

# MEDICAL POLICY

MEDICAL POLICY DETAILS	
Medical Policy Title	<b>Total Parenteral Nutrition (TPN) or Hyperalimentation</b>
Policy Number	<b>11.01.04</b>
Category	<b>Contract Clarification</b>
Original Effective Date	<b>09/16/99</b>
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Current Effective Date	<b>02/22/24</b>
Archived Date	<b>02/22/24</b>
Archive Review Date	<b>N/A</b>
Product Disclaimer	<ul style="list-style-type: none"> <li>• <i>Services are contract dependent; if a product excludes coverage for a service, it is not covered, and medical policy criteria do not apply.</i></li> <li>• <i>If a commercial product (including an Essential Plan or Child Health Plus product), medical policy criteria apply to the benefit.</i></li> <li>• <i>If a Medicaid product covers a specific service, and there are no New York State Medicaid guidelines (eMedNY) criteria, medical policy criteria apply to the benefit.</i></li> <li>• <i>If a Medicare product (including Medicare HMO-Dual Special Needs Program (DSNP) product) covers a specific service, and there is no national or local Medicare coverage decision for the service, medical policy criteria apply to the benefit.</i></li> <li>• <i>If a Medicare HMO-Dual Special Needs Program (DSNP) product DOES NOT cover a specific service, please refer to the Medicaid Product coverage line.</i></li> </ul>

## POLICY STATEMENT

- I. Based upon our criteria and assessment of the peer-reviewed literature, total parenteral nutrition (TPN) has been medically proven to be effective and, therefore, is considered **medically appropriate** for malnourished patients\* (Please refer to Policy Guideline VI) with indications that include, but are not limited to, the following:
- A. Gastrointestinal (gut) failure:
    1. Short bowel syndrome (e.g., secondary to mesenteric infarction, surgical treatment of Crohn's disease, midgut volvulus, traumatic gastroschisis, small bowel atresia in neonates);
    2. Radiation enteritis;
    3. Intestinal pseudo-obstruction-motility disorder;
    4. Idiopathic diarrhea; or
    5. Secondary gastrointestinal failure (e.g., scleroderma).
  - B. Crohn's disease:
    1. Growth retardation;
    2. Diffuse small bowel disease refractory to medical management; or
    3. Enterocutaneous fistulae.
  - C. Severe mucosal injury with intractable malabsorption (e.g., selected cases of celiac disease, immunodeficiency syndromes with enterocolitis, idiopathic mucosal failure with congenital failure to develop villi).
  - D. Cystic fibrosis with malnutrition unresponsive to enteral nutrition.
  - E. Intestinal lymphangiectasia with failure of dietary management.

## Medical Policy: TOTAL PARENTERAL NUTRITION (TPN) OR HYPERALIMENTATION

Policy Number: 11.01.04

Page: 2 of 6

- F. Short-term treatment of a condition requiring “bowel rest,” where prolonged hospitalization would otherwise be required (e.g., pancreatic pseudocysts, proximal enterocutaneous fistulae in which surgical management is not indicated).
  - G. Short-term treatment for children with severe reflux and aspiration who fail to thrive, until a surgical procedure can be performed.
  - H. Adjunctive therapy for malnourished patients with specific cancers who are receiving intense and frequent chemotherapy that causes severe gastrointestinal toxicity.
  - I. Liver failure in children approved for liver transplants, who fail to grow while receiving enteral nutritional support.
  - J. Liver failure in adults who have hepatic encephalopathy and cannot tolerate a protein source consisting of standard amino acids or enteral nutritional support (TPN used for the administration of a liver-specific amino acid mixture).
  - K. Acute necrotizing pancreatitis in adults with an inadequate oral intake for longer than a week, where enteral feedings exacerbate abdominal pain, ascites, or fistulous output.
- II. Based upon our criteria and assessment of the peer-reviewed literature, parenteral therapy with home TPN for the management of intractable hyperemesis gravidarum has been medically proven to be effective and, therefore, is considered **medically appropriate** when **ALL** of the following criteria have been met:
- A. The patient has attempted and failed the step therapy approach;
  - B. Other potential causes of nausea and vomiting have been ruled out;
  - C. Information about symptoms, food intake, urinary ketones, urine specific gravity, and daily weights is supplied;
  - D. Clinical signs of hyperemesis gravidarum, including nausea and vomiting, have been persistent for three or more weeks;
  - E. Within this time, there has been documented weight loss and dehydration or electrolyte abnormalities;
  - F. There has been over five percent weight loss since the beginning of pregnancy, and the patient is over 14 weeks pregnant;
  - G. The patient has failed intravenous (IV) or subcutaneous (SQ) Zofran or Reglan therapy;
  - H. The patient has failed, or is not a candidate for, enteral therapy (nausea is unrelated to olfactory or gustatory cues);
  - I. The patient has fully consented with respect to the risks of line infection, bacteremia, sepsis, thrombosis, and fetal loss; **and**
  - J. The PICC line is started in the hospital.
- III. Based upon our criteria and assessment of the peer-reviewed literature, intradialytic nutrition, including intradialytic parenteral nutrition (IDPN) or intraperitoneal nutrition (IPN), for patients with end-stage renal disease (ESRD) who are undergoing hemodialysis or peritoneal dialysis, is considered:
- A. **Medically appropriate** when:
    - 1. It is utilized as an alternative to regularly scheduled TPN in patients who meet the criteria for TPN therapy; **and**
    - 2. Intradialytic nutrition provides an incremental boost in calories and is not used as the sole source of nutrition.
- IV. Based upon our criteria and assessment of the peer-reviewed literature and available information, TPN is considered **not medically necessary** for the following indications:
- A. Children who were previously well-nourished or mildly malnourished, who are undergoing oncologic treatment associated with a low nutrition risk (e.g., less-advanced disease, less-intense cancer treatments, advanced disease in remission during maintenance treatment);
  - B. Patients (either adult or pediatric) with advanced cancer whose malignancy is documented as unresponsive to chemotherapy or radiation therapy; **or**
  - C. Patients for whom liver transplantation is not feasible and whose prognosis will not change in spite of TPN therapy.

