

## CURRICULUM VITAE

# Lindsay B. Weitzel, PhD

Founder, Executive Director, MigraineNation Foundation

CEO, Twelve Carbon Press, LLC

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### Education

2008

#### Doctorate in Analytical Health Sciences

University of Colorado Health Sciences Center, School of Public Health  
Denver CO

Doctoral thesis: Differential Protein Levels Related to Breast Cancer in  
Tissue and Plasma

2000

#### Masters of Nutrition

#### The Pennsylvania State University

State College, PA

1998

#### Bachelor of Science in Nutrition

Colorado State University

Fort Collins, CO

### Current Work

**MigraineNation Foundation**, 501(c)3 (Founder and Executive Director)

- Founder of the MigraineNation Patient Navigator Program

**Twelve Carbon Press, LLC**, (CEO)

- Podcast and Videocast Host for the National Headache Foundation
- Migraine Medical Writer

### Current Area of Interest

Migraine, Debilitating Migraine, Headache-related illness and chronic pain

### Invited Talks

1. *Parent and Adolescent Pediatric Migraine Talk*, Miles for Migraine Denver Youth Event, June 15<sup>th</sup>, 2019.
2. *Overcoming a Brain in Pain: Advice from a Migraine Strategist* (Hour-long FaceBook Event) June 19<sup>th</sup>, 2019.
3. *Role of a Strategist to Help Patients Improve Pain and Overcome Daily Frustrations*, Healthy Women Chronic Pain Summit, July 18<sup>th</sup>, 2019.
4. *STRONGER. Winning at Life with Chronic Migraine*. Miles for Migraine Youth and Caregiver Event Sept 2020.
5. *The Role of a Migraine Strategist*. Association of Migraine Disorders Symposium, Oct 2020.
6. *The Healing Mindset*. RetreatMigraine, 2020.
7. † Use of Arginine and Glutamine in the Post-op Patient. Colorado State University Veterinary School. March, 2009.

## Bibliography

### Book

1. Weitzel, LB. (2018) *Super Zoe the Migraine Hero*. Denver, Twelve Carbon Press. (A graphic novel to empower children and adventurous adults with migraine)

### Recent Invited Online and Print Publications and Blogs

1. *Where Does Your Mind Wander When the Pain is Too Bad; What to Do About It*; Juva for Migraine, 2022 <https://www.juvahealth.com/where-does-your-mind-wander>
2. *Prove to Me That Meditating Will Help Me Overcome Migraine*; Juva for Migraine. May 20, 2022. <https://www.juvahealth.com/how-meditation-helps-migraine>
3. *Migraine Brain Fog is Real, What Can We Do About It?*; Juva for Migraine, 2022. <https://www.juvahealth.com/migraine-brain-fog>
4. *We're Making Great Headway in the Migraine Field, Let's Continue the Momentum for Vestibular Migraine*; Association of Migraine Disorders, Feb 1, 2022. <https://www.migrainedisorders.org/vestibular-migraine-lay-blog/>
5. *To Exercise or Not to Exercise, The Migraine Paradox*; Association of Migraine Disorders, April 2, 2021. <https://www.migrainedisorders.org/migraine-exercise/>
6. *Moms with Migraine, You are Superheroes*; Association of Migraine Disorders, April 30, 2020. <https://www.migrainedisorders.org/moms-with-migraine/>
7. *Why Do We Hate Light? Perhaps the Answer is More Complicated Than We Thought*; Association of Migraine Disorders. Feb 28, 2020. <https://www.migrainedisorders.org/migraine-light-sensitivity/>
8. *Fifty Shades of Migraine: Is it Vestibular, Hemiplegic, or Migraine with Brainstem Aura?*; Association of Migraine Disorders. Jan 30, 2020. <https://www.migrainedisorders.org/migraine-types/>
9. *Pregnancy and Migraine Medications*; Association of Migraine Disorders. April 8. <https://www.migrainedisorders.org/pregnancy-and-migraine-medications/>
10. *Breastfeeding and Migraine Medication*; Association of Migraine Disorders. Feb 3, 2019. <https://www.migrainedisorders.org/breastfeeding-and-migraine-medications/> (AMD Top Blog of 2019)
11. *Retreat Migraine Through the Senses of Someone with Migraine Disease*; US Pain Foundation. April 23, 2019.

