



Presents
The central nervous systems role in appetite regulation

Insatiable appetite causing you to gorge on the pantry stores for the month? An increase of unwarranted appetite may be to the effect of your stress status and not entirely managed by sheer abstinence of food. Remember the early years in your life where you would eat a salad and feel energized to conquer your day? Years pass and responsibilities increase and before you know it your managing a mortgage, managerial roles and raising children, all along with eating an extra big Mac or two during your fight for championing the multitude of tasks you have ahead in your day.

Stress is the byproduct of stimulation through sympathetic influence of our autonomic nervous systems. When our needs for energy increase (artificial or physical) our bodies respond in stimulating our adrenal glands to release stress hormones: norepinephrine and epinephrine. At first norepinephrine is released which stimulates a segment of our brain called the VMH (ventral medial hypothalamus), which in turn influences synapses along our spinal column to stimulate receptors which further stimulate our adrenals to release epinephrine. Stimulation of a stress response is useful if kept under check and volume, however excessive stimulation of our VMH eventually may cause lesions to occur within the VMH itself.

The VMH has the role in stimulating not only the adrenals but a host of segments in the brain that control both inhibitory and excitatory neurotransmitters. Neurotransmitter balance is vital toward establishing both metabolic and glucose regulating hormones, an imbalance between inhibition and excitation will thus effect how well we burn calories and manage our blood sugar. Lesions of the VMH cause a multitude of issues, most

notably are listed below:

1. Regulation of Leptin and Ghrelin: hormones that regulate hunger or satiety
2. Regulation of thyroid and pituitary function: both of which regulate how well we utilize energy for the purpose of balance to our metabolism
3. Regulation of both insulin and glucagon: blood sugar regulating hormones that either promote or inhibit activity of receptors throughout our entire nervous system

Through excessive stress our ability to metabolise, use and store energy becomes inefficient leading our bodies to become fatter and more toxic. Taking measures to balance adrenal activity along with beneficial nutritional stimulation for the central nervous system could make all the difference in your efforts to control your appetite and burn unwanted fat. The effect of lesions to the VMH are so pronounced that just one hour after a lesion occurs the body will go into a state of hyper-insulinemia, causing an excess release of insulin, effecting the central integrative state of our brains neurons, leading to eventual transneuronal degeneration.

Excessive stress in short causes a host of unwanted symptoms to not only that of your psychology but your entire biology too. From an exacerbated cephalic response of food to excessive tone of your muscle. Not controlling your stress through balanced nutrition, regular exercise and limited exposure to artificial chemicals and stimulus, could lead you into lack of control of body your body and mind.

There are a few pointers that may help you to regain control of your bodily systems:

1. Limit intake of caffeine
2. Increase intake of water
3. Intake of polyphenols such as those found in blueberries, green tea and cocoa will go a long way toward metabolizing oxidants an overactive sympathetic nervous system may produce
4. Exercise with variety of movement: from weights to yoga, implement all strategies that not only excite your tissue but calm them too
5. Balanced nutrition: ensure that your diet is full of organic sources that are not adulterated by additives or preservatives