

## **Title: On Demand Webinar: Indirect Calorimetry: What to Expect at the Bedside**

### *Program Instructions:*

1. Watch the session video in full
2. Review the available handouts
3. Take the session exam under the **CE Information** tab
4. Access your CE Transcript from the **CE Transcript** tab after clicking **My Account**

CE credit available for dietitians, nurses, pharmacists, and physicians

Total Credit Hours: 1.5

On-Demand Activity Start Date: March 6, 2023

On-Demand Activity Expiration Date (all CE credit must be claimed by the expiration date): March 6, 2024

### **FACULTY AND TOPICS**

*Indirect Calorimetry: What to Expect at the Bedside*

**Laura Van Althuis, RDN, LDN**

Clinical Research Coordinator, Registered Dietitian, Duke Office of Clinical Research, Duke University School of Medicine, Durham, NC

*Indirect Calorimetry: What to Expect at the Bedside*

**Paul Wischmeyer, MD, EDIC, FASPEN, FCCM**

Professor of Anesthesiology and Surgery; Associate Vice Chair for Clinical Research, Department of Anesthesiology; Physician Director, PN/Nutrition Support Service, Duke University School of Medicine, Durham, NC

*MODERATOR*

**Rachel Ludke, MS, RD, CS, CNSC, CCTD**

Clinical Dietitian, Froedtert Hospital, Clinical Nutrition, Milwaukee, WI

Format: **Online as MP3/MP4 files and PDF Handouts**

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### **On Demand Webinar Activity Overall Goal:**

This CE activity serves to promote the process of life-long learning for physicians, dietitians, pharmacists, and nurses who specialize in the sciences of clinical nutrition and metabolism.

### **Goal and Target Audience:**

This educational activity is directed toward clinical nutrition and metabolism professionals and others who wish to update their knowledge of clinical nutrition and metabolism. By participating in this educational activity, the reader may expect to:

- Acquire knowledge in the area of clinical nutrition and metabolism research.
- Update or confirm your understanding of appropriate clinical nutrition and metabolism practices.
- Identify further learning needs as they relate to the subject matter.

**Webinar Description:**

Estimating calorie needs during hospitalization can be a complex assignment given the dynamic nature of energy requirements that vary based on body composition, disease state, and surgical interventions. Indirect Calorimetry (IC) is the gold standard of energy measurement in the hospital setting and is a great tool to help understand resting energy requirements. IC can be utilized in many patient populations, including those spontaneously breathing and on a ventilator. Although every assessment will routinely provide resting energy expenditure (REE) and respiratory quotient (RQ), it is essential for users to understand all test results and be able to overcome technical challenges according to specific clinical circumstances. This webinar will take a bedside approach to highlight common and unique scenarios while utilizing indirect calorimetry and provide user tips for IC assessment during mechanical ventilation, mask, and canopy tests.

**Learning Objectives:**

1. Describe the role of indirect calorimetry in determining the caloric needs of hospitalized patients.
2. Determine patient populations who would benefit from indirect calorimetry as part of the patient assessment.
3. Identify which values are necessary to interpret results provided by indirect calorimetry.

**Speaker Credentials and Affiliations:****Laura Van Althuis, RDN, LDN**

Clinical Research Coordinator, Registered Dietitian, Duke Office of Clinical Research, Duke University School of Medicine, Durham, NC

**Paul Wischmeyer, MD, EDIC, FASPEN, FCCM**

Professor of Anesthesiology and Surgery; Associate Vice Chair for Clinical Research, Department of Anesthesiology; Physician Director, PN/Nutrition Support Service, Duke University School of Medicine, Durham, NC

**Requirements for Successful Completion:**

To obtain CE credit for this activity, attendees must listen to the education recording, complete an online knowledge assessment for the education recording achieving a score of 100%, and complete an online activity evaluation. All CE credit must be claimed prior to the expiration date, no exceptions.

Pharmacists must provide their NABP e-PID and birthday (MMDD) when claiming credit to enable ASPEN to upload credit claimed to the CPE monitor. Failure to provide accurate information by the expiration date for claiming CE credit can result in an inability for the earned credit to be uploaded to the CPE monitor and thus not appear in the pharmacist's NABP profile. Detailed information is available here: [https://www.nutritioncare.org/Continuing\\_Education/Claim\\_CE\\_Credit/Continuing\\_Education\\_Credit/](https://www.nutritioncare.org/Continuing_Education/Claim_CE_Credit/Continuing_Education_Credit/).

## Accreditation Statement




In support of improving patient care, The American Society for Parenteral and Enteral Nutrition (ASPEN) is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

ASPEN designates this enduring activity for a maximum of 1.5 *AMA PRA Category 1 Credits™* per activity. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Pharmacists: ASPEN designates this activity for a maximum of 1.5 contact hours/0.15 CEUs. ACPE UAN: JA0002345-0000-23-041-H99-P. Knowledge Activity.

Nurses: ASPEN designates this activity for a maximum of 1.5 nursing contact hours. ASPEN is approved as a provider of continuing nursing education by the California Board of Nursing, provider number CEP3970.

Dietitians: ASPEN designates this activity for a maximum of 1.5 CPEUs.

