Adults with COVID-19 Present with High Nutritional Risk \(^1\-^4\)

- Adults positive for COVID-19 have increased nutritional requirements due to a severe acute inflammatory status
- Many have comorbidities (diabetes, chronic kidney disease, etc.) which put them at even higher nutritional risk
- Decreased food intake and difficulty eating are often present and prevent them from meeting their nutritional requirements

Conduct Nutrition Screening \(^1\,^2\,^5\)

- Conduct nutrition screening using a validated nutrition screening tool (such as the Mini Nutritional Assessment (MNA\(^\text{®}\)) to identify (at-risk of) malnutrition

Estimate Nutritional Requirements \(^1\,^2\,^6\-^10\)

- **PROTEIN:** Estimate protein needs based on increased requirements for adults with acute or chronic disease (1.2-1.5 g protein/kg body weight [BW]/day), and severe illness or marked malnutrition (up to 2 g protein/kg BW/day)
- **ENERGY:** Estimate energy requirements using a weight-based formula: 27-30 kcal/kg BW/day; to be individually adjusted based on nutritional status, physical activity level, disease status and tolerance
- **MICRONUTRIENTS:** Assure daily provision of recommended dietary allowances (RDA) for micronutrients including vitamins C, D, A, E & B-vitamins, and zinc, selenium & iron. Deficiency of these micronutrients has been associated with adverse clinical outcomes during viral infections

Initiate Nutrition Care \(^1\,^2\,^11\-^13\)

- Provide a diet rich in nutrient-dense foods and initiate oral nutritional supplements (ONS)
- Provide 2-3 servings of ONS in accordance with individual needs and regular food intake
  - ONS shall provide ≥400 kcals/day including ≥30 g protein/day, and micronutrients to help meet daily nutritional requirements
  - Select ONS based on individual diet, nutritional needs and presence of specific co-morbidities
- Provide adequate hydration (about 3 L fluid/day); including water and clear liquid beverages to replace fluid losses and thin respiratory secretions

Monitor Diet and ONS Intake \(^1\,^2\,^5\)

- Encourage compliance and monitor nutritional intake
- If unable to meet nutritional requirements, initiate supplemental enteral feeding

Plan Nutritional Support During Recovery \(^1\)

- Nutritional support during recovery should continue with ONS and individualized nutrition plans. This is especially important since pre-existing nutritional risk factors continue to apply, and acute disease is likely to worsen the risk or condition of malnutrition
- Assure ONS usage for at least 1 month. Assess ONS efficacy after 1 month, and continue as needed
Conduct Nutrition Screening of Adults Positive for COVID-19

At-risk of Malnutrition or High Nutritional Risk Identified

Individual is able to Tolerate Oral Feedings

Estimate Nutritional Requirements

- **Protein**: 1.2-1.5 g protein/kg BW/day for acute or chronic disease; and up to 2 g protein/kg BW/day for severe illness or marked malnutrition
- **Energy**: 27-30 kcal/kg BW/day; to be individually adjusted based on nutritional status, physical activity level, disease status and tolerance
- **Micronutrients**: Assure provision of RDA for vitamins C, D, A, E & B-vitamins, and zinc, selenium & iron

Initiate Nutrition Care Plan

**Adequate Hydration**
Assure ~3 L fluid/day; including water & clear liquid beverages

**Nutrient-dense Foods**

2-3 Servings of Oral Nutritional Supplements per day
ONS to provide ≥400 kcals/day including ≥30 g protein/day, and micronutrients to help meet daily nutritional requirements

**ONS Product Selection based on Individual Diet & Nutritional Needs**

**Monitor Diet and ONS Intake**

Plan Nutritional Support during Recovery
- **Assure individualized nutrition plan and ONS for at least 1 month**
- **Assess ONS efficacy after 1 month, and continue as needed**

*Nestlé Health Science Oral Nutritional Supplement Offerings by Diet Order*

<table>
<thead>
<tr>
<th>ONS Diet Order</th>
<th>ONS Product Selection</th>
<th>Total Kcals (per 237 mL serving)</th>
<th>Kcal per mL</th>
<th>Protein (% Total Energy)</th>
<th>Carbs (% Total Energy)</th>
<th>Fat (% Total Energy)</th>
<th>Vitamins &amp; Minerals</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Protein</td>
<td>BOOST® High Protein Drink</td>
<td>240</td>
<td>1.0</td>
<td>20 g (33% TE)</td>
<td>28 g (44% TE)</td>
<td>6 g (23% TE)</td>
<td>27</td>
</tr>
<tr>
<td>High Calorie</td>
<td>BOOST PLUS® Drink</td>
<td>360</td>
<td>1.5</td>
<td>14 g (15% TE)</td>
<td>45 g (50% TE)</td>
<td>14 g (35% TE)</td>
<td>26</td>
</tr>
<tr>
<td>High Protein, High Calorie</td>
<td>BOOST® Very High Calorie (VHC)</td>
<td>530</td>
<td>2.24</td>
<td>22 g (17% TE)</td>
<td>52 g (39% TE)</td>
<td>26 g (44% TE)</td>
<td>26</td>
</tr>
<tr>
<td>Diabetes Friendly</td>
<td>BOOST Glucose Control® Drink</td>
<td>250</td>
<td>1.06</td>
<td>14 g (23% TE)</td>
<td>23 g (33% TE)</td>
<td>12 g (44% TE)</td>
<td>25</td>
</tr>
<tr>
<td>Renal Friendly</td>
<td>NOVASOURCE® Renal Drink</td>
<td>475</td>
<td>2.0</td>
<td>21.6 g (18% TE)</td>
<td>43.5 g (37% TE)</td>
<td>23.8 g (45% TE)</td>
<td>25</td>
</tr>
<tr>
<td>Clear Liquid Options</td>
<td>BOOST BREEZE® Drink</td>
<td>250</td>
<td>1.06</td>
<td>9 g (14% TE)</td>
<td>54 g (86% TE)</td>
<td>0 g (0% TE)</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>BOOST® SOOTHE Drink</td>
<td>300</td>
<td>1.26</td>
<td>10 g (13% TE)</td>
<td>65 g (87% TE)</td>
<td>0 g (0% TE)</td>
<td>0</td>
</tr>
</tbody>
</table>

For specific product information, visit [www.NestleHealthScience.us](http://www.NestleHealthScience.us)

For MNA® form and tools for clinicians, visit [www.mna-elderly.com](http://www.mna-elderly.com)

References:

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