

NEUROPEPTIDES: MOLECULES OF EMOTIONS

[PART 1 & 2]

WORKING WITH YOUR SUBCONSCIOUS FEELINGS AND BELIEFS ARE IMPORTANT FOR SUSTAINABLE AND LONG TERM MANAGEMENT OF ANY HEALTH CHALLENGE

Part 1

'I suggest that the body and soul react to each other in sympathy. A change in the state of the soul would necessarily have an effect on the body and vice versa'. – Aristotle, 400 BC

'Our thoughts create our reality'. This is a strange concept for many of us. How could what you think, possibly make you sick or well, happy or unhappy?

Candace Pert is 'n neuroscientist who did a lot of research on the neuropeptides. She was the first to call them the 'molecules of emotions'.

Peptides are miniscule pieces of protein. Protein comes from the Greek word 'proteios', meaning primary. Proteins are the first material of life as we know it. Peptides consist of strings of amino acids of varying lengths, joined together in a necklace by very strong bonds made of carbon and nitrogen. Between 10 and 100 amino acids that form a strong bond, are called peptides. Between 100 to 200 are called polypeptides and more than 200 are called proteins. Amino acids are the letters that when combined in certain sequences, form the words that are peptides, or the sentences that are polypeptides or proteins. These make up a language that forms and directs the function of every single cell, organ and system inside the body, from the deepest vibrations of the DNA molecule inside the nucleus of every cell, to the macrocosmic systems function of the whole individual being. More than 90 neuropeptides have been identified so far, associated with mood changes, nerve, hormone and immune regulation. Well known groups of neuropeptides include the neurotransmitters that carry messages across synapses in the nervous system, growth factors, gut peptides, immune system modulators (e.g. interleukins, cytokines, chemokines, growth inhibitors that tell cells when to stop growing*). A better term for the peptides might be *informational substances*. Other common peptides include the endorphins (our own happy hormones), insulin (responsible for blood sugar control), vasopressin (responsible for blood pressure), sex hormone releasing hormones, serotonin (the feel-good neurotransmitter)

There are 20 essential amino acids found in the human body, meaning that we have to take it in from the food we eat, as they're not manufactured inside the body, hence 'essential'. The first peptide, secretin was discovered in the gut. This surprised scientists as they thought all physiological functions were controlled purely by electrical impulses from the brain and nerves. Then the endogenous endorphins, enkephalin peptides that bind to the body's own opiate (morphine-like) receptors inside the brain, were found. This led to a mad search for receptors and their binding peptides inside the brain, hence the pronoun 'neuro'peptides. It was only realised much later that every single peptide was made in many parts of the body, including of course, the brain. Now we know that the peptides are actually manufactured throughout the whole body, e.g. immune cells, bone marrow and gut cells have receptors for, and produce, neuropeptides. The T & B-cells of the immune system communicate with the brain and vice versa via the neuropeptides. Some emotions suppress lymphocyte (immune) function, others may enhance it.

All the neuropeptides have a similar molecular structure, with subtle differences in the tertiary structure, meaning that only the frequency and amplitude at which each molecule oscillates (wavelike vibrations of electrons in each molecule), differ. Neuropeptides change configuration (like a chameleon) due to emotional influence, according to specific thoughts and emotions. Depending on the thoughts and emotions, specific neuropeptides are made in the brain and nervous system, white blood cells, reproductive system, digestive system and heart, to name but a few. They form a two-way network between psyche and soma, mind and body.

The complicated and complex communication network between cells, neurotransmitters, neuropeptides, hormones, immune system, blood and nerves, demands a remarkable orchestration of effective communication and integration of form and function, for the body-mind to work as one healthy, balanced and integrated whole.

Pert describes the mysterious energy connecting body to mind & emotions as the free flow of information carried by the biochemical of emotion: neuropeptides and their receptors – the information substances. The strong link between emotional responses and the biochemical change they produce specifically in the immune system forms the basis of the field known as psycho-neuro-immunology or PNI. Cortisol secreted during long term stress, plays a role in immune suppression. Structural changes in the neuropeptides play a role in immune incompetence. Pert says: 'it is possible now to conceive of mind and consciousness as an emanation of emotional information processing, and as such, mind and consciousness would appear to be independent from brain and body'.