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|  | <p>Completion of this RD/DTR profession-specific or IPCE activity awards CPEUs (One IPCE credit = One CPEU).</p> <p>If the activity is dietetics-related but not targeted to RDs or DTRs, CPEUs may be claimed which are commensurate with participation in contact hours (One 60 minute hour = 1 CPEU).</p> <p>RD's and DTRs are to select activity type 102 in their Activity Log. Sphere and Competency selection is at the learner's discretion.</p> |
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This activity was planned by and for the healthcare team, and learners will receive (1.5) Interprofessional Continuing Education (IPCE) credit for learning and change.

## Policies and Information:

**Non-Commercialism.** ASPEN subscribes to the Standards for Integrity and Independence in Accredited Continuing Education. ASPEN does not provide programs that constitute advertisement or include promotional materials. ASPEN does not endorse any products.

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**Grievances.** Grievances must be submitted in writing to Senior Director, Education and Research at ASPEN, 8401 Colesville Road, Ste 510, Silver Spring, MD 20910.

**Computer Requirements and Technical Support:**

Participants will need a computer with internet connection, and it is recommended that end users' devices satisfy the following requirements:

- OS: Windows, Mac
- Browser: Firefox 52+, Chrome 58+, Safari 10+, Microsoft Edge 14+
- Javascript & Cookies enabled
- Recommended RAM: 512MB+

**Mobile support**

- Iphone 5s+ - Safari Browser - IOS 9+
- Ipad 2+ - Safari Browser - IOS 9+
- Android Running 4.0+ - Chrome Browser

For technical difficulties, please contact Broadcastmed Customer Support:

by phone: **1.860.953.2900**

*Phone support is available 8am-8pm EST Monday through Friday.*

by email: [support@broadcastmed.io](mailto:support@broadcastmed.io)

**Refund Policy.** Refunds are not available.

**Commercial Support and Sponsorship:** No commercial support was received for this on demand educational activity.

**Disclosures and Relevant Financial Relationships for Faculty and Planning Committee Members**

The following individuals have no relevant financial relationships with ineligible companies: Adeeba Spann, Ajanta Raman, Blair Brown, Candi Jump, Christopher Sprinzyk, Claudia Maza, Erin Shepherd, Hannah Piper, Jaime Avila, Jana Ponce, Jessica Monczka, Joanna Helm-Cummings, Joel Rush, JUVY MARTILLOS-SY, Karrie Derenski, Katie Mathias, Kelly Green Corkins, Kristin Izzo, Kyle Hampson, Lacey Harter, Laura Gearman, Leah Hoffman, Leslie Goudarzi, Mary Pat Turon-Findley, Mireille Hamdan, Monica Agarwal, Moriah Bellissimo, Ryan Garst, Sandra Kless, Sandra Mayol-Kreiser, Silvia Figueiroa Da Cruz, Soodeh Nezamabadi, Victoria Pehling

ASPEN staff have no relevant financial relationships with ineligible companies.

Laura Van Althuis, Baxter, speaker/consultant, relationship ended.

Rachel Ludke, Baxter, one time payment for professional opinion on a product, relationship ended.

Paul Wischmeyer, Abbott, research grant to institution; education grant to institution, consultant, speaker; Baxter, research grant to institution, consultant, speaker; Fresenius Kabi, research grant to institution, consultant, speaker; Nutricia, consultant, speaker; MuscleSound, unrestricted gift funding to institution, initial unvalued stock options;

Dr. Wischmeyer reports receiving investigator-initiated grant funding related to this work from National Institutes of Health, Canadian Institutes of Health Research, Abbott, Baxter, and Fresenius. Dr. Wischmeyer has served as a consultant to Abbott, Fresenius, Baxter, Cardinal Health, and Nutricia, for research related to this work. Dr. Wischmeyer has received unrestricted gift donation for nutrition research from Musclesound. Dr. Wischmeyer has received honoraria or travel expenses for CME lectures on improving nutrition care from Abbott, Baxter, Danone-Nutricia and Nestle.

Carol Rollins: Baxter, independent contractor for Channel ONE advisory committee and iCAN presentations

Catherine Larson-Nath: Nutricia, advisory board, relationship ended

Manpreet Mundi: Fresenius Kabi - research grant; Nestle - research grant; Real Food Blends - research grant; Baxter - advisory board, relationship ended; Vectiv Bio - research grant

Mary Petrea Cober: CAPS/Bbraun - consulting; Baxter - consulting, relationship ended; Fresenius Kabi - consulting, relationship ended; Lexi-Comp – consulting

Melissa Hughey: Fresenius Kabi - advisory board, relationship ended

Rhone Levin: Abbott Nutrition Health Institute, author and speaker, relationship ended

Sarah Cogle: Fresenius Kabi - study investigator, relationship ended

All relevant financial relationships have been mitigated.

Note: an ineligible company is one whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients. For specific examples of ineligible companies visit [accme.org/standards](http://accme.org/standards).

Financial relationships are relevant if the following three conditions are met for the prospective person who will control content of the education:

- A financial relationship, in **any amount**, exists between the person in control of content and an ineligible company.
- The financial relationship existed during the past **24 months**.
- The content of the education is related to the products of an ineligible company with whom the person has a financial relationship.