

# Massage Therapy's Proven Ability to Enhance Sequelae in Stroke Survivors

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## Abstract

Adults with long-term disabilities are most likely to suffer from strokes. Up to 50% of stroke survivors are permanently disabled and the upper motor neuron syndrome signs and symptoms they experience include weakness, spasticity, lack of coordination and agonist antagonist co-contraction. Together, they contribute to impairments and functional issues that have the potential to result in costly complications. Physical therapy may help people with disabilities improve their quality of life and their disabilities. The most widely used form of passive physical therapy is manual therapeutic massage, which is one of the oldest forms of medicine known to man and has been used worldwide since antiquity. All back rub controls bring mechanical powers into the delicate tissues through "mechanotransduction". Massage may help to reduce muscle stiffness and increase muscle compliance by increasing blood flow and muscle mass temperature. Therapeutic massage comes in many different varieties. In the Western world, Swedish massage is the most common type of massage. Based on Western concepts of anatomy and physiology, this is one of the most common treatments for athletes who want to improve their performance to its full potential. To achieve or maintain health, it involves the systematic application of manual pressure and the movement of soft tissue with rhythmic pressure and stroking.

**Keywords:** Telerehabilitation • Physiotherapy • Musculoskeletal • Therapeutic massage

## Introduction

The Chinese massage (Tuina) is another type. To restore equilibrium to the physical and emotional systems of the body, this involves a variety of strokes, shaking, stretching and joint movement along energy channels. The hands are used to manipulate the body's tissues in Indian massage (Dalk). Dalk is based on the concepts of tanqiyah (expulsion) and imla (diversion) in Unani medicine. Last but not least, Thai massage is a type of deep massage that uses light, persistent pressure on the muscles. It is believed that pressure point massage along the body's 10 major energy channels, or Sen Sib, can open up blocked energy and boost awareness and vitality. Cancer patients, para-athletes, people with some neurological conditions like Parkinson's disease, people with dementia and people with constipation after a stroke can all benefit from therapeutic massage, which has been shown to effectively improve mood, create a sense of pleasure and reduce the occurrence of major adverse events and injuries.

## Description

However, there is insufficient scientific evidence to suggest that stroke survivors benefit from therapeutic massage. We conducted a meta-analysis and systematic review for evidence-based treatment due to the heterogeneous reporting of therapeutic massage trends in previous studies. Therefore, the objective of this systematic review is to examine the evidence that therapeutic massage can improve adult stroke survivors quality of life, stroke disability,

motor function, spasticity, activities of daily living, anxiety, pain, balance and gait. This systematic review and meta-analysis main finding is that traditional physiotherapy and therapeutic Chinese massage (Tuina) work well to improve motor function and reduce spasticity in stroke survivors, especially in the sub acute stage. The symptoms also get better when acupuncture and Tuina massage are combined. Because the therapeutic massage intervention was mostly used in the sub acute stage of the stroke and had positive effects on motor function in the upper and lower limbs, the findings of this review are significant. Recovery of upper limb function is still a top priority for patients, researchers and clinicians [1].

This review found only one study that used Swedish massage as an intervention, which surprised everyone. Anxiety was reduced by using it. This came as a surprise to us because Swedish massage is currently the most well-known and widely practiced type of massage in Western countries. Since other authors had used Swedish massage to improve spasticity and motor function in multiple sclerosis and cerebral palsy, we anticipated finding additional studies. There were no scientific publications in Europe, the United States, Africa, or Australia; they were only found in Asian nations, particularly China.

The outcome that received the most attention was motor function in the upper and lower limbs, followed by spasticity, although the two are related. A cycle of over activity, contraction and over activity can be used to describe motor impairments in stroke survivors. This cycle occurs simultaneously with the continuum of paresis, disuse and paresis. In order to achieve optimal motor recovery and function, both cycles must be disrupted [2].

In point of fact, when spasticity is absent, motor function is restored more fully. Because this will affect the neuroplasticity of the individuals and their recovery, it is essential to reduce spasticity before the patient performs voluntary movement in order to obtain a movement of some quality. The sensory system, according to a number of authors, is the most important predictor of severe spasticity and plays a significant role in reducing spasticity. It is still up for debate what drives changes in spastic muscle's elastic modulus in stroke survivors. A stroke-related structural change in the muscle is one possible explanation. The length of the muscle fascicles in the upper and lower limbs has been found to be shorter. According to these findings, abnormal elastic properties of the paretic muscle may be caused by altered muscle morphology during passive stretching. There is evidence of upregulation of reticulospinal tract projections excitability on the contralateral side in stroke survivors due to damages to the motor cortex and its descending pathways and the subsequent

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unmasking of inhibition. Periphery and neck proprioceptors provide sensory input to the reticular nuclei.

