

## Massage

### What Is It?

Massage has been used since before recorded history, and it remains a popular CIH approach. In 2012, 6.9% of Americans had experienced some form of massage in the past year.<sup>1</sup> Use in people with pain is much higher; a Canadian study reported that 56% of patients with nonspecific chronic back pain and 48% with arthritis or other musculoskeletal disorders had used it over the last 12 months.<sup>2</sup> Aside from mind-body approaches and animal-assisted therapies, massage is currently one of the most widely available complementary approaches used in the US.

Massage therapist training and licensing standards vary greatly from state to state.<sup>3</sup> There is also variability from school to school. Common certifications you will see after a therapist's name include CMT (certified massage therapist) and LMT (licensed massage therapist). CAMT stands for "certified acupressure massage therapist."

### Types of Massage Therapy

Massage therapy has been defined as "the systematic manipulation of soft tissue with the hands that positively affects and promotes healing, reduces stress, enhances muscle relaxation, improves local circulation, and creates a sense of well-being." Types of massage therapy include the following<sup>4-6</sup>:

- **Swedish massage (and similar schools)** involves stroking and kneading the body using various methods. 5 basic massage techniques are used, including:
  - **Effleurage**—stroking with various degrees of pressure. This is what most people think of when they think of a massage.
  - **Petrissage**—a kneading motion, done with the fingers and thumbs in a circular pattern
  - **Tapotement**—rhythmic, vigorous tapping or slapping done to stimulate deep tissues
  - **Friction**—use of the palm, forearm, heel of the hand, or even the elbows to roll, ring, and compress tissue
  - **Vibration**—can be done using hands or using a machine
- **Shiatsu** is based on massaging over trigger points and pressure points. Therapists most commonly use the balls of their thumbs and follow points called tsubos, which are often pressed or held, and correlate with acupuncture points.
- **Neuromuscular massage** involves applying pressure throughout the body, not just in areas that are sore. Pressure is usually much higher than other forms of massage therapy. Neuromuscular therapy (or neuromuscular technique) involves a careful examination and manipulation of the soft tissues of a specific area of the body. It is often used to treat chronic pain.

- **Visceral massage** involves the gentle manipulation of the visceral organs of the abdomen and pelvis. Mayan abdominal massage, which has been passed down for centuries, is one example.

## How Massage Works

Massage is thought to reduce the effects of stress on the muscles and to ease tension and correct unhealthy postures, all of which can contribute to chronic disease in various ways. Massage therapy's healing benefits are thought by many to occur, at least in part, through the movement of the fascia, the net of connective tissue that surrounds the muscles and other tissues. When the fascial network is subjected to an injury or stress, resultant adaptations by the body (shifts in how the body carries itself, for example) can have widespread health consequences. Massage therapy and other touch therapies are thought to restore fascial balance.<sup>7</sup>

In 2004, a meta-analysis of 37 studies found that a single massage therapy session led to the following:<sup>8</sup>

- Reduced anxiety and depression (multiple sessions were actually found to have comparable benefits to psychotherapy)
- Lowered blood pressure
- Decreased heart rate

