The Limbic System, Disease and Homeopathy - How does emotional stress affect our Health and what can we do about it? –

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As published in Positive Health Online – Issue 232, August 2016

"*Like the fire's visible flame, thought is merely a phantom of the nonverbal passion/combustion going on within the limbic system beneath the verbal cortex."*[1]

What is the Limbic system?

Science has now established that it is a crucial player in neuroendocrinology.[2,3] As somebody who is interested in complementary therapies, you no doubt will understand and subscribe to the idea that energy follows thought and energy influences physiology and pathology. That emotions play a seminal role in the development of serious diseases has long been an area that has aroused interest among researchers. It has been postulated in various research projects that for example a person who is stressed and a workaholic is more likely to have a heart attack than somebody who is very happy, relaxed and with minimum stress.

A study published in 2008 suggests stress contributes to the increase in the risk for a number of pathologies including diabetes as it alters the need for insulin, digestive disturbances as it may alter the chemistry of the digestive tract, cardiovascular disease as it may lead to plaque build-up in the arteries. Other diseases are mentioned too, but what is of prime importance in this modern world with its increase in cancer is that while the study found no direct correlation between the immune system and the development of cancer, recent studies had "found a link between stress, tumour development and suppression of natural killer (NK) cells, which is actively involved in preventing metastasis and destroying small metastases."[4]

One of the earliest pioneers of the idea that there may be a link between emotions and disease is Louise Hay, who in her book 'You Can Heal your Life' set out to show her belief that certain thoughts and behaviours can lead to certain types of disease and specific ailments, and how each individual has the power to change those thoughts and to regain their health. Listed as one of the key points of her philosophy is: *"Every thought we think is creating our future"* and another of the key points states: *"We create every so-called illness in our body."*[5]

Long term stress has the potential to cause elevated levels of the adrenal hormones, the catecholamines adrenalin, noradrenaline and Cortisol and suppressor T cells, which may suppress the immune system and may increase the possibility of infections

developing. It can also contribute to a cascade of hormones such as histamine, increasing the chances of an allergic type reaction which may manifest in asthma attacks.

Paul Maclean was an American brain scientist who identified and named the limbic system, and then went on to do much more research on the evolution of the brain generally.[6] He contributed greatly to our understanding of the roles that different parts of the brain have played in mammalian development. In his 1990 work *The Triune Brain*, he summarised his life's work on the matter. He discovered there are three parts to the brain, which have evolved sequentially since life on earth began. They are, in order of evolution – the reptilian brain, the limbic system and the neocortex. The reptilian brain was the first brain to evolve and is basic for all animal life i.e. for survival: it allows, and to a certain extent controls heartbeat, breathing, body temperature and balance. It appeared first in fish, then became more sophisticated in amphibians and finally matured in reptiles.

The limbic system came next as mammals evolved to higher forms particularly humans. The limbic system evolved as a communications system connecting all cells in the system. Our conscious mind experiences those signals as emotions. Prof. Bruce Lipton, a cell biologist, describes this advance as a major step in human evolution as it coordinates the behaviour-regulating signals within the cellular system.[2] Community and society evolves as a result in harmony with all its components and with the universe. This is the part of the brain that allows for feeling pleasurable experiences, love, interaction and memory. It also covers aggression, fear, anger and hate so it has a crucial role to play in everyday life.

Then came the neocortex in the form of two cerebral hemispheres, which is unique to humans and a few higher mammalian species. This matured brain provided additional capabilities such as thinking, planning, language development, abstract thought and imagination. This is described as the *self-conscious,*
which enables us to be self-reflective to make decisions and judgements. We are enabled to utilise the faculties granted by the limbic system such as how we connect with ourselves, with each other and with society. Are we programmed to exchange love or fear or both and in what proportions? Candace Pert, neuroscientist and pharmacologist, found that the proper use of consciousness can bring health to an ailing body; and improper use of consciousness can bring disease to a healthy body.[3] We are reminded of that frequently stated slogan, '*our health is in our hands'* - we just need our mind to direct it.

