

# Hormones Come To Light

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For those of us in the healing arts, it is useful to take a step back from day to day practice and to ask ourselves what “healing” really is all about. When a patient has a very positive, long lasting response to your treatments, what really has taken place? Or if patients don’t get much better after receiving well-chosen techniques, why is that? Most of what we have been taught offers only very limited explanations for the phenomenon of healing, or lack of it.

Cutting edge research from molecular biology is showing us remarkably vaster visions of how the body regulates itself, and how it instantaneously communicates information throughout all of its parts to promote healing and inner balance.

The truth is emerging is that each cell of our bodies are in constant communication with every other cell, and that this system is perfectly responsive at all times to each movement, change in body posture, emotion, thought and all external stimuli. Each of these events triggers release of subtle electrical, light and chemical signals that instantly communicate throughout the body. This goes far beyond the traditional teachings limiting the body’s internal communication system to nerves conducting signals and hormones targeting specific receptor sites.

There has also been intense study of minute chemical messengers called neuropeptides. These include hormones, neuro-transmitters, endorphins and a host of other substances the body uses to balance and regulate its myriad functions. The study of these peptides has turned the traditional study of endocrinology on its head by showing that hormones and other neuropeptides, previously believed to have singular origin and receptor tissues, actually originate all over the body and affect tissues all over the body. For example, neurologists previously believed that endorphins, which help modulate pain and stress, were only produced in the central nervous system. Now it is known that endorphins also exist in the lungs and many other body organs.<sup>1</sup> That’s probably why deep breathing is so healing and stress-reducing!

This ability of many body tissues to release electric energy during movement is called piezoelectricity. Now we know that piezoelectricity not only helps power the body with needed energy, but is also part of its precise communication network. The body’s piezoelectricity and neuropeptide production and circulation no doubt account largely for the effectiveness of acupuncture and other energy stimulation healing systems.

This perfectly attuned and interconnected communication network is often now called the *Living Matrix*. In his book *Energy Medicine*, James Oschman wrote:

“The living matrix is a continuous and dynamic ‘supramolecular’ webwork, extending into every nook and cranny of the body: a nuclear matrix within a cellular matrix within a connective tissue matrix. In essence,

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<sup>1</sup> Pert, Candace *Molecules of Emotion*, Scribner 1997

when you touch a human body, you are touching a continuously interconnected system, composed of virtually all of the molecules in the body linked together in an intricate webwork.”<sup>2</sup>

Dr. Oschman goes on to say that the Living Matrix is exquisitely sensitive to vibrations of energy it comes in contact with:

“The most exciting property of the living matrix is the ability of the entire network to generate and conduct vibrations. Modern biophysical research is revealing a wide range of properties that enable the body to use sound, light, electricity, magnetic fields, heat, elasticity, and other forms of vibrations as signals for integrating and coordinating diverse physiological activities, including those involved in tissue repair ....”<sup>3</sup>

What is of particular interest to acupuncturists is the work of German scientist H. Heine, who showed that the main communication pathways of the Living Matrix through connective tissue runs parallel to the body surface. There are many places where nerve and blood vessel-rich tissues pop up perpendicularly up to the surface of the body. These correlate well with charted acupuncture points. This is just one of the many pieces of evidence that acupuncture points are bio-electric communication gateways between the Living Matrix and the outside environment, including other people.

There is also now an abundance of research confirming that light striking the body triggers many valuable body healing and repair functions. The effects of light on hormonal and other neuropeptide activities is particularly fascinating.

There are two main ways that light enters and affects the body – through the retina of the eyes and via the entire skin surface. While we all understand that the eyes register light, it is less known how the skin does the same. It seems that skin cells contain light-sensitive molecules in the flavin family which are specifically called “cryptochromes”. These act in a similar manner as chlorophyll does in plants, registering various wavelengths (colors) of light and activating many physiologic functions. So, don’t worry about “vegging out” sometimes, because we are more like plants than we would think!

The pineal gland and hypothalamus both register light by stimulating release of powerful hormones that have many far-reaching effects throughout the body. In an article in the journal Nature Okamura describes how light affecting the hypothalamus enhances release of gonadotropic, luteinizing, thyroid and follicle-stimulating hormones.<sup>4</sup> These directly or indirectly help regulate most body functions. Another study revealed the effects of light on adrenal hormones. Okamura goes on to say:

“in these patients, light therapy improves not only psychiatric status, but also disordered hormones and metabolisms.”

Another aspect of these effects is regulation of the circadian rhythms that regulate sleep and waking and the balance of the autonomic nervous system.

There is no doubt that our bodies operate through an incredibly sophisticated and totally interconnected network, which is instantaneously passing information throughout. We are always responding both to our internal terrain, through food, air, thoughts and emotions, and to all external energies. Unfortunately so many of these stimuli in our modern world tend to

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<sup>2</sup> Oschman, J.L. Energy Medicine – The Scientific Basis, Churchill Livingstone 2002

<sup>3</sup> Oshman, J.L. Energy Medicine in Therapeutics and Human Performance

<sup>4</sup> Okamura, H., Brain Comes To Light, Nature, Vol 452, March 2008

increase stress levels, causing negative reactions and resistance in the Matrix, leading to pain, disease and premature aging. There is great power and promise in therapies applying beneficial colors of light, microcurrents and healing sound vibrations through acupuncture points to counter-balance ourselves toward greater harmony and resistance to stress. This is a big part of our amazing body's healing responses.