Meeting protein goals higher than 1.2 g/kg/day reduces mortality¹. Try Peptamen® AF, an optimal high protein based formula that can help meet requirements and improve outcomes.
How does early and adequate feeding fit within your protocols in the ICU?
ICU patients receive only 59% of the nutrition prescribed to them\textsuperscript{2}
In general, what % of prescribed nutrition is actually received by ICU patients?
Energy alone is not sufficient for optimal nutrition

Protein play an important role in improving patient outcomes

Achieving protein and energy goals together reduces mortality\(^1\)
A protein intake higher than 1.2 g/kg/day is associated with lower mortality\textsuperscript{1}

Hospital mortality for all non-septic and non-overfed patients per protein intake group
PROVIDE THE RIGHT AMOUNT OF PROTEIN

- High protein intake is associated with low mortality\(^3\)
- ICU patients need higher amounts of protein\(^3\)

0.8 g/kg per day
Healthy person's protein needs

1.5 g/kg per day
ICU patient's protein needs
### Evidence supports higher protein intakes in the ICU

<table>
<thead>
<tr>
<th>Evidence</th>
<th>Population</th>
<th>Suggested protein target</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPEN/SCCM Critical Care Guidelines 2016⁴</td>
<td>BMI &lt; 30</td>
<td>1.2-2.0 g/kg/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>May be higher in burn/trauma</em></td>
</tr>
<tr>
<td></td>
<td>BMI 30 – 40</td>
<td>≥ 2.0 g/kg IBW/day</td>
</tr>
<tr>
<td></td>
<td>BMI ≥ 40</td>
<td>Up to 2.5 g/kg IBW/day</td>
</tr>
<tr>
<td></td>
<td>CRRT⁺, hemodialysis</td>
<td>Up to 2.5 g/kg/day</td>
</tr>
<tr>
<td>ASPEN Obesity Guidelines 2013⁵</td>
<td>Hospitalized adults with obesity</td>
<td>2-2.5 g/kg IBW/day</td>
</tr>
<tr>
<td>Hoffer and Bistrian 2012³</td>
<td>Most critically ill patients</td>
<td>2-2.5 g/kg/day</td>
</tr>
<tr>
<td>Dickerson et al. 2015⁶</td>
<td>Trauma patients &gt; 60 years</td>
<td>1.5-2.0 g/kg/day</td>
</tr>
<tr>
<td>PROT-AGE† Position Paper 2014⁷</td>
<td>&gt; 65 years with severe illness, injury or marked malnutrition</td>
<td>Up to 2.0 g/kg/day</td>
</tr>
</tbody>
</table>

*CRRT = Continuous Renal Replacement Therapy  PROT-AGE = ”Protein needs with aging” study group*
PROVIDE EASY TO ABSORB PROTEIN

ICU patients need high quality protein for:

- gastric emptying
- easy absorption
### Protein Quality Indicators

1. **Essential Amino Acid Content**
   - mg of essential amino acids/g protein

2. **Net Protein Utilization (NPU)**
   - % Nitrogen retained of Nitrogen ingested

3. **Biological Value (BV)**
   - % Nitrogen retained of Nitrogen absorbed

4. **Protein Efficiency Ratio (PER)**
   - Weight gain per g Nitrogen consumed

5. **Protein Digestibility Corrected Amino Acid Scores (PDCAAS)**
   - Digestibility corrected for essential amino acid content

<table>
<thead>
<tr>
<th>Protein</th>
<th>WHEY</th>
<th>CASEIN</th>
<th>SOY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essentials</td>
<td>609</td>
<td>511</td>
<td>360</td>
</tr>
<tr>
<td>NPU</td>
<td>92</td>
<td>76</td>
<td>61</td>
</tr>
<tr>
<td>BV</td>
<td>104</td>
<td>77</td>
<td>74</td>
</tr>
<tr>
<td>PER</td>
<td>3.2</td>
<td>2.5</td>
<td>2.1</td>
</tr>
<tr>
<td>PDCAAS</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
OPTIMIZE PROTEIN DELIVERY

PROVIDE THE RIGHT AMOUNT OF PROTEIN

PROVIDE EASY TO ABSORB PROTEIN
Peptamen® AF - reach your patient’s protein and energy goals

• Allows you to meet BOTH energy AND protein guidelines recommendation of 25 kcal/kg AND 1.5 kcal/kg

• High protein formula: 25% of calories from protein (47 grams per 500 ml)

• High quality protein source: 100% hydrolyzed whey protein

• Contains MCTs to promote absorption
How Peptamen® AF works

In the stomach:
Hydrolyzed whey protein remains liquid which
→ facilitates gastric emptying\textsuperscript{10}
→ promotes tolerance\textsuperscript{12,13}

In the intestine:
Branched chained amino acids:
→ help promote new cell growth
→ maintain lean body mass

MCTs:
→ help minimize fat malabsorption\textsuperscript{13,14,15}
→ promote easy absorption\textsuperscript{13,16}
→ prevent complications\textsuperscript{17}
What is important for your ICU patients

- Meeting protein goals are critical
- Peptamen® AF delivers high protein amounts and high quality protein source
- Delivering 80% of prescribed nutrition, clinical outcomes will improve²

Try Peptamen® AF on your next ICU patient


