

ULTIMATE LONGEVITY CONSCIOUS SCIENCE IN SERVICE TO THE MIRACULOUS INTELLIGENCE IN NATURE™

949.200.6404 | support@UltimateLongevity.com | UltimateLongevity.com

QUICK VIEW: GROUNDING RESEARCH RESULTS

(last updated 8/18/2019)

This document contains two comprehensive "bullet-pointed" lists (one categorized and one alphabetical) of the **benefits of grounding** as seen in over 20 peer-reviewed research studies. This "quick-view" format will assist you to quickly scan through the research results, at a glance.

Note: All studies were conducted using indoor grounding devices.

SECTION 1: COMPREHENSIVE LIST (categorized)

- Pain & Inflammation (Chronic Injury)^[7,9,12,15]
 - Acute Inflammation (Decrease)^[12]
 - o Chronic Inflammation (Decrease)[12]
 - o Pain (Decrease)[7,9,12]
 - Chronic Back Pain (Decrease)^[15]
 - Chronic Joint Pain (Decrease)^[15]
 - o Pain and Stiffness (Decrease)[15]
- Circulation (Cardiovascular Disease)[8,12,13,14,16,17,18]
 - Circulation (Improved)^[12]
 - Blood Pressure [Hypertensive] (Decrease)^[16]
 - Blood Viscosity (Decrease)^[8,14,17]
 - Facial Circulation (Improved)^[13,18]
 - Zeta Potential (Increase)^[14]
- Fitness, Performance, & Recovery^[1,2,3,4]
 - Recovery After Intensive Exercise (Improved)[1,4]
 - Blood Urea Levels After Exercise (Decrease)^[2]
 - Creatine Kinase After Exercise (Decrease)^[1,3,4]
 - Inflammation Markers Associated with Muscle Damage (Decrease)^[1]
 - Post Exercise Pain Relief (Improved)^[4]
 - Performance After Intensive Eccentric Exercise (Increase)[1]
 - Glycerylphosphorylcholine (Increase)[4]
 - Phosphorylcholine (Increase)^[4]
 - o Inorganic Phosphate/Phosphocreatine Ratio (Improved)[4]

- Stress, Energy, Mood, & HRV (Cardiovascular Disease)[5,6,7,9,10,20,21]
 - Anxiety (Decrease)^[9]
 - o Blood Volume Pulse (Decrease)[21]
 - Cortisol (Decrease)^[7]
 - Depressed Mood (Decrease)^[9]
 - Energy (Increase)[9]
 - Emotional Stress (Decrease)^[7,9]
 - Fatigue (Decrease)^[9]
 - Heart Rate Variability (Improved)[5,6]
 - Mood (Improved)^[10]
 - o Tiredness (Decrease)[9]
 - Vagal Tone (Improved)^[6]
 - Sympathetic to Parasympathetic (Improved)^[5,6,20]
 - Skin Conductance (Decrease)^[20]
 - Pulse Rate Variation [HRV] (Increase)^[20]
 - o Perfusion Index Variation (Increase)[20]
- Diabetes^[19]
 - Fasting Glucose in Non-Insulin Dependent Diabetes (Improved)^[19]
- Serum Electrolytes & Blood Chemistry^[19]
 - Serum Calcium, Iron, Magnesium, Phosphate, Potassium, Sodium^[19]
- Bone Density & Osteoporosis^[19]
 - Serum Calcium and Phosphate^[19]
- Sleep (Improved)^[7,9,15]
- Thyroid & Increased Metabolism^[19]
- Wound Healing^[12]
- Vaccine & Toxoid Exposure^[19]
- Protective Immunity (Increase)[19]
- Blood Oxygenation Variation (Decrease)^[20]

SECTION 2: COMPREHENSIVE LIST (in alphabetical order)

- Anxiety^[9]
- Blood Oxygenation Variation (Decrease)^[20]
- Blood Pressure [Hypertensive] (Decrease)[16]
- Blood Urea Levels After Exercise (Decrease)[2]
- Blood Viscosity (Improved)^[8,14,17]
- Blood Volume Pulse (Decrease)^[21]
- Circulation, Including Torso and Facial (Improved)[12,13,18]
- Cortisol (Improved)^[7]
- Creatine Kinase After Exercise (Improved)[1,3,4]
- Depressed Mood (Improved)^[9]
- Emotional Stress (Decrease)[7,9]
- Energy (Improved)[9]

- Fasting Glucose in Non-Insulin Dependent Diabetes (Decrease)[19]
- Fatigue (Improved)^[9]
- Glycerylphosphorylcholine (Improved)[4]
- HRV (Improved)^[5,6]
- HRV HF (Improved)[5]
- HRV LF (Improved)^[5]
- Inflammation, Acute (Improved)[12]
- Inflammation, Chronic (Improved)[12]
- Inflammation Markers Associated with Muscle Damage, including IP-10, MIP-1 α , and sP-Selectin (Improved)^[1]
- Immunity (Increase)[19]
- Inorganic Phosphate/Phosphocreatine Ratio (Improved)[4]
- Mood (Improved)^[10]
- Pain (Improved)^[7,9,12]
- Pain Chronic Back or Joint (Improved)^[15]
- Pain and Stiffness (Improved)^[15]
- Pain Pressure Test/Post-Exercise Pain Relief (Improved)^[4]
- Performance After Intensive Eccentric Exercise (Improved)^[1]
- Perfusion Index Variation (Increase)^[20]
- Phosphorylcholine (Improved)^[4]
- Pulse Rate Variation (Increase)^[20]
- Recovery After Intensive Exercise (Improved)^[1,4]
- Serum Calcium^[19]
- Serum Iron^[19]
- Serum Magnesium^[19]
- Serum Phosphate^[19]
- Serum Potassium^[19]
- Serum Sodium^[19]
- Skin Conductance (Decrease)^[20]
- Sleep (Improved)^[7,9,15]
- Sleep Quality (Improved)^[15]
- Sleep Time to Fall Asleep (Improved)^[15]
- Sleep Wake Feeling Rested (Improved)^[15]
- Stress, Subjective (Improved)[7]
- Thyroid & Increased Metabolism^[19]
- Tiredness (Decrease)^[9]
- Vaccine and Toxoid Exposure^[19]
- Vagal Tone (Improved)^[6]
- Visual Analogue Pain Scale/Post-Exercise Pain Relief (Improved)^[4]
- Wound Healing^[12]
- Zeta Potential Blood Viscosity (Decrease)^[14]

