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Incorporating Acupressure into Nursing Practice

Rooted in traditional Chinese medicine, this technique may be used to treat nausea and numerous types of pain.

ABSTRACT: Rooted in traditional Chinese medicine, the use of acupressure to alleviate symptoms, support the healing process, promote relaxation, and improve overall health has grown considerably in the West. The effects of acupressure—like those of acupuncture, with which it shares a theoretical framework—cannot always be explained in terms of Western anatomical and physiologic concepts, but this noninvasive practice involves minimal risk, can be easily integrated into nursing practice, and has been shown to be effective in treating nausea as well as low back, neck, labor, and menstrual pain. The author discusses potential clinical indications for the use of acupressure, describes the technique, explains how to evaluate patient outcomes, and suggests how future research into this integrative intervention might be improved.

Keywords: acupoint, acupressure, acupuncture, complementary medicine, integrative health, integrative medicine, integrative nursing, traditional Chinese medicine

Acupressure is a therapeutic intervention rooted in traditional Chinese medicine but also widely practiced in Korea and Japan. Like acupuncture, its theoretical framework can be best understood through the lens of a philosophy that sees health as the maintenance of the internal flow of a vital energy, known as *qi*, within the body.^{1,2} According to this theory, when this flow of energy becomes stagnant or is blocked, symptoms or disease can develop. Whereas acupuncture seeks to restore the flow of *qi* through needle insertion at specific points on the body, acupressure seeks to do the same through the practitioner's use of the fingertips (or, in the case of advanced practitioners,

fingertips, palms, elbows, forearms, or various devices) to apply pressure at these points.^{1,3-7} Acupressure is used to alleviate symptoms, support the healing process, promote relaxation, and improve overall health.

While research into the use of traditional Chinese medicine and other integrative therapies has increased substantially over the past two decades, the mechanism of action at work in acupressure and acupuncture remains unexplained in terms of the anatomic and physiologic concepts of Western medicine.^{1,4-6,8-10} (See *Principles of Traditional Chinese Medicine*.^{1,4,6,8,9,11}) Nevertheless, it is considered by its practitioners around the world to be an



Photo courtesy of Judy Wagner.

“entirely coherent system, with internal logic and consistency of thought and practice.”¹

This article discusses clinical indications for the use of acupressure; describes the technique, which can be easily incorporated into nursing practice; explains how to evaluate patient outcomes; and suggests how future research into this integrative therapy might be improved. The article also includes figures that illustrate the acupoints involved in reducing nausea and alleviating low back pain, neck tension, and dysmenorrhea.

INDICATIONS FOR USE

Acupressure is used in various ways outside the health care setting—in community wellness centers, for example. A well-known form of acupressure called *shiatsu* blends the use of direct pressure at specific points of the body with a systematic form of massage to promote healing and wellness.⁵ One popular application of acupressure, used by thousands of people daily, is stimulation of the pericardium 6 (P6) point above the wrist, which many people believe can prevent motion sickness (see Figure 1³). Stimulation may be achieved by finger pressure or by specialized elastic wristbands that apply direct pressure to the P6 point. While this

practice is common, research on its efficacy for this specific symptom has produced conflicting evidence. Further research is warranted.

In the clinical setting there are numerous indications for the use of acupressure, with most research focused on nausea and pain. Acupressure has been shown to be effective in treating chemotherapy-induced and postoperative nausea, as well as low back, neck, and labor pain, and dysmenorrhea (see Figures 2, 3, and 4 for acupressure points and specific indications for their use³).

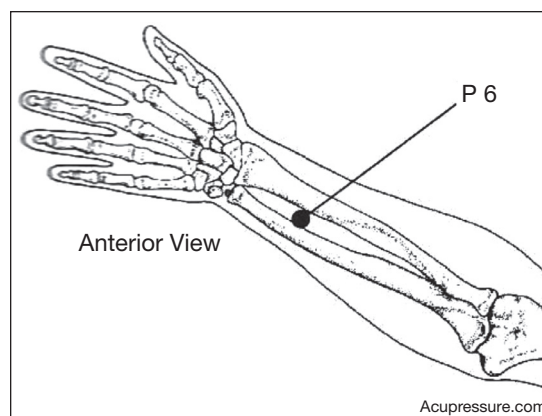
Chemotherapy-induced nausea. A systematic review of 11 randomized controlled trials analyzed the effects of acupoint stimulation used concurrently with pharmacologic antiemetic therapy on acute and delayed chemotherapy-induced nausea.¹² Stimulation was delivered to the acupoints through a variety of modalities, including acupressure, electroacupuncture, electrostimulation, and manual acupuncture. While acupressure reduced both mean and worst acute nausea severity, it did not reduce acute vomiting, delayed nausea, or delayed vomiting. Electroacupuncture and manual acupuncture were more effective than acupressure in reducing acute vomiting but did not reduce acute nausea.

