

# **Effects of Specific Massage Therapy on Chronic Pain in Institutionalized Elderly: Meridian Channel Stimulation**

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## **Abstract:**

Little research, in regard to chronic pain and pain management, is done on the elderly population due to a lack of interest on the natural decline that accompanies old age and the end stages of life. Our elderly population has multiple medical conditions that can cause and contribute to chronic pain. The conventional treatment, of chronic pain in the elderly, often includes such interventions as medications, moist heat and physical therapy. This approach produces a less than desirable effect because of the side effects produced by mixing life supporting medications with pain medications. Physical therapy treatments are often limited due to cost factors although the conditions, which warrant PT, are often chronic and long term. Being institutionalized, as in a nursing home, increases the moribund effect on the elderly population and the need for special consideration. Using more traditional (sometimes labeled complementary or alternative) approaches to pain management and the treatment of chronic pain must be explored to maximize the quality of life in the elderly and to minimize complications from drug reactions as well.

## **Purpose**

The purpose of our study was to examine the effects of Meridian Channel Stimulation (adapted from Meridian Massage from “Touch For Health” Synthesis) and Hand and Foot Reflexology on perceptions of chronic pain among institutionalized elderly. This was a pilot study, conducted by Registered Nurses and funded by the United Way (St. Louis, MO). This was a controlled clinical trial of massage versus conversation in 18 institutionalized elderly residents with chronic pain. A baseline assessment of pain and mood were obtained two weeks prior to subjects being randomly assigned to one of two groups of either conversation or massage. Subjects received

the intervention (massage or conversation) in the privacy of their room. Subjects wore comfortable clothing but no socks or shoes. The intervention was administered by independent nurses who were not employees of the nursing home and who were trained in the massage technique at the Massage & Energy Connection College of Applications (MECCA). The primary focus of the conversations was reminiscence and social interaction.

## **Goals**

1. To test the hypothesis that nursing home residents receiving Meridian Channel Stimulation and Hand

and Foot Reflexology will effect significant reduction in pain perception as measured by a decrease in pain as measured on an objective pain rating tool (form) as compared to the nursing home residents who participate in a conversation group.

2. To test the hypothesis that receiving Meridian Channel Stimulation and Hand and Foot Reflexology effect decreases in pain perception as measured by a reduction in the use of pain medication as compared to the nursing home residents who participate in a conversation group.
3. To inspire, by example, the staff of the nursing home to replicate the treatment, Meridian Channel Stimulation and Hand and Foot Reflexology, on all eligible nursing home residents.

### **Background**

Massage has been used for pain relief and healing by various cultures. It is cited as the intervention of choice in several nursing references. Other disciplines, such as physical therapy also include massage for pain relief. The major role of massage is to improve the circulation through touch, pressure and stimulation of proprioceptors and receptors of the skin and underlying tissues. There is also mechanical effect upon the superficial venous and lymphatic channels providing mechanical and reflex pain relief (Jacobs, 1959; Sims, 1986; Scull, 1945).

There are numerous studies using massage that focus on pain relief with chronic

diseases. Massage has been used with cancer patients, AIDS patients and burn victims. "Slow stroke" massage was studied in healthy middle-aged women and showed a decreased level of anxiety and subjects perceived it as relaxing. (Longworth, 1982)

The use of the term massage is considered a manipulation often associated with the act of rubbing the skin. However, any tactile stimulation within two inches of the skin will stimulate the proprioceptors on the surface of the skin causing a measurable change or manipulation in the response. Because of the frailty of the population and the physical limitations often associated with the elderly, we wanted to utilize the least aggressive mode of manipulation. The stimulation of the acupuncture channels or meridians was chosen as the most effective and least invasive type of massage.

Meridians have been used in East Asian medicine for centuries. The Meridian Channel Stimulation is believed to have effect through the Meridians in the body. Meridians are reported as specific energy pathways that run throughout the body and indicate the flow of energy. (Austin, 1972, Thie, 1997) Acupuncture points are considered to be points of electrical resistance running along these energy pathways (Meridians). Theoretically when disease or pain occurs, there is a disruption in this energy pattern and organization. This disruption may be caused by an excess or a deficiency resulting in a blockage or loss of energy. It is hypothesized that stimulation of either the meridians or acupuncture points may improve energy flow and affect organs quite distant from the area being stimulated (Harnack, 1990). Specifically, stimulation of the meridians enhances circulation of

lymph and blood and brings about energy balance and optimal function, which gives the patient a sense of relaxation and increases the patient's energy level (Gottesman, 1992; Hare, 1988).

