

## *CURRICULUM VITAE*

# Lindsay B. Weitzel, PhD

Twelve Carbon Press, LLC

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### Education:

- 1998**                    **Bachelor of Science: Nutrition**  
Colorado State University  
Fort Collins, CO  
Major: Nutrition
- 2000**                    **Masters of Nutrition**  
The Pennsylvania State University  
State College, PA
- 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

### Postgraduate Training

- 6/2008-4/2012**            **Instructor/Fellow** in clinical trials, Nutrition, vascular and myocardial  
ischemia
- 4/2012-2015**            **Instructor/Fellow** in ischemic brain injury, stroke, animal models of brain  
injury

### Current Work:

Self-Employed: Twelve Carbon Press, LLC  
Writer, Author, Speaker, Migraine Strategist

**Current Area of Interest:** Migraine, Debilitating Migraine, Migraine-related illness and chronic pain

### 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 –  
my 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.

<b>6/2000-6/2001</b>	<b>PRA</b> for the Shingles Prevention Study (Clinical trial for the shingles vaccine) Responsibilities: phlebotomy and database management University of Colorado Denver, Denver, CO.
<b>8/1998-6/2000</b>	<b>Manager</b> for the Medication Safety Program Responsibilities: project planning, subject recruitment, analysis, tracking Penn State University, State College, PA
<b>8/1998-6/2000</b>	<b>Instructor</b> for undergraduate diet assessment laboratory Penn State University, State College, PA

## Leadership Roles and Committee Appointments

### National Leadership:

**2011-2015** Editorial Board Seminars in Cardiothoracic and Vascular Anesthesia

### Local / University of Colorado Denver Leadership

#### University Hospital / Departmental

**2012-2013** Member Department of Anesthesiology Steering Committee

#### University of Colorado Denver, School of Medicine.

**10/2010- 7/2012** Member, Admissions Committee UCD School of Medicine

### Review Service

<b>2011</b>	<b>Reviewer</b> - International Journal of Nutrition
<b>2010</b>	<b>Reviewer</b> – Society of Critical Care Medicine
<b>2013</b>	<b>Reviewer</b> - PloS ONE Journal
<b>2013 - 2015</b>	<b>Reviewer</b> - Journal of Cardiothoracic and Vascular Anesthesia

### Invited Lectures

- ‡ Use of Arginine and Glutamine in the Post-op Patient. Colorado State University Veterinary School. **Invited speaker**, March, 2009.

### Local Teaching University of Colorado Denver: (not listed in detail)

**2010-2013 - Resident 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.

### Research:

## Past Projects:

2011-2015	Ischemic injury of the brain and myocardium
2013-2015	Determining the role of the A2B receptor in a mouse model of stroke
2010-2011	Cardiac ischemia and the effects on metabolic substrates, specifically the effects of LVADs on cardiac metabolism
2008-2011	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.
2005-2008	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: <i>Effect of glutamine on HSP-70 expression in ICU patients</i> , Role: PI

## Bibliography:

### Electronic Media – Online reviews of Medical Articles

1. More on the migraine gender gap. The pill and risk of stroke with migraine. (Feb 3, 2018.) <http://lindsayweitzel.com/more-on-the-migraine-gendergap-the-pill-and-risk-of-stroke-in-migraine/>
2. Do we have a migraine patch? (Sep 2017) <http://lindsayweitzel.com/do-we-have-a-migraine-patch/>
3. Can we gain control over our own pain? (Sep 2017) <http://lindsayweitzel.com/can-we-gain-control-over-our-own-pain/>
4. The latest review on developments for pediatric migraine was a little disheartening. (Aug 2017) <http://lindsayweitzel.com/the-latest-review-on-new-developments-for-pediatric-migraine-was-a-little-disheartening/>
5. The race to provide us the first CGRP drug (Aug 2017) <http://lindsayweitzel.com/the-race-to-provide-us-the-first-cgrp-drug/>

### Papers published / in press

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**, Koeppe 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 to 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 Helyand, 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. \*‡**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 178.16, 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.

#### **Teaching Syllabus / Protocols:**

1. Anesthesiology Journal Club "Statistics Sheet" for use in journal club and when evaluating medical literature 5/2012
2. Anesthesiology Journal Club "Study Evaluation Guide" for use when evaluating the medical literature

#### **Honors/Awards**

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