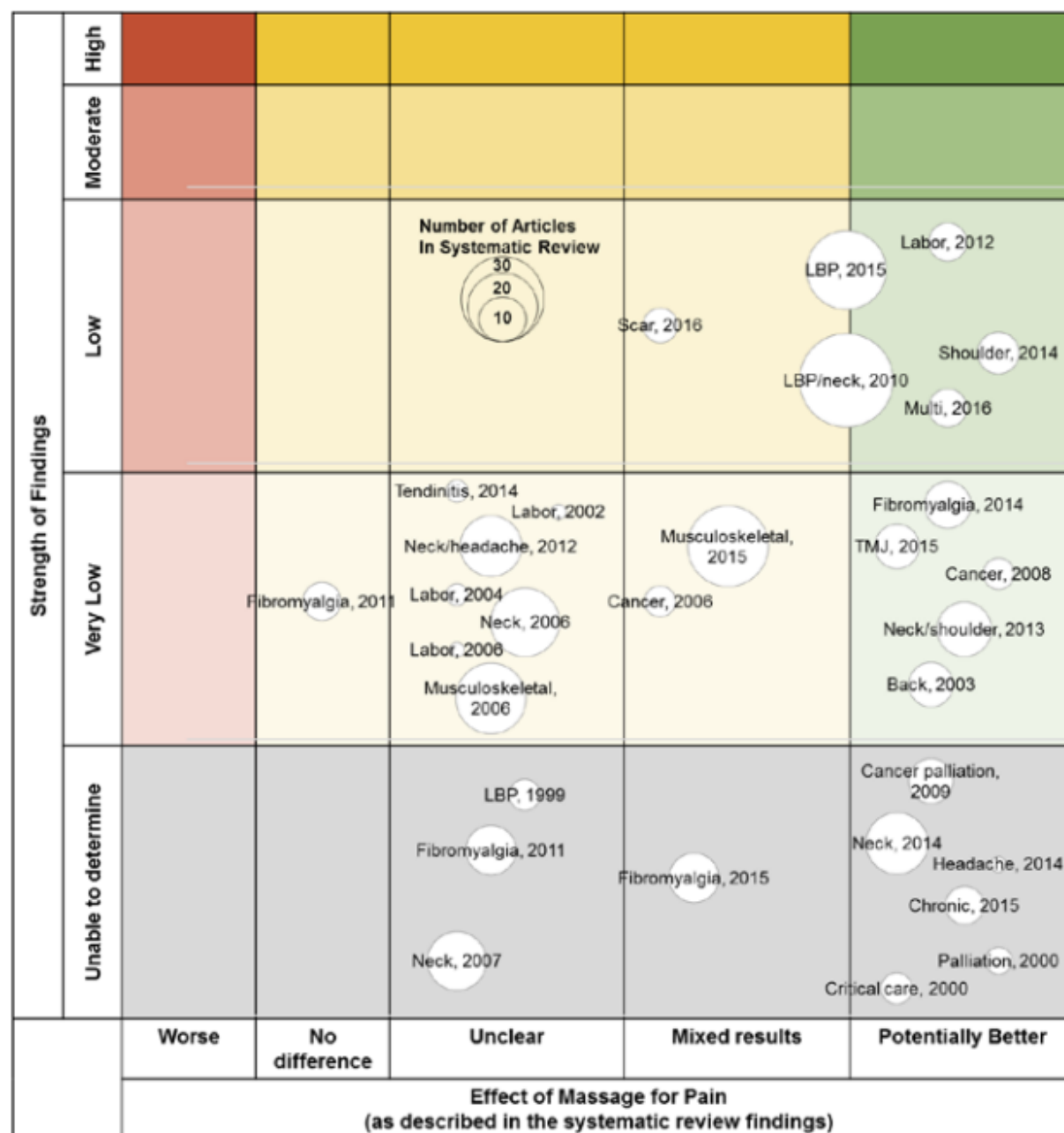
Single sessions were not found to immediately reduce pain, improve mood, or lower cortisol levels, but repeated sessions were noted to reduce pain.

## When to Use It

Figure 1 shows the QUERI evidence map for massage therapy, which covers research through February 2016.<sup>9</sup> Note that the farther up and to the right a given condition's circle is, the more favorable the literature is for massage for being beneficial. Note the following:

- The best support is for lower back pain, neck pain, shoulder pain, labor, and pain in multiple areas
- There are weaker findings supporting potential benefits for TMJ, fibromyalgia, cancer pain, and neck/shoulder pain.





LBP = low back pain, TMJ = temporomandibular disorder; Multi = multiple conditions described

Figure 1. Massage Therapy Evidence Map<sup>9</sup>

It can be helpful to go into more detail as far as research findings.

**Pain.** Pain is one of the main reasons people use massage, and research favors massage for many aspects of pain control.

- **General pain.** A 2016 review of 60 high- and 7 low-quality studies concluded that massage therapy should be strongly recommended as a pain management option, compared to no treatment. It also “weakly recommended” massage for improving mood and health-care related quality of life.<sup>10</sup> A review of 26 trials found that massage therapy, as a stand-alone treatment, reduces pain and improves function in some musculoskeletal conditions (back pain, knee arthritis, shoulder pain), but did not show a clear benefit when compared to other active treatments.<sup>11</sup> Another 2016 review of 16 studies found weak evidence of benefit for pain and
- **Back pain.** A 2015 Cochrane review of 25 trials did not find massage to be an effective low back pain treatment, though in the short term people reported benefits.<sup>12</sup>
- **Neck pain.** A 2014 meta-analysis concluded that there is moderate evidence supporting that massage therapy improves neck pain, but not dysfunction (e.g. limited range of motion).<sup>13</sup>
- **Post-surgical pain.** A 2016 review of 12 high- and 4 low-quality studies found enough data to “weakly recommend” massage for reducing pain and anxiety in patients undergoing surgical procedures.<sup>14</sup> A 2017 review of 10 studies including 1,157 patients found that massage therapy may alleviate post-operative pain, though methodological quality of studies was low.<sup>15</sup> Another review found it serves as a useful adjunct to medications for reducing post-cardiac surgery pain intensity.<sup>16</sup>
- **Cancer pain.** A 2016 review of 16 studies found that “...weak recommendations are suggested for massage therapy, compared to an active comparator, for the treatment of pain, fatigue, and anxiety.”<sup>17</sup> A 2015 meta-analysis of 12 studies with 559 participants concluded, “massage significantly reduces cancer pain compared to no massage or conventional care.”<sup>18</sup> Reflexology, which includes foot massage, was found to have more of an effect than aromatherapy or body massage. In contrast to these results, a Cochrane review concluded that overall, studies were too small to draw a conclusion.<sup>19</sup>
- **Arthritis.** A 2017 review found seven small trials involving 352 people which concluded there is low- to moderate-quality evidence supporting massage over non-active therapies for improving osteoarthritis or rheumatoid arthritis outcomes<sup>20</sup>
- **Fibromyalgia.** A unique 2015 study looked at which types of massage therapy were most helpful in fibromyalgia.<sup>21</sup> (Many studies do not differentiate the types of massage used when data is compiled.) It was found that “myofascial release had large, positive effects on pain and medium effects on anxiety and depression.” Shiatsu and connective tissue massage also improved several outcomes, but Swedish massage was not found to do so. Another 2014 meta-analysis of nine trials involving 404 patients with fibromyalgia found that treatment with massage therapy for five weeks or longer led to immediate and lasting improvements in pain, depression, and anxiety.<sup>22</sup>

