



# Critical Care Demands Specialized Therapeutic Nutrition.



PRIMARY ISSUE		2009 CRITICAL CARE NUTRITION GUIDELINE SUPPORT <sup>1</sup>	CONSIDER	ADDITIONAL PRODUCT FEATURES
<b>MECHANICAL VENTILATION WITH PULMONARY INFLAMMATION*</b>		<b>INFLAMMATION-MODULATING</b>	<b>E2:</b> Patients with ARDS and severe acute lung injury (ALI) should be placed on an enteral formulation characterized by an anti-inflammatory lipid profile (ie, omega-3 fish oils, borage oil) and antioxidants. (Grade: A)	<b>OXEPA®</b> <ul style="list-style-type: none"> <li>• Omega-3 fatty acid (fish oil)<sup>†</sup></li> <li>• Borage oil</li> <li>• Elevated antioxidants</li> </ul> <ul style="list-style-type: none"> <li>• Calorically dense (1.5 Cal/mL)</li> <li>• Low carbohydrate (28.1% Cal)</li> </ul>
<b>TRAUMA BURNS SURGERY HEAD/NECK CANCER</b>		<b>IMMUNE SUPPORT</b>	<b>E1:</b> Immune-modulating enteral formulations (supplemented with agents such as arginine, glutamine, nucleic acid, omega-3 fatty acids, and antioxidants) should be used for the appropriate patient population (major elective surgery, trauma, burns, head and neck cancer, and critically ill patients on mechanical ventilation), with caution in patients with severe sepsis. (Grade: A – Surgical ICU; Grade: B – Medical ICU) <b>C4:</b> Ongoing assessment of adequacy of protein provision should be performed. In patients with BMI <30, protein requirements should be in the range of 1.2–2.0 g/kg actual body weight per day, and may likely be even higher in burn or multi-trauma patients. (Grade: E) <b>C5:</b> In the critically ill obese patient, permissive underfeeding or hypocaloric feeding with EN is recommended. Protein should be provided in the range ≥2.0 g/kg ideal body weight per day for patients with BMI ranging from 30–40 and ≥2.5 g/kg ideal body weight per day for BMI ≥40. (Grade: D)	<b>ADDED ARGININE: PIVOT® 1.5</b> <ul style="list-style-type: none"> <li>• Arginine (supplemental)</li> <li>• Glutamine (inherent)</li> <li>• Omega-3 fatty acid (fish oil)<sup>†</sup></li> <li>• Elevated antioxidants</li> <li>• Very high protein</li> </ul> <ul style="list-style-type: none"> <li>• Calorically dense (1.5 Cal/mL)</li> <li>• Arginine 13 g/L (supplemental)</li> <li>• MCT/fish oil-based structured lipid<sup>‡</sup></li> <li>• NutraFlora® scFOS® prebiotic<sup>  </sup></li> </ul>
<b>GI INTOLERANCE MALABSORPTION TUBE-FEEDING ASSOCIATED DIARRHEA PANCREATITIS TRANSITIONING FROM TPN</b>		<b>TOLERANCE</b>	<b>E4:</b> If there is evidence of diarrhea, soluble fiber-containing or small peptide formulations may be utilized. (Grade: E) <b>F4:</b> Soluble fiber may be beneficial for the fully resuscitated, hemodynamically stable critically ill patient receiving EN who develops diarrhea. Insoluble fiber should be avoided in all critically ill patients. Both soluble and insoluble fiber should be avoided in patients at high risk for bowel ischemia or severe dysmotility. (Grade: C) <b>K4:</b> Tolerance to EN in patients with severe acute pancreatitis may be enhanced by: changing the content of the EN delivered from intact protein to small peptides, and long-chain fatty acids to medium-chain triglycerides or a nearly fat-free elemental formulation. (Grade: E)	<b>NO ADDED ARGININE: VITAL AF 1.2 CAL™</b> <ul style="list-style-type: none"> <li>• Omega-3 fatty acid (fish oil)<sup>†</sup></li> <li>• Elevated antioxidants</li> <li>• High protein</li> </ul> <ul style="list-style-type: none"> <li>• 1.2 Cal/mL</li> <li>• MCT/fish oil-based structured lipid<sup>‡</sup></li> <li>• 75 g/L protein</li> <li>• Peptide based<sup>§</sup> whey-dominant protein</li> <li>• NutraFlora® scFOS® prebiotic<sup>  </sup></li> </ul>