Notice the heart rate differences based on two very common human emotions. Appreciation leads to a slower, more coherent heart rate. We can choose in any moment to run the gratitude circuitry in our minds.

Let's simplify the concept by using practical examples. The specific feel-good peptide (e.g. serotonin), bind to its specific receptors on the cell membrane. This sends a 'feel-good' message to the inside of the cell, right into the nucleus. The message influences every function the cell is responsible for, including the expression of the DNA molecule. Now consider the fact that you constantly think of things others have done to harm you; or you feel stressed out and overwhelmed, with unhappy, resentful, angry thoughts and feelings that grow and increase to disproportionate levels every time you think about it. The thoughts become emotions, then the neuropeptides that course through your body-mind, influencing your mood, your cell function and efficacy. Do you think that any cell receiving these messages for 30 years, would still feel like functioning well enough for you to be optimally happy, alive and fully self-actualising to become all you're meant to be?

I'll leave you to ponder this question!

Part 2

To continue with the article on neuropeptides, the molecules of emotion, a quote from Confucius: 'If you devote your life to seeking revenge, first dig two graves'.

Your cells *feel* the way you do! Your thoughts *do* create your reality! What you spend your time thinking about, becomes the facts of your life. That's why positive affirmations actually work, *provided you really believe and feel them deep inside yourself* (otherwise they're just like Smartie coating only covering the surface, and not very effective). Repeating simple, positive, powerful statements to yourself, changes the frequency of the vibrations around your own neuropeptides, allowing cells to function better, your mind to find solutions to reach your goals, and your whole body-mind system to function optimally. Changing your habitual thought patterns to one of positivity and love, such as 'I am calm in my body, in my mind and in my emotions', 'I succeed', 'I feel calmness flowing through me', 'I love, accept and approve of myself just as I am', 'I live my truth', 'let go let God', or the Sanskrit mantra, 'om gum gana patayei namaha' to remove energy blockages, will allow the electrons around the nucleus of your neuropeptides to send positive, feel-good vibrations of waves and particles throughout your body-mind

being. These vibrations bind to your cell receptors and allow the message to go right into your physical and spiritual DNA, the genetic source of your being.

Emotions like bitterness, unresolved anger, resentment, fear and worry constantly trigger your stress response. These then become buried in ever deepening layers inside the cell memories. The layers become the physical footprints of your dream body, psyche or soul, manifesting in unhappiness, mood swings, and eventually, physical illness or chronic health problems. Once the cell memories are awakened, they can reach the conscious mind, so that you can make contact with your whole, integrated human *beingness*, leading to the identification of the deep issues that might play a role in the disease process. Through this, disease becomes a teacher potentially leading to important life lessons, personal and spiritual growth and healing from the inside out. The choice and free will to follow this path, is yours! You can become all you're meant to be: successful from the inside, out!

The field of psycho-neuro-immunology (PNI) explores the links between mind and body with regard to the immune system. Sinceneve supply extends to all the components of the immune system (e.g. lymph nodes, thymus gland, and spleen), the nervous system with its head office inside the brain, will necessarily influence the immune system directly. Stress and depression can suppress the activity of lymphocytes, the white blood cells that are the body's first line of defense against cancer and invading organisms. Diseases of the immune system include HIV/aids, cancer, allergies, arthritis, infections, the auto-immune disorders such as ulcerative colitis, multiple sclerosis and rheumatoid arthritis, and many other conditions that are a consequence of either a under- or an over-active immune system. Cells in the immune system are responsive to all 90 neuropeptides, that are triggered by our thoughts and emotions.

Neuropeptides cause chemical changes in the body that can improve or weaken the immune system. Once immune cells receive the stress response alarm, they undergo changes and begin to produce powerful chemicals. These substances allow the cells to regulate their own growth and behavior, enlist the help of other immune cells, and direct these to the areas of invasion or other trouble spots. Studies show that the HIV virus interferes with a peptide associated with feelings of self-esteem. In one study, patients with full blown Aids, who had therapy to boost their sense of self and strengthen emotional bonds, survived statistically longer than expected.

Establishing which emotions affect which neuropeptides will be the best treatment for all modern day illnesses! This forms the basis of deeper healing work.