### Top 25 Videocast/Podcast Publications

#### Host for the National Headache Foundation Podcast and Videocast

(Top 25 out of >140 Videocast publications and 3 Seasons. All views are as of Nov 2022)

1. *COVID-19, Migraine, and Headache Disorders* (17,000 Views) <https://headaches.org/heads-up-episode-51-covid-19-and-migraine-headache-disorders/>
2. *White Matter Lesions and Migraine* (13,800 Views) <https://headaches.org/whitemattermri/>
3. *Low Pressure Headache* (12,900 Views) <https://headaches.org/heads-up-episode-7-low-pressure-headache/>
4. *Menstrual Migraine* (11,700 Views) <https://headaches.org/heads-up-episode-65-menstrual-related-migraine/>
5. *Migraine and the COVID vaccine* (10,300 Views) <https://headaches.org/heads-up-episode-91-migraine-and-the-covid-vaccine/>

6. *What is Migraine?* (9,200 Views) <https://headaches.org/heads-up-episode-1/>
7. *Psilocybin* (7,700 Views) <https://headaches.org/heads-up-episode-81-study-data-on-psilocybin-and-treatment-for-migraine/>
8. *Gluten and Migraine* (7,700 Views) <https://headaches.org/heads-up-episode-4-gluten-and-migraine/>
9. *Combining Botox and Anti-CGRP Meds* (5,700 Views) <https://headaches.org/heads-up-episode-68-the-latest-data-on-combining-botox-with-anti-cgrp-medications/>
10. *High Pressure Headache* (5,600 Views) <https://headaches.org/heads-up-episode-8-high-pressure-headache/>
11. *Living with Cluster* (5,400 Views) <https://headaches.org/heads-up-episode-28-living-with-cluster-headache/>
12. *Ehlers-Danlos Syndrome* (4,600 Views) <https://headaches.org/heads-up-episode-21-hypermobile-ehlers-danlos-syndrome-and-migraine/>
13. *New and Emerging Therapies Part 1* (4,600 Views) <https://headaches.org/heads-up-episode-43-new-and-emerging-migraine-therapies-pt-1/>
14. *Vitamin Supplements* (4,000 Views) <https://headaches.org/heads-up-episode-94-vitamin-supplements-and-migraine/>
15. *Spring Headache Part 1* (3,800 Views) <https://headaches.org/heads-up-episode-9-springtime-headaches-part-1/>
16. *Cannabis and Rebound* (3,700 Views) <https://headaches.org/heads-up-episode-92-cannabis-migraine-and-rebound-headache/>
17. *Childhood Syndromes* (3,600 Views) <https://headaches.org/heads-up-episode-47-childhood-syndromes-and-migraine-disease/>
18. *Low Pressure Leak* (3,600 Views) <https://headaches.org/heads-up-audio-podcast-low-pressure-headache-finding-the-leak/>
19. *Vestibular Migraine* (3,500 Views) <https://headaches.org/heads-up-audio-podcast-low-pressure-headache-finding-the-leak/>
20. *Atogepant* (3,400 Views) <https://headaches.org/heads-up-episode-103-atogepant-and-migraine/>
21. *Monthly News Edition #1* (3,200 Views)
22. *Migraine and COVID #2* (3,100 Views) <https://headaches.org/heads-up-episode-91-migraine-and-the-covid-vaccine/>
23. *Anti-Inflammatory Diet* (3,100 Views) <https://headaches.org/heads-up-episode-102-anti-inflammation-diet-and-migraine/>
24. *Dizzy Cook* (3,000 Views) <https://headaches.org/heads-up-episode-45-cooking-with-the-dizzy-cook/>
25. *What Does My Gut Have to do with My Migraine?* (3,000 Views) <https://headaches.org/for-heads-sake-s3e4-what-does-my-gut-have-to-do-with-my-migraine/>

