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# An Ayurvedic approach to sustaining and pampering the feet of healthcare workers

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## ABSTRACT

The COVID-19 pandemic caused imbalances in the lives of healthcare workers to a great degree, leading to long hours on the feet without time for sustained rest and rejuvenation. Ayurvedic wisdom provides a holistic lens from which to view the importance of footcare, which ultimately affects the systemic being. To reduce suffering on all levels, it is important to dedicate time, daily, to the use of doshic-specific self-care techniques. This article offers a daily footcare ritual in support of mind, body, and spiritual health through application of oiling, massage, gratitude, and a yoga-based inversion.

## 1. Pampering the feet of healthcare workers

**A Statement of the Problem:** Healthcare workers have faced an increase in physical demands and stressors since the COVID-19 pandemic emerged with little time for breaks or self-care.<sup>1</sup> Data from an Occupational Requirements Survey of nearly 136 million civilian workers ( $N = 135,979,200$ ) found sectors of healthcare employees, such as nurse practitioners, spend the majority (61%) of the workday standing, walking, stooping, or crouching.<sup>2</sup> Excessive use of the feet can lead to pathologies making it imperative to overall health and livelihood to prioritize a proper daily care regimen for the feet.<sup>3,4,5</sup> As opposed to the often reductionist, symptom-specific approach used in the United States,<sup>6</sup> this article explores simple self-care strategies in support of foot health through an evidence-based Ayurvedic lens which encourages holistic daily lifestyle prevention techniques over treatment of disease.<sup>7</sup> Considering that the average American has walked over 75,000 miles by age 50 years,<sup>8</sup> the information in this article is also relevant to all adults with healthy feet, even if they do not serve in a healthcare role.

## 2. An Ayurvedic approach

Ayurveda, translated as the “science of life [span]”,<sup>9,6</sup> is a comprehensive Traditional Medicine System which has been in use for millennia.<sup>10</sup> An in-depth account of the rich history of Ayurvedic philosophies and treatment complexities is beyond the scope of this article. For the purpose herein it is vital to note that in Ayurvedic wisdom each living being is believed to consist of a particular *dosha* (constitution), or combination of the five base universal elements: fire,

water, earth, air, and ether/space, from at least birth, if not conception.<sup>11,12</sup> Imbalances in, or vitiation of, elements away from the natural doshic presentation in a physical, mental, spiritual, ethical, or environmental context move one away from their *Prakriti* (sometimes *Prakuti*), or natural doshic state, causing illness.<sup>13,11,14,9</sup> Therefore, daily attention to how one’s mind, body, and spirit are affected by their environment should be applied, with intentional effort to remain in balance.<sup>12</sup>

All elements are present in some amount within each living creature though readers might resonate with one of the following abridged descriptors of the predominant elemental/genetic expressions and doshic presentations (or a combination of them):

- From cumulation, *Kapha* (earth [*Prithvi*] and water [*Ap*] qualities):  
slower movements, natural caretaker, soft and loving, prefers sweet foods, can struggle with excess phlegm, depression, and slower metabolism.
- From metabolism, *Pitta* (fire [*Agni*] and water [*Ap*] qualities):  
entrepreneurial, hot and sweaty, can be fiery in temperament, hard-worker, ambitious, intellectual, may struggle with heat, ulcers, diarrhea/constipation and liver issues.
- From movement, *Vata* (ether [*Akasa*] and air [*Vayu*] qualities):  
light, quick-moving, often slender, dry skin and brittle hair,

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intellectual but perhaps less mindful, high-arousal, can struggle with anxiety, insomnia, cold, and digestion.

- *Tri-doshic*: a combination of Vata, Kapha, and Pitta elemental qualities in balance<sup>13,10,15,11</sup>

As a result of chronic stress, lifestyle, or unsupportive environments, skin conditions may present as a symptom of imbalance, especially dry cracked feet from excessive walking, excessive dryness Vata imbalance, or conversely, conditions of too much moisture—a Kapha imbalance.<sup>3,5</sup> Pitta doshas are especially prone to burnout due to tendencies towards challenging work without taking time off.<sup>15</sup> The following terse summary highlights elements of the *Dinacharya* (daily ritual), thought to enhance vitality and longevity via prophylactic measures that complements an established Western pedicure practice.<sup>3,16</sup>

