

**PARENTERAL NUTRITIONAL THERAPY**

Effective Date: February 26, 2015

Review Dates: 8/06, 8/07, 8/08, 8/09, 8/10, 8/11,  
12/11, 8/12, 8/13, 8/14, 8/15, 8/16, 8/17, 8/18,  
11/18

Date of Origin: August 9, 2006

Status: Current

*Note: This policy incorporates Intradialytic Parenteral Nutrition (IDPN) criteria formerly part of the End Stage Renal Disease (ESRD) & Home Hemodialysis Medical Policy #91526 now known as “End Stage Renal Disease (ESRD): Renal Dialysis”.*

**Summary of Changes**

Clarifications:

- Pg. 2, Section I F: Intradialytic Parenteral Nutrition (IDPN). Clarification added to indicate that this includes intraperitoneal nutrition (IPN).

**I. POLICY/CRITERIA**

Parenteral nutritional therapy in the home:

A. Home parenteral nutrition may be considered medically necessary and a covered benefit when the patient has a structural or functional gastrointestinal tract disease or condition (see D below for examples) resulting in insufficient absorption of nutrients to maintain adequate strength and weight that cannot be corrected by modifying the nutrient composition of the enteral/oral diet (e.g., lactose-free) or utilizing pharmacologic means to treat the etiology (e.g., pancreatic enzymes or botulinum toxin\*) AND meets one of the following:

1. > 10% loss of body weight over three-months or less,

**OR**

2. Serum albumin concentration < 3.4 g/dl,

**OR**

3. The clinical record demonstrates that the patient cannot be maintained on enteral feedings.

\*Note: Botulinum toxin and TPN will not be authorized together for the treatment of gastroparesis.

- B. Equipment - If the criteria for parenteral nutrition are met, medically necessary nutrients, administration supplies, and equipment are considered medically necessary.
- C. Preauthorization is required. Initial authorization will not exceed three months and continuing authorization is required at least every three months.
- D. Specific malabsorptive conditions include, but are not limited to, the following:
- Crohn's disease

- Newborn infants with catastrophic gastrointestinal anomalies such as tracheoesophageal fistula, gastroschisis, omphalocele, or massive intestinal atresia
  - Infants and young children who fail to thrive due to short bowel syndrome, malabsorption, or chronic idiopathic diarrhea
  - Short bowel syndrome secondary to massive small bowel resection
  - Prolonged paralytic ileus after major surgery or multiple injuries
  - Radiation enteritis
  - Chronic or severe acute pancreatitis when a feeding tube cannot be placed or tube feeding is not tolerated
  - Hyperemesis Gravidarum (severe hyperemesis during pregnancy) when a feeding tube cannot be placed or tolerated.
  - Obstruction secondary to stricture or neoplasm of the esophagus or stomach, where a feeding tube cannot be placed beyond the obstruction
  - Small bowel obstruction that cannot be bypassed by a feeding tube
  - Malabsorption due to enterocolic, enterovesical, or enterocutaneous fistulas (parenteral nutrition being temporary until the fistula is repaired)
  - Motility disorder (pseudo-obstruction)
- E. Home intravenous parenteral nutrition is considered not medically necessary and **not** a covered benefit, including but not limited to the following circumstances:
1. To increase protein or caloric intake in addition to the patient's daily diet
  2. For routine pre- and/or postoperative care
  3. Patients with functional GI tracts including but not limited to the following:
    - a. Disorders that induce anorexia including cancer
    - b. Swallowing disorders
    - c. A temporary defect in gastric emptying such as a metabolic or electrolyte disorder.
    - d. A psychological disorder impairing food intake such as depression or anorexia nervosa.
    - e. A physical disorder impairing food intake such as dyspnea of severe pulmonary or cardiac disease.
    - f. A side effect of a medication
    - g. Renal failure or dialysis.
- F. Intradialytic Parenteral Nutrition (IDPN), which includes intraperitoneal nutrition (IPN)
1. Intradialytic parenteral nutrition (IDPN), which includes intraperitoneal nutrition (IPN), will be covered for ESRD\* if member has a serum albumin < 3.4 g/dl or protein < 6 g/dl and one of the following:
    - a. BMI < 18.5 kg/m<sup>2</sup> or

- b. Unintentional weight loss > 10% within last 6 months or
- c. BMI < 20 kg/m<sup>2</sup> and unintentional weight loss >5% within last 3-6 months