### Peer-Reviewed Publications

1. **Weitzel LR**, Sampath D, Shimizu K, White AM, Herson PS, Raol YH. EEG power as a biomarker to predict the outcome after cardiac arrest and cardiopulmonary resuscitation induced global ischemia. *Life Sci.* 2016 Nov 15;165:21-25. PMID: 27640888.
2. Wilson J, Higgins D, Hutting H, Serkova N, Baird C, Khailova L, Queensland K, **Weitzel L**, Wischmeyer P. Propranolol Induces Lung Heme-Oxygenase-1, Attenuates Metabolic Dysfunction, and Improves Survival Following Experimental Sepsis. *Critical Care* 2013 Sep 10;17(5):R195. PMID: 24020447.
3. **Weitzel LB**, Ambardekar A, Brieke A, Cleveland J, Serkova N, Wischmeyer P, Lowes BD. Effect of Left Ventricular Assist Device Effects on Metabolic Substrates in the Failing Heart. *PLoS One.* 2013;8(4):e60292. PMID: 23560088.

4. Weitzel NS, **Weitzel LB**, Epperson LE, Kerimpour-Ford, Tran ZV, Seres T. Platelet mapping as part of modified thromboelastography (TEG®) in patients undergoing cardiac surgery and cardiopulmonary bypass. *Anaesthesia*. 2012 Oct;67(10):1158-65. PMID: 22809250.
5. (Co-first authors) Sufit A, **Weitzel L**, Hamiel C, Queensland K, Dauber I, Rooyackers O, Wischmeyer P. Oral Glutamine Reduces Myocardial Injury and Peri-Operative Complications in Patients Undergoing Cardiac Surgery: A Randomized Pilot Trial. *JPEN J Parenter Enteral Nutr*. 2012 Sep;36(5):556-61. PMID: 22623413.
6. Frank A, Bonney M, Bonney S, **Weitzel L**, Koeppen M, Eckle T. Myocardial Ischemia Reperfusion Injury: From Basic Science to Clinical Bedside. *SCVA* 2012 Sep; 16(3):123-32. PMID: 22368166
7. Drover J, Dhaliwal R, **Weitzel L**, Wischmeyer, P, Ochoa J, Heyland D. The Perioperative Use of Arginine-supplemented Diets: A Systematic Review of the Evidence *J am Coll Surg*. 2011 Mar;212(3):385-99, 399.e1. PMID: 21247782.
8. **Weitzel L** and Wischmeyer PW. Glutamine. In: *Encyclopedia of Intensive Care Medicine* (Eds.) JLVincent, J Hall, Springer-Verlag, Heidelberg, 2010.
9. **Weitzel LB**, Sandoval PA, Mayles J, Wischmeyer, PE. Performance Enhancing Sports Supplements: Role in Critical Care. *Curr Opin Anaesthesiol* 2009 Apr;22(20):177-83. PMID: 20046127.
10. **Weitzel LB**, Haeussner GL, Ochoa JB, Mayles J, Sandoval PA, Wischmeyer PE. Immunomodulating Nutrition: A New Paradigm. Accepted at *Current Opinion in Critical Care*, 2009.
11. **Weitzel LR**, Mayles WJ, Sandoval PA, Wischmeyer PE. Effects of pharmaconutrients on cellular dysfunction and the microcirculation in critical illness. *Curr Opin Anaesthesiol*, 2009 Apr; 22(2):177-83. PMID:19307892
12. **Weitzel LB**, Duncan MW, Byers T, Finlayson C, Helmke S, Hokanson JE, Hunsucker SW, Murphy JR, Singh M, Elias A. Discovery and validation of protein differences between ER+/Her 2/neu Negative breast tumor tissue and matched adjacent normal breast tissue. *Breast Cancer Res Treat*. 2010 Jan 20. PMID: 20087651. **Provisional Patent Application Filed for This Work**
13. Innes KE, **Weitzel LB**, Laudenslager M. Altered metabolic profiles among older mothers with a history of preeclampsia. *Gynecol Obstet Invest* . 2005;59(4):192-201. PMID:15735370
14. Smiciklas-Wright H, **Weitzel LB**, Lancaster KJ, Friedmann JM, Mitchell DC, Jensen GL. Hypertension-related dietary patterns of rural older adults. *Preventive Medicine* 38 (2004) 812-818. PMID: 15193903.
15. James K, **Weitzel LB**, Engelman CD, Zerbe G, Norris JM. Genome scan linkage results for longitudinal systolic blood pressure phenotypes in subjects from the Framingham Heart Study. *BMC Genet*. 2003 Dec 31;4 Suppl 1:S83. PMID:14975151