### 2.1. Strategies that promote regular practice: dinacharya

The term *Dinacharya* from *dina* (day) and *acharya* (behavior)<sup>7</sup> is used to describe a set of daily practices for health, happiness, and avoidance of lifestyle-induced diseases. Though the following is not an exhaustive list, *Dinacharya* includes:

- appropriate sleep
- waking before sunrise
- appropriate elimination of urine and fecal waste
- systemic cleansing, with specific practices for each body part
- appropriate exercise
- quality food intake appropriate to the prakriti, doshic vitiation, environment, and season
- gainful employment
- worship or prayer (such as with surya-namaskar yoga)
- doshic-specific oiling and daily massage

<sup>17,7</sup>

As a supportive complementary lifestyle framework, *Dinacharya* can be modified as necessary to the constitution of the individual and environment.<sup>9</sup> While multiple components come together to form the comprehensive *Dinacharya*, the solitary practice of oiling for the feet, known as *padabhyanga*, can be self-administered in a relatively short time.

### 2.2. The modality and the evidence base: padabhyanga, oiling of the feet

Oiling is an essential component of Ayurveda in support of systemic wellness, including *padabhyanga*, from *pada* (foot) and *abhyanga* (massage with oils).<sup>3</sup> In Ayurveda, as in several other Traditional Medicine Systems, the feet are thought to be highly important as they contain direct access sites to *prana*—succinctly: “vital life force”, all organs of the body, and energy zones.<sup>18</sup> The feet directly connect to and interact with information from the environment, as well as inner and outer elements.<sup>18,19</sup> While Ayurvedic treatments specific to foot conditions are currently understudied in the United States, the American Podiatric Medical Association (APMA) also recommends massage, appropriate moisturization, and stretching in support of foot health (2022), aligning with Ayurvedic wisdom.<sup>9</sup>

#### 2.2.1. Oils

Commonly used carrier and essential oils contain unique properties and qualities, though many overlap.<sup>20,21</sup> Cold-pressed plant oils and their component parts offer rich nutrients and protective antioxidants that may enhance the extracellular matrix of the skin, contribute to wound healing, and reduce inflammation.<sup>21</sup> The procedures by which oils are manufactured for commercial use may differ from that of medicinal/Western pharmaceutical oils or Ayurvedic preparations.<sup>22,23</sup> Like oils chosen for ingestion, consideration for individual allergens,

health condition, good manufacturing procedure compliance, oil purity, and scent preference should be given when selecting products for topical application. All oils should be used in accordance with manufacturers' directions.

**Mustard Oil.** In parts of India, it is common practice to use mustard oil as an inexpensive antimicrobial massage therapeutic, though concerns exist for use on fragile skin<sup>24</sup>. Cold-pressed mustard oils can be considered for adults with Kapha doshas (Sexton, n.d.<sup>25</sup>). The plant parts and byproducts of several varieties of Brassicaceae mustards (E.g., *Brassica juncea*, *Brassica nigra*, *Brassica alba* ...) are used globally as medicines, food sources, and even as material to increase soil nutrition.<sup>26</sup> Steam-distilled essential oils of mustard plants contain natural antimicrobial compounds which can reduce bacterium such as *Escherichia coli* (*E. coli*), *Salmonella enterica*, *Staphylococcus aureus*, *Listeria monocytogenes*, and others.<sup>27</sup> A water and mustard oil gel containing rock salt and *Euphorbia caducifolia* latex was found in a small study ( $n = 26$ ) to reduce itching, foot pain, and dryness ( $P < 0.001$ ).<sup>28</sup> In the United States, mustard oil solutions are used as treatments for dry, damaged hair, as antifungal, antibacterial, dandruff and scalp treatments, and as part of anti-inflammatory skin conditioning regimens (Iftikar, 2019<sup>29</sup>).

**Olive Oil.** According to Kulkarni<sup>30</sup> and peers (2016), olive oil is ubiquitous and, despite lack of presence in traditional texts, should be considered as an Ayurvedic topical massage oil. Olive oil could be particularly useful for Vata doshas, especially where sesame oil, a prevalent allergen,<sup>31</sup> is contraindicated. In many cultures olive oil, pressed from the fruit of *Olea europaea* (Lin et al., 2017), has a rich history of use as both an internal and external anti-inflammatory agent due to high levels of phenolic compounds. As it is readily available in most homes, olive oil makes an excellent, affordable carrier oil for massage in combination with herbs or essential oils. Olive oil delivers emollient properties that allow for skin barrier homeostasis and regeneration, promotion of wound healing, protection from pressure ulcers and upregulation of antimicrobial properties with little risk for irritation<sup>32</sup>; Lin et al., 2017).

