

Clinical Practice Guideline: **Reflexology**

Date of Implementation: **February 9, 2006**

Product: **Specialty**

POLICY

American Specialty Health – Specialty (ASH) clinical committees have determined that the peer-reviewed, published literature to support reflexology, as a form of foot or hand massage, is predominately positive in respect to reducing anxiety and relieving pain; however, most of the studies had methodological flaws. Reflexology, as a form of foot or hand massage is professionally recognized and does not pose a health and safety risk. Reflexology, as a form of foot or hand massage, is considered to be analogous to other massage techniques in terms of its safety and effectiveness profile.

ASH clinical committees have also determined that the peer reviewed, published literature to support reflexology as a diagnostic/assessment procedure or for therapeutic intervention of visceral conditions has insufficient evidence to establish clinical effectiveness, is not professionally recognized, poses a health and safety risk through a substantial risk of both substitution harm and labeling effects, and is considered scientifically implausible. For more information, see ASH policy Techniques and Procedures Not Widely Supported as Evidence Based - CPG 133 – S.

PROCESS AND DEFINITIONS

When developing, reviewing, and approving clinical policy, ASH peer-review committees consider whether the technique/procedure:

- Is established as clinically effective or as having diagnostic utility by:
 - Scientific information published in an acceptable peer-reviewed clinical science resource, and
 - The consensus opinion of the Evidence Evaluation Committee (EEC) when available;
- Is professionally recognized by:
 - Inclusion in the educational standards accepted by the majority of the professions' educational institutions,
 - Wide acceptance and use of the practice, and
 - Recommendations for use made by healthcare practitioners practicing in the relevant clinical area;
- Poses a health and safety risk; and
- Is plausible or implausible

- A belief, theory, or mechanism of health and disease that can be explained within the existing framework of scientific methods, reasoning, and available knowledge is considered plausible.
- A treatment intervention or diagnostic procedure that requires the existence of forces, mechanisms, or biological processes that are not known to exist within the current framework of scientific methods, reasoning, and available knowledge is considered implausible.

Substitution harm (indirect harm): Compromised clinical outcomes caused by:

- Utilizing a specific diagnostic or therapeutic procedure when the safety, clinical effectiveness, or diagnostic utility is either unknown or is known to be unsafe, ineffective, or of no diagnostic utility, *instead of* a diagnostic or therapeutic procedure known to be safe, be clinically effective, or to have diagnostic utility; or
- The utilization of a diagnostic or therapeutic procedure that is substantially less effective or safe than another procedure with established safety, and clinical effectiveness or utility.

Labeling effects (non-specific harm): The harm that results from identifying in a patient a condition or a finding that is not clinically valid.

Safe: The terms “safe” and “safety,” are used only with specific reference to the absence of direct harm. Direct harm would include any injury to a patient caused by the mechanical, thermal, biological, chemical, pharmacological, electrical, electromagnetic, or psycho-dynamic properties of a diagnostic or therapeutic procedure, and as such, the procedure would be considered unsafe.

Direct harm: Any injury to a patient caused by the mechanical, thermal, biological, chemical, pharmacological, electrical, electromagnetic, or psycho-dynamic properties of a diagnostic or therapeutic procedure.

Benefit versus risk profile: The relative effectiveness or utility of a therapeutic intervention or diagnostic procedure versus its potential for direct harm.

- Positive (benefits outweigh risks),
- Negative (risks outweigh benefits), or
- Equivocal (available information is inconclusive).

Description/Background

Reflexology is a method of foot (and sometimes hand) massage in which pressure is applied to "reflex" zones mapped on the feet (or hands). Tension or stress in any area of the body is believed to be reflected in specific areas of the feet. Reflexology divides the feet into 10 regions which relate to 10 regions of the body. These “reflex zones” were

first developed by an American medical doctor in 1913 and later refined by a physical therapist. The theory of reflex zones on the feet is that they mirror specific organs and glands in the body. Practitioners theorize that by stimulating these regions on the feet, stress and tension in different areas of the body can be relieved.

The organs, glands, and other components of each half of the body are believed to be represented on the foot on the same side, mainly on the sole but also including the top of the foot, heel, and toes. Some practitioners believe the health of the body can be assessed by examining the feet to detect imbalances or obstructions to the flow of energy, which are expressed as tenderness or feelings of grittiness or crystalline-like formation at the site. Bodily function can then be influenced by stimulating these areas with pressure or massage, thus activating a reflex mechanism involving nerves or meridians (energetic pathways in traditional oriental medicine). Reflexology is claimed to reduce stress, improve circulation, eliminate toxins, and promote metabolic homeostasis.