#### Peer Reviewed Abstracts: \*Published / ‡ Presentation

1. \*‡ **Weitzel L**, Sufit A, Hamiel C, Queensland K, Dauber I, Rooyackers O, Wischmeyer P. A Randomized Controlled Trial of Glutamine in Patients Undergoing Cardiac Surgery: Oral Glutamine Reduces Myocardial Injury and Peri-Operative Complications, ASPEN Nutrition Foundation. **VARS Award Nominee**, top 5 out of 200 abstracts), 2011.
2. \*‡**Weitzel LB**, Ambardekar A, Brieke A, Cleveland J, Serkova N, Wischmeyer P, Lowes B. Heart Failure Metabolomics by Nuclear Magnetic Resonance and the Effects of Ventricular Assist Devices. American Heart Association, 2011.
3. **Weitzel LB**, Queensland K, Heyland D, Wischmeyer PE. Evaluation of Biomarkers to Stratify Patients for Enrollment in Clinical Trials of Immune Modulating Nutrients in the Intensive Care Unit. *JPEN (Abstract SP4)* 34(2):203, 2010.
4. Edwards, AG, Queensland K, Hamiel, CR, **Weitzel LB**, Heyland DK, Wischmeyer, PE. Compared to ICU patients Alive at Day 28, Deceased ICU Patients Show Decreasing Levels of HSP70 at Day 7 of Hospital Stay (Abstract 659) *Crit Care Med* 37(12):A321, 2010.

5. **LB Weitzel**, K Queensland, D Heyland, P Wischmeyer. Elevated Admission IL-8 Level is Associated with Mortality in Critically Ill Adults (Abstract 474) *Critical Care Medicine* 37(12): A229, 2010.
6. **LB Weitzel**, R Dhaliwal, J Drover, G Haeussner, WJ Mayles, D Heyland, P Wischmeyer. Systematic Review of Perioperative Immune-Modulating Nutrition Therapy: A New Standard of Care? (Abstract P125) *SHOCK* 31(1):62, 2009.
7. M Ariefdjohan, K Queensland, **L Weitzel**, D Heyland, P Wischmeyer. Elevated Admission IL-10 Level is Associated with Development of Sepsis in Critically Ill Adults (Abstract P190) *SHOCK* 31(1):85, 2009.
8. \*<sup>‡</sup>**Lindsay-Rae B. Weitzel**. Title: Arginine, A Lifesaver Revisited. Society of Critical Care Medicine Congress, January 2009.
9. \***Weitzel L**, Innes K, Laudenslager M. Altered metabolic profiles among older mothers with a history of preeclampsia. DOD Breast Cancer Research Program Era Of Hope Meeting, Miami, FL, 2001.
10. \***Weitzel LB**, Lancaster, KJ, Smiciklas-Wright H, Ahern F. Older adults with diabetes are not following recommendations. *FASEB* 17:16, 2000.
11. **Weitzel LB**, Lancaster KJ, Smiciklas-Wright, Friedmann JM, Mitchell DC, Jensen GL. Dietary intakes of older adults with hypertension do not meet current recommendations. *A-224.1*, *FASEB*, 1999.