**Blood Pressure.** A 2014 systematic review concluded that massage therapy combined with anti-hypertensives was more effective than the drugs alone for lowering blood pressure.<sup>23</sup> Reduction of systolic pressure averaged about 7 points, and 3.6 points for diastolic pressures. However, overall quality of the studies was poor. There are a number of theories surrounding how massage affects blood pressure, including that it may decrease sympathetic nervous system activity and alter adrenal cortex activity.<sup>24</sup>

**Other Indications.** While more research is needed, massage therapy’s overall safety and broad availability make it a worthwhile approach to consider. Natural Medicines, which



summarizes research for given therapeutic approaches, rates massage as “Likely Effective” for back pain and cancer related pain and “Possibly Effective for ADHD, fibromyalgia, labor pain, low birth weight, and stress. The verdict is still out for many other conditions, including alcoholism, asthma, carpal tunnel syndrome, dementia, diabetes, headache, multiple sclerosis, osteoarthritis, Parkinson’s, premenstrual dysphoric disorder, rheumatoid arthritis, and other types of pain.”<sup>25</sup>

A wide-ranging 2016 review concluded that massage therapy “...has been shown to have beneficial effects on varying conditions including prenatal depression, preterm infants, full-term infants, autism, skin conditions, pain syndromes including arthritis and fibromyalgia, hypertension, autoimmune conditions including asthma and multiple sclerosis, immune conditions including HIV, and breast cancer and aging problems including Parkinson’s and dementia.”<sup>26</sup> A 2018 review of 8 trials with 657 participants found that acupoint massage likely maintains cognitive function in older adults.<sup>27</sup>

## What to Watch Out for (Harms)

When done by a skilled therapist, massage therapy is quite safe.<sup>28</sup> Contraindications to massage, according to some therapists, include the following:<sup>29</sup>

- Infectious or contagious skin conditions
- Acute inflammation (e.g. rheumatoid arthritis, appendicitis)
- Massage near open skin wounds, burns, or other friable tissues
- Varicose veins and venous inflammation (thrombophlebitis)
- Sites of tumors or metastases. Even though it is unlikely that massaging an area with cancer would be any more likely to cause metastases to split off than exercise would, many practitioners recommend avoiding direct massage of cancerous areas
- Low bone density (for techniques that use high pressure)
- Coagulopathies that would result in massage therapy causing severe bruising
- Risk of recurrent bleeding at a site that has recently been injured or traumatized

A good therapist will always clarify whether there are any particularly vulnerable places, or places where a person simply prefers not to be touched. Appropriate draping should always be practiced.

In conclusion, when you are helping patients to create [Personal Health Plans](#) (PHPs), keep body-based therapies in mind. They can be useful for many different patient issues.

## Resources

### Websites

- [National Certification Board for Therapeutic Massage and Bodywork.](http://www.ncbtmb.org/)  
<http://www.ncbtmb.org/>
- [American Massage Therapy Association \(AMTA\) Research Roundup.](http://www.amtamassage.org/research/Massage-Therapy-Research-Roundup.html?src=navdropdown)  
<http://www.amtamassage.org/research/Massage-Therapy-Research-Roundup.html?src=navdropdown>

- [Associated Bodywork and Massage Professionals](https://www.amtamassage.org/research/Massage-Therapy-Research-Roundup.html?src=navdropdown).  
<https://www.amtamassage.org/research/Massage-Therapy-Research-Roundup.html?src=navdropdown>
  - Has nice information for patients. Refer to the “250 Variations” link to see a glossary of different massage therapy types.
- [National Institutes of Health](https://nccih.nih.gov/health/massage/massageintroduction.htm).  
<https://nccih.nih.gov/health/massage/massageintroduction.htm>
  - National Center for Complementary and Integrative Health (NCCIH). Massage therapy info for patients.
- [Massage Evidence Map](https://www.hsrd.research.va.gov/publications/esp/massage.cfm).  
<https://www.hsrd.research.va.gov/publications/esp/massage.cfm>

## Books

- *Basic Clinical Massage Therapy: Integrating Anatomy and Treatment*, James Clay (2008)
- *The World's Best Massage Techniques: The Complete Illustrated Guide to Eastern and Western Techniques*, Victoria Stone (2010)
- *Chinese Self Massage Therapy: The Easy Way to Health*, Ya-Li Fan (1999)

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