

# Reflexology

## Emerging Evidence Points to Health Benefits

Jane Hart, MD

Reflexology is increasingly recognized and used as a complementary therapy to help people feel better in community, academic, and clinical settings. In fact, according to a review last year, reflexology is one of the top 6 complementary and alternative medicine (CAM) treatments used in the United Kingdom and is among the more popular CAM treatments in Northern Ireland.<sup>1</sup> Despite a lack of solid research evidence regarding reflexology's use for specific conditions in clinical settings, emerging results suggest that reflexology can help people find symptom relief and feel better, particularly in the areas of quality of life (QoL), stress, anxiety and pain.<sup>1,2</sup>

Gwen Wyatt, RN, PhD—a researcher in the field of reflexology for the past 15 years and a professor of nursing at Michigan State University College of Nursing, East Lansing, Michigan—stated that many patients report symptom relief and are finding benefit from this age-old practice. She commented:

Breast cancer patients report significant benefits from reflexology for symptom management and improved physical functioning. One of our research sites has now employed a lead reflexologist to train a group of nurses in reflexology for use in the hospital system. How broadly reflexology is being used in clinical practice nationally is uncertain, but it is definitely widespread. Oncology clinics with integrative health centers are offering reflexology on-site. This allows for screening of practitioners and assures that they have basic professional credibility.

Lila M. Mueller, CRR, ART (Regd), NBCR—director of the Reflexology Association of America (RAA)—stated that, while reflexology research is in its infancy in the United States, there have been “significant beneficial outcomes for patients as a result of incorporating reflexology with other traditional therapies.” Mueller works as a reflexology preceptor at St. Luke's Medical Center, in Milwaukee, Wisconsin, as part of the Center's Integrative Medicine Program, whereby physicians can shadow and learn about reflexology and its benefits for patients.

### Definition

Reflexology is an ancient practice with an interesting historical evolution from many cultures and traditions to the modern practice that exists today.<sup>2</sup> The RAA defines reflexology as “a non-invasive complementary practice involving the use of alternating pressure applied to reflexes within reflex maps of the body, located on the feet, hands, and outer ears.”<sup>3</sup> Wyatt stated that reflexology is more like acupuncture or acupressure than massage and commented: “It is important that clinicians understand that reflexology is not massage. Reflexology targets specific reflexes that are similar to acupressure/acupuncture points in the ancient Chinese system. For example, in my research, we use 9 specific points that are stimulated, and this stimulation does not resemble massage. It is a deep walking motion with the thumb.”

A review by McCullough and colleagues points out that many types of reflexology exist including, the Ingham method, the Father Josef method, the hand versus foot versus ear method, the Bayly method, and others.<sup>1</sup> Further details about the history, definition, and specific practice of reflexology are available from the references listed in this article.

### Research

Reflexology studies have shown beneficial effects on pain, mental health, QoL, and stress. McCullough and colleagues carried out a systematic review of 17 reflexology studies that included 34 physiologic or biochemical outcome measures.<sup>1</sup> The review showed that “significant within reflexology group changes were recorded for 11 outcome measures including blood pressure in five studies, heart rate in three studies, cortisol in two studies, salivary amylase, lymphocyte production, and heart rate variability.”<sup>1</sup> The review authors pointed out that only three studies showed significant between-group changes in favor of reflexology. These researchers commented, however, that “for all of the articles evaluated, whether a significant change was identified or not, reflexology had a positive effect

on the health and well-being, quality of life, stress, anxiety, and pain levels of the participants involved.”<sup>1</sup>

One trial evaluated the safety and efficacy of reflexology for 385 women with advanced-stage breast cancer, who were receiving chemotherapy and/or hormonal therapy.<sup>4</sup> The women were randomly assigned to one of three treatment interventions: reflexology; lay foot manipulation; or conventional care. Compared with the control group, reflexology significantly improved functionality and dyspnea. The researchers concluded that “reflexology may be added to existing evidence-based supportive care to improve health-related quality of life (HRQoL) for patients with advanced-stage breast cancer during chemotherapy and/or hormonal therapy.”<sup>4</sup> Specifically the researchers stated: “Reflexology can be recommended for safety and usefulness in relieving dyspnea and enhancing functional status among women with advanced-stage breast cancer.”<sup>4</sup>

Wyatt, the lead author of the study, commented: “Our research has demonstrated that reflexology can help reduce symptoms and improve functional status, which are both key to HRQoL. Through the improvements in HRQoL during treatment, patients are more likely to complete their medical-treatment protocols, which, in the long run, contributes to less morbidity and greater longevity.”

As the reflexology data regarding its use for specific medical and health conditions continues to emerge, authors of reflexology reviews often cite small study size, problems with methodology, and conflicts in findings, which hinder interpretation of some of the current reflexology evidence.

