

Biofeedback

Business



Biofeedback applies the notion that human beings can control their automatic body functions using their brains.

Biofeedback helps individuals acquire a degree of control over psychological bodily functions. Patients are trained to improve their health using their mind control by listening to their body signals. Two very common devices used in biofeedback are a weigh and a thermometer. The two help an individual to get feedback on their health. Patients are trained to relax and modify their general behaviour, hence changing habitual responses to stress. This is because stress is the major cause of pain and diseases.

Clinical biofeedback is used to treat various conditions, which include migraine headaches, tension headaches and many other types of pain, digestive system disorders, high & low blood pressure, Cardiac arrhythmias, Raynaud's disease, Epilepsy, Paralysis and other movement disorders Pain receptors transmit information to the spinal cord. The pain is then transmitted to the brain stem, thalamus and the somatosensory cortex respectively. Sometimes, modulation occurs in the pathways leading to the suppression of the mechanosensory cortex or by initiating a release of endorphin. This lessens the magnitude and perception of pain the endorphins produced acts as an inhibitor to pain pathways. Through manipulating the brain to focus away from the pain, the body inhibits nocireceptors hence reducing the degree of pain received from the interneuron.

An individual under hypnosis, they are blocked from what is going on in the surroundings hence their bodies are able to inhibit the degree of pain the

pain receptors are receiving making it more bearable for the patient.

Hypnosis refers to a scenario where a patient is put in a trance and they are in a state where they block out any conscious awareness. Hypnosis enhances self-image and one starts having more positive attitude towards his environment including them. Hypnosis treatments normally provide positive motivation and influence in case of such psychosomatic situations. (Ghazi 1996).

Hypnosis reduces pain perceived by decreasing cortical activities (Steven & Judith 1991). According to a study conducted to establish the degree of pain relief provided by various forms of treatments, hypnosis was responsible for alleviating pain for days in 33% of the patients who tried the procedure.

Ulcerative colitis is an inflammation of mucosa that causes diarrhoea and bleeding. Patient with such disorders has been found to have personality problems, low self-esteem and sensitivity. Nociceptors are the sensory pathways or receptors that send a signal to the brain through the spinal cord and back.

They signal pain by means of endorphin-natural opiate mechanism. The brain is divided into the right and left hemisphere. There are nerve fibres connecting the two hemispheres the cingulate gyrus of the brain responsible for attention and emotion determines how successful hypnosis and meditation will be. During meditation theta waves, which indicate intense relaxation, are found accumulated in the middle and frontal part of the brain. However, alpha waves accumulated on the posterior part of the brain to signify wakeful rest.

Electrical activity is always present in the brain; therefore, by monitoring the waves using an EEG electrodes, a specialist can be able to determine the degree of relaxation. Hypnosis, biofeedback and meditation involve controlling the brain to relax and focus narrowly on something. Thus, brain activity during these procedures is similar. Neurological findings on meditation have shown that growth in the brain depending on the meditation technique administered. Meditation has enhanced focus on one single activity.

On the other hand, it has been proven that biofeedback has a pain reducing effects. A north-western university carried a research on nine patients, after biofeedback, 90% of the patients admitted having less pain. Patients under hypnosis experienced the same effect.