**Coconut Oil.** Coconut oil is a good choice for Pitta doshas—who should limit oiling in hot and humid conditions<sup>15</sup>; Sexton, n.d.<sup>25</sup>). Coconut oil, from the coconut kernels of the coconut palm (*Cocos nucifera*), offers strong anti-microbial, anti-viral, and antifungal activity as well as anti-bacterial protection—including against *E. coli*.<sup>21</sup> Across South Asia and the United States, varieties of coconut oil are commonly used for cooking, cosmetic purposes, as a massage oil, and wound healing agent.<sup>20,33</sup> Cool coconut milk makes a good alternative for a decadent pedicure soak when humidity and heat deter oiling.

#### 2.2.2. Essential oils

Essential oils are the aromatic volatile compounds of various plant parts, such as the bark, fruit, flowers, and roots that have been used throughout history for their spirit shifting/aphrodisiac and medicinal effects—antimicrobial, antitumor, antiviral, and anti-inflammatory, to name a few.<sup>34,35,36</sup> As Das and peers (2019) have noted, essential oils can create various skin injuries, toxicity, or allergic response, especially if not diluted in a carrier oil or footbath. No more than one to three percent of essential oils to carrier oil/dilution material should be applied directly to the skin<sup>37</sup>. Adding essential oils directly to water or milk in a pedicure bath following the guideline above will offer a delicate aroma and adhere to pedicure standards.<sup>16</sup> Some especially fragrant and soothing essential oils used for pedicure services are: German and Roman chamomile (*Chamomilla recutita*, *Chamaemelum nobile*, respectively),<sup>38</sup> lavender (*Lavandula angustifolium*),<sup>35</sup> bergamot (*Citrus bergamia*),<sup>39</sup> and marjoram (*Origanum narjorana*).<sup>40</sup>

Alternately, in alignment with Ayurvedic skin care practices<sup>41, 23</sup> consider adding the whole dried or fresh herbs listed above to a steamy footbath, allowing the water to comfortably cool before inserting the feet, or infuse them in the oil, prior to use.

### 2.3. Instructions and recommendations for use

#### 2.3.1. Disclaimer

The practices herein should not be considered prescriptive, nor a replacement for medical advice. While self-care Dinacharya protocols are considered vital to health for all ages,<sup>7</sup> it is important to first speak with a licensed medical provider for clearance to use the following footcare routine, especially in cases of existing conditions, including—but not limited to—pregnancy, sensory concerns, skin or nail conditions, glucose, organ, vertebral, or vascular dysfunction.

#### 2.3.2. Self-care ritual for the feet

After each long work shift, or when desired, prepare an area with a comfortable seat, towels (preferably warmed for Vata and Kapha), a soaking basin large enough for the feet, disposable nail file or nail clippers (weekly), liquid soap, water, and massage oil. Enhancing options include essential oils and a dry brush or nail brush. The foot soaking basin should be filled with comfortably warm water or milk and, following manufacturer's directions, a couple drops of liquid soap. A second basin or pitcher of clean water for rinsing the feet should be placed nearby.

- clip or file the nail straight across with corners rounded for comfort, moving the file in one direction only and never across the top of the nail surface
- gently dry brush the skin of each foot a few times towards the heart
- soak in warm, soapy water for 5–10 min to cleanse and soften the feet
- breathe deeply and relax
- use nail brush as needed to remove debris
- rinse soap from feet
- dry the feet thoroughly to prevent fungal infection
- apply massage/carrier oil or lotion to the heel of one foot and wrap it in a warm towel while attending to the second foot
- begin self-massage

