

FACT SHEET

Parenteral Nutrition

Overview of Parenteral Nutrition:

Parenteral nutrition (PN) is intravenous administration of nutrition, which may include protein, carbohydrate, fat, minerals and electrolytes, vitamins and other trace elements for patients who cannot eat or absorb enough food through tube feeding formula to maintain good nutrition status. Achieving the right nutritional intake in a timely manner can help combat complications and be an important part of a patient's recovery. Parenteral nutrition is sometimes called Total Parenteral Nutrition (TPN).

Who receives Parenteral Nutrition?

People of all ages receive parenteral nutrition. It may be given to infants and children, as well as to adults.

People can live well on parenteral nutrition for as long as it is needed. Many times, parenteral nutrition is used for a short time; then it is lessened or discontinued when the person begins to eat normally again.

Parenteral nutrition bypasses the normal digestion in the gastrointestinal (GI) tract. It is a sterile liquid chemical formula given directly into the bloodstream through an intravenous (IV) catheter (needle in the vein).

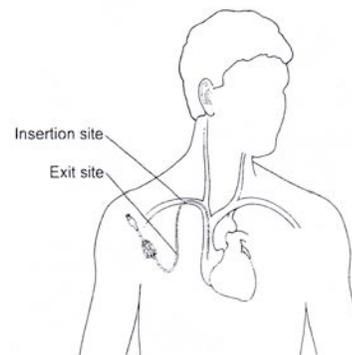


Illustration taken from The A.S.P.E.N. Nutrition Support Patient Education Manual 2008 Courtesy of the Cleveland Clinic Foundation Nutrition Support Team

For What Diseases or Conditions Would Patients Need PN

Patients may need PN for any variety of diseases or conditions that impair food intake, nutrient digestion or absorption. Some diseases and conditions where PN is indicated include but are not limited to short bowel syndrome, GI fistulas, bowel obstruction, critically ill patients, and severe acute pancreatitis. Some patients may require this therapy for a short time and there are other patients who have received PN at home for a lifetime.

How Many Patients in the U.S. Receive PN?

Many hospitalized patients in the U.S. receive parenteral nutrition. According to the 2009 National Center for Health Statistics (latest available statistics), patients received PN in almost 360,000 hospital stays. About 33% of those were for children and newborns. Individuals can also receive this therapy at home and in long-term care facilities but statistics on the number of patients receiving tube feeding are not available.

Complications of PN

PN is a life-saving but complex therapy, which is not without risk of complications. Some of these complications include infection, metabolic, and fluid issues. Management by an interdisciplinary Nutrition Support Team can optimize patient outcomes associated with this therapy.

PN Safety

During the past year, drug shortages and incidents have threatened the safety of parenteral nutrition as an important therapy. A.S.P.E.N. is committed to addressing the safety of PN prescribing, compounding, and delivery.

A.S.P.E.N., held a PN Safety Summit on September 23, 2011 in Rockville, MD, which included representatives from the U.S. Food and Drug Administration, the Institute of Safe Medication Practices (ISMP), the American Society of Health-System Pharmacists, the Board of Pharmacy Specialties, National Home Infusion Association, and industry representatives, among others. The Summit allowed experts in clinical nutrition to address the safety issues surrounding parenteral nutrition and to develop recommendations for improvement. Proceedings from the PN Safety Summit have been published in A.S.P.E.N.'s *Journal of Parenteral and Enteral Nutrition (JPEN)*. A.S.P.E.N. has also named a PN Safety Task Force to continue to implement many of the recommendations from this summit.

A.S.P.E.N. is continuing to optimize PN therapy by:

- Implementing a PN Safety Task Force
- Publishing PN Guidelines
- Promoting Nutrition Support Services
- Partnering with the Oley Foundation, the consumer group for home PN and EN patients
- Working with other organizations to prevent and manage PN product shortages
- Educating clinicians through A.S.P.E.N.'s educational offerings

For more information and updates on this topic, contact Peggi Guenter, PhD, RN Senior Director, A.S.P.E.N. at peggig@aspen.nutr.org.

References

1. Canada T, Crill C, Guenter P. *A.S.P.E.N. Parenteral Nutrition Handbook*. A.S.P.E.N. Silver Spring, MD 2009.
2. Task Force for the Revision of Safe Practices for Parenteral Nutrition: Jay Mirtallo, MS, RPh, BCNSP, Chair, Todd Canada, PharmD, BCNSP, Deborah Johnson, MS, RN, Vanessa Kumpf, PharmD, BCNSP, Craig Petersen, RD, CNSD, Gordon Sacks, PharmD, BCNSP, David Seres, MD, CNSP, and Peggi Guenter, PhD, RN, CNSN
3. Safe Practices for Parenteral Nutrition *Journal of Parenteral and Enteral Nutrition (JPEN)* Vol. 28, No. 6 S39-S70 Copyright © 2004 by the American Society for Parenteral and Enteral Nutrition
4. AHRQ Healthcare Costs and Utilization Project (HCUP) Nationwide Inpatient Sample (NIS) 2009 data. <http://hcup.ahrq.gov/>