels?

Cortisol levels increase in response to stress; hence reducing your stress also helps to lower cortisol levels. Proven ways to reduce stress and cortisol levels include yoga, listening to relaxing music, meditation, maintaining healthy relationships. Other ways to reduce cortisol levels include getting adequate sleep and exercise, eating healthy foods (particularly reduced sugar intake), and having fun.

Where can I find more info?

Visit www.genetrackdiagnostics.com for full test information, including specimen collection requirements

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References:

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NOTE:

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