

# GENERAL INFORMATION

## FUNCTIONS OF CORTISOL

- Mobilizes and increases amino acids, the building blocks of protein, in the blood and liver.
- Stimulates the liver to convert amino acids to glucose, a primary fuel for energy production.
- Stimulates increased glycogen in the liver. Glycogen is a storage form of glucose.
- Mobilizes and increases fatty acids in the blood (from fat cells) to be used as fuel for energy production.
- Counters inflammation and allergies.
- Prevents the loss of sodium in urine and thus helps maintain blood volume and blood pressure.
- Maintains resistance to stress (infections, physical trauma, temperature extremes, emotional trauma, etc.).
- Maintains personality and emotional stability.

## HOWEVER, IN EXCESS, CORTISOL:

- Diminishes glucose utilization by the cell and increases blood sugar levels. Reduces memory recall.
- Decreases protein synthesis.
- Increases protein breakdown, leading to muscle wasting and osteoporosis.
- Causes shrinking of lymphatic tissue, diminishes lymphocyte numbers and functions, and lessens secretory antibody production. This immune system suppression may lead to increased susceptibility to allergies, infections, and cancer.

## FUNCTIONS OF DHEA

- Functions as a male hormone with weak anabolic activity (anabolic refers to building or synthesis of tissues).
- A precursor that is converted to Testosterone, a male hormone.
- A precursor to Estrogens, major female hormones.
- Reverses immune suppression caused by excess cortisol levels, and therefore improves resistance against viruses, bacteria, yeast, parasites, allergies, and cancer.
- Stimulates bone deposition and remodeling, which prevents osteoporosis.
- Improves cardiovascular status by lowering total and LDL (“bad”) cholesterol levels and lessens the incidence of heart attack.
- Increases muscle mass, decreases percentage of body fat.
- Reverses many of the unfavorable effects of excess cortisol and therefore creates an improvement in energy/vitality, sleep, premenstrual symptoms, and mental clarity, as well as quicker recovery from any kind of acute stress (insufficient sleep, excessive exercise, mental strain, etc.).