The whole range of human emotions are valid and worthy of your complete attention. Become aware of your emotions, try to find out what they want to communicate to you, then choose to let the ones who don't serve your health and wellness any longer, go.

- Anger, fear, sadness, hate, resentment
- Joy, contentment, courage, love
- Basic sensations: pain, pleasure
- Instinctual drives are very powerful, but deeply subconscious drivers of behaviour: thirst, survival, instinct, cold and hunger – the last 2 being especially important as deeply unconscious saboteurs in weight release efforts as the deep need for protection and support, yearning to be loved, protected, cherished and adored. These have to be made conscious before being released.
- Intangible, subjective experiences that are uniquely human: spiritual inspiration, awe, bliss. There are many dormant nerve links between the primitive limbic system where the emotional centre of the brain is, to the pre-frontal cortex where spiritual intelligence and unconditional love reside. Waking up these cross links will help us to become the spiritual, loving beings we truly are.

By dr arien van der merwe - <https://www.drarien.co.za/neuropeptides-the-molecules-of-emotions-part-1-2>

Neuro)peptides: The Molecules of Emotions [Part 3]

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In this, the final part of our exploration of the peptides, or molecules of emotion, we'll consider the endorphins and some ways to feel good. If we choose to feel good, doing or thinking about things that make us feel happy, grateful and joyful, even if only for a few minutes every day, we'll change our informational substances (the molecules of emotion) to send better feeling frequencies through binding to specific receptors on our cell membranes, right into the core of every cell, the nucleus that contain our DNA.

Endorphins

The brain produces its own peptides, the endogenous opiates (e.g. beta-endorphin). These chemicals are produced in the brain in response to a variety of stimuli. Endorphins were discovered in 1975. Distress and pain are the two most common triggers for release of the endorphins. Activation of the opiate receptors in the brain by the body's own endorphins do not cause addiction or dependence, whereas exogenous opiates, such as morphine and codeine, do lead to addiction and dependence.

The effect of endorphins on the body-mind:

- decrease in pain sensation
- feelings of euphoria
- appetite modulation
- release of sex hormones
- enhanced immune response
- fewer negative effects of stress

Enhance your own endorphins:

- Regular exercise where you push yourself a little. This is the *runner's high*, or being *in the zone*, athletes experience after prolonged exercise.
- Breathing techniques. Changing the rate of your breathing, allows the respiratory centre to become flooded with endorphins. This is why the yoga breathing techniques are so effective. Examples include complete breath, inhaling through the nose, into the lower, mid and upper chest area, filling the lungs completely (belly-chest-collarbone); diaphragmatic breathing where you breathe in slowly and deeply, holding the breath, then releasing it, making the out breath longer than the in breath; or breathing in deeply, holding it and breathing out fast and forcefully through the mouth – a few forceful exhalations (pushing the tummy in and out like a bellows) for every deep inhalation. Sit down if you do this to prevent dizziness, and do only 5-10 breaths.
- Certain foods, like chocolate (preferably dark chocolate with at least 70% cocoa solids), and chili peppers can enhance the secretion of endorphins.
- Through acupuncture, massage therapy and regular meditation practice
- Last but not least: making love is a potent trigger for endorphin release! So remember next time you have the 'headache' – there might be a quick fix!

Become aware of your habitual thought patterns – thoughts do create reality!

Where are your thoughts? Anticipation, fear and worry are mostly in the future over which you have no control. Unresolved anger, bitterness, resentment are in the past. You can only learn from, grow and let go of the past. You can never change it. So why waste your precious life force energy there? These thoughts prevent you from being in the present, the NOW, which is all you have. Thoughts lead to emotions or feelings that often manifest as physical reality, symptoms, disease and habitual behaviour. Try journal writing as a very effective thought management tool that can help you release unpleasant thoughts and feelings.

How to feel good!

Experience gratitude, tune into what you do have and appreciate in your life. This will lead to moments of joy and happiness: our birth right feelings that lie deep within our souls, connecting us to Source/God/Higher Self. When we're joyful we feel connected to

our deepest truth, our authentic selves; in flow, in the stream of wellbeing – yield to your higher mind, trust, let go! Experience the shift from left brain to right mind!

<https://drarien.co.za/oldsite/neuropeptides-the-molecules-of-emotions-part-3/>