Wyatt commented that the state of the science in research on reflexology is still growing and being refined and noted:

Some of the key issues in reflexology research center around the conduct of consistent research protocols. For example, my publications go well beyond outcome data, in order to include protocol fidelity. Factors include: How many sessions are required to make a difference in cancer symptoms? How long does each session need to be? Which reflexes are key to symptom improvement? Can a friend or family caregiver be taught a very specific symptom management protocol to deliver to a patient? Our current \$2.7M National Cancer Institute [NCI] grant is in year 4 of training caregivers to deliver in-home reflexology. This approach overcomes many of the travel and financial barriers for cancer patients.

McCullough and colleagues also commented on the state of research: “Reflexology is an area that has seen much growth within the private sector; however, little work has been carried out to determine . . . how it may be best incorporated into mainstream medical care from a measurable, quantitative perspective informed by high quality evidence.”<sup>1</sup> They point out, however, that the practice of reflexology is “worthy of [continued] investigation and a socially acceptable form of treatment globally.” Ciara Hughes, PhD—one of the researchers involved in the McCullough review and a researcher and se-

nior lecturer, in the School of Health Sciences, at the University of Ulster, Newtownabbey, United Kingdom—commented: “Reflexology is suitable for a wide range of patients including people with cancer, heart failure, COPD [chronic obstructive pulmonary disease], and the elderly. This therapy has been shown to reduce psychological and physiological stress, including reduced stress biochemicals, such as cortisol, and the research also suggests a trend in reduction in blood pressure.” Mueller points to the RAA website for further information on the available research literature.<sup>5</sup>

## Considerations

For clinicians to recommend reflexology they need to explore and learn about credible providers in their communities. Wyatt commented: “In our research, we use the Ingham Method of reflexology. It is the most investigated and widely used method. It would be important to know if a provider is certified in reflexology or just had a few hours added to a massage course he or she took.” She added that clinicians need to consider if the patients they are recommending reflexology to have any contraindications and said:

We do not enroll study patients if they have [histories] of deep vein thrombosis [DVT] or are at risk for a DVT, if they have intravenous lines in or near the feet (which is rare but possible), or if they have severe and/or painful neuropathy. There may be additional red flags for individual patients. Clinicians should also consider how long a reflexology provider has been in practice and if he or she is used to working with ill patients. Some practices are for high-level wellness where the clients are not coping with any life-threatening illness.

Hughes added that reflexology is a powerful adjunct therapy that can be extremely beneficial for patients and affirmed: “It is important to attend a fully qualified reflexologist preferably, what may be referred to as a clinical reflexologist, with a biomedical understanding, which can allow for treatment that is of better quality and better tailored to the patients’ individual needs.”

## Conclusion

As the field of reflexology grows and increasing numbers of people turn to this practice, Hughes commented: “Reflexology is a gentle, noninvasive and inexpensive treatment with minimal risk of adverse effects. The treatment may offer ways to manage problems such as pain, stress and anxiety and should be viewed with an open mind by clinicians and researchers alike while the knowledge base remains incomplete.”

Mueller added: “As reflexology relieves stress and tension, improves blood supply, and promotes the unblocking of nerve impulses to achieve homeostasis for all body systems, clini-

cal application is limitless.” She also said: “Personally, I have been privately hired to come to hospital settings for reflexology for cardiac, stroke, and other health problems, by physician prescription, with positive outcomes. I see reflexology

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becoming a utilized tool anywhere within health care, sports, dance and work settings where relaxation and/or restoration are needed.” Wyatt contributed that, in the future, she hopes to see integrative therapy centers that include reflexology services become incorporated into hospitals and health care agencies. “Reflexology is ideal for such integration since it is noninvasive, and soothing, and has an evidence base,” Wyatt said. ■

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## References

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1. McCullough JEM, Liddle SD, Sinclair M, et al. The physiological and biochemical outcomes associated with a reflexology treatment: A systematic review. *Evid-Based Complement Alternat Med* 2014;2014:502123.
2. Horowitz S. Evidenced-based reflexology. *Altern Complement Ther* 2004; 10:211–216.
3. Reflexology Association of America. Definition of Reflexology. Online document at: <http://reflexology-usa.org/information/raas-definition-of-reflexology/> Accessed February 25, 2015.
4. Wyatt G, Sikorskii A, Rahbar MH, et al. Health-related quality-of-life outcomes: A reflexology trial with patients with advanced-stage breast cancer. *Oncol Nurs Forum* 2012;39:568–577.
5. Reflexology Association of America. Reflexology Research. Online document at: <http://reflexology-usa.org/reflexology-research/> Accessed February 25, 2015.

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