Nutrition/Oral Nutritional Supplement Guidance for Facility-based Adult Residents with COVID-19

April 2020

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 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

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Conduct Nutrition Screening of Adults Positive for COVID-19

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At-risk of Malnutrition or High Nutritional Risk Identified

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Individual is able to Tolerate Oral Feedings

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Estimate Nutritional Requirements

Protein	Energy	Micronutrients
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	27-30 kcal/kg BW/day; to be individually adjusted based on nutritional status, physical activity level, disease status and tolerance	Assure provision of RDA for vitamins C, D, A, E & B-vitamins, and zinc, selenium & iron

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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*

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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

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

For specific product information, visit www.NestleHealthScience.us

References: 1. Barazzoni R et al. *Clin Nutr* 2020;March 24 (E pub ahead of print). **2. Jin** et al. *MMR* 2020;7:4. **3. Bhatraju PK** et al. *NEJM* 2020;March 30 (E Pub ahead of print). **4. Rabi FA** et al. *Pathogens* 2020; 9:231. **5. ASPEN** Adult Malnutrition Care Pathway 2015. **6. Bauer J** et al. *J Am Med Dir Assoc* 2013;14:542-59. **7. Deutz NEP** et al. *Clin Nutr* 2014; 33:929-36. **8. McClave SA** et al. *JPEN* 2016;40:159-211. **9. Zang L, Liu Y.** *J Med Virol* 2020;92:479-90. **10. Semba RD, Tang AM**. *Br J Nutr* 1999;81:181-89. **11. Volkert D** et al. *Clin Nutr* 2019;38:10-47. **12. Gomes F** et al. *Clin Nutr* 2018;37:336-53. **13. ASPEN** Nutrition and Hydration: Quick Facts for COVID-19 Patients 2020.

This document is not intended to be a substitute for clinical judgment.

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