



Pharmacy Grand Rounds

200 First Street SW
Rochester, Minnesota 55905
<https://ce.mayo.edu/pharmacy-grandrounds-2024>

The B1 and Only: Evaluation of Thiamine in Septic Shock

Session Date: 06/11/2024

Session Time: 11:00 – 11:45 AM (CST)

Target Audience

This continuing education (CE) session was planned to meet the needs of professional staff who deal with the selection and monitoring of medication(s) as part of their patient care duties, including pharmacists, RNs, APRNs, PAs, MDs.

Activity Overview

Elevated serum lactate in septic shock results from impaired tissue oxygenation, triggering anaerobic cellular metabolism and, as a byproduct, lactate production. Thiamine is a co-factor for a key enzyme influential in progressing glycolysis through the Krebs Cycle. Thiamine administration is believed to improve mitochondrial dysfunction and optimize oxygen utilization for aerobic cellular metabolism. If true, this could be vital in salvaging tissue and organ function. The 2021 Surviving Sepsis Campaign Guidelines do not provide recommendations related to the utilization of thiamine monotherapy as an adjunct to current standard of care therapies. This presentation will review literature evaluating the efficacy of thiamine for accelerated lactate clearance and its impact on clinical outcomes of interest in patients with septic shock.

Learning Objectives

At the conclusion of this knowledge-based CE session, participants should be able to:

1. Describe the mechanism underlying the elevation and clearance of serum lactate in septic shock.
2. Compare current literature assessing the role of thiamine for increased lactate clearance in septic shock.
3. Develop an evidence-based approach to thiamine utilization in clinical practice, understanding inconsistent evidence and gaps in current literature.

Faculty Information

Kennedy Concannon, PharmD
PGY1 Pharmacy Resident
Mayo Clinic Hospital - Rochester, MN

Kennedy received a Doctor of Pharmacy degree from the University of North Carolina Eshelman School of Pharmacy and is a current PGY1 pharmacy resident at Mayo Clinic Hospital – Rochester. Her practice interests include solid organ transplant and cardiology. After PGY-1 residency, she will be completing her PGY-2 residency in Solid Organ Transplant at the University of Colorado.



Approved Provider Statement



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INTERPROFESSIONAL CONTINUING EDUCATION

Credit Statements

In support of improving patient care, this activity is planned and implemented by Mayo Clinic College of Medicine and Science. Mayo Clinic College of Medicine and Science is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

AMA

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ACPE



ACPE Universal Activity Number (UAN): JA0000238-0000-24-004-L01-P

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ANCC

Mayo Clinic College of Medicine and Science designates this activity for a maximum of 0.75 ANCC contact hours. Nurses should claim only the credit commensurate with the extent of their participation in the activity.

AAPA



Mayo Clinic College of Medicine and Science has been authorized by the American Academy of PAs (AAPA) to award AAPA Category 1 CME credit for activities planned in accordance with AAPA CME Criteria. This activity is designated for 0.75 AAPA Category 1 CME credits. PAs should only claim credit commensurate with the extent of their participation.

Educational Format and CE Requirements

This CE session is available as a live presentation, including live webcast.

Participants must complete the following to record attendance and obtain CE credit:

1. Attend the entire session.
2. Text the session code to 507-200-3010 within 48 hours of the live presentation to record attendance.
 - a. This number is only used for receiving text messages related to tracking attendance
 - b. Employees are encouraged to create a contact in their mobile phone, as the same number is used to record attendance for every session
3. Complete the online evaluation for the respective session within 2 weeks of live presentation.

Pharmacist CE credit is electronically transferred to the National Association of Boards of Pharmacy CPE Monitor. To track CE, please go to [NABP CPE Monitor](#).

Non-pharmacist attendees can print out a record of attendance at ce.mayo.edu after completing the evaluation and claiming credit.

Live Webcast - access during presentation times

Disclosure Summary

As a provider accredited by Joint Accreditation for Interprofessional Continuing Education, Mayo Clinic College of Medicine and Science must ensure balance, independence, objectivity and scientific rigor in its educational activities. All who are in a position to control the content are required to disclose all financial relationships with any ineligible company. Faculty will also identify any off-label and/or investigational use of pharmaceuticals or instruments discussed in their content for FDA compliance.

Listed below are individuals with control of the content of this program:

The faculty report the following relationships:

- Kennedy Concannon, PharmD
 - Declares no financial relationship(s) pertinent to this session
 - Declares the off-label use of thiamine will be discussed during this presentation

Course Director and Planning Committee Members declare no relevant financial relationship(s) pertinent to this session. Members include:

- Jennifer Elmer, DNP, APRN, CCNS
- Andrew Herber, PA-C
- Sarah Jane Kotval, BSW, RSS Coordinator
- Scott Nei, PharmD, BCPS, BCCCP, FCCM, FMSHP
- Wayne Nicholson, MD, PharmD, BCPS
- Sara Thompson, PharmD, MEd, BCACP

All relevant financial relationships have been mitigated.

For additional disclosure information regarding Mayo Clinic School of Continuous Professional Development accreditation review committee members visit ce.mayo.edu, About Us, Disclosures - or -

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System and Technical Requirements

For participants viewing the webcast, sessions are delivered via Mayo Clinic intranet web browser and Adobe® PDF. For participants viewing outside the Mayo Clinic firewall, a VPN connection is required for remote access. Recommended web browser includes Google Chrome. This session is planned and coordinated by **the Department of Pharmacy, Mayo Clinic.**