### 2.4. Massage

In a comfortable position, such as with the bottom of the foot propped towards the opposing thigh, apply the massage/carrier oil, lightly warmed for Vata and Kapha doshas, with a few drops of essential oil (optional) to the palms and rub into the bottom and top of the foot with intentionality and self-love in support of Dinacharya practice.<sup>15</sup> Interlace the fingers with toes from the top of the foot, moisturizing and separating them. Gently grasp the joints of each toe between the thumb and fingers, wiggling and lubricating the toes as feels good, one at a time. Run the fingers upwards along the top of the foot from toes towards the shin several times. Then, using the opposite hand to foot, with palm and sole facing each other, use firm pressure and massage the transverse arch, beneath the toes from large to small toe. This may also feel lovely with a jade roller or the back of a chilled teaspoon, especially for *Pitta* doshas. Continue across the heads of the metatarsals at the footpad then down each side of the foot, towards the heel. With fingers interlaced in toes again, gently circle the ankle in both directions. Finally, take some time to massage the heel, under the ankle, and run the thumb and fingers upwards from the Achilles tendon. Wrap foot in a warm towel or clean sock and repeat on the other side. For further revitalization, consider lower leg elevation over a pillow, on a chair, or with the yoga posture, “legs up the wall”.

### 3. Yoga

<sup>42</sup> Birch (2018) shares that yoga is often, though arguably, called the “sister science” of Ayurveda due to overlapping, though at times distinct, holistic lifestyle approaches that address disease control via elemental adjustment in support of the prakriti state. It is known that yoga dates back several thousand years with practices deeply rooted in maintaining

proper working of the body's physiological functions to reduce barriers to the ultimate goal of liberation. Yoga incorporates breathwork (*pranayama*), meditation (*dhyana*), and physical postures (*asanas*) to keep the physical being, mental levels, and energy bodies functioning properly.<sup>42,43</sup> Asanas specific to elevation of the feet above the heart can be revitalizing to the mind, physical body, and spirit.

#### 3.1. Legs up the wall

The asana *Viparita Karani* (inverted in action), or “legs up the wall” can be especially restorative for individuals who have spent several hours on their feet, so long as they do not have pressure conditions such as glaucoma, excessive fluid retention, organ failure (heart, kidney, liver disease of any type), or uncontrolled hypertension (<sup>44</sup>). *Viparita Karani* increases circulation of the blood and lymph, destresses the body, and can bring deep relaxation.<sup>44,45</sup> If moving legs up a wall is unavailable, elevating the lower legs, such as on a chair or pillow,<sup>46</sup> the use of compression socks,<sup>47</sup> legs on a yoga ball or simply lying supine<sup>48</sup> may offer health benefits after a long day on the feet.

To move into *Viparita Karani*, begin by placing a soft blanket or yoga mat on the floor next to a wall.<sup>44</sup> Lie on the surface with the spine perpendicular to the wall, knees bending towards the chest and shift the lower body to bring the sit bones near the wall. Begin lifting and stretching the feet towards the ceiling, until the heels are resting against the wall, higher than the head. Keep the neck soft. Breathe slowly and fully for at least five breaths. To return to seated, mindfully slide the heels back down the wall, legs together, knees bent. Slowly move legs together to one side. Lie on the side body for a moment before mindfully returning to a seated position.

#### 3.2. Resources for continued exploration and/or guided practice

While the author has no affiliations with any of the following entities, nor is recommending purchases from any links within, to learn more about Ayurveda or doshas, please visit the Chopra Center: [Chopra.com](https://www.chopra.com).<sup>49</sup>

For a visual guide of “legs up the wall”, see: <https://health.clevelandclinic.org/benefits-of-legs-up-the-wall/><sup>44</sup>

For additional information on essential oils, dilution, and massage visit Healthline (Cherney, 2022) with the following link: <https://www.healthline.com/health/essential-oils-for-skin>.<sup>50</sup>

#### 3.3. Key takeaways

- healthcare workers are more demanding of their feet than the average American citizen
- environmental, spiritual, mental, and physical stressors combined with unpredictable health disruptions are abundant in the era of today's fast-paced, ever-changing society
- non-pharmacologic lifestyle modifications which align with ancient Ayurvedic wisdom offer the potential to sustain foot health
- taking a few moments after each work shift or before bed each night to properly wash, dry, thank, elevate, and massage the feet as part of a regular Dinacharya practice can reduce the risk for some lifestyle diseases.

#### Author statement

Conceptualization, Writing-Original Draft, Visualization.

#### COI author note

Though the author will not receive direct compensation related to this article, Dixie is licensed to provide cosmetology services in the states of California and Michigan, is a Registered Yoga Teacher, RYT-500, owner of *Integrative Evolution*, a wellness and education space and

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