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Many Benefits, Little Risk: The Use of Massage in Nursing Practice

An ancient therapy's resurgence is bringing touch back into nursing.

ABSTRACT: Since ancient times, massage therapy has been used to promote healing by people of all backgrounds and cultures. Massage therapy was once taught as a core nursing skill, but it gradually lost ground in the United States during the second half of the 20th century with the increased use of technology and documentation in nursing. In recent years, however, there has been a resurgence in the use of massage therapy. Research has provided insight into the mechanisms by which massage supports the healing process, and this has sparked support for including massage therapy in routine hospital care. In this article, the authors touch on the history of massage in nursing care and discuss its emotional and physiologic benefits for both patient and nurse. They describe specific massage techniques and discuss precautions to consider before using massage with certain patients.

Keywords: complementary medicine, healing, holistic care, integrative nursing, massage, massage therapy, relaxation response, touch

Imagine yourself working on a medical–surgical unit, caring for the following three hypothetical patients:

- Patricia Crawford, a 57-year-old woman with type 2 diabetes admitted for exacerbation of moderate to severe chronic obstructive pulmonary disease
- Aaron Wolfe, a 64-year-old man who recently underwent colostomy surgery
- Julio Lopez, a 41-year-old man with chronic kidney failure admitted with severe influenza

Ms. Crawford is anxious and reporting shortness of breath. She has received acetaminophen, oral morphine, lorazepam, and nebulized albuterol, but says she “just can’t get comfortable” and is unable to identify the exact location of her pain.

Mr. Wolfe has reported significant shoulder pain, probably resulting from the gas used during surgery to separate his abdominal wall from his abdominal organs. He tells you that his pain medication has only partially relieved the pain, but his surgeon is reluctant

to increase his opioid dose, concerned that a higher dose may slow gastrointestinal motility.

Mr. Lopez, who is being treated with long-term dialysis, is malnourished and has two nonhealing lower-extremity wounds. He is receiving oxygen therapy by nasal cannula and can tolerate only a supine position, occasionally turning slightly toward his right side. Nursing staff and family are exploring ways to increase his comfort.

For which of these patients would massage therapy be an appropriate intervention?

In fact, all three patients could derive benefit from massage therapy. Ms. Crawford could probably tolerate a seated back massage, but also may appreciate a massage to the lower back or feet. Mr. Wolfe may find a slow massage with light pressure on the upper back, neck, and chest to be beneficial, though any massage that increased the comfort and relaxation of these two patients would be appropriate. Because of his intolerance to any nonsupine position and considering his dialysis fistula, iv line, and nasal cannula, Mr. Lopez may benefit most from a hand or foot massage, either of which might greatly increase his comfort.

In a health care environment increasingly reliant on technology-based patient care, the current resurgence of therapeutic massage provides an opportunity to return to high-touch nursing. Massage therapy, whether formally ordered as part of a care plan or informally integrated into regular nursing care, can help patients relax and cope with unpleasant stimuli, pain, anxiety, insomnia, fatigue, and stress, all of which can interrupt the healing process.^{1,4} Massage also allows nurses to better establish a therapeutic relationship with patients in an environment of electronic monitors and invasive, often painful, procedures.

Massage therapy may take many different forms, from the intentional kneading or rubbing of joints and muscles for several minutes by a nurse familiar with massage therapy practices to an hour-long session of soft tissue manipulation by a highly trained, certified massage therapist. Increasing evidence of the benefits of massage therapy provides support for reintegrating massage into daily, routine hospital care.^{1,3-6}

Here we'll discuss the history of massage in nursing care, the emotional and physiologic benefits for both patient and nurse, specific massage techniques, and precautions to consider before using massage with certain patients. We'll also describe the methods by which innovative nurses throughout the country have successfully reintroduced this nursing intervention at their hospitals.