Reflexology is an acupressure style that involves pressing points on the hand and foot that relate to other parts of the body or internal organs. A reflexology chart correlates the points of stimulation on the hands or feet to other parts of the body (Hare, 1988). It is believed that by applying pressure to these areas, it is possible to effect a change to another part of the body presumably promoting well being and relaxation (Griffith, 1996). A study, completed on 52 post-surgical patients, using reflexology post-operatively found the amount of post-operative pain (determined by analgesic use) was reduced for up to 3 days following reflexology treatment (Griffith, 1996).

### **Outcome Analysis**

This was a small pilot study. Subjects were followed for a period of 10 weeks. Several assessment tools geared for use in the elderly population were utilized to measure pain and mood. Assessments were taken at the beginning of the study and at the end of the study. Pain surveys were completed twice weekly for the first two weeks of the study to obtain a pre-treatment baseline, then four times weekly during the intervention and one additional time 2 weeks after the intervention was completed.

The results indicated that both interventions (conversation and massage) were useful in lowering pain perception indicating the need for further research on a larger group of subjects. The decrease in pain perception

in both the conversation and the massage groups reinforce the premise that we all need social as well as physical interaction.

The amount of decrease in pain was only slightly higher in the massage group indicating the need for further study to analyze the clinical effect of this type of massage in place of pain medication in the form of drugs. Two weeks post intervention the pain perception in the conversation group was equal to the baseline established prior to the interventions. The effect of massage therapy was only slightly different(?) from the baseline established prior to the interventions.

The staff of the nursing home was not inspired by our efforts. They were much too busy providing the "routine" care of the residents and at times considered us (the nurses conducting the study) an interference. The attitude of the nursing staff made data collecting more difficult. Because the staff nurses were dedicated to routines to make their workload less hectic, our request to withhold pain medication unless the patient requested it was ignored. There was no incentive or bonus to making an additional therapy available because there was neither time nor staff to administer it.

### **Working With The Energy Meridian System**

"Meridian Massage" is a term readily associated with the Touch For Health Synthesis. Students routinely receive this information and practice the application in the Level 1 Touch For Health class. In researching the idea of using the established meridian flow as a technique for reducing pain perception and improving mood in the

nursing home residents, several questions required clarification.

1. Was there any possibility the procedure would hurt or cause more pain to the subjects?

The sequence of the Horary or Meridian Wheel (or Clock) is the accepted pattern of energy flow in acupuncture. (Austin, 1972, Thie, 1997). There are no reported findings that indicate using this energy flow pattern (following the time sequencing) is in any way disruptive. It was also noted that actually touching the subjects was not entirely necessary given that the desired effect could be realized without ever actually physically touching the subject (Thie, 1997).

2. Would the subjects be required to perform in any specific way to receive the massage (turn over, stand up etc.)?

It was decided that if unable to turn on their sides subjects could remain supine or seated and the nurse would reach under them to stimulate the meridian.

3. Would the pressure of the touch cause pain?

Since it was the direction or pattern of the massage that was crucial, minimal touch could be used. It was desirable to touch the beginnings and ends of the meridians, however it was not crucial.

## Adaptation of the Meridian Massage from Touch For Health

The nurses recruited for this study were required to take a Level 1 Touch for Health class. This was to help them gain some knowledge regarding acupuncture and the system they were going to employ with the nursing home residents.

This particular method of utilizing the meridian pathways was first described by Richard Harnack in a workshop he developed, called The Body Energy, to acquaint people with meridians and Touch For Health. The pattern, adapted for this study, utilizes six basic Energy meridians: Stomach, Spleen, Bladder, Kidney, Gall Bladder and Liver. Utilizing these particular meridians allowed us to cover the front, back and sides of the body while following the basic time of day sequencing. Thus, we could encourage and influence the energy flow of the 12 meridians by utilizing the direction of flow established by the Meridian Wheel.

