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Are you down to earth?

Karmen Koch

The practice of grounding, or “earthing” has been gaining popularity in the last few decades as a holistic approach to prevention and treatment in broad scopes of practice. The exercise reflects the early human experience of frequent and direct contact with the earth’s surface. The current, limited available data perceives and theorizes health improvements including decreased inflammation, enhanced perfusion, sleep restoration, lowered blood pressure, enhanced muscle recovery, and decreased cortisol levels. When implementing any new health practice into one’s routine, it is crucial to be well informed. This review can help individuals better ascertain if grounding could improve their health and provide practical methods to begin the practice.

Keywords: *grounding, earthing, holistic medicine*

A recent health trend called grounding, or “earthing,” has been quietly emerging as a holistic approach to prevention and treatment in broad scopes of practice. The exercise reflects the early human experience of frequent and direct contact with the earth’s surface. For individuals unable to earth outdoors, unique products are being developed and marketed to accommodate a method of indoor grounding.¹ A few researchers, a handful of practitioners, and authors of questionable credibility are suggesting that physical touch with our electric and lively earth could send energy through our conductive human bodies to provide a wide range of health benefits. Current data is limited, and many are skeptical, but perceived and theorized health improvements include decreased inflammation, enhanced perfusion, sleep restoration, lowered blood pressure, enhanced muscle recovery, and decreased cortisol levels.²⁻⁴

A man with a background in the cable television business may sound like an unlikely pioneer for this emerging health practice, but it turns out Clint Ober’s work experience and personal health struggles gave him the perfect combination of insight and inspiration to discover the practice of earthing.⁵ Ober knew that television cable systems must be grounded upon installation to prevent other electrical fields from disrupting the signal. He coupled this knowledge with the realization that our modern lifestyles rarely involve direct contact with the earth and concluded that humans have become insulated from the electric stabilization earth’s surface provides. Ober and some friends casually implemented grounding techniques and were amazed by their resulting decreased chronic pain. Then, in 2000, Ober independently conducted an informal study of 60 individuals to further investigate his idea.⁵ For 30 days, roughly half of the study participants slept on mattress pads that incorporated grounding technology, while control group subjects slept on pads that were not connected to an electrical source to mimic

the earth’s current. A few of the results Ober measured included time to fall asleep, quality of sleep, muscle stiffness, and general well-being. He simply reported the percentage of subjects who noticed improvements after the 30-day study period. The study found that sleeping grounded to the earth’s electrical current improved every area assessed. The reliability of this primary study is arguable, as it is not published in any medical journals and there are minimal details on how the study was conducted.⁶

When Ober discovered the benefits of grounding, he also recognized its limitations and thus was one of the first to design accommodations for indoor earthing.⁷ Since his pilot study, Clint Ober, along with men such as earthing advocate, James Oschman, have led the way in developing a variety of products to earth indoors. Mats and pads that can be slept or sat on are sold with outlet adapters and an attaching coil cording to retrieve the earth’s energy. Skin patches and bracelets have also been incorporated with grounding technology. Grooni Earthing[®] is an example of an online retailer of many earthing products including sleeping mats, blankets, yoga mats, and pillowcases. A deeper look into the Grooni Earthing[®] website raises red flags on the concept of earthing since the citation links that are meant to provide the “scientific perspective” of the practice link to entirely unrelated content. Although their credibility may be lacking, Oschman and Ober have believed through experience that these methods have legitimate health benefit.⁷

While additional research efforts have emerged from a small subset of individuals since Ober’s pilot study in 2000, few studies contain concrete evidence. Testimonials stand as the primary attestation of apparent health benefits.¹ An article from *The Journal of Science and Healing* collected testimonials from medical professionals who have embraced earthing practices and routinely “prescribed” it for patients. An

acupuncturist, nursing director, psychiatrist, and chiropractor made observations of improved sleep, energy levels, circulation, and more. They concluded that the greatest improvements have been seen when earthing is used as an adjunct therapy for primarily inflammatory conditions.¹ Additionally, endless personal accounts of earthing and its benefits can be found across social media platforms.⁸ The trending practice even caught national news as USA Today reported on it in August of 2022.⁸

A small study of 22 participants conducted at the University of Salzburg in Austria evaluated how sleeping on a grounded mat would impact the incidence of muscle soreness following intense activity.³ Participants engaged in intensive downhill treadmill running to induce muscle soreness. Maximum jumping height, creatine kinase, and perception of muscle soreness scored on a Visual Analog Scale were collected as measures of results. Data suggested that grounded sleeping made positive impacts on the speed and degree of recovery. Critical limitations of this study included a small population sample observed and the arbitrary clinical assessment measures used. These factors should be taken into consideration when weighing this study's significance.³ It has become apparent that grounded sleeping is one of the most common ways to research the effects of health practice. Another trial out of California that used this method looked at 10 individuals and demonstrated that grounded sleeping reduced blood pressure and the need for antihypertensive medications.¹