Practitioners also claim that they can bring about more specific changes in health. One classic reflexology text, for example, includes case histories of treating ataxia, osteoarthritis, and epilepsy.

Evidence and Research

Four (4) systematic reviews evaluating the effectiveness of reflexology for various health conditions were found with the following conclusions:

- A systematic review evaluating twelve (12) studies found no positive effect for reflexology on symptoms of menopause (Carpenter & Neal, 2005).
- A systematic review evaluating eighteen (18) randomized controlled trials (RCTs) found no specific effect for reflexology for treatment of any health condition (Ernst, 2009).
- A systematic review evaluating five (5) studies found a lack of evidence to support the routine use of reflexology, but reported one study with a statistically significant treatment effect on urinary symptoms in patients with multiple sclerosis (Wang, Tsai, Lee, Chang, & Yang, 2008).
- A systematic review evaluating the physical and psychological effects of reflexology on cancer patients reported inconclusive results due to limited research (5 qualifying studies, all with methodological limitations) (Wilkinson et al., 2008).

Thirteen (13) randomized controlled trials (RCTs) evaluating the effectiveness of reflexology for treatment of health conditions were identified. Three (3) found no specific effects, five (5) found significant positive effects, and three (3) found possible positive effects, but no clear evidence that reflexology was superior to control treatments, and/or no clear association between effects seen and reflexology.

- Three (3) RCTs found no specific effect for reflexology for inducing ovulation (n = 48) (Holt et al., 2009); reducing foot edema in pregnant women (n = 55) (Mollart, 2003); or treating patients with COPD (n = 14) (Wilkinson, Prigmore, & Rayner, 2006).
- Five (5) RCTs found significant positive effects for reflexology for quality of life in cancer patients (n = 12) (Hodgson, 2000); sleep quality in postpartum women (n = 65) (Li, Chen, Gau, & Huang, 2009); diurnal micturition frequency (n = 109) (Mak, Cheon, Wong, Liu, & Tong, 2007); perceived well-being in pregnant women with foot edema (n = 55) (Mollart, 2003); and quality of life in post-surgical breast cancer patients (n = 183) (Sharp et al., 2010).
- An RCT evaluating the use of reflexology for chronic low back pain (n = 243) found that reflexology reduced pain in back pain patients similarly to relaxation and usual general practitioner care. The authors concluded that, while reflexology appears to be safe and may fulfill patient preferences, evidence of a clear association between reflexology and positive effects is limited and inconclusive (Poole, Glenn, & Murphy, 2007).
- An RCT comparing reflexology to sham reflexology (n = 73) found similar positive effects in the treatment and control groups, suggesting a possible placebo effect or effectiveness of stimulation of reflex points (Hughes, Smyth, & Lowe-Strong, 2009).
- An RCT comparing reflexology to nonspecific foot massage for treatment of menopausal symptoms (n = 76) found similar positive effects in both groups (Williamson, White, Hart, & Ernst, 2002).
- An RCT found reflexology to be superior to placebo reflexology for the treatment of premenstrual symptoms, but the protocol included foot, hand, and ear treatment so no conclusions can be drawn about any one region treated independently (Oleson & Flocco, 1993).
- An RCT of patients with multiple sclerosis showed symptomatic improvements but the drop-out rate was high (Siev-Ner et al., 2003).

Two (2) non-randomized controlled trials were also found:

- A blind, non-randomized controlled trial (n=40) evaluating the effectiveness of reflexology for treatment of asthma over a 10 week period found no evidence of a specific effect for reflexology (measured by change in peak flow and spirometry, and by subjective scores of symptoms, quality of life, and beta-2 inhalations) when compared with placebo (Brygge et al., 2001).
- A single-blind trial (n = 34) evaluating the effect of reflexology on symptoms of Irritable Bowel Syndrome (abdominal pain, abdominal distention, and diarrhea/constipation) found no evidence of effectiveness for reflexology when compared with regular, non-reflexology foot massage (Tovey, 2002).

One study investigated whether reflexology is an accurate method of diagnosis (Ernst, 2001) and concluded reflexology techniques are not a valid method of diagnosis.

The effects of foot reflexology on anxiety and pain in patients with breast and lung cancer were tested in a study which found a significant decrease in anxiety (Stephenson et al., 2000). The result suggests that reflexology may be a self-care approach to decrease anxiety in this patient population.

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