

Understanding the cause of Obesity

Avicenna, a Persian Physician (980-1037), made an enduring medical observation which is true until today: “To prevent and cure a disease, one must first know the cause of the disease.”

It is this enduring wisdom which helped modern medicine, eliminate the epidemics of contagious diseases such as cholera, smallpox, polio, and plague. The cause got identified and cure achieved by vaccination, antibiotics, and sanitation. The similar wisdom of finding the cause to implement the cure will help us prevent the modern food and lifestyle disease epidemics.

Obesity starts first with high blood glucose levels which increase the demand for Insulin in the body. As explained above obesity is not caused by a caloric imbalance but is the result of hormonal imbalance. The three hormones which get into imbalance in obesity are:

1. Insulin – The glucose utilization hormone, which is the main culprit in causing obesity.
2. Cortisol – This hormone released in large amounts in response to emotional stress and lack of good sleep. Cortisol raises blood glucose, increases the release of Insulin from the pancreas. Excess of cortisol hormone causes obesity and diabetes.
3. Melatonin – This hormone is the key to rejuvenating restful sleep. It is synthesized in the brain in the morning in response to sunlight and natural light. Melatonin gets stored in a special area in the brain called pineal gland from where it is released in the night to induce and maintain a healthy sleep cycle. The release of melatonin gets inhibited on exposure to blue light such as from television, computer, and cell phone screens. Synthesis of melatonin is reduced in the brain if there is inadequate exposure to sunlight or natural light in the morning hours. Lack of rejuvenating sleep causes excessive cortisol release. Several scientific studies have shown that chronic lack of sleep, even by 1-2 hours/day can cause a weight gain of as much as 10-15kg.