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A LONG HISTORY OF MASSAGE IN NURSING

Since Florence Nightingale pioneered modern nursing, nurses have been trained in massage therapy and have routinely administered massages to patients. In 1882, the “American Florence Nightingale,” Anna Maxwell of Massachusetts General Hospital in Boston, began instructing nursing students in the art of massage, ultimately prompting the head nurses at the hospital to request a course at their own expense and inspiring physicians to prescribe massage for their patients.⁷ Several early nursing texts described massage as a basic nursing skill, and writings from the 1920s indicate that massage was at that time still firmly embedded in the nursing process—seen as an essential part of patient care plans, with site and frequency based on medical diagnoses.^{7,8} Throughout the 20th century,

evening back massages were considered routine care in hospitals and elsewhere, and massage was taught in U.S. nursing schools, though it lost ground with the increased reliance on analgesics, technologically based protocols, and increased monitoring and documentation demands on nurses' time.⁷

TOUCH AND THE NURSE–PATIENT RELATIONSHIP

Massage both positively affects patients and strengthens the relationship between patient and nurse. First, it provides the simple pleasure of human touch. When routine nursing care includes starting IV lines and inserting indwelling catheters, it is often unpleasant and painful for patients, though medically necessary. Such impersonal tasks can distance patient and caregiver during hospitalization. Massage offers a direct contrast to these routine nursing interventions. By helping patients achieve a relaxed state, massage can make difficult conversations possible, or help patients process bodily or circumstantial changes. Simply administering a massage can positively influence a patient's psychological state,⁹ eliciting a sense of emotional well-being.⁵ It can also quickly promote the establishment of a nurse–patient bond in settings in which patients are very sick, lengths of stay are very short, and time is very scarce.

disorder were likewise able to detect reduced cortisol levels, but also found increased levels of brain-derived neurotrophic factor—which, like reduced cortisol levels, is associated with adaptive coping.¹¹ In addition, massage therapy increased participants' overall sense of well-being as measured by a psychosocial well-being questionnaire.

Improved pain management. Researchers in Arizona investigated the effects of massage therapy on pain management in the acute care setting, using as their framework the gate-control theory of pain.⁵ The theory postulates that, in both acute and chronic pain, massage can slow or stop (“close the gate on”) the transmission of noxious stimuli by competing with pain messages sent to the brain from the injured area of the body. Investigators considered both quantitative and qualitative data—using pain levels as measured by visual analog scale (VAS), survey data, and participant and nursing comments both before and after massage. Of the initial 65 participants, 53 completed the project, rating their postmassage pain significantly lower than their premassage pain: a mean score of 2.33, down from 5.18, on a 0-to-10-point VAS scale.

Relaxation and sleep. Massage triggers the body's relaxation response,^{5,12} which is well known to reduce

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PHYSIOLOGY

Massage affects both body and mind. Researchers quantify the benefits of massage in various ways, often through changes in stress hormone levels, vital sign measurements, and pain scores.

Lower stress levels, increased well-being. When the body is stressed, the brain's hypothalamus and the pituitary gland stimulate release of the hormone cortisol by the adrenal glands. Reduced levels of cortisol in the bloodstream can be used as a quantitative marker for reduced stress and increased physical and psychological well-being. In patients undergoing intensive chemotherapy in a UK hospital isolation unit, researchers found that a single episode of massage therapy significantly reduced cortisol levels at 30 minutes posttreatment, with a number of patients experiencing continued reduction of cortisol levels throughout a two-hour assessment period.¹⁰ Korean researchers who provided aromatherapy massage to mothers of children diagnosed with attention deficit–hyperactivity

blood pressure, anxiety, and pain levels, and therefore often increases the ability of the patient to participate in therapy. Sleep is essential for wound healing and for preventing delirium. Massage can have positive effects on the quality and duration of sleep,^{1,5} which is often poor in hospitalized patients owing to noise, uncomfortable bedding, the presence of tubes and drains, and the stress of necessary but unpleasant interventions. Administering massages to patients may simultaneously lower nurses' stress levels. As Stone points out, “The giver frequently receives as much benefit as the receiver.”^{9,13}

Effects on inflammation. Damaged or stressed muscle fibers release inflammatory chemicals to aid the healing process, but these chemicals cause significant pain and discomfort in the process. At least one study, which looked at the effects of massage on postexercise tissue inflammation, suggests that even 10 minutes of massage can reduce signs of inflammation and improve cell processes, thereby

How to Administer Massage Therapy

Before starting.

