Is Massage Nature's Sleep Aid?

For millions of restless Americans, massage therapy could be the secret to a better night's sleep.

By Matt Alderton, February 1, 2020

In a world where sleep has become such a precious commodity, could the prescription for better slumber be touch instead of a tablet?

Rebekah Delling, LMT, thinks so. When she was a girl, she suffered from an undiagnosed anxiety disorder that routinely kept her up at night. She's been interested in sleep science ever since.

"Sleep is something I've always had an issue with," says Delling, owner of the Hampton Holistic Center in Ross Township, Pennsylvania. "Not only did I have a lot of anxiety, but I'm also a night owl. I wasn't sleepy at 9 or 10 o'clock. I was sleepy at 1 o'clock. So I'd have a lot of trouble falling asleep. I'd just lie there, and my anxiety would kick in."

By treating her anxiety and improving her sleep hygiene, Delling eventually was able to resolve her own sleep issues. Because she wanted to help others resolve theirs, however, five years ago she decided to make sleep optimization the primary focus of her massage practice.

"I believe that sleep is the next big health issue, and that massage is a natural complement to sleep," Delling says. "People who don't necessarily have a sleep disorder tell me, 'I'm really noticing a lot of benefits from massage. I'm even sleeping better.' I hear it all the time, so it makes sense to me."

From snoring clients to post-massage testimonials, anecdotal evidence abounds. But does massage therapy have an actual, demonstrable impact on sleep? Although answers remain ambiguous, both physicians and massage therapists are asking the question. And for some people, at least, that means the massage table could be the next best place to search for missing Zs.

Sleep Setbacks

The American Academy of Sleep Medicine (AASM) recommends sleeping at least seven hours per night.[1] Unfortunately, more than one-third of Americans fail to do so, according to the U.S. Centers for Disease Control and Prevention (CDC), which says inadequate sleep is associated with an increased risk of mental distress, as well as numerous chronic health conditions, including obesity, diabetes, high blood pressure, heart disease and stroke.[2]

Sleep isn't just nice, then. It's a necessity. "Sleep is extremely important," says David Leopold, M.D., medical director for Hackensack Meridian Integrative Health & Medicine, the integrative medicine practice at Hackensack Meridian Health, New Jersey's largest health care network. "Sleep is the time when our body is repairing itself; if you're not getting enough deep sleep, then you're compromising your ability to repair damage that's been done to your body."

According to Leopold, sleep deprivation also can interfere with memory, impair immune function, and interrupt the body's production and regulation of hormones and neurotransmitters. "If you're not sleeping, you're throwing your whole physiology off," he continues. "It's almost impossible to be a healthy individual if you're not getting good, restful sleep."

Of course, everyone experiences sleep disruption at some point. When sleeplessness lasts for longer than a few days, however, what began as a sleep disturbance instead becomes a sleep disorder.

"If it keeps happening every night for more than three weeks or a month, you've moved away from a temporary, roiling turbulence into more of a chronic problem," explains Gandis Mažeika, M.D., founder of Sound Sleep Health, a sleep medicine practice based in Kirkland, Washington.

According to Mažeika, sleep disorders can be rooted in both psychology and physiology. Take the most common sleep disorder—insomnia. A catch-all term that describes the inability to initiate or maintain sleep, it could have mental underpinnings—depression or anxiety, for example—or physical ones, such as medication, substance abuse or a chronic illness like diabetes, arthritis, cancer or heart disease.[3]

Other common sleep disorders include:

- Obstructive sleep apnea, wherein someone momentarily stops breathing in their sleep due to causes such as obesity, narrowed airways or nasal congestion
- Restless leg syndrome (RLS), wherein a dopamine imbalance is believed to make people feel a "creeping" sensation in their legs that can only be relieved with movement
- Narcolepsy, wherein a person for unknown reasons feels sudden daytime drowsiness that often manifests along with sudden muscle weakness.

Treatment can vary depending on the disorder and its underlying cause. Options might include medication, including sedatives like Ambien; supplements, such as melatonin; cognitive behavior therapy, which helps individuals control or eliminate the negative thoughts and actions that keep them awake; and, for obstructive sleep apnea, a continuous positive airway pressure (CPAP) machine that uses air pressure to keep airways open during sleep.

Although prescription sleep medication can be helpful for short-term sleep fragmentation, it can also have significant negative side effects. "That includes basic things like falling and daytime sedation to—for reasons we don't fully understand yet—increased rates of death and other types of disease, including cancer and dementia," says Leopold, who therefore prefers integrative therapies whenever possible—including massage. "I think massage can be a very valuable part of a comprehensive care plan."

Pinpointing Pain

Whether someone is experiencing temporary or chronic sleeplessness, the best way to assess whether massage might help is to determine its underlying cause—for example, pain. "Massage is hugely helpful at relieving pain and discomfort. It's very anti-inflammatory," reports Mažeika, who says musculoskeletal pain is especially common among athletes with sports injuries as well as aging people with arthritis and other inflammatory conditions.