## Honors/Awards

1. Association of Migraine Disorders' Top Blog of 2019: *Breastfeeding and Migraine Medication* - Author
2. Association of Migraine Disorders Advocacy Award (2018)
3. Winner, Author U Draft to Dream Competition for ***Super Zoe the Migraine Hero***, a graphic novel for kids with migraine (2017).
4. VARS award finalist, ASPEN Nutrition Foundation, top 5 out of 200 abstracts. Title: A Randomized Controlled Trial of Glutamine in Patients Undergoing Cardiac Surgery: Oral Glutamine Reduces Myocardial Injury and Peri-Operative Complications (2011)
6. Best Student Presentation, cash award, Epidemiology Exchange. Title: A Plasma Protein Biomarker of Breast Cancer: Findings from a Discovery-Phase Case-Control Study (2008).
7. Penn State Graduate School Dean's List (1998-2000)
8. Vice-President, Nutrition Graduate Student Association (Penn State 1999-2000)
9. Colorado State University Dean's List (1994-1998)

## Research

### Past Projects:

<b>2011-2015</b>	Ischemic injury of the brain and myocardium
<b>2013-2015</b>	Determining the role of the A2B receptor in a mouse model of stroke
<b>2010-2011</b>	Cardiac ischemia and the effects on metabolic substrates, specifically the effects of LVADs on cardiac metabolism
<b>2008-2011</b>	Effects of pharmacconutrients such as glutamine and arginine on outcomes in ICU patients. Also the ability of glutamine to induce heat shock proteins in the ICU population.
<b>2005-2008</b>	Discovery of biomarkers of breast cancer in tissue and blood. A prospective study of over 200 patients and resultant patent.

## Research Support

- 2010-2013** ASPEN Foundation, Rhoades Research Foundation Small Grant Recipient, 2010, Role: PI
- 2011-2013** PI- initiated competitive award from Fresenius Inc. titled: *Effect of glutamine on HSP-70 expression in ICU patients*, Role: PI

## Previous Academic Appointments

- 8/2008-2015** **Instructor**, Department of Anesthesiology  
University of Colorado Denver
- 2009-2015** **Instructor**, Department of Preventive Medicine  
University of Colorado Denver
- Employment:**
- 9/2004-7/2008** **PRA** and **study coordinator** for the Breast Cancer & Proteomics Study – dissertation study involving 200 patients  
Responsibilities: patient recruiter, phlebotomist, bench scientist, statistician  
University of Colorado Denver, Denver, CO.
- 7/2001-9/2004** **PRA** for SHINE (Southwestern Hormone, Insulin, Nutrition, and Exercise) Study  
Responsibilities: patient interviewer, recruiter, and phlebotomist  
University of Colorado Denver, Denver, CO.
- 6/2000-6/2001** **PRA** for the Shingles Prevention Study (Clinical trial for the shingles vaccine)  
Responsibilities: phlebotomy and database management  
University of Colorado Denver, Denver, CO.
- 8/1998-6/2000** **Manager** for the Medication Safety Program  
Responsibilities: project planning, subject recruitment, analysis, tracking  
Penn State University, State College, PA
- 8/1998-6/2000** **Instructor** for undergraduate diet assessment laboratory  
Penn State University, State College, PA

## Teaching (not listed in detail)

### University of Colorado Anschutz Medical Center

**2010-2013 – Anesthesiology Residency Teacher/Journal Club Facilitator** for the Department of Anesthesiology Resident Journal Club

Role: Guide Anesthesiology Residents in aspects related to study design, statistics, and basic science in the articles they present; point out relevance to questions that may appear on the board exam, and to present slides in journal club related to these areas.

Prepared a statistics and study design guide for residents to use when reading medical literature.

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## **Teaching Syllabus / Protocols**

1. Anesthesiology Journal Club “Statistics Sheet” for use in journal club and when evaluating medical literature (2012)
  2. Anesthesiology Journal Club “Study Evaluation Guide” for use when evaluating the medical literature (2012)
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