A quasiexperimental controlled study compared the effects of standard antiemetic drugs alone or in conjunction with wristband-delivered acupressure on nausea, vomiting, and anxiety in 64 patients receiving chemotherapy for stage I to stage III breast cancer.¹³ Results showed that nausea and anxiety were significantly reduced in the experimental group compared with the control group, suggesting that acupressure applied to the P6 pressure point is effective in reducing chemotherapy-induced nausea and anxiety in patients with breast cancer. Vomiting and retching were also reduced in the experimental group, though these reductions were not significant.

A randomized controlled trial comparing the effects of standard antiemetic therapy alone or together with either P6-stimulating acupressure wristbands or sham wristbands on 500 patients receiving emetogenic chemotherapy found no statistically significant differences between the three groups in terms of vomiting, anxiety, or quality of life.¹⁴ When considered together, however, both wristband groups reported a nearly significant ($P = 0.07$) reduction in nausea compared with the group receiving antiemetic therapy alone.

Postoperative nausea. White and colleagues investigated the effects of acupressure on postoperative nausea and vomiting in a double-blind, sham-controlled

Figure 1. Acupoint for Nausea and Motion Sickness



P6, the pressure point stimulated to relieve nausea and motion sickness, is located approximately three finger widths above the transverse crease of the inner wrist between the two tendons. To accurately locate the P6 acupoint, use the patient's own fingers: place the three middle fingers of the patient's other hand across and above the wrist, and then lift all but the index (pointer) finger—this finger will rest at the P6 point. Reprinted with permission from Gach MR. *Acupressure's potent points: a guide to self-care for common ailments*. New York: Bantam Books; 1990.³

Principles of Traditional Chinese Medicine

In traditional Chinese medicine, health is maintained when a vital energy known as *qi* (often spelled "chi" and pronounced "chee" in English usage) flows unobstructed throughout the body, within a closed, interconnected system (conceptually parallel to the nervous, lymph, or vascular systems) that comprises seven symmetrical pairs of "energy channels," often called *meridians*.⁶ According to this theoretical construct, when *qi* circulation within the meridians is impeded, the primary universal forces exerted on matter and energy—yin (associated with passivity) and yang (associated with activity)—are thrown out of balance, thereby producing symptoms or disease. Within this paradigm, balance, and thus health, may be restored when specific points along the meridians, called *acupoints*, are manipulated, either through pressure applied using the pads on the practitioner's fingertips (or, with advanced training and substantial experience, the palms, elbows, forearms, or various devices), as in acupressure, or through needle insertion, as in acupuncture.^{1,4,6} Applying pressure or inserting a needle at these points is thought to help disperse stagnant *qi*, encourage its natural flow, and stimulate the body's healing mechanisms.¹¹ Approximately 2,000 acupoints, each with a defined sphere of bodily influence, are said to lie within the body's 14 meridians.⁹

Both the skilled application of therapies and the therapeutic relationship between the practitioner and the patient are important aspects of this ancient approach to healing. With acupressure and acupuncture, as with all nursing interventions, nurses need to recognize that they themselves are a vital component—a facilitator—of the healing process.⁸