SOURCES

- 1. Effectiveness of Grounded Sleeping on Recovery After Intensive Eccentric Muscle Loading https://www.frontiersin.org/articles/10.3389/fphys.2019.00035/full
- 2. Differences in Blood Urea and Creatinine Concentrations in Earthed and Unearthed Subjects during Cycling Exercise and Recovery

HTML Version: https://www.hindawi.com/journals/ecam/2013/382643/

PDF Version: http://downloads.hindawi.com/journals/ecam/2013/382643.pdf

3. Grounding After Moderate Eccentric Contractions Reduces Muscle Damage

https://www.dovepress.com/grounding-after-moderate-eccentric-contractions-reduces-muscle-damage-peer-reviewed

-fulltext-article-OAJSM

- 4. Pilot Study on the Effect of Grounding on Delayed-Onset Muscle Soreness http://162.214.7.219/~earthio0/wp-content/uploads/2016/11/Brown Chevalier Hill earthing delayed muscle 2010.pdf
- 5. Emotional Stress, Heart Rate Variability, Grounding, and Improved Autonomic Tone: Clinical Applications http://162.214.7.219/~earthio/wp-content/uploads/2016/07/Emotional-stress-study.pdf
- 6. Electrical Grounding Improves Vagal Tone in Preterm Infants

HTML Version: https://www.karger.com/Article/FullText/475744

PDF Version: https://www.karger.com/Article/Pdf/475744

Summary: https://www.earthinginstitute.net/wp-content/uploads/2018/03/groundingprematurebabiesposter.pdf

7. The Biologic Effects of Grounding the Human Body During Sleep as Measured by Cortisol Levels and Subjective Reporting of Sleep, Pain, and Stress

http://162.214.7.219/~earthio0/wp-content/uploads/2016/07/Cortisol-Study.pdf

8. Effects of Grounding (Earthing) on Massage Therapists: An Exploratory Study

HTML Version: http://www.scirp.org/html/6-8204248_82706.htm

PDF Version: http://www.scirp.org/pdf/Health 2018022714160180.pdf

9. The Effects of Grounding (Earthing) on Bodyworkers' Pain and Overall Quality of Life: A Randomized Controlled Trial

https://www.sciencedirect.com/science/article/pii/S1550830718302519

- 10. The Effect of Grounding the Human Body on Mood https://journals.sagepub.com/doi/10.2466/06.PR0.116k21w5
- 11. The Neuromodulative Role of Earthing https://www.sciencedirect.com/science/article/abs/pii/S0306987711003641
- 12. 20 Medical Thermography Case Studies on Grounding https://www.ultimatelongevitv.com/docs/grounding-medical-thermographics.pdf
- 13. One-Hour Contact with the Earth's Surface (Grounding) Improves Inflammation and Blood Flow A Randomized, Double-Blind, Pilot Study

HTML Version: http://www.scirp.org/html/14-8203393 58836.htm

PDF Version: http://www.scirp.org/pdf/Health_2015081716010615.pdf

14. Earthing (Grounding) the Human Body Reduces Blood Viscosity

Summary: https://www.earthinginstitute.net/how-grounding-affects-blood-viscosity/

Full Study: https://www.liebertpub.com/doi/pdfplus/10.1089/acm.2011.0820

15. Initial Grounding Experiment Conducted by Clint Ober: Improved Sleep & Reduced Pain https://www.earthinginstitute.net/discoverers-of-earthings-benefits/

16. Grounding Patients With Hypertension Improves Blood Pressure: A Case History Series Study http://alternative-therapies.com/openaccess/26-6_Elkin.pdf

17. Grounding the Human Body during Yoga Exercise with a Grounded Yoga Mat Reduces Blood Viscosity

HTML Version: http://www.scirp.org/html/2-1340431_55445.htm

PDF Version: http://www.scirp.org/pdf/OJPM 2015040915172304.pdf

18. Grounding the Human Body Improves Facial Blood Flow Regulation: Results of a Randomized, Placebo Controlled Pilot Study

HTML Version: http://www.scirp.org/html/1-1050269 51326.htm

PDF Version: http://www.scirp.org/pdf/JCDSA_2014111211461709.pdf

19. Earthing the Human Body Influences Physiologic Processes https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3154031/

20. Changes in Pulse Rate, Respiratory Rate, Blood Oxygenation, Perfusion Index, Skin Conductance, and Their Variability Induced During and After Grounding Human Subjects for 40 Minutes http://162.214.7.219/~earthio0/wp-content/uploads/2016/07/Changes-in-Pulse-Rate-Study.pdf

21. The Effect Of Earthing On Human Physiology - Part 1
http://162.214.7.219/~earthio0/wp-content/uploads/2016/07/Effects-of-Earthing-on-Human-Physiology-Part-1.pdf

22. The Effect Of Earthing On Human Physiology - Part 2 http://journals.sfu.ca/seemj/index.php/seemj/article/view/9/7