## **Medical Policy: TOTAL PARENTERAL NUTRITION (TPN) OR HYPERALIMENTATION**

**Policy Number: 11.01.04**

**Page: 3 of 6**

V. Based upon our criteria and assessment of the peer-reviewed literature, intradialytic nutrition, including intradialytic parenteral nutrition (IDPN) or intraperitoneal nutrition (IPN), for patients with end-stage renal disease (ESRD) who are undergoing hemodialysis or peritoneal dialysis, is considered **not medically necessary** when:

1. It is used as an adjunct to regularly scheduled TPN infusions; **or**
2. TPN is considered not medically necessary for the patient.

*Refer to Corporate Medical Policy #08.01.18 Nutritional Therapy/Nutritional Counseling*

*Refer to Corporate Medical Policy #10.01.03 Enteral Nutrition*

### **POLICY GUIDELINES**

- I. Home TPN should be employed as therapy only in patients in whom enteral feeding (employing the patient's own gastrointestinal tract) is considered contraindicated or in whom such feeding has been unsuccessful.
- II. Because of the potential risks of home TPN, this therapy should generally not be employed when simpler, more routine therapies may be the first choice of treatment (e.g., pharmacological therapy for an acute exacerbation of short segment illness due to Crohn's disease).
- III. The patient must be medically stable for TPN to be safely administered in the home setting.
- IV. The patient and/or caregiver must be adequately trained in the techniques of home TPN, to ensure that it is administered according to policy and that complications requiring appropriate treatment are recognized.
- V. The need for continuing TPN therapy must be periodically reassessed because, in many disease processes causing gut failure, intestinal adaptation may take place.
- VI. \*Malnourished patients are those in a stage of wasting, as indicated by the following:
  1. Weight is significantly less than normal body weight for height and age, in comparison with pre-illness weight;
  2. Serum albumin is less than 2.5 grams;
  3. Blood urea nitrogen (BUN) is below 10 mg (not a good marker in patients receiving dialysis, due to protein catabolism);
  4. Phosphorous level is less than 2.5 mg (normal is 3 - 4.5 mg); and
  5. The patient can receive no more than 30 percent of caloric needs enterally (oral or tube feeding).

### **DESCRIPTION**

Total parenteral nutrition (TPN), also known as hyperalimentation, is administered to patients with medical conditions that impair gastrointestinal absorption to a degree that is incompatible with life. TPN is also used for variable periods of time to bolster the nutritional status of severely malnourished patients with medical or surgical conditions.

TPN involves the percutaneous transvenous implantation of a central venous catheter into the vena cava or right atrium. A nutritionally adequate hypertonic solution consisting of glucose, amino acids, electrolytes, vitamins, minerals, and sometimes fats is administered daily. An infusion pump is generally used to assure a steady flow of the solution, either on a continuous or intermittent schedule.

For patients with severe dysfunction of the gastrointestinal tract, in whom survival was previously precluded, the patient can often be restored to a near-normal nutritional state. The goals of TPN are:

- I. Nutritional repletion;
- II. Avoidance of repeated and prolonged hospitalization;
- III. Return to gainful employment, where appropriate; and
- IV. Improvement of the quality of life.

