

The Burnham Review

Benefits of Touch and Neurofascial Process (NFP)

Manual Therapy and CAM Complement Your Health Care Program

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Neurofascial Process—Why You Should Try It?

From the field of Integrative Manual Therapy comes a remarkable self-care program that can alleviate pain, increase range of motion and improve function. Anyone who has used Neurofascial Process, knows the effectiveness of this hands-on technique.

There are plenty of testimonials on the benefits of Neurofascial Process (NFP)¹ (Weiselfish-Giammatteo, 2002) and case studies with before and after tests showing improvements following a few hours of NFP. For many clients these suffice to motivate them to try Neurofascial Process for themselves.

Others want to know more about how it works, before they spend the time and effort using it on themselves and their family members.

So, is it reasonable to believe that a simple hands-on technique will decrease pain and increase function?

Lets start with a look at some of the components of the NFP is thought to work on and then look at the medical literature that supports

those theories.

First, NFP is a process of connecting certain areas of the body, called Process Centers (PC), for example, the ureters and the liver to improve the neural

connection between the two areas, to improve the fascial relationships and fluid flow in the body and to normalize emotions content of the two areas. Sometimes it is referred to as the “one hand here and one hand there” self-care. Touch or contact with the two areas is all that is needed to make a shift.

“The experience of being touched, new research shows, has direct and crucial effects on the growth of the body as well as the mind.”² (Goleman, 1988). The New York Times article goes on to say, “Touch is a means of communication so critical that its absence retards growth in infants, according to researchers who are for the first time

determining the neurochemical effects of skin-to-skin contact. The new work focuses on the importance of touch itself, not merely as part of, say, a parent's loving presence. The findings may help explain the

long-noted syndrome in which infants deprived of direct human contact grow slowly and even die.”

Hands-on contact can shift brain chemistry, which certainly affects how we feel and function. “New research suggests that certain brain chemicals released by touch, or others released in its absence, may account for these infants' failure to thrive. The studies on the physiology of touch come against a backdrop of continuing research on the psychological benefits of touch for emotional development.”² (Goleman, 1988)

One study looked at the influence of touch on the ability to feel that area. Researchers explain, “the mature mammalian nervous system alters its functional organization in a use-dependent manner.” This means the more you touch an area the better the sensation in that location. Continuing they said, “enhanced stimulation of a body part enlarges its cortical representational zones and may change its topographic order”³

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(Steer, 1998)

The brain is more tuned into an area that is touched. Researchers concluded that touch can be associated with changes in an individual's sensations and behavior.

Touch therapies can save money as shown in studies involving weight gain in babies. "The massaged infants did not eat more than the others," said Tiffany Field, a psychologist at the University of Miami Medical School, who did the study. "Their weight gain seems due to the effect of contact on their metabolism." The infants who were massaged were discharged from the hospital an average of six days earlier than premature infants who were not massaged, saving about \$3,000 each in hospital costs, Dr. Field said.² (Goleman, 1988).

Testimonial

Mother of a baby boy with colic. (2002). "My husband and I adopted our son, J. on 2/13/02 when he was 2 days old. Our time with him has been the most rewarding, joyful thing we have ever done and our friends constantly ask "How did you get such a happy baby? He's sleeping through the night already? You mean he doesn't cry for hours at a time? I give the same answer each time - it's the Neurofascial Processing!!"

"The primacy of touch in infancy, experts say, is tied to touch's being the most mature sensory system for the first several months of life. "It's the first way an infant learns about the environment," said Kathryn Barnard, a professor of nursing at the University of Washington. "About 80 percent of a baby's communication is through its body movement. It's

easier to read a baby's communication with skin-to-skin contact."² (Goleman, 1988).

"N" as in Neural

The first part of Neurofascial Process, indicates that this technique affects the nervous system. Can hands-on contact change neural conductivity or fascial dysfunction?

Certainly, touch can cause pain as in the case of someone with dysreflexia, a dysfunction in which even a slight touch causes pain. This makes it reasonable to believe that touch influences the nervous system and can influence it in a positive or negative way.

The medical literature also discusses the connection between the nervous system and the fascia or connective tissue of the body. In one case they describe a blood flow problem due to "a stenosis [narrowing of the blood vessel] immediately distal to a transverse neurofascial band formed by the hypoglossal nerve"⁴ (Ranval, 1994). This quote illustrates the effect of a dysfunction in the nervous system and the fascial system (neurofascial band). They noted, turbulence or flow problems in the blood vessel can result from restrictions of the neural or myofascial bands.