				<b>VITAL AF 1.2 CAL™</b> <ul style="list-style-type: none"> <li>• Peptides</li> <li>• Soluble fiber</li> <li>• MCT</li> </ul> <ul style="list-style-type: none"> <li>• 1.2 Cal/mL</li> <li>• 75 g/L protein</li> <li>• Peptide based<sup>§</sup> whey-dominant protein</li> <li>• MCT/fish oil-based structured lipid<sup>‡</sup></li> <li>• NutraFlora® scFOS® prebiotic<sup>  </sup></li> <li>• Elevated antioxidants</li> </ul>
				<b>VITAL® 1.5 CAL</b> <ul style="list-style-type: none"> <li>• Peptides</li> <li>• Soluble fiber</li> <li>• MCT</li> </ul> <ul style="list-style-type: none"> <li>• Calorically dense (1.5 Cal/mL)</li> <li>• Peptide based<sup>§</sup> whey-dominant protein</li> <li>• NutraFlora® scFOS® prebiotic<sup>  </sup></li> <li>• MCT/canola-based structured lipid<sup>‡</sup></li> <li>• Elevated antioxidants</li> </ul>
				<b>VITAL® 1.0 CAL</b> <ul style="list-style-type: none"> <li>• Peptides</li> <li>• Soluble fiber</li> <li>• MCT</li> </ul> <ul style="list-style-type: none"> <li>• 1.0 Cal/mL</li> <li>• Peptide based<sup>§</sup> whey-dominant protein</li> <li>• NutraFlora® scFOS® prebiotic<sup>  </sup></li> <li>• MCT/canola-based structured lipid<sup>‡</sup></li> <li>• Elevated antioxidants</li> </ul>
				<b>OPTIMENTAL®</b> <ul style="list-style-type: none"> <li>• Peptides</li> <li>• Soluble fiber</li> </ul> <ul style="list-style-type: none"> <li>• 1.0 Cal/mL</li> <li>• Arginine 3.6 g/L (supplemental)</li> <li>• Peptide based<sup>§</sup> whey-dominant protein</li> <li>• MCT/fish oil-based structured lipid<sup>‡</sup></li> <li>• NutraFlora® scFOS® prebiotic<sup>  </sup></li> <li>• Elevated antioxidants</li> </ul>
				<b>Vital® HN</b> <ul style="list-style-type: none"> <li>• Peptides</li> <li>• Low fat</li> </ul> <ul style="list-style-type: none"> <li>• 1.0 Cal/mL (standard dilution)</li> <li>• Peptide based<sup>§</sup> and free amino acids</li> <li>• &lt; 4 g of fat/300-Cal serving</li> </ul>
<b>ABNORMAL GLUCOSE TOLERANCE HYPOGLYCEMIA TYPE 1 OR TYPE 2 DIABETES</b>		<b>GLYCEMIC MANAGEMENT</b>	<b>G4:</b> A protocol should be in place to promote moderately strict control of serum glucose when providing nutrition support therapy. (Grade: B)	<b>GLUCERNA® 1.2 CAL</b> • Carb Steady <sup>¶</sup> <ul style="list-style-type: none"> <li>• 1.2 Cal/mL</li> <li>• 60 g/L protein</li> <li>• Omega-3 fatty acid (fish oil and plant-based ALA)</li> <li>• NutraFlora® scFOS® prebiotic<sup>  </sup></li> </ul>
				<b>GLUCERNA® 1.5 CAL</b> <ul style="list-style-type: none"> <li>• Carb Steady<sup>¶</sup></li> <li>• High protein</li> <li>• 1.5 Cal/mL</li> <li>• 82.5 g/L protein</li> <li>• Omega-3 fatty acid (plant-based ALA)</li> <li>• NutraFlora® scFOS® prebiotic<sup>  </sup></li> </ul>
<b>CHRONIC KIDNEY DISEASE RENAL FAILURE</b>		<b>DIALYSIS</b>	<b>I1:</b> ICU patients with acute renal failure (ARF) or acute kidney injury (AKI) should be placed on standard enteral formulations, and standard ICU recommendations for protein and calorie provision should be followed. If significant electrolyte abnormalities exist or develop, a specialty formulation designed for renal failure (with appropriate electrolyte profile) may be considered. (Grade: E) <b>I2:</b> Patients receiving hemodialysis or continuous renal replacement therapy (CRRT) should receive increased protein, up to a maximum of 2.5 g/kg/d. Protein should not be restricted in patients with renal insufficiency as a means to avoid or delay initiation of dialysis therapy. (Grade: C)	<b>NEPRO® WITH CARB STEADY™</b> <ul style="list-style-type: none"> <li>• Carb Steady<sup>¶</sup></li> <li>• High protein</li> <li>• 1.8 Cal/mL</li> <li>• 81.0 g/L protein</li> <li>• Low phosphorus, potassium, and sodium</li> <li>• NutraFlora® scFOS® prebiotic<sup>  </sup></li> </ul>