To help insure our success at meeting the goal of pain reduction and mood enhancing we worked with the system in three ways: Scanning, Tracing and Brushing (the Energy Shower). Each method has a specific use and advantage.

### Scanning

Scanning involves basic awareness of the energy of the body. Utilizing this as the first contact heightened the awareness of both the nurse and the patient. It is not necessary to try and interpret what you or the subject may feel and it is important not to become discouraged if you have difficulty deciding that you feel anything.

**Procedure:**

Beginning at the head, mentally divide the face into halves. From the hairline move your hand down to the shoulder. Slowly, with hand outstretched, move down toward the fingers then back toward the torso. From the shoulder use both hands to scan down the side of the body to the foot then back up the front of the body to the shoulder. Repeat on the opposite side. Repeat the entire sequence three times. This is a very slow movement.

**Tracing**

Tracing the Energy System involves lightly touching the body with a tracing motion while moving your hands in the same direction of the flow of the Scanning technique. This method can also be done just above the body, in case the person is ticklish or sensitive.

The main use of the Tracing technique is to increase the energy flow in the system. It has the effects of increasing both energy and relaxation. The speed used to do this can be varied. If you move slowly the greater the relaxation seems to be, while the faster movement seems to energize.

**Energy Shower**

To do the Energy Shower you touch the body using a continuous brushing and scooping motion following the pattern described below:

1. Following the diagrams above start at the beginning of the stomach meridian, brush in the direction of the meridian (down the body) to the foot to the 2nd toe. Hold the tip of the 2nd toe about 2 seconds.

2. Hold at the nail root of the big toe on the side closest to the middle of the body for two seconds then brush upward along the inside of the foot curving upward in front of the ankle; continuing up the leg just behind the shin bone (tibia), curve slightly forward at the knee and continue along the inside of the thigh up the abdomen to the outside the chest toward the arm pit.
3. From the arm pit, brush down the inside of the arm to the palm of the hand.
4. Brush up the back of the hand and arm to the ear.
5. Starting at the inner corner of the eye above the eyebrow, press firmly on these points for two seconds then brush over the top of the skull, down the back of the head, down the neck move in close along the spine down to the lower lumbar, following the gluteal fold outward. Return to the shoulder and brush out towards the edge of the shoulder, down through the middle of the buttocks, down the back of the thigh, to the back of the knee, following the curve of the calf outside down along the outside of the foot and end at the outside nail root of the little toe. Hold the little toe for two seconds.
6. Begin on the ball of the foot, brush upwards following the arch of the foot up and inside; continue back behind the ankle making a small circle, then up the inside of the leg passing on either side of the pubic bone and navel. At the base of the sternum, flare out slightly and continues on either side of the sternum ending just below the collarbone. Hold the notches at the collarbone for two seconds.

7. From the top of the shoulder brush down the inside of the arm to the palm of the hand.
8. Brush up the back of the arm to the ear.
9. Begin at the outer corner of the eye, brush down and back toward the opening of the ear, make a circle forward then back behind the ear. Continue brushing forward toward the mid-point of the eyebrow (about one finger's width above the eyebrow) continuing back over the top of the skull along the outside down to the back of the shoulders. From the shoulders brush forward on the chest and back under the arms, follow the curve of the chest back at the waist; brush forward on the hips. Continue down the outside mid-point of the thigh and lower leg onto the 4th toe. Hold the 4th for two seconds.
10. Begin on the lateral side of the nail root of the big toe (hold for two seconds) then brush up the foot in front of the ankle on the inside of the leg. Follow the inside edge of the shin bone (tibia) then slightly back at the knee, upward on the inside of the thigh, following the curve of the hips back and up to the side of the abdomen, ending on the rib cage in line with the nipple (in the sixth intercostal space).
11. Brush up the rib cage and down the inside of the arm to the palm of the hand.
12. Brush up the back of the arm to the ear.

REPEAT SEQUENCE AT LEAST THREE TIMES. MAY BE REPEATED AS OFTEN AS NEEDED.

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