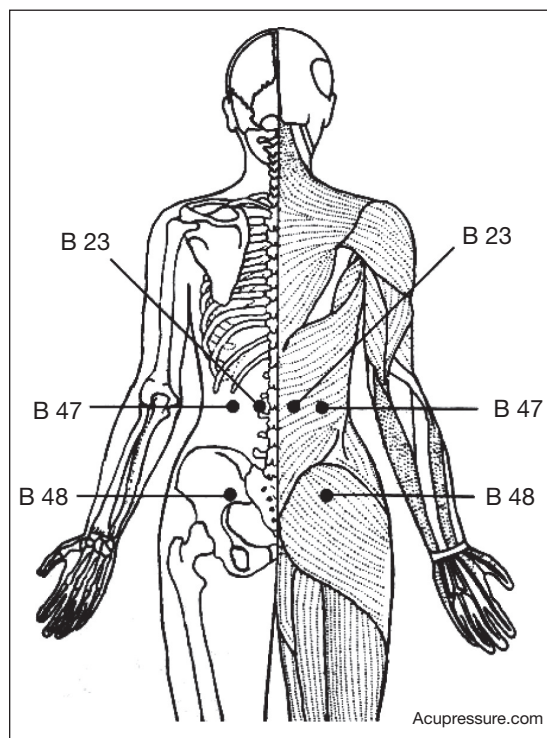
study of 100 patients undergoing laparoscopic surgery with general anesthesia.¹⁵ In addition to giving patients standard antiemetic therapy, the investigators randomized half the patients to receive P6 stimulation using a disposable acupressure wrist strip and half to receive a sham wrist strip. Strips were applied to patients' wrists 30 to 60 minutes before anesthesia was induced, and patients were instructed to leave the strips in place for 72 hours following surgery. The acupressure group had significantly less postoperative vomiting than the sham group at both 24 hours (10% versus 26%; $P = 0.04$) and 72 hours (12% versus 30%; $P = 0.03$) following surgery.

In a randomized controlled trial investigating nausea and vomiting in 102 women undergoing elective cesarean section, participants were randomly assigned to receive one of three therapies: metoclopramide 10 mg IV immediately before anesthesia induction, acupressure bands applied at the P6 point on both wrists 15 minutes before anesthesia induction, or no prophylaxis for nausea and vomiting (the control group).¹⁶ The incidence of postoperative vomiting was higher in the control group (32.34%) than in either the acupressure (17.64%) or metoclopramide (11.76%) groups, and use of antiemetics was significantly higher in the control group than in either of the intervention groups. Investigators concluded that acupressure and metoclopramide were similarly effective in alleviating postoperative nausea and vomiting following cesarean section.

Lee and Fan conducted a meta-analysis of 40 randomized controlled trials that investigated the effects on postoperative nausea and vomiting of drug therapy, P6 acupoint stimulation (through acupuncture, electroacupuncture, transcutaneous nerve stimulation, laser stimulation, capsicum plaster, an acustimulation device, or acupressure), or sham treatment.¹⁷ They concluded that P6 acupoint stimulation was as effective as antiemetic drugs in alleviating symptoms, with fewer adverse events. They also noted that more research is needed to determine whether the duration of P6 stimulation is an important factor and whether combining antiemetic therapy with acupressure produces better outcomes than either intervention alone.

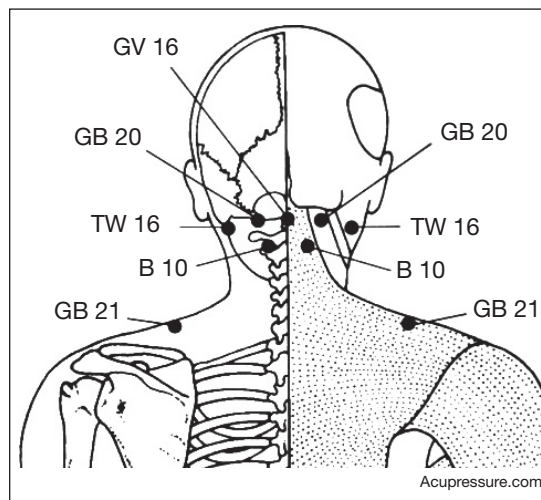
Chronic pain. The most commonly studied use of acupressure is in alleviating chronic pain. In their systematic review of 71 studies in which acupressure was used to treat a variety of conditions, Robinson and colleagues rated the evidence for its effectiveness in treating pain as a category 1: a “generally consistent finding in a range of evidence from well-designed experimental studies.”¹⁸ Included among the pain studies they reviewed were four randomized controlled trials on low back and neck pain in which acupressure was compared either with physical therapy or with usual care and was found to significantly reduce pain.