- *Ask the patient* if she or he has any aversion to touch (for example, has experienced posttraumatic stress disorder or had a previous negative experience with massage). Avoid obvious areas of injury such as open wounds or burns and pressure ulcers.
- *Create a calming environment.* Turn down the lights, quiet any extraneous noise, and adjust the room temperature for patient comfort. Ask another staff member to answer your phone and call lights while you deliver the massage.
- *Warm the lotion or oil* you will use in your hands before touching the patient.

Techniques.

- *Pressure.* Vary the pressure, based on patient preference, by using different parts of your hand (for example, the pads of the fingers versus the palm of the hand). Less pressure is needed to affect smaller muscle groups, like those in the hand, than the long muscles of the thigh or back.
- *Motion.* Movements can be circular, or across or along the length of the muscles.
- *Speed.* Slow, steady strokes will feel different than fast, chopping strokes. Vary strokes according to patient preference.

During and after the massage.

- *Invite feedback* from the patient on pressure, position, and length of time.
- *Leave the patient sleeping*, if possible, with the call light and other safety precautions in place.
- *Document* observations and assessments both before and after the massage.



To watch the author demonstrate massage therapy of the hand, go to “Podcasts/Videos” on our Web site, www.ajnonline.com, and click on the “Videos” tab.

promoting healing, with effects lasting several hours after the massage.⁶ Another study found that massage therapy increases skin temperature, theoretically reflecting increased blood flow to the area.¹⁴

Promoting healing after burns. Among patients with burn injuries, the incidence of severe pruritus is reportedly as high as 87%.^{15,16} Three different studies, two conducted on adults and one on adolescents, found that massaging burn injuries during the remodeling stage significantly reduced itching, as well as pain and anxiety.¹⁵⁻¹⁷ Furthermore, regular massage with an emollient can help reduce the risk of excessive scarring.¹⁸

SPECIFIC MASSAGE TECHNIQUES

Classic massage. In the West, when people speak of massage, they're usually referring to what is often termed “Swedish” or “classic” massage. Classic massage incorporates different types of strokes that vary in both pressure and direction, including the following¹³:

- *stripping*—short strokes applied in the same direction as the muscle fibers
- *friction*—circular or short strokes applied with back-and-forth movements across the muscle
- *effleurage*—the stroke most commonly used in hospital settings: long, light, skimming, and

often circular, delivered with the palm of the hand

- *wringing*—a working of the muscle between both hands in a motion that mimics wringing out a towel

Administering massages to patients may simultaneously lower nurses' stress levels.

Patient preference should always dictate the type of massage given. Nurses should frequently ask for feedback on pressure, depth, and stroke style, while paying close attention to the patient's body language. Quiet the environment before administering a massage and eliminate as many distractions as possible during the massage (see *How to Administer Massage Therapy*). Use some type of lubricant during the massage, either an oil or lotion to which the patient has no allergy or aversion.

Table 1. Focusing Massage to Address Common Symptoms

Common Symptoms	Areas of Focus
Anxiety	Focus on upper back, neck, and shoulders using slow, rhythmic movements delivered under dim lights with soothing music or in a quiet room.
Headache	Focus on neck and shoulders, using the pad at the base of the thumb, and delivering massage in a dark, quiet room. Offer scalp massage focusing on the temples and “third eye” (the area between the eyebrows).
Cancer	Assess patient’s platelet count and massage only the hands, feet, and scalp if platelets are low. Otherwise, massage the back, legs, or arms in a quiet room. Use very little pressure.
Low back pain	Massage muscles around the spine, but avoid the spine itself. Have the patient lie supine, then reach under the patient, whose body weight will provide sufficient pressure as you massage the muscle groups.

For very ill patients. One simple massage technique developed by Jane Buckle, a critical care nurse who practices in London, can be used on even very ill patients who would not tolerate a classic massage. The “M” technique, a series of stroking movements delivered in a set sequence at a specific pressure and pace, can be delivered in five minutes or less and is ideal for patients in whom access to the back, head, neck, or limbs is limited (for example, patients in a rotating ICU bed or wearing a halo or with extremely fragile skin, extensive casts, or braces). The technique has also been used with very young children who are hospitalized.