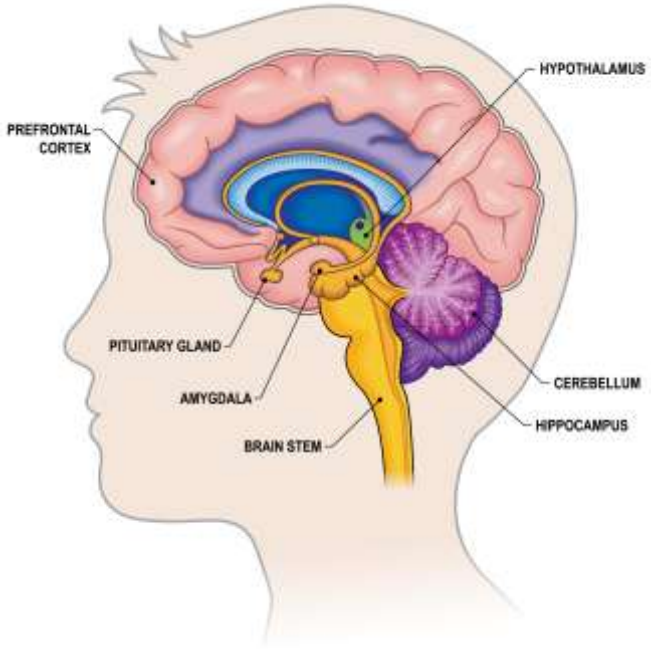
The Interconnection

The three parts of the brain are inextricably connected and work together. The limbic system is the part of the brain that deals with emotions, memories, stimulation and how we connect with the world. It is comprised of a number of components which are found above the brainstem and within the cerebrum. It sits at the top of the brainstem, which in turn leads into the spinal column. Its relationship to the physiology of the body is of critical concern here, as part of the limbic system is the hypothalamus and for reasons we shall see, the link that the hypothalamus offers between emotions and the physical body is the process which leads to the hypothesis that many diseases are stress-triggered. Scientists have established that the limbic area of the brain has more

receptors for peptides (opiates from food or chemicals) than any other part of the brain accounting for as much as 85% of all receptors.[3]

There are several components of the limbic system, but for the purposes of this paper we will focus on 4 of them: **thalamus**, **hypothalamus, amygdala** and **hippocampus.**

The link between the outside world and our brain, and subsequently, our whole being are the senses. The **thalamus** acts as a gateway – it processes sensory input and passes this on to the hypothalamus and/or to the rest of the cerebrum from where it goes out to relevant body parts e.g. arm brushes hot oven door – information goes to thalamus and then on to the brain which registers that your arm must be removed from the hot surface, and so the motor nerves are stimulated and activated. Interestingly, above the thalamus is the Corpus Callosum (**CC**) which connects the two brain hemispheres. This is responsible for communication and transferring motor, sensory and cognitive information between the two hemispheres.



The **hypothalamus** regulates the Autonomic Nervous System, and controls the endocrine system. It is responsible for producing multiple chemical messengers, called hormones. These hormones control water levels in the body, weight, sleep cycles, body temperature, immune response and food intake to name but a few. The hypothalamus is located beneath the thalamus. ***The hypothalamus appears to be the link between the physical and the emotional.*** It has long been noted even by mainstream medical practitioners that stress/emotional upsets can trigger or exacerbate a physical condition. What is worrying is the comment often uttered by people about their symptoms: 'Oh, it's **only** stress!' A person's response to stress, if it is causing symptoms, needs to be addressed.

The **amygdala** is known as the aggression centre stimulating anger, violence, fear and anxiety. If this structure is destroyed there are often certain symptoms related to it – hyperorality, hypersexuality, disinhibited behavior. It would also appear that the state of one's amygdala may reflect or have a knock on effect on:

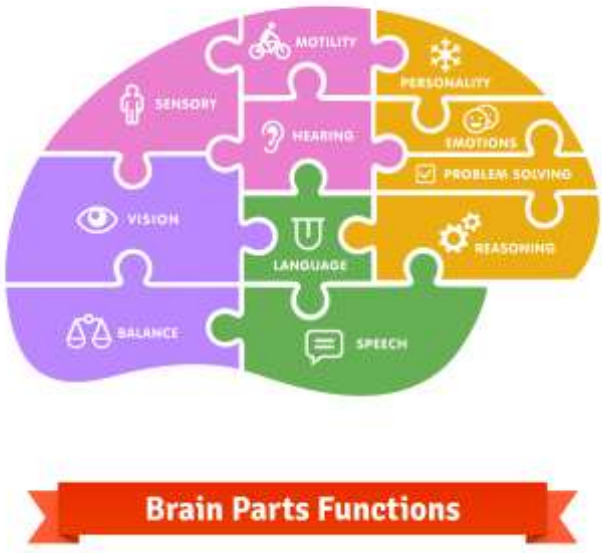
- How strong a network of friends you have[7]
- How you cope with fearful situations
- How you regulate and enjoy pleasurable experiences (addiction)
- Your relationship with aggression
- Your relationship with sexuality

The **Hippocampus** is the memory centre responsible for forming new memories. It converts short term memory into long term memory. If it is damaged there may be difficulty with short term memory. It is one of the first brain areas to show real damage in Alzheimer's. We use it for navigation such as within the home and in the outside world. So the link can again be seen with Alzheimer's.