\*clinical re-evaluation after six months for consideration of continued treatment

## II. MEDICAL NECESSITY REVIEW

- Required
- Not Required
- Not Applicable

## III. APPLICATION TO PRODUCTS

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

- ❖ **HMO/EPO:** *This policy applies to insured HMO/EPO plans.*
- ❖ **POS:** *This policy applies to insured POS plans.*
- ❖ **PPO:** *This policy applies to insured PPO plans. Consult individual plan documents as state mandated benefits may apply. If there is a conflict between this policy and a plan document, the provisions of the plan document will govern.*
- ❖ **ASO:** *For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.*
- ❖ **INDIVIDUAL:** *For individual policies, consult the individual insurance policy. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.*
- ❖ **MEDICARE:** *Coverage is determined by the Centers for Medicare and Medicaid Services (CMS); if a coverage determination has not been adopted by CMS, this policy applies.*
- ❖ **MEDICAID/HEALTHY MICHIGAN PLAN:** *For Medicaid/Healthy Michigan Plan members, this policy will apply. Coverage is based on medical necessity criteria being met and the appropriate code(s) from the coding section of this policy being included on the Michigan Medicaid Fee Schedule located at: [http://www.michigan.gov/mdch/0,1607,7-132-2945\\_42542\\_42543\\_42546\\_42551-159815--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-159815--,00.html). If there is a discrepancy between this policy and the Michigan Medicaid Provider Manual located at: [http://www.michigan.gov/mdch/0,1607,7-132-2945\\_5100-87572--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--,00.html), the Michigan Medicaid Provider Manual will govern. If there is a discrepancy or lack of guidance in the Michigan Medicaid Provider Manual, the Priority Health contract with Michigan Medicaid will govern. For Medical Supplies/DME/Prosthetics and Orthotics, please refer to the Michigan Medicaid Fee Schedule to verify coverage.*

## IV. DESCRIPTION

Parenteral Nutrition (PN)

Parenteral nutrition (or PN) is the provision of nutritional requirements intravenously, either through a central or peripheral vein. The purpose of initiating parenteral nutritional therapy is to prevent or correct specific nutrient deficiencies and to prevent the adverse effects of malnutrition when the gastrointestinal tract cannot be used effectively or safely.

Generally, the parenteral approach is considered medically necessary only if adequate nutritional intake is not possible via the oral or tube-feeding route.

A daily caloric intake for adults of 20-40kcal/kg is generally sufficient to maintain body weight. If less than 20-30kcal/kg per day it may be considered supplemental.

Parenteral nutritional therapy is covered as defined above for patients with severe pathology of the alimentary tract that does not allow absorption of sufficient nutrients to maintain weight and strength commensurate with the patient's general condition.

#### **Intradialytic Parenteral Nutrition (IDPN) for ESRD**

In use since the 1970s, intradialytic parenteral nutrition (IDPN) is a convenient method of administering nutritional supplements to patients undergoing hemodialysis for end-stage renal disease (ESRD). Malnutrition is common in patients with ESRD due to factors such as poor eating habits and loss of nutrients during dialysis. Maintaining adequate nutrition in patients undergoing hemodialysis is vital, as a number of nutritional parameters are associated with increased mortality, including low body fat, fat loss over time, low body mass index (BMI) ( $< 20 \text{ kg/m}^2$ ), reduced serum albumin levels, and reduced creatinine levels. In the 1980s, a trend began in which decisions regarding the use of IDPN in the United States were empirically based, and, although this was controversial, IDPN gained approval through the Centers for Medicaid & Medicare Services as a Medicare-covered benefit. As IDPN use expanded, the increasing use and associated costs attracted scrutiny, due to the limited evidence base that supported IDPN use. Accordingly, in 1994, Medicare coverage of IDPN was tightened and then further restricted in 1996, which resulted in a decline in its use. Several manufacturers produce premixed bags for IDPN, or components of a formulation can be made up on site from previously prepared ingredients. IDPN formulas generally contain a mix of amino acids, carbohydrate (usually dextrose), and lipids. Trace elements and multivitamins may also be included. IDPN may be considered for hemodialysis patients who show physical wasting and significant weight loss; have serum hypoalbuminemia (low albumin) and/or other markers of malnutrition; have failed to respond to oral nutrition supplements; have failed, or are contraindicated, for enteral feeding; and whose caloric and/or protein intake is insufficient to meet recommended daily requirements. IDPN is given at the same time as hemodialysis by a dialysis nurse or other licensed healthcare practitioner, at an outpatient center. IDPN is infused through an existing dialysis access

catheter or site, via an infusion pump; no additional needle stick or line is necessary.