Massage only the hands, feet, or scalp of patients with sepsis, fever over 100°F, nausea or vomiting, sickle cell crisis, HIV crisis, a complicated or high-risk pregnancy, crepitus, edema, thrombocytopenia, or meningitis.

When patients have fragile skin, or the potential for skin breakdown, apply only light pressure, using enough lotion or oil to minimize friction. For patients with a previous injury, chronic pain, or scar tissue, frequently ask them how the massage feels, and adjust both pressure and massage technique to the patients’ preferences. Ask all patients if they have an aversion to any particular type of physical touch. Such aversions

Enough evidence exists to support the benefits of massage to consider adding massage therapy to order sets, protocols, and unit guidelines of care.

For common patient symptoms and areas of the body on which to focus massage therapy in order to treat them, see Table 1.

PRECAUTIONS TO TAKE WITH CERTAIN PATIENTS

Although massage is associated with few adverse effects, nurses should be careful to avoid areas near open wounds, any stage of pressure ulcer, reddened or swollen areas, rashes, incisions, thromboses, IV lines, drains, shunts, and tubes. Do not massage areas over bony prominences, and use pillows, foam devices, or pressure-relieving mattresses to keep pressure off of them. Avoid putting pressure on the sacrum by ensuring that the head of the bed is not elevated more than 30° for long periods.¹⁹

may indicate a history of trauma or abuse, in which case a massage may trigger painful memories, increasing psychological stress. Information on modifying a massage for older adults can be found at www.amtamassage.org/articles/3/MTJ/detail/2315.

INTEGRATING MASSAGE INTO PRACTICE

Several nurses and hospitals have successfully reintroduced massage into routine patient care. At Saint Barnabas Medical Center in Livingston, New Jersey, a hospital vice president, an RN, worked with holistic nurses, nurse administrators, and physicians to secure grant money to finance a hospital-based massage program. By tracking patients’ responses to massage interventions and presenting these data

to hospital leadership, they were able to obtain initial funding and, through negotiations with administrators and high-level patient care directors, equipment rebate programs, and general nursing staff budgets, to sustain funding for the program after the initial grant ended.²⁰

To determine the acceptability and feasibility of massage at their institution, nurses at a Canadian hospital selected 40 adult patients in a cardiac ICU to receive a 15-minute hand massage.¹² This small pilot allowed researchers to collect both quantitative data (pain scores) and qualitative data (patient interviews). The interviews provided insight into how to change the intervention to make it more meaningful, as well as evidence for the use of nonpharmacologic pain management in the critical care setting.

Another effective strategy is “bundling” massage into existing care—for example, combining massaging the back with turning patients to maintain skin health. Enough evidence exists to support the benefits of massage to consider adding massage therapy to order sets, protocols, and unit guidelines of care.

Tracking the effectiveness of massage as an independent nursing intervention and the time involved in its delivery is an essential first step toward the successful integration of massage into routine nursing care. Presenting those data to bedside nursing staff and senior leaders can increase the support for and encourage the adoption of massage. Having a trained massage therapist train others is always beneficial, but if unavailable, many nursing manuals and reputable online sources can teach nurses simple massage techniques. With the right approach and institutional support, nurses can incorporate massage into their daily practice as a way to promote healing and establish a therapeutic relationship with patients, using an intervention that is widely accepted and associated with minimal risk.

REVIVING TRADITION

The benefits of massage and reasons for incorporating its use in nursing care remain fundamentally the same today as in nursing's earliest days. Massage promotes the development of a therapeutic relationship between patient and nurse and more fully engages the patient in the healing process. As in nursing's early days, massage is still promoted in today's nursing textbooks as a way to mitigate pain, increase comfort, and preserve function of all major body systems. Given massage's many benefits and few adverse effects, we should consider using it in populations of all ages and with a wide variety of conditions. Beyond the benefits massage confers to the patient, it offers nurses an opportunity to slow down and relate to their patients in a direct, nonverbal, meaningful way. Nurses' ability to provide high-touch, as well as high-tech, care and to support the healing of the entire patient will help define nursing in this century. ▼

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