\* Secondary to sepsis, ALI, ARDS, P/F ratio (PaO<sub>2</sub>/FIO<sub>2</sub>) <300 mm Hg. <sup>†</sup> Omega-3 fatty acids help modulate inflammation and support immune function.<sup>2,3</sup> <sup>‡</sup> Compared with a simple physical mixture of MCT and LCT oils, structured lipids are better absorbed and tolerated.<sup>4-7</sup> <sup>§</sup> Peptide-based formulas, compared with formulas containing only free amino acids or intact protein, provide better absorption, better tolerance, and better maintenance of GI-tract integrity.<sup>8</sup> <sup>||</sup> NutraFlora scFOS is a prebiotic that provides fuel for beneficial bacteria in the digestive tract that helps support a healthy immune system.<sup>9-11</sup> <sup>¶</sup> Carb Steady carbohydrate blend designed to help manage blood glucose response.

# Abbott Nutrition ICU Specialized Enteral Products Formulary

\* Gamma-linolenic acid.  
 † Value(s) based on typical fatty acid profile.  
 ‡ Eicosapentaenoic acid.  
 § Docosahexaenoic acid.  
 ¶ Alpha-linolenic acid.

Product	Oxepa®	Pivot® 1.5 Cal	Vital AF 1.2 Cal™	Vital® 1.0 Cal	Vital® 1.5 Cal	Optimental®	Glucerna® 1.2 Cal	Glucerna® 1.5 Cal	Nepro® with Carb Steady®
Cal/mL	1.5	1.5	1.2	1.0	1.5	1.0	1.2	1.5	1.8
Protein, g/L	62.7	93.8	75	40	67.5	51.3	60	82.5	81.0
Arginine, g/L Glutamine, g/L (inherent)	– 6.7	13 7.6	– 4.7	– 2.6	– 4.3	3.6 3.0	– 5.9	– 8.3	– 7.5
Fat, g/L GLA,* g/L Omega-3 Fatty Acids†: EPA,‡ g/L DHA,§ g/L ALA,¶ g/L MCT, g/L	93.8 4 4.6 2 3.1 23	50.8 – 2.6 1.3 2 10	53.9 – 2.7 1.1 1.4 24	38.1 – – – 1.6 18	57.1 – – – 2.5 27	28.4 – 2.29 1.0 – 8	60 – 0.6 0.3 2.4 –	75 – – – 3 –	96.0 – – – 2.4 –
Carbohydrate, g/L	105.3	172.4	110.6	130	187	139	114.5	133.1	161
Fiber Soluble, g/L Insoluble, g/L	– –	7.5 –	5.1 –	4.2 –	6 –	5.0 –	11.1 5	11.1 5	12.6 –
Fiber Source	–	NutraFlora® scFOS®	NutraFlora® scFOS®	NutraFlora® scFOS®	NutraFlora® scFOS®	NutraFlora® scFOS®	NutraFlora® scFOS®, Fibersol® (corn fiber), soy fiber, and oat fiber	NutraFlora® scFOS®, Fibersol® (corn fiber), soy fiber, and oat fiber	NutraFlora® scFOS®, Fibersol® (corn fiber)
Total Cal/g Nitrogen	150:1	100:1	100:1	156:1	139:1	122:1	125:1	114:1	139:1
Sodium, mg/L (mEq/L)	1310 (57.0)	1400 (60.9)	1266 (55.1)	1055 (45.9)	1500 (65.2)	1125 (48.9)	1110 (48.3)	1380 (60)	1060 (46.1)
Potassium, mg/L (mEq/L)	1960 (50.3)	2000 (51.3)	1688 (43.2)	1400 (35.9)	2000 (51.2)	1705 (43.7)	2020 (51.8)	2520 (64.6)	1060 (27.2)
Chloride, mg/L (mEq/L)	1690 (47.7)	1600 (45.2)	1266 (35.7)	1055 (29.8)	1500 (42.3)	1215 (34.3)	1280 (36.6)	1600 (45.7)	845 (23.9)
Water, g/L	785	759	811	842	764	832	805	759	727
