

ICE MASSAGE FOR REDUCING LABOR PAIN

Ice massage for Reduction of Labor Pain is based on the work done by Dr. Ronald Melzack and Dr. Patrick Wall at the McGill University in Canada. In the early 1960s Drs. Melzack and Wall proposed a new theory of pain mechanism. According to their Gate Control Theory of pain, stimulation of the skin creates nerve impulses that are transmitted to the spinal-cord system; nerve impulses that can be inhibited or enhanced at the level of the spinal cord. Nerve impulses traveling toward the brain in the smaller nerve fibers of the spinal cord proceed at a steady rate. This continuous discharge keeps the pain gate open and the transmission of pain is enhanced.

Nerve impulses traveling toward the brain through large nerve fibers in the spinal cord occur in a burst of impulses. These burst-type impulses are mainly inhibitory and have the effect of keeping the pain gate partially closed resulting in diminishing the perception of pain intensity. When the large fiber impulses are artificially stimulated by vibration, scratching, or ice massage, the gate further closes resulting in a decrease in the sensation of pain.

Ice has been successfully used in the treatment of musculoskeletal pain over the years. Dr. Melzack studied the use of ice massage of the web of skin between the thumb and forefinger for the reduction of acute dental pain. His work showed a 50 percent reduction in acute dental pain.

Drs. Melzack and Wall did not describe in their published study how they came to decide on the selected anatomical area to use ice massage. However, the two physicians did studies comparing acupuncture to TENS (Transcutaneous electrical nerve stimulation) for pain relief. Located within the anatomical area they massaged on the hand, is an acupressure meridian point described in acupuncture literature as Hoku or Large Intestine 4 (LI4).

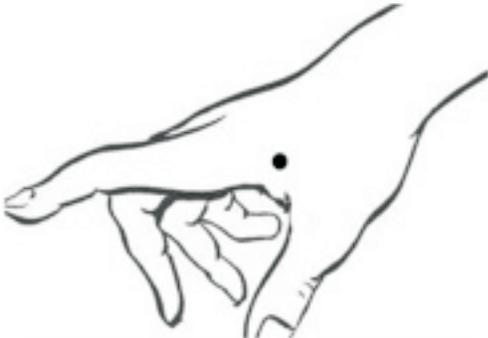
The Large Intestine 4 pathway moves from the tip of the forefinger up to the face and circles the teeth; it bifurcate at the shoulder to move downward wrapping around the entire colon. At term pregnancy the colon practically encircles the upper portion of the uterus.

The exact point of LI4 is located on the medial aspect of the first metacarpal. The skin located directly over this point is part of the outer part of the hand and is thin. Ice massage over this area can cause breakdown of skin integrity due to cold temperatures and friction. However, the skin between the thumb and forefinger shown in Figure 18 is part of the thick, hard, and horny texture of the palm and can withstand the intermittent friction and cold temperatures used in this technique. A study was done by this author in 1992 using a small number of laboring women with overall 25 percent reduction of early labor pain. The hypothetical question was developed: If ice massage of the web of the skin between the thumb and forefinger can reduce dental pain, will ice massage used in this manner also reduce labor pain?

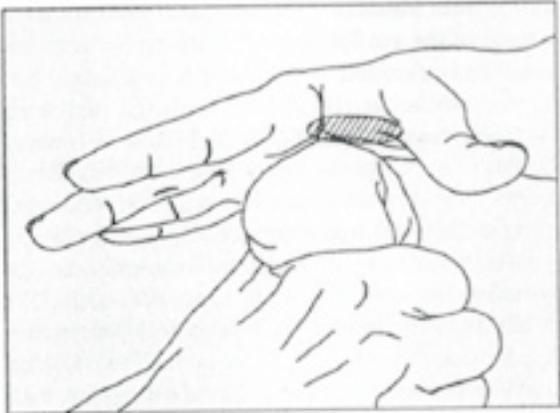
The application of ice massage to the skin is noninvasive, non-pharmaceutical and is comparable to applying a hot water bottle or powder for effleurage, and was considered no threat to the mother or the fetus.

Ice Massage for the Reduction of Labor Pain, a research paper, was presented at the University of Southern Queensland, Toowoomba, Queensland, Australia, June, 1992, and at a Midwifery Education Seminar, Tampa General Hospital, Tampa, Florida, 1993.

A second, larger study carried out in 1999-2002. Ice Massage for the Reduction of Labor Pain, was published in the Journal of Midwifery and Women s Health Sep/Oct, 2003. November 2003. The paper was selected by Medscape (WebMD Health Professional Network) as best in maternal health journals for the week and printed on the internet in its entirety. In 2010 it was included in Midwifery Best Practice, Vol 5.



Large Intestine 4 energy meridian



Correct hand anatomy for massage with miniature ice bag.