A different approach that has been taken to simulate grounding is to apply conductive adhesive patches to the bottom of the feet.⁹ These patches then wire to an electrical current sourced from the earth's surface. One study that had individuals ground with the patches for 28 minutes showed results of reduced stress levels and a shift in autonomic nervous system (ANS) balance. The ANS is responsible for regulating many of the body's internal organs by controlling functions such as heart rate, blood pressure, breathing, and intestinal activity. Specifically, this study demonstrated a decreased blood volume pulse and change in electroencephalogram (EEG) values, which is a measure of the brain's electrical activity.⁹ Another study with some of the most convincing results and professional methods to date, also used patches as a method of indoor grounding.¹⁰ This project, conducted by Chevalier and colleagues in 2013, looked at how grounding affects blood viscosity. Researchers observed an increased negative surface charge, referred to as zeta potential, on red blood cells, that caused them to aggregate less. It is known that high blood viscosity is a significant contributing factor to cardiovascular events; hence, this study showed favorable outcomes of grounding on heart health. While still only 10 participants were recruited for this study, it is among the few projects that appear professional and is formally published in a legitimate scientific journal.¹⁰

While many skeptics write off grounding practices as just another health hoax, others will choose to embrace the holistic techniques and be eager to begin. Author Laura Koniver gives readers guidance on methods of implementing grounding techniques into life's daily routines.² Practical suggestions include enjoying meals directly seated on the ground or walking around barefoot after eating to aid in digestion. This may also work to reduce inflammatory responses of the gut that may benefit individuals suffering from inflammatory bowel disease or Crohn's disease. Gardening, grounded exercise, grounded yoga, spending time in water, and dedicating entire vacations to spending time in contact with the earth are additional suggestions Koniver presents.²

At this point, it is evident that more robust research is warranted. While many of the available clinical studies have promising results for this holistic practice, continued research is needed to defend grounding's health claims. Presently, the downsides appear to be a waste of time, and potentially money, if one purchases indoor grounding technology. It is difficult to discern whether outcomes are placebo or scientific with current knowledge of the practice. Regardless there may be a role for grounding in the future of medicine. If nothing else, there certainly is no harm in getting outside and reconnecting with earth.

REFERENCES

1. Menigoz W, Latz TT, Ely RA, et al. Integrative and lifestyle medicine strategies should include earthing (grounding): review of research evidence and clinical observations. *Explore (NY)*. 2020;16(3):152-160. doi: [10.1016/j.explore.2019.10.005](https://doi.org/10.1016/j.explore.2019.10.005)
2. Koniver L. Practical applications of grounding to support health. *Biomed J*. 2022;S2319-4170(22)00158-5. doi:10.1016/j.bj.2022.12.001
3. Müller E, Pröller P, Ferreira-Briza F, Aglas L, Stögal T. Effectiveness of grounded sleeping on recovery after intensive eccentric muscle loading. *Front Physiol*. 2019;10(35):1-12. doi:10.3389/fphys.2019.00035
4. Sinatra ST, Sinatra DS, Sinatra SW, Chevalier G. Grounding - the universal anti-inflammatory remedy. *Biomed J*. 2022;S2319-4170(22)00170-6. doi:10.1016/j.bj.2022.12.002
5. About Clint Ober. Earthing. Accessed February 12, 2023. <https://www.earthing.com/pages/about-clint-ober>
6. A. Clinton Ober. *ESD Journal*. Accessed February 12, 2023. <http://www.esdjournal.com/articles/cober/ground.htm>
7. Rodrigo Gaete. The benefits of earthing: a scientific perspective. Grooni. January 31, 2023. Accessed January 21, 2023. <https://grooniearthing.com/blogs/news/the-benefits-of-earthing-a-scientific-perspective>

8. Moniuszko S. Have you heard of 'grounding' or 'earthing'? What it is and why it's getting attention. *USA Today*; August 10, 2022. Accessed February 17, 2023.
<https://www.usatoday.com/story/life/health-wellness/2022/08/10/earthing-grounding-what-to-know/10264397002/>
9. Chevalier G, Sinatra ST, Oschman JL, Sokal K, Sokal P. Earthing: health implications of reconnecting the human body to the Earth's surface electrons. *J Environ Public Health*. 2012;2012:291541. doi:10.1155/2012/291541
10. Chevalier G, Sinatra ST, Oschman JL, Delany, RM. Earthing (grounding) the human body reduces blood viscosity-a major factor in cardiovascular disease. *J Altern Complement Med*. 2013;19(2):102-110. doi:10.1089/acm.2011.0820