Hyperemesis gravidarum is a term reserved to describe the most severe cases of nausea and vomiting in pregnancy (NVP). It is characterized by the inability to rehydrate and replenish nutritional reserves, after severe nausea and vomiting. A diagnosis of hyperemesis gravidarum is made based on objective findings such as moderate to large ketonuria and weight

**Medical Policy: TOTAL PARENTERAL NUTRITION (TPN) OR HYPERALIMENTATION**

**Policy Number: 11.01.04**

**Page: 4 of 6**

loss. Weight loss of five percent or greater is often described as diagnostic of hyperemesis gravidarum. Hyperemesis gravidarum tends to begin earlier in pregnancy and lasts longer than those patients with less severe NVP.

Intradialytic nutrition is a specific form of TPN utilized in malnourished patients with end-stage renal disease (ESRD) who are undergoing dialysis. It includes:

- I. Intradialytic parenteral nutrition (IDPN): a form of parenteral nutritional therapy administered to malnourished patients undergoing hemodialysis.
- II. Intraperitoneal nutrition (IPN): a form of parenteral nutritional therapy administered to malnourished patients undergoing peritoneal dialysis.

**RATIONALE**

Clinical trials have been conducted to determine the efficacy and safety of TPN for numerous conditions, including cancer, HIV, renal failure, liver failure, and Crohn’s disease. Studies have proven that nutrition support and effective oncologic treatment lessen morbidity and improve tumor response for those patients undergoing intense chemotherapy. These studies suggest that TPN is effective in repleting lean tissues of malnourished HIV patients and minimizes nutrient loss during catabolic illness. Studies show that the survival rate of patients suffering from renal failure is directly related to the patient's ability to attain positive energy balance with parenteral nutrition and that TPN not only assists in counteracting the nutrition loss associated with active Crohn’s disease, but also indicate that nutrition support influences the activity of Crohn’s disease (increases remission rates).

Most patients with end-stage renal disease (ESRD) who are undergoing hemodialysis or peritoneal dialysis have intact and fully functional gastrointestinal systems. Many of these patients become malnourished due to inadequate intake of nutrients as the result of anorexia, frequent acute intercurrent illness, dietary restrictions, and/or nutrient losses into the dialysate. Evidence suggests that poor nutrition may contribute to increasing the morbidity and mortality of dialysis patients. In view of these indications, nutritional supplements, referred to as intradialytic nutrition, which include intradialytic parenteral nutrition (IDPN) and intraperitoneal nutrition (IPN), have been administered during dialysis treatment in an attempt to improve the nutritional status of these patients. The amount and composition of solutions administered during dialysis are adjusted according to the patient's estimated needs.

The American Society for Parenteral and Enteral Nutrition (ASPEN) practice guidelines addressing parenteral nutrition indicate that IDPN should be reserved for patients who cannot meet their nutritional needs orally and who are not candidates for enteral or parenteral nutrition because of gastrointestinal intolerance or venous access problems and should only be used in situations of gut failure or other unusual circumstances where enteral or parenteral nutrition are not feasible.

**CODES**

- *Eligibility for reimbursement is based upon the benefits set forth in the member’s subscriber contract.*
- ***CODES MAY NOT BE COVERED UNDER ALL CIRCUMSTANCES. PLEASE READ THE POLICY AND GUIDELINES STATEMENTS CAREFULLY.***
- *Codes may not be all inclusive as the AMA and CMS code updates may occur more frequently than policy updates.*
- *Experimental/Investigational = (E/I), Not medically necessary/ appropriate = (NMN).*

**CPT Codes**

<b>Code</b>	<b>Description</b>
36568 - 36573	Insertion of peripherally inserted central venous catheter (PICC) or access device (code range)

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**Medical Policy: TOTAL PARENTERAL NUTRITION (TPN) OR HYPERALIMENTATION****Policy Number: 11.01.04****Page: 5 of 6****HCPCS Codes**

Code	Description
B4164 - B4216 B5000 - B5200	Parenteral nutrition solutions and additives (code ranges)
B4220 - B4224	Parenteral nutrition supply/administration kit (code range)
B9004	Parenteral nutrition infusion pump, portable
B9006	Parenteral nutrition infusion pump, stationary
B9999	NOC for parenteral supplies
S9364 - S9368	Home infusion therapy, total parenteral nutrition (TPN); administrative services, professional pharmacy services, care coordination, and all necessary supplies and equipment including standard TPN formula, per diem (code range)

**ICD10 Codes**

Code	Description
Numerous	

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- \*Key Article

**Medical Policy: TOTAL PARENTERAL NUTRITION (TPN) OR HYPERALIMENTATION**

**Policy Number: 11.01.04**

**Page: 6 of 6**

**KEY WORDS**

Hyperalimentation, Intradialytic parenteral nutrition (IDPN), Intraperitoneal nutrition (IPN), Total parenteral nutrition (TPN)

**CMS COVERAGE FOR MEDICARE PRODUCT MEMBERS**

Based on our review, there is currently a National Coverage Determination (NCD#180.2) for Enteral and Parenteral Nutritional Therapy. Please refer to the following website for Medicare Members: [