The reticular formation appears to also aid in voluntary movement preparation in addition to sensorimotor integration. Relaxation and stress hormones are released, blood flow is increased, parasympathetic activity is activated and muscle tension and neuromuscular excitability are reduced with therapeutic massage. It might lessen the reticulospinal tracts hyper excitability. To enable other therapeutic interventions, the therapist may find that the various therapeutic massage modalities are most beneficial in reducing muscle over activity. Inconclusive results were obtained for stroke severity, daily activities, gait, balance and quality of life. When Tuina is used in addition to acupuncture or conventional therapy, the trend is positive. Our findings are in line with what has been written about pain. The idea that the immune system, the neuroendocrine axis and the cutaneous nerves are connected through an interconnected network is receiving more and more support. The growth response has been suggested to be mediated by oxytocin and therapeutic massage is known to have a number of beneficial effects, including activation of the relaxation response [3].

Anxiety affects stroke patients and massage might be able to help them relax and feel better. Anxiety levels among stroke survivors were found to have decreased as a result of these reviews positive effects. It's surprising that no study looked into whether or not range of motion was an important factor to consider when reducing spasticity. A number of brain regions, including the amygdala, hypothalamus and anterior cingulate cortex, which are all involved in stress and emotion regulation, have been shown to be represented by moderate pressure massage with movement, according to functional magnetic resonance imaging data. The importance of taking into account bilateral activation, particularly in the secondary somatosensory cortex, is highlighted by the findings of the whole-brain meta-analysis of right-hand tactile stimulation. The majority of the articles in this systematic review improved outcomes by using Tuina massage. Traditional Chinese medicine has four main subspecialties.

However, despite its long history in China, it is still relatively new in Western culture. Tuina knead was started from China quite a while back and is normally referred to the present time as "The granddad of all restorative back rub treatments". Using the same principles as acupuncture, but using hands and fingers instead of needles, it works on the organs, energy channels in muscle groups and points on the body according to the meridian theory. To achieve dredging meridian, it is combined with anatomical and pathological diagnosis, eliminates pathogenic factors and restores a harmonious Yin-Yang balance. The subcutaneous muscular layer can be affected by tuina; improve the circulation of local blood and lymph, the metabolism of skin tissue, regulate physiological and pathological states, unblock meridians and harmonize Qi (the total life energy). Balance issues following a stroke are attributed, according to Chinese medicine, to Qi disorder and imbalance of the Yin and Yang. It balances the yin and yang and qi (energy), which is also known as the "modulation of the imbalance between parasympathetic and sympathetic activity" in Western medical terminology. After a stroke, upper and lower limb spasticity, also known as "flaccidity of Yang and spasm of Yin," is caused by an imbalance in the Yin and Yang [4].

Techniques like grasping, pressing, rolling, round rubbing, holding-twisting, rub rolling, pushing, kneading, rotating, shaking, wiping, vibrating, digital striking, knocking, chapping, pressing, acupressure, myofascial

release, reflexology, stretching and joint mobilizations are all included in tuina massage. These techniques are applied to specific body points. Tuina is a type of functional massage that uses muscle, tendon and joint motion to send a lot of proprioceptive sensory impulses to the brain.

Despite the fact that massage therapy is not completely risk-free, no studies have reported any adverse events. Although the rate of negative outcomes is unknown, it is probably low. A person's risk of stroke is not increased by the massage itself; however, certain individuals must be handled with caution. There is a small chance that massage could break up blood clots if the person has them. Deep tissue massage should not be performed on people who are taking blood thinners because they bruise more easily. In the vicinity of the carotid artery, care should be taken, but an experienced massage therapist should not have any problems with this [5].

## Conclusion

To compare Swedish massage and therapeutic Chinese massage (Tuina) in stroke survivors, additional clinical and experimental research is required. Western stroke management guides do not recommend therapeutic massage, which is surprising. Stroke survivors may benefit from rehabilitation therapy that combines Western and Chinese medicine. Last but not least, a patient can benefit greatly from touch therapy. There are several limitations to the current review. First of all, most of the patients in this review are Asian. Second, only one article on Swedish massage for stroke survivors was found. It is unknown whether Tuina massage will be beneficial to the Western population.

## Acknowledgement

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## Conflict of Interest

None.

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