Touch, Energy & Nervous System

A Reiki study measured the effect of an energy medicine based treatment on "autonomic nervous system function such as heart rate, cardiac vagal tone, blood pressure, cardiac sensitivity to baroreflex, and breathing activity." The results showed, "heart rate and diastolic blood pressure decreased significantly in the Reiki group compared to both placebo and control groups." Researchers concluded, "the study indicates that

Reiki has some effect on the autonomic nervous system."⁵ (Mackay, 2004). Here we see a change in blood pressure with touch designed to have a positive influence.

Fascial System Connected To The.....Everything

Another journal article talks about the connections between different systems and describes the "neural and fat tissue-fascial formations of the kidneys and pancreas." They note, "the greatest concentration of the neural elements [nerve cells] is noted in fat tissue at the level of the posterior surface of the pancreatic head [right side of the abdomen], as well as in the facial-fat tissue formations of the inferior pole and the hilus renalis [kidney]."⁶ (Maiborda, 1982).

"P" as in Process

Process, the way we process emotional energies and sensory information from our environment and pain, is the third part of Neurofascial Process.

Just the effect of touching an area and bringing one's attention to it can change what is going on. "Emotions have been shown to alter pain perception, but the underlying mechanism is unclear since emotions also affect attention, which itself changes nociceptive [painful] transmission. Shifts in attention between the thermal [heat/temperature] and olfactory [pleasant and unpleasant smells] modalities did not alter mood or anxiety. These results show that emotion and attention differentially alter pain perception and thus invoke at least partially separable neural modulatory circuits."⁷(Villemure, 2003)

NFP and Pain Reduction

Another study compared the sensation of pain to the sensation of temperature, itch, hunger and thirst. "Pain is conventionally viewed as a pattern of convergent activity within the somatosensory system that represents the exteroceptive sense of touch. These findings indicate that the human feeling of pain is both a distinct sensation and a motivation - that is, a specific emotion that reflects homeostatic behavioral drive, similar to temperature, itch, hunger and thirst."⁸ (Craig, 2003).

It is common for a person doing Neurofascial Process to notice changes in the temperature in the area of their hand contact, or a feeling of pulsation indicative of changes in the fascial tissue under their hands.

The Experience of Touch: Research Points to a Critical Role

"The experience of being touched, new research shows, has direct and crucial effects on the growth of the body as well as the mind.

Touch is a means of communication so critical that its absence retards growth in infants, according to researchers who are for the first time determining the neurochemical effects of skin-to-skin contact. "

Goleman, D. (1988). "The Experience of Touch: Research Points to a Critical Role." New York Times February 2. from: <http://query.nytimes.com/gst/fullpage.html?sec=health&res=940DE0D91F3EF931A35751C0A96E948260>

Emotions and Organs

Just how important to overall health and recovery is it to balance emotional states? One researcher put it this way, "negative emotional

states are the single most influential factor in determining quality of life after a successful kidney transplant"⁹ (Baines, 2002).

Another study describes, "with the aid of auditory or visual stimuli etc., the influence of emotional state upon parotid secretion [a gland near the mouth] was investigated in 12 subjects. It was found that the flow rate decreased significantly from an intense, passionate state to a relaxed, pleasant state, to a tense or uneasy state and was lowest in a passive, indifferent state, being almost the same as that during sleep. These findings suggest that secretion of parotid saliva depends more on emotional state than circadian rhythm."¹⁰ (Gemba, 1996).

Recognizing Emotions

Is it reasonable to believe that a person can palpate or feel areas of emotional "stuckness"? Many people can recognize how someone is feeling by their facial expression. In a study on schizophrenia and the recognition of facial expressions, researchers looked at emotion recognition from moving and static images. They concluded, "people with schizophrenia are sensitive to the motion patterns which underlie individual expressions of emotion and can use this information to accurately recognize emotions."¹¹ (Tomlinson, 2006). In this study people were able to read emotions from images of facial expressions, in other words from visual information.

Another study used brain imaging equipment to find evidence that "the human brain contains facial expression recognition detectors specialized for specific discrete emotions."¹² (Susskind, 2006).

In an earlier study, researchers found that emotional states could be reliably read using assessment tools

that look at brain waves and how the autonomic nervous system responds.

Most manual therapists don't have access to the equipment used in this study, including an Electroencephalogram (EEG), Electrocardiogram (ECG), Galvanic Skin Response (GSR), Skin Temperature (SKT), and Respiration (RSP) monitors, but they can feel the quality of the tissue, the heat or sweatiness of the skin, and feel breathing patterns as well as other motilities or rhythms in the body that give information about brain waves and the autonomic nervous system.