The results of three comparative retrospective studies suggest that IDPN for up to 1 year in duration may reduce mortality in malnourished patients undergoing hemodialysis. In contrast, the results of the single prospective randomized study conducted in France, provide strong evidence that there is no reduction in mortality for 1 year of IDPN plus oral nutritional supplementation compared with oral nutritional supplementation alone. Despite the lack of strong evidence, IDPN is an established therapy and it is possible that it offers potential advantages to a subset of malnourished patients in ESRD; however, prospective studies are needed to define these subpopulations.

## V. CODING

### ICD-10 Codes that may apply

E08.43	Diabetes mellitus due to underlying condition with diabetic autonomic (poly) neuropathy
E09.43	Drug or chemical induced diabetes mellitus with neurological complications with diabetic autonomic (poly) neuropathy
E10.43	Type 1 diabetes mellitus with diabetic autonomic (poly) neuropathy
E11.43	Type 2 diabetes mellitus with diabetic autonomic (poly) neuropathy
E13.43	Other specified diabetes mellitus with diabetic autonomic (poly) neuropathy
E43.0	Unspecified severe protein-calorie malnutrition
E46	Unspecified protein-calorie malnutrition
E64.0	Sequelae of protein-calorie malnutrition
K31.6	Fistula of stomach and duodenum
K31.84	Gastroparesis
K31.89	Other diseases of stomach and duodenum
K50.00 - K50.919	Crohn's disease
K51.012 - K51.919	Ulcerative colitis
K56.0	Paralytic ileus
K56.2	Volvulus
K56.5	Intestinal adhesions [bands] with obstruction (post procedural) (post infection)
K56.60	Unspecified intestinal obstruction
K56.69	Other intestinal obstruction
K56.7	Ileus, unspecified
K60.3	Anal fistula
K60.4	Rectal fistula
K60.5	Anorectal fistula
K63.1	Perforation of intestine (nontraumatic)
K63.2	Fistula of intestine
K63.9	Disease of intestine, unspecified

K90.49	Malabsorption due to intolerance, not elsewhere classified
K90.89	Other intestinal malabsorption
K90.9	Intestinal malabsorption, unspecified
K91.2	Postsurgical malabsorption, not elsewhere classified
K91.850	Pouchitis
K91.858	Other complications of intestinal pouch
K92.9	Disease of digestive system, unspecified
K94.01	Colostomy hemorrhage
K94.09	Other complications of colostomy
K94.11	Enterostomy hemorrhage
K94.19	Other complications of enterostomy
O21.1	Hyperemesis gravidarum with metabolic disturbance
P77.1 – P77.9	Necrotizing enterocolitis in newborn
Q43.0 – Q43.9	Other congenital malformations of intestine
Q79.2	Exomphalos
Q79.3	Gastrochisis
T81.83xA - T81.83xS	Persistent post procedural fistula

**CPT/HCPCS Codes:**

*Presence of codes on this list does not guarantee coverage.*

B4164	Parenteral nutrition solution: carbohydrates (dextrose), 50% or less (500 ml = 1 unit), home mix
B4168	Parenteral nutrition solution; amino acid, 3.5%, (500 ml = 1 unit) - home mix
B4172	Parenteral nutrition solution; amino acid, 5.5% through 7%, (500 ml = 1 unit) - home mix
B4176	Parenteral nutrition solution; amino acid, 7% through 8.5%, (500 ml = 1 unit) - home mix
B4178	Parenteral nutrition solution: amino acid, greater than 8.5% (500 ml = 1 unit), home mix
B4180	Parenteral nutrition solution: carbohydrates (dextrose), greater than 50% (500 ml = 1 unit), home mix
B4185	Parenteral nutrition solution, per 10 grams lipids
B4189	Parenteral nutrition solution: compounded amino acid and carbohydrates with electrolytes, trace elements, and vitamins, including preparation, any strength, 10 to 51 g of protein, premix
B4193	Parenteral nutrition solution: compounded amino acid and carbohydrates with electrolytes, trace elements, and vitamins, including preparation, any strength, 52 to 73 g of protein, premix
B4197	Parenteral nutrition solution; compounded amino acid and carbohydrates with electrolytes, trace elements and vitamins, including preparation, any strength, 74 to 100 grams of protein - premix
B4199	Parenteral nutrition solution; compounded amino acid and carbohydrates with electrolytes, trace elements and vitamins, including preparation, any strength, over 100 grams of protein - premix
B4216	Parenteral nutrition; additives (vitamins, trace elements, Heparin, electrolytes), home mix, per day
B4220	Parenteral nutrition supply kit; premix, per day
B4222	Parenteral nutrition supply kit; home mix, per day
B4224	Parenteral nutrition administration kit, per day