Figure 2. Acupoints for Low Back Pain



Reprinted with permission from Gach MR. *Acupressure's potent points: a guide to self-care for common ailments*. New York: Bantam Books; 1990.³

Figure 3. Acupoints for Neck Tension and Pain



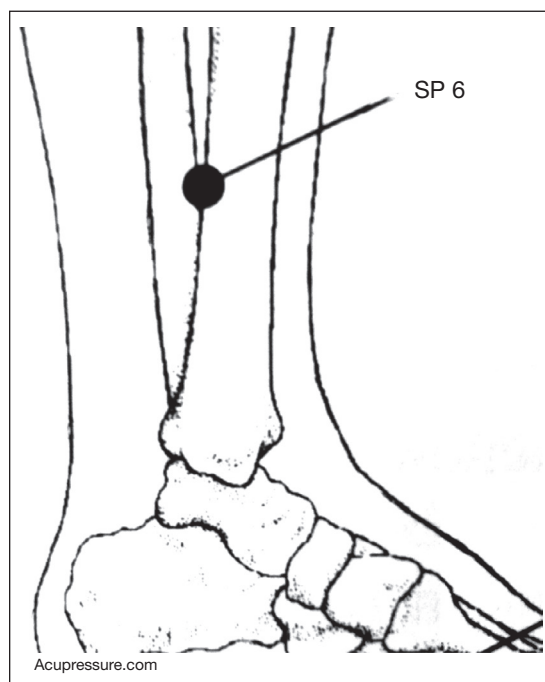
Reprinted with permission from Gach MR. *Acupressure's potent points: a guide to self-care for common ailments*. New York: Bantam Books; 1990.³

Labor pain. A review and meta-analysis of 13 randomized controlled trials, representing a total of 1,986 participants, investigated the use of either acupuncture (nine trials) or acupressure (four trials) in managing labor pain. The investigators concluded that both interventions may play an important role in diminishing pain, reducing the need for pharmacotherapy, and increasing the mother's satisfaction with pain control.¹⁹ They emphasized, however, the need for further research in this area.

Dysmenorrhea. A systematic review that analyzed data from 10 randomized controlled trials, with a total of 944 participants, compared the effects of acupuncture (six trials) and acupressure (four trials) with placebo, nonintervention, or conventional medical treatment.² Researchers found evidence that both interventions improved pain relief compared with placebo but concluded that further research through well-designed randomized trials is warranted.

In another study of the effects of acupressure on pain and menstrual distress, investigators randomly assigned 40 nursing students younger than age 25 with dysmenorrhea characterized by a visual analog scale (VAS) pain score higher than 5 to either a control group that used only rest as an intervention or an intervention group that used acupressure at the spleen 6 (SP6) point.²⁰ Patients in the acupressure group had a statistically significant decrease in pain scores as measured by both the pain VAS and the Short-Form McGill Pain Questionnaire after 20 minutes of point stimulation, as well as over the next three months in which they self-administered acupressure to the SP6 point at home.

Figure 4. Acupoint for Dysmenorrhea



Reprinted with permission from Gach MR. *Acupressure's potent points: a guide to self-care for common ailments*. New York: Bantam Books; 1990.³

Similarly, in a single-blind clinical trial of 86 medical students, ages 18 to 28, with dysmenorrhea and VAS pain scores higher than 4, within the first menstrual cycle participants treated with either acupressure at the SP6 point or sham acupressure experienced a reduction in symptoms immediately following the treatment. However, the reduction in dysmenorrhea severity was significantly greater in the intervention group at 30 minutes, one hour, two hours, and three hours following the treatment. During the next menstrual cycle, dysmenorrhea was again reduced in both groups immediately following the treatment, but this time the reduction was significantly greater in the intervention group, as it was again at all measured time points.²¹

ACUPRESSURE TECHNIQUE

The acupressure practitioner typically uses the distal finger pads to apply gentle to firm pressure at specific locations designated as key energy points on the body in order to stimulate the flow of qi within the body, thus supporting the body's self-healing capabilities. When receiving acupressure, it is important that patients focus their attention on their breathing in order to trigger the parasympathetic response, which enhances the treatment.^{6,22}