Osmolality, mOsm/kg H <sub>2</sub> O	535	595	425	390	610	585	720	875	745
mL to meet 100% RDIs for Key Vitamins and Minerals	946	1000	1185	1422	1000	1422	1250	1000	944
Vitamin C, mg/L	850	300	422	350	500	215	260	325	105
Vitamin E, IU/L	320	250	253	70	100	215	39	48	95
Beta-carotene, mg/L	5.0	4.8	0	0	0	3.6	2.7	3.3	0
Other	Suitable for lactose intolerance, gluten-free, low-residue	Suitable for lactose intolerance, gluten-free, low-residue	Suitable for lactose intolerance, gluten-free, low-residue	Suitable for lactose intolerance, gluten-free, low-residue	Suitable for lactose intolerance, gluten-free, low-residue	Suitable for lactose intolerance, gluten-free, low-residue	Suitable for lactose intolerance, gluten-free, kosher	Suitable for lactose intolerance, gluten-free, kosher	Suitable for lactose intolerance, gluten-free, low-residue, kosher
Indications for Use	For modulating inflammation in sepsis, ARDS, and ALI patients	Metabolically stressed, immunosuppressed patients	Peptide-based, elemental for patients with GI intolerance and metabolic stress	Peptide-based, elemental for patients with impaired GI function and/or feeding intolerance	Peptide-based, elemental for patients with impaired GI function and/or feeding intolerance	Elemental for malabsorptive conditions	Diabetes or abnormal glucose tolerance/hyperglycemia	Diabetes or abnormal glucose tolerance/hyperglycemia	Acute renal failure, acute kidney injury, and stage 5 chronic kidney disease requiring dialysis
Closed System Available	Yes 1000 mL	Yes 1000 mL	Yes 1000 mL	Yes 1000 mL	Yes 1000 mL	Yes 1000 mL	Yes 1000 mL/1500 mL	Yes 1000 mL	Yes 1000 mL
HCPCS Codes	B4154	B4153	B4153	B4153	B4153	B4153	B4154	B4154	B4154

Every effort is made to ensure that all product information is accurate at the time of publication. However, this information is subject to change. Please refer to the product label for the most current ingredient, allergen, and nutrient profile information.

The HCPCS codes provided in this book are taken from government publications and are provided from information correct at the time of publication. They are provided for your information only. Health care providers are ultimately responsible for making appropriate product selections per individual patient and verifying that codes used for third-party billing are accurate for the items provided.

Fibersol, NutraFlora and scFOS are not registered trademarks of Abbott Laboratories.

Use under medical supervision.

©2011 Abbott Laboratories Inc.  
 74470-002/January 2011  
 LITHO IN USA  
 www.abbottnutrition.com