Obesity and excess weight also have an adverse effect on the brain as scientists have found the larger the waist-to-hip ratio, the smaller the hippocampal area in the brain.[8] Weight control is therefore essential to protect brain function.

Control of Stress

The body has its own built-in system to handle stress as it arises. The brain acts through the Hypothalamus, Pituitary and Adrenal glands, each with a role to play, communicating with each other through cellular signaling. It is often referred to as the *HPA Axis*. The pituitary is the master gland that controls the trillions of cells in the body. When the brain receives a signal that a stressor is present, the hypothalamus releases a hormone which travels to the pituitary which alerts the adrenal glands of danger which in turn switches on the fight/flight response to deal with the problem. In our ancestors' days, it might have been the sight of a wild animal. Extra strength and speed is instantly needed to get out of danger. Today it's most likely the heavy traffic, the mortgage in arrears, or being bullied at work. Activating the HPA Axis continually or excessively is a cause for ill health.



There are certain conditions where we consider that the limbic system is involved. By investigating what may be the triggers, we can support the health of the limbic system. The use of homeopathic remedies can be appropriate to support people suffering from: hormone imbalance, poor memory, tendency to get lost in familiar territory, sex drive issues, eating disorders, addiction, aggressive behavior, Post Traumatic Stress Disorder, difficulty studying for exams, difficulty with making and keeping friends, body temperature regulation, depression, phobia, anxiety, panic attacks, Alzheimer's, problems with sensory and/or motor skills, frequent infections (excess cortisol can dampen the immune system), malfunctioning digestive system, OCD, tendency to road rage, or easily angered (part of the system deals with cognitive flexibility), repeating same mistakes, insomnia, water balance problems.

This is just the tip of the iceberg: there are many more conditions. Homeopaths and Naturopaths believe, as with any other structure in the body, a number of factors can significantly impair limbic system function such as:

- Chemical Exposure
- Virus or Infection
- Inflammation
- Psychological and/or Emotional Trauma
- Genetic Patterning
- Accumulated stress
- Physical Trauma (not limited to brain injuries)

However, even if it is felt there may be a problem in the limbic system – as with any other system - the question needs to be asked, 'Why?' It is necessary to look for the underlying cause. A homeopath has a variety of choices in the way he or she can work with people, whatever their presenting symptoms:

1. The Materia Medicas are home to a wonderful array of remedies and rubrics which, one way or another, lead homeopaths to find remedies to try to support the situation. Some of the rubrics which may be helpful for people with limbic system involvement are (and this is just a tiny selection for illustration purposes):

- Forgetful words while speaking
- Forgetful on which side of the street his house was
- Forgetful names of members of his own family
- Confusion loses his way in well-known streets
- Anticipation before examination
- Anticipation before going to the dentist[9]

2. The homeopath may consider what toxin could have triggered this, e.g heavy metal toxicity, a virus, geopathic stress, and give an appropriate single remedy, or use a combination remedy from one of the companies who specialize in complex homeopathy.
3. They may consider that there is a genetic link and give a miasmatic nosode such as Syphilinum.[10]
4. After attempting to address the underlying toxicity, it is prudent then to support the components of the limbic system by using homeopathic sarcodes individually or as a whole system – so consider a combination remedy to support the limbic system.

The process of homeopathic treatment is exactly that – a process. Too often people are looking for a quick fix. Homeopathy can take a long time when a disease has fixed itself in place over many years. All too often what is sought is a tablet that will completely remove all traces of any symptom. Homeopathy is trying to offer much more than that. As is often said, the underlying cause has to be

removed. Resonance testing such as kinesiology can be used to identify both the causative factors as well as the solutions available.

Here we see that first an acknowledgement and an understanding of the role emotions play in the development of disease is required and then working with a homeopath/naturopath to try to safely remove toxicity, support damaged organs and then rebalance the system.

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Sally Ann Hutcheson was formerly a teacher. In the early 90's she qualified as a Classical Homeopath and immediately commenced full time practice. She later added Kinesiology, Naturopathy & Craniosacral Therapy to her range of skills and incorporated those modalities with her traditional homeopathic treatments. In addition to lecturing, teaching and writing she runs a busy practice in North London. For more information - www.sallyannhutcheson.co.uk