The frailty or strength of the patient should determine the amount of pressure applied by the practitioner, an issue that was not addressed in any

of the studies reviewed for this article. Frail, elderly patients and young children require less pressure than healthy adolescents and adults. Although acupressure points are frequently tender to the touch, this is not a contraindication for using the point, but rather an indication that the practitioner has located the point.⁶ If touching the point causes the patient to wince, start with a gentle pressure that is just slightly more firm than that required to check a radial pulse and gradually increase the pressure over the next minute. Advise the patient that the pain should never be greater than mild discomfort, and check in with the patient frequently to confirm patient tolerance and make any necessary adjustments.

Pressure is generally applied for approximately 15 to 20 seconds,⁶ but duration can be increased up to a maximum of one minute per acupressure point and can be applied simultaneously to bilateral points. If the patient's anatomy or an injury prohibits simultaneous bilateral pressure point stimulation, unilateral pressure is acceptable. Remind the patient to breathe diaphragmatically, slowly and deeply, during the process. As with any nursing intervention, the acupressure practitioner must ensure that her or his fingernails are sufficiently short to avoid making contact with the patient's skin.

Do not apply acupressure to bruised areas or open wounds, or administer acupressure to patients who are hypersensitive to touch.

Evaluating outcomes. Effective stimulation of the appropriate acupressure points should reduce or eliminate symptoms. Optimal results for a variety of symptoms have been achieved in one week with daily use in conjunction with breathing exercises and other relaxation techniques.⁶ As an NP who incorporates acupressure in my practice, I have observed prolonged patient relief from chronic symptoms (specifically neck and low back pain) with acupressure treatments administered three to four times weekly and from acute symptoms with daily acupressure treatments. If no improvement is noted after several days, other integrative or conventional modalities should be used.

INCORPORATING ACUPRESSURE INTO NURSING PRACTICE

A survey of more than 700 critical care nurses found that those who used integrative therapies in their personal lives were more knowledgeable about these therapies and more likely to use these approaches in their professional practice.²³ Learning acupressure techniques for self-care allows the practitioner to gain confidence and experience that can be brought to the clinical setting. While it takes some advanced training to reap all the benefits of acupressure, Gach provides a short and reliable resource practitioners can use to guide them in using acupressure both personally and professionally to treat numerous symptoms and conditions.³ The techniques described previously for pain and nausea can be used in acute (hospital), outpatient

(clinic), and long-term (transitional care or nursing home) settings. Many hospitals currently use manual P6 acupoint stimulation and nausea bands to prevent postoperative, chemotherapy-induced, and pregnancy-related nausea.

Integrative nursing practice uses evidence-based practice to promote patients' ability to heal, emphasizing the use of the least invasive interventions.¹¹ Integrative practice allows nurses to use acupressure alone or in conjunction with other approaches to treat moderate to severe symptoms.

Nurses are encouraged to check with their state boards of nursing regarding the use of integrative therapies. In many states, integrative therapies are within a nurse's scope of practice; some state boards clarify this on their Web sites. Several states, including Minnesota, Texas, North Dakota, and North Carolina, include the use of integrative therapies in their scope of nursing practice guidelines.²⁴⁻²⁷

NEED FOR FURTHER RESEARCH

While research on the use of acupressure and other integrative therapies within the nursing and medical communities is increasing, many investigators have pointed out that, to establish best practices, a greater number of well-designed trials are needed, as well as supportive funding. Current standardized research methodologies are not designed to capture all that integrative therapies encompass, such as the influence of the relationship between patient and practitioner, the senses the patient employs, or the patient's past experiences and memories, all of which may affect the patient's interpretation of the experience and therefore the outcomes. Innovative research methods are needed to capture these variables.

It is important that future researchers determine which symptoms, disease processes, and wellness practices are best treated with which of the multitude of integrative therapies available. Not all modalities are appropriate for all circumstances, and it is vital for practitioners, in partnership with patients, to choose the therapies that are most effective for the patients' specific symptoms. ▼

For 14 additional continuing nursing education activities on topics related to complementary and alternative medicine, go to www.nursingcenter.com/ce.

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