

# ASPEN

# Parenteral Nutrition Workbook

**SECOND EDITION**

## **EDITOR**

M. Petrea Cober, PharmD, BCNSP, BCPPS, FASPEN  
Clinical Pharmacy Specialist – Neonatal Intensive Care Unit, Akron Children's Hospital  
Professor, Pharmacy Practice & Director of Professional Development  
Northeast Ohio Medical University, College of Pharmacy

## **CONTRIBUTORS**

Allison Blackmer, PharmD, BCPS, BCPPS, FCCP, FASPEN  
Director, Clinical Practice, Quality, and Advocacy  
American Society for Parenteral and Enteral Nutrition

Karrie Derenski, PharmD, BCNSP, BCCCP, CNSC, FASPEN  
Director Pharmacy Operations, CoxHealth

Ainsley Malone, MS, RD, LD, CNSC, FAND, FASPEN  
Clinical Practice Specialist, American Society for Parenteral and Enteral Nutrition  
Nutrition Support Dietitian, Mt. Carmel East Hospital

Jessica Monczka, RD, CNSC  
Regional Nutrition Manager, Restore+ Home Nutrition

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<https://www.nutritioncare.org>  
[aspen@nutritioncare.org](mailto:aspen@nutritioncare.org)

ASPEN is a scientific society whose members are dietitians, nurses, pharmacists, physicians, scientists, students, other health professionals, and researchers who envision an environment in which every patient receives safe, efficacious, and high-quality nutrition care. ASPEN's mission is to improve patient care by advancing the science and practice of clinical nutrition and metabolism.

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# Introduction

Parenteral nutrition (PN) is a complex nutrition support modality for patients with inadequate gastrointestinal function. Many reasons account for its complexity, including the use of multiple components, the creation of a safe and stable formulation, and the management of clinically challenging patients. Prescribing and ordering PN is a process that should be performed by experienced clinicians who have demonstrated the necessary proficiency and competence. A PN order completed by an inexperienced clinician may result in an unsafe PN formulation with the potential to cause serious patient harm.

The knowledge and skills to prescribe and order PN are gained through a combination of content mastery and experiential activities. There is overlap between the terms *prescribe* and *order*, so for the purposes of this text, the terms *order* or *ordering* will be used and should be understood to include both prescribing and ordering. This workbook is intended to augment PN knowledge with experience. It consists of various fictitious adult, pediatric, and neonatal patient cases requiring PN. Important clinical information is provided, combined with key questions and practice exercises to guide you through the PN order writing process. Appendices A–C provide essential information to assist with completing PN orders. A case-based approach is an established teaching technique used across disciplines that enables application of knowledge to real-world scenarios, reinforcing and augmenting the learned content. Lastly, recommendations and guidance to facilitate competency development in PN ordering as well as home case examples are also included.

Reviewing the following resources on safe PN prescribing and ordering and PN ordering competency will enhance your experience with this workbook:

American Society for Parenteral and Enteral Nutrition. *Appropriate dosing for parenteral nutrition: ASPEN recommendations*. 2019. <https://www.nutritioncare.org/PNDosingRecommendations>

Ayers P, Adams S, Boullata J, et al. A.S.P.E.N. parenteral nutrition safety consensus recommendations. *JPEN J Parenter Enteral Nutr*. 2014;38(3):296–333.

Boullata J, Gilbert K, Sacks G, et al. A.S.P.E.N. clinical guidelines: parenteral nutrition ordering, order review, compounding, labeling, and dispensing. *JPEN J Parenter Enteral Nutr*. 2014;38(3): 334–377. <https://doi.org/10.1177/0148607114521833>

Guenther P, Boullata JJ, Ayers P, et al. Standardized competencies for parenteral nutrition prescribing: the American Society for Parenteral and Enteral Nutrition model. *Nutr Clin Pract*. 2015;30:570–576.

## How to Use This Workbook

Sharpen your PN ordering skills by completing these adult, pediatric, and neonatal cases. Each chapter is independent of the others so that you can practice and complete single or multiple cases depending on your practice setting and interest. The appendices provide further information to support the concepts and practices exemplified in the cases.

Look for the following symbols to guide you throughout the workbook:



This symbol denotes the key background information and patient scenarios needed for you to complete the practice exercises.



Now, you try it! Write in your answers. If you need extra practice, make a copy of the sheet before writing on it.



Shine some light on the answers with the conveniently placed answer key.

The answers provided are for educational purposes and could vary depending on the medical status of the patient and facility or site-specific factors (eg, clinician resources, pharmacy practices). The answer key may provide a range of values or several options with explanations, thus offering a comprehension strategy that will allow you to connect new information with prior knowledge, verify predictions, and help clarify meaning and interpretations.



## Vocabulary

Competence/competency

Order/ordering

Parenteral nutrition (PN)

Prescribing