

## **Adrenal Exhaustion**

Your adrenal glands sit on top of the kidneys and secrete important hormones: cortisol, adrenaline, and dehydroepiandrosterone (DHEA). These hormones help you to buffer stress and adapt to everyday life demands by determining the stress response.

Under stress, healthy adrenals increase their output of cortisol and DHEA to enable you to preserve health. They also secrete adrenaline, giving you a boost of energy when needed. If this becomes chronic, the adrenals can no longer keep up with the demand, and DHEA levels begin to fall, signifying adrenal exhaustion. In addition, the oversecretion of adrenaline can cause you to feel anxious and nervous. Complaints of insomnia, fatigue, depression, irritability, and digestive difficulties are also common. As adrenaline surges during stress, digestive enzymes are simultaneously lowered, and blood sugar levels initially rise. As this becomes a more chronic occurrence, the results of high cortisol and adrenaline levels from prolonged stress include:

- Diminished immune function
- Depletion of cortisol, resulting in low blood sugar
- Less restful sleep
- Increased lipid levels of blood fats
- Water retention
- Loss of cellular potassium, a very important mineral
- Lowered insulin sensitivity, with a higher susceptibility to diabetes
- Loss of the capacity to produce sufficient DHEA

### **Functions of cortisol**

- Converts proteins into energy by increasing amino acids in the bloodstream
- Stimulates the liver to convert amino acids to glucose as needed for energy
- Counters inflammation and allergies
- Helps maintain blood pressure
- Aids in stress reactions

### **Functions of DHEA**

- Precursor to testosterone and estrogen
- Improves resistance to viruses, bacteria, parasites, allergies, and cancer
- Prevents osteoporosis
- Lowers total and LDL cholesterol
- Increases muscle mass and decreases body fat

### **Restoration**

- Diet should avoid refined sugars, caffeine, and alcohol and should include several small meals containing protein.
- Determine allergic foods and avoid them.
- Ginseng and/or licorice tea can be supportive.
- Adequate vitamin C is important.
- Get adequate sleep and go to bed by 10pm
- Use stress-management techniques.
- Deal with emotions as needed with laughter, breathing, and/or professional help.
- Engage in light exercise.
- Get daily outdoor light.

The following is an example of a typical cortisol curve throughout the day.

