MY health 360

Hormonal Factors

There are many hormones and chemical compounds involved in the regulation of body weight.

The hormones directly involved in appetite regulation (hunger versus satiety or feeling of fullness), energy production and body fat metabolism are leptin, insulin, oestrogens, androgens and growth hormone.

THE LEPTIN HORMONE

The hormone, leptin, is produced by fat cells and is secreted into our bloodstream. Leptin signals to the hypothalamus which is an area of the brain. **Leptin reduces a person's appetite** by acting on specific centres in the hypothalamus to **reduce the urge to eat.**

It is also involved in how the body manages fat storage. However, leptin does not influence food intake from meal to meal, but instead, acts to alter food intake and control energy expenditure over the long-term.

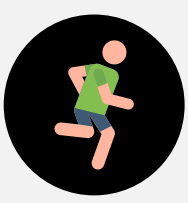
Since leptin is produced by fat cells, leptin levels are **higher in overweight people than those of normal weight.** However, it appears that this over-production of leptin in overweight individuals leads to a form of 'leptin resistance'.

This means that even though there is a abundance of leptin being produced, the areas in the brain that should respond to leptin stimulation do not, very much like you get insulin resistance in type 2 diabetes. What this means is that the urge to eat is not controlled or switched off and these individuals constantly feel hungry and are never full.

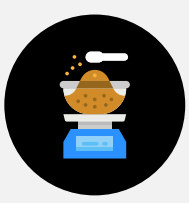
Leptin has a more profound effect when we lose fat tissue, causing the leptin levels to fall. This can stimulate appetite in order to regain the weight lost, which is the body's survival mechanism to restore homeostasis (a balance between two interdependent things).

What you can look forward to is to make sure you do not regain the weight you have lost and maintain you goal weight.

This we do by:



Increase exercise



Manage your energy intake (what you eat)

This will prevent you from re-gaining the weight you lost and maintaining your goal weight.

If there is a congenital leptin deficiency (in other words a baby has a genetic condition in which the body cannot produce leptin at all), it is evident from as young as four months. A baby with this condition will exhibit an insatiable appetite and consequently becomes morbidly obese at a very young age. However, the condition is revered by leptin replacement therapy.

In **Module 6 you will learn how to manage your weight in the long term.**