One way that massage might help pain is by increasing circulation and lymphatic drainage. For example, a 2017 study in the *Journal of Manipulative and Physiological Therapeutics* found that massage—specifically, manual lymphatic drainage (MLD)—can promote shortterm blood flow.[4] MLD also has been found to increase pain threshold and pain tolerance in healthy individuals,[5] and to improve pain, tightness and heaviness sensations in people with breast cancer-related lymphedema.[6]

"When the body's in pain, it will often lock down an area. The ligaments and tendons around the area will have a reduced ability to stretch, and that isolates the area. One of the things those areas really need is increased blood flow, but what you actually end up getting is ischemia, which propagates the problem," Leopold explains. "Massage forces blood flow into the area and reduces ischemia."

Mažeika elaborates: "People carry stress in certain parts of their body, and massage works wonders to help undo that stress … For example, there are counter-strain techniques that are designed to reduce spasm around connective tissue, which can cause subtle rearrangements in circulation or nervous system activity that impact not just pain, but also range of motion and lymphatic drainage. In fact, if you have limited lymphatic drainage in a limb, a massage that's dedicated to improving lymphatic flow will help edema in that limb and the deep ache that's often associated with it."

Clients tell Delling all the time that a sore back, neck or knee kept them awake at night. “Insomnia is usually a secondary symptom of something else—including pain,” she says. “If you can relieve the pain, you can alleviate the sleep issue.”

Stroking Away Stress

But pain is just one potential cause of sleeplessness. Another is stress. “Most people I’m seeing for sleep issues suffer from stress-induced insomnia,” reports Leopold, who says the key to combating stress is toning down the sympathetic nervous system that prepares the body for activity and activating the parasympathetic nervous system that prepares it for rest.

“Most of us are constantly in fight or flight, which is our sympathetic nervous system. That’s fine when you need to run from a tiger, but it’s not great when you want to calm down and go to sleep. When your body loses the ability to enter a restful state, you have to retrain it to bring the parasympathetic nervous system back online.”

Whether massage can seduce the body into a parasympathetic state is unclear. On the one hand, there’s research like a 2009 study in the International Journal of Neuroscience, which examined the impact of massage on heart rate and concluded that moderate-pressure massage stimulated “a shift from sympathetic to parasympathetic activity.”[7]

A 2012 study in the Journal of Alternative and Complementary Medicine likewise showed that twice-weekly massage for five weeks increased neurotransmitters that stimulate parasympathetic activity, like oxytocin, and decreased neurotransmitters that inhibit it, like the stress hormone cortisol.[8]

On the other hand, there also is research such as a 2010 metaanalysis published in the *Journal of Bodywork and Movement Therapies*. Based on a comprehensive review of existing literature, it concluded that massage therapy has “wellestablished … beneficial effects on anxiety, depression and pain,” but that its effect on cortisol is “generally very small.”[9]

“There isn’t a lot of hard evidence [that massage stimulates the parasympathetic nervous system] because studies of that nature are very complicated and very invasive,” Leopold says. “What we do know is that any time you put the body into a relaxed state, there is a large cascade of ‘relaxation hormones’ that sets a better stage for sleep. And massage clearly is shown to have relaxing properties.”

Fascia—the sheath of continuous connective tissue that covers internal muscles and organs—may play a role, according to Dan Williams, D.O., an osteopathic physician based in Carmel, Indiana.

In fact, studies have shown that fascia is rife with sympathetic nerve endings,[10] and that myofascial release may reduce anxiety.[11] “Fascia absolutely is an inroad by which a massage therapist can influence the sleep cycle of their client,” Williams says. “There’s still a lot we don’t know, but once you understand that fascia exists—that it’s a living, breathing structure that gives feedback to the nervous system—you can start to conceptualize how fascial manipulation might have a positive physiological impact.”

Although evidence is scant, some researchers also believe that pressure can produce a parasympathetic response. A 2015 study in the *American Journal of Occupational Therapy*, for example, found that wearing a weighted vest for even short periods reduced sympathetic arousal and increased parasympathetic arousal.[12]

A 2009 study in the *Journal of Physiological Sciences* found that pressure stimulus applied over trigger points also enhances the parasympathetic nervous system.[13] Proponents further point to the long-held practices of swaddling and rocking infants, which received support in a 2019 study published by the journal *PLOS ONE*; in it, Dutch researchers concluded that swaddling and movement promptly produced a physiological calming response in fussy infants.[14]

Adults are not infants, but Delling has observed positive responses in clients by leveraging the same principles of pressure and movement. “I take a lot of techniques from shiatsu and acupressure,” she says. “For sleep purposes, my focus is … on the deep, rhythmic pressure and rocking.”

Putting Sleep Problems to Bed?

When it comes to the physiological connections between massage and sleep, the jury is still out in terms of definitive research. While the jurors deliberate, however, massage therapists nevertheless can help facilitate better sleep—even if their actions aren’t yet proven to directly induce it.

“Data on massage and whether it helps with sleep is mixed, but when you look at the risk-to-benefit ratio, there really isn’t much risk in trying it, except what you risk in time and money,” Leopold says.

Delling agrees. “Putting aside for a moment deep, rigorous scientific studies, which are definitely important, just the fact that somebody is taking time out of their day to lie quietly on a table is huge. You’re resting your mind, you’re resting your body and you’re being touched by another human being … Regardless of what’s happening physiologically, that’s relaxing, and you can’t sleep if you’re not relaxed.”

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