- B5000 Parenteral nutrition solution: compounded amino acid and carbohydrates with electrolytes, trace elements, and vitamins, including preparation, any strength, renal - Amirosyn RF, NephAmine, RenAmine - premix
- B5100 Parenteral nutrition solution: compounded amino acid and carbohydrates with electrolytes, trace elements, and vitamins, including preparation, any strength, hepatic - FreAmine HBC, HepatAmine - premix
- B5200 Parenteral nutrition solution: compounded amino acid and carbohydrates with electrolytes, trace elements, and vitamins, including preparation, any strength, stress - branch chain amino acids - premix
  
- B9004 Parenteral Nutrition Infusion Pump, Portable
- B9006 Parenteral Nutrition Infusion Pump, Stationary
- E0791 Parenteral infusion pump, stationary, single or multichannel
  
- A4211 Supplies for self-administered injections

*(Per diem "S" codes include payment for TPN solution, standard additives, supplies and equipment)*

- S9364 Home infusion therapy, total parenteral nutrition (TPN); administrative services, professional pharmacy services, care coordination, and all necessary supplies and equipment including standard TPN formula (lipids, specialty amino acid formulas, drugs other than in standard formula and nursing visits coded separately), per diem
- S9365 Home infusion therapy, total parenteral nutrition (TPN); 1 liter per day, administrative services, professional pharmacy services, care coordination, and all necessary supplies and equipment including standard TPN formula (lipids, specialty amino acid formulas, drugs other than in standard formula and nursing visits coded separately), per diem
- S9366 Home infusion therapy, total parenteral nutrition (TPN); more than 1 liter but no more than 2 liters per day, administrative services, professional pharmacy services, care coordination, and all necessary supplies and equipment including standard TPN formula (lipids, specialty amino acid formulas, drugs other than in standard formula and nursing visits coded separately), per diem
- S9367 Home infusion therapy, total parenteral nutrition (TPN); more than 2 liters but no more than 3 liters per day, administrative services, professional pharmacy services, care coordination, and all necessary supplies and equipment including standard TPN formula (lipids, specialty amino acid formulas, drugs other than in standard formula and nursing visits coded separately), per diem
- S9368 Home infusion therapy, total parenteral nutrition (TPN); more than 3 liters per day, administrative services, professional pharmacy services, care coordination, and all necessary supplies and equipment including standard TPN formula (lipids, specialty amino acid formulas, drugs other than in standard formula and nursing visits coded separately), per diem

**VI. REFERENCES**

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3. “Home Total Parenteral Nutrition” Blue Cross Blue Shield of Massachusetts Medical Policy, May 2005. Available on the World Wide Web @ [http://www.bluecrossma.com/common/en\\_US/medical\\_policies/fs296.htm](http://www.bluecrossma.com/common/en_US/medical_policies/fs296.htm) (Retrieved December 15, 2005)
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5. AdminaStar Federal, Inc. (Region B), Local coverage Determination (LCD #L5063), Parenteral Nutrition, CMS Pub. 100-3 (National Coverage Determinations Manual), chapter 1, section 180.2, Original determination effective date: 10/01/1993, Revision effective date 01/01/2007.
6. Hayes Brief, Hayes, Inc. Intradialytic Parenteral Nutrition (IDPN) for End-Stage Renal Disease in Adults, August 2008.
7. Nutritional Support, Cigna Medical Coverage Policy @ <https://cignaforhcp.cigna.com/web/public/resources> (Retrieved July 12, 2016 , June 30, 2017 & June 6, 2018)

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