



State of Evidence

July 2013

A large body of empirical evidence supports the established effects of massage therapy for the following conditions and populations:

Cancer

Over the last six months, evidence for the positive effects of massage therapy in the management of cancer patients has continued to burgeon, with several new Level 1 and 2 studies being published. Although massage therapy is clearly not a treatment for cancer itself, it is effective in the management of symptom distress and palliation. It can also ameliorate the mood effects of a cancer diagnosis, such as stress and depression.

A substantial body of systematic reviews supports the efficacy of massage therapy in treating the side effects of cancer, including a Cochrane Systematic Review in 2004, which was updated in 2008.¹

The largest single study of massage and cancer was conducted at Memorial Sloan-Kettering Cancer Centre, where 1290 patients were treated with massage therapy over a three-year period.²

Musculoskeletal pain, including low back pain

A significant body of evidence, including systematic reviews, supports the effectiveness of massage therapy in the treatment of a range of musculoskeletal presentations.

There are five systematic reviews of massage and low back pain, including a Cochrane Systematic Review in 2008, which was updated in 2009.³ The most recent review, published by the Ottawa Panel in 2012, concluded that massage interventions provide short-term improvement of sub-acute and chronic low back pain symptoms and decrease disability at immediate post treatment. Massage therapy provides short-term relief when combined with therapeutic exercise and education.⁴

There are five systematic reviews of neck and shoulder pain, including a Cochrane Systematic Review in 2012 which concluded that massage therapy provides short-term relief of mechanical neck pain.⁵ A systematic review published by the Ottawa Panel in 2012 reached a similar conclusion.⁶

A 2013 meta-analysis and systematic review also showed that massage therapy is an effective intervention that may provide immediate relief of neck and shoulder pain.⁷

A large body of research exploring the connection between active myofascial trigger points and various kinds of myofascial pain and dysfunction, provides underpinning evidence for the use of trigger point techniques, including myofascial dry needling. A team of Spanish researchers in the Department of Physical Medicine and Rehabilitation at the Universidad Rey Juan Carlos have established a substantial body of work in this area, with a particular focus on headache, neck and shoulder pain.⁸

There is also modest evidence for the effectiveness of massage therapy in ameliorating the symptoms of fibromyalgia. A 2010 review revealed short-term benefits, with one single arm study reporting longer term effects.⁹

Mood

Anxiety reduction is one of the most well-established effects of massage therapy with evidence for this crossing multiple presenting conditions and populations. In a 2004 meta-analysis of 37 studies, reductions in trait anxiety and depression were identified as massage therapy's largest effects.¹⁰ A number of studies also show that massage therapy increases oxytocin, which may be one of the mechanisms by which it mediates anxiety.

Pre/Post operative

A significant body of RCTs demonstrate the efficacy of massage in the management of pre- and post-operative pain, anxiety and tension, and post-operative nausea. A 2009 Cochrane Systematic Review found that acupressure stimulation of the P6 acupoint significantly reduced post-operative nausea and vomiting, and the need for antiemetics.¹¹

Pregnancy/Labour/Post-natal

A significant body of evidence supports the efficacy of massage throughout pregnancy, and particularly during labour. A 2012 Cochrane Systematic Review found evidence that massage improves the management of labour pain with few adverse side effects.¹² Another 2012 Cochrane review found that massage may have a role in reducing pain and improving women's emotional experience of labour.¹³

Infant/Paediatric

A 2004 Cochrane Systematic Review found that massage of pre-term or low-weight infants improved daily weight gain by 5.1 grams and appeared to reduce the length of hospital stay by 4.5 days.¹⁴ A 2006 Cochrane review also found evidence of benefits in connection with mother-infant interaction, sleeping and crying, and on hormones influencing stress levels.¹⁵

A 2007 review established the efficacy of paediatric massage for a range of conditions; however, significant reductions in state anxiety were identified as one of the strongest effects.¹⁶ A 2013 meta analysis concluded that massage therapy may be a safe and cost-effective practice to improve weight gain and decrease the hospital stay of clinically stable preterm infants.¹⁷

Older adults

A body of RCT evidence supports the efficacy of massage in treating a range of conditions associated with aging. A Cochrane Database Review of massage and touch for dementia found that massage therapy may serve as an alternative or complement to other therapies for the management of behavioural, emotional and other conditions associated with dementia.¹⁸

Athletes/Sports/Exercise

Systematic reviews show that massage therapy is effective in reducing delayed onset muscle soreness and enhancing recovery after strenuous exercise.¹⁹ A number of RCTs have also shown positive effects of massage on pain and recovery after strenuous exercise.

Strong preliminary evidence also points toward the clinical efficacy of massage therapy in the treatment of the following conditions:

Headache and migraine

A 2010 systematic review of manual therapies for migraine found that massage therapy, physiotherapy, relaxation and chiropractic spinal manipulative therapy might be as effective as propranolol and topiramate in the prophylactic management of migraine.²⁰ A number of RCTs investigating headache and migraine also report positive results for massage.

Arthritis

A number of promising RCTs support the efficacy of massage therapy in treating both osteo and rheumatoid arthritis. One recent RCT of Swedish massage for osteoarthritis of the knee revealed significant improvements across a range of measures compared to usual care.²¹ This dose-finding study built on an earlier study that produced similar results.²² A study released in 2013 found that twice weekly, self-massage of the quadriceps muscle improved pain, stiffness, physical function and knee range of motion in adults with diagnosed knee osteoarthritis.²³

Hypertension

Some preliminary evidence, based principally on case series, indicates that massage has a moderating effect on blood pressure and heart rate. One specific study provides evidence that the style of massage therapy can influence blood pressure, with increases in blood pressure noted for potentially painful massage techniques.²⁴

HIV/Immune Function

A number of studies report findings that massage therapy has a positive effect on immune function. A 2010 Cochrane Review found evidence to support the use of massage therapy to improve the quality of life of people living with AIDS/HIV.²⁵ A 2013 clinical trial showed massage therapy to be effective in the treatment of depression in HIV patients.²⁶

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³ Furlan AD, Imamura M, Dryden T, Irvin E. (2008). Massage for low-back pain. *Cochrane Database Syst Rev.* 2008 Oct 8;(4):CD001929.

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⁵ Patel KC, Gross A, Graham N, Goldsmith CH, Ezzo J, Morien A, Peloso PM. (2012). Massage for mechanical neck disorders. *Cochrane Database Syst Rev.* 2012 Sep 12;9:CD004871

⁶ Brosseau L, Wells GA, Tugwell P, Casimiro L, Novikov M, Loew L, Sredic D, Clément S, Gravelle A, Hua K, Kresic D, Lakic A, Ménard G, Côté P, Leblanc G, Sonier M, Cloutier A, McEwan J, Poitras S, Furlan A, Gross A, Dryden T, Muckenheimer R, Côté R, Paré V, Rouhani A, Léonard G, Finestone HM, Laferrière L, Dagenais S, De Angelis G, Cohoon C. (2012). Ottawa Panel evidence-based clinical practice guidelines on therapeutic massage for neck pain. *J Bodyw Mov Ther*, 16(3), 300-325.

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- ⁸ See numerous studies by Alonso-Blanco C, Fernández-de-Las-Peñas C, de-la-Llave-Rincón AI, Zarco-Moreno P, Galán-Del-Río F and Svensson P.
- ⁹ Kalichman L. (2010). Massage therapy for fibromyalgia symptoms. *Rheumatol Int*. Jul;30(9):1151-7.
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