Angry Liver, Anxious Heart, Melancholy Spleen

"Numerous examples from traditional Chinese medicine, based on research in China, illustrate a wealth of symptoms, sensations, and their relation to the world of emotions. These examples provide arguments for collapsing the strict distinction between somatic changes and emotions as based in the dichotomized view of mind and body, subject and object."

Ots, T. (1990). "The angry liver, the anxious heart and the melancholy spleen. The phenomenology of perceptions in Chinese culture." Cult Med Psychiatry 14(1): 21-58.

Balancing Pain and Emotions

Neurofascial Process helps to balance emotional states and this helps to decrease pain and improve function. Pain and emotions are processed in similar areas of the brain. One study noted, "acute pain and emotion are processed in two forebrain networks, and the cingulate cortex is involved in both."¹³ (Vogt,

2005). Another study noted the similarity in how we process emotions and how we process pain, saying, "due to similarities between emotion and pain, it is thought that emotional models can be applied to pain."¹⁴ (Mollet, 2006).

Intestines Boiling

"People from cultures around the world report embodied feelings of emotions. Although their exact feelings may vary, this variation is bounded by universal aspects of emotional experience; there are limits to the cultural definition of emotion. Anger will always be a "hotter" emotion than fear, whether this is felt in blood rushing to the head or in intestines boiling."

Breugelmans, S. M., Y. H. Poortinga, et al. (2005). "Body sensations associated with emotions in Raramuri Indians, rural Javanese, and three student samples." Emotion 5(2): 166-74 from www.ecsa.ucl.ac.be/personnel/philippot/Article-%20BodySensation.pdf.

Which Comes First: Smiling or That Happy Feeling

One theory of emotional expression, dates back to 1906 and "holds that facial muscles act as ligatures on facial blood vessels and thereby regulate cerebral blood flow, which, in turn, influences subjective feeling." The theory, developed by Israel Waynbaum, a French physician, hypothesizes the subjective experience of emotions as following facial expression rather than preceding it.¹⁵ (Zajonc, 1985)

Perhaps this explains why laughter is such a positive influence on health.

It begs the question, "do we laugh because we are happy or do we laugh so our brains will get better blood flow and then we will feel happy?"

Touch and the Medical System

Touch is used in several medical areas, "touch can cause positive or negative neurophysiological responses. In the Operating Room, nurses do a great deal of touching, and they need to be aware of the appropriateness of their touch. Touch can be an alternative mode of conveying empathy and caring for certain patients when it is difficult for the nurse to communicate verbal empathy. Touch assessments and interventions need to be included in perioperative nursing care plans to promote the patient's comfort and avoid unwanted physiological responses from the patient."¹⁶ (Tovar, 1989).

TCM and Touch Diagnosis

Traditional Chinese Medicine also uses touch to assess and treat many dysfunctions. In 1985 a study validated the hypothesis "that a disturbance in blood flow at one place can be detected in the arterial pulse waves at a distant site. This hypothesis was motivated by the traditional Chinese medicine which uses arterial pulse waves as a principal means of diagnosis."¹⁷ (Dai, 1985).

Given the frequently reported benefits of touch and Neurofascial Process, it also warrants further investigation and wide spread use as a self-care tool for healing.

NFP First Aid

You can treat any newly injured area immediately with NFP. A powerful first aid treatment for virtually any problem would be holding one hand on the problem

area or injury and the other hand placed across the low back or ureters. The contact or connection is held for 20 minutes or more. This will often reduce toxicity or eliminate symptoms.

Body Wisdom Book

Weiselfish-Giammatteo, S. and T. Giammatteo (2002). Body wisdom : light touch for optimal health. Berkeley, Calif., North Atlantic Books. **Consult this book for details**

Case Study

"The purpose of this case study is to show the changes in Range of Motion in all joints after performing Neurofascial Process." Potter, B. (2002). Changes in Range of Motion After Neurofascial Process, from: www.centerimt.com/e-journal/articles/ej0001.html.

Headaches are a common complaints of people all over the world. This study is about a 38 year old female who has suffered from headaches since childhood, approximately 25 days out of every month. The study shows the great benefit of IMT and Neurofascial Process in treating this common complaint of headaches." Gil'ad, R. (2002). Treating Chronic Headaches with Basic Techniques of Integrative Manual Therapy, www.centerimt.com/e-journal/articles/ej170.asp.

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