

# Malnutrition...An Unintended Consequence of COVID-19 Webinar

## Malnutrition... An Unintended Consequence of COVID-19

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Becky Dörner  
& Associates

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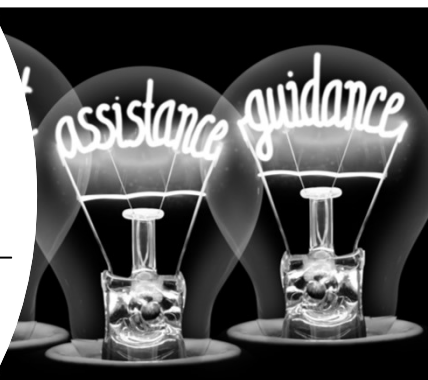
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## Objectives

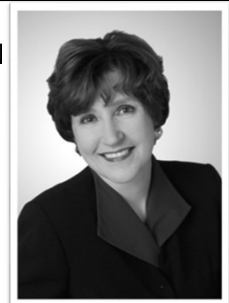
1. Discuss risk factors for COVID-19 infection
2. Describe common unintended consequences of social distancing
3. Explore current nutrition guidance for adults with COVID-19 and recovering from COVID-19



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## Mary Litchford, PhD, RDN, LDN

- International speaker, author, medical-legal expert, consultant to HC providers
- President, CASE Software & Books
- President/Past-President, NPUAP 2017-2019
- Author of reference books and advanced-level CE courses (available at [www.beckydorner.com](http://www.beckydorner.com)):
  - *Nutrition Focused Physical Assessment: Making Clinical Connections*
  - *Laboratory Assessment of Nutritional Status: Bridging Theory & Practice*
  - *Nutrition & Pressure Ulcers: Putting New Guidelines into Practice*



**Disclosures:** Consultant to Prosynthesis Labs, Medline Industries; President, Case Software and Books. There are no conflicts of interest for this webinar.

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## Who is at Highest Risk for COVID-19?

According to the CDC....

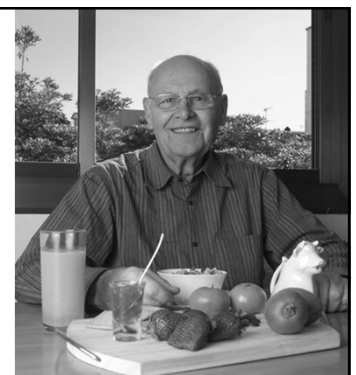
- Individuals 65 years +
  - Live in a post-acute care setting
  - Have underlying medical condition
    - Chronic lung disease
    - Diabetes
    - Obesity (BMI >40)
    - Immune-compromised
- [www.cdc.gov](http://www.cdc.gov)



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## Who is at Highest Risk for COVID-19?

- Emerging data from France, Germany, Italy, South Korea and Spain suggest:
  - not a clear gender gap is contracting virus, BUT...
  - almost twice as many men die from COVID19 than women
  - diabetes is a common comorbidity in individual with severe cases of COVID-19



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## Unintended Consequences of Social Distancing

- Isolation, loneliness
- Poor diet; limited access to grocery stores
- Less activity/exercise than usual
- Anxiety; substance abuse
- Decline in functional status
- According to the NAS.... Older adults may be more susceptible to unintended consequences of social distancing

National Academies of Sciences, Engineering, and Medicine 2020. *Social Isolation and Loneliness in Older Adults: Opportunities for the Health Care System*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25663>. © CSB 2020



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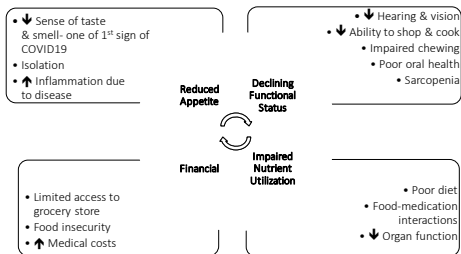
## What Do Your Patients/Residents Eat?



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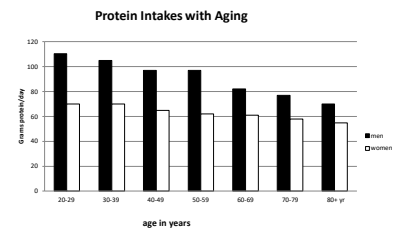
## Footsteps to Undernutrition/Malnutrition



Libafford, M. Counteracting the Trajectory of Frailty and Sarcopenia in Older Adults. *Age-Acting Press* 2014. © CSB 2020

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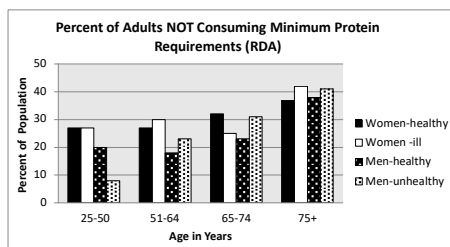
## Protein Intakes Over the Lifecycle



Wakimoto, J, Block, G. Dietary intake, dietary patterns and changes with age: an epidemiological perspective. *J Gerontol a Biol Sci Med Sci* 2001; 56, (2) 65-80. © CSB 2020

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## Protein Intakes in Health and Sickness



Wright, JD. Dietary intake of ten key nutrients for public health, US 1999-2000. Advance data from vital and health statistics. No. 334 Hyattsville, MD: NCHS 2003. © CSB 2020

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## Nutrition Consequences of COVID19

- Unintended weight loss
- Increased nutrition needs
- Inadequate food/fluid intake
- Malnutrition
- Sarcopenia

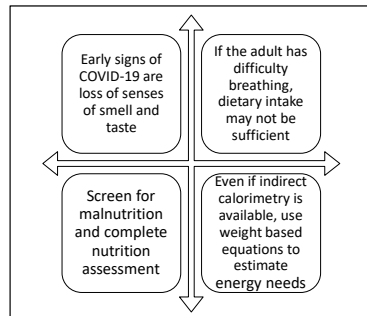


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# Malnutrition...An Unintended Consequence of COVID-19 Webinar

## Practical Guidance for Nutrition for Adults with Suspected COVID-19



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## Practical Guidance for Nutrition for Adults with COVID-19 Diagnosis

- Screen all new admissions for malnutrition to document malnutrition diagnosis if appropriate
- Nutrition assessment is based on data from EHR; NFPA is not advised unless PPE is provided
- Early nutrition support with fortified foods or oral nutritional supplements is recommended

- Adults with GI symptoms may need not tolerate oral intake without meds
- Enteral nutrition maybe appropriate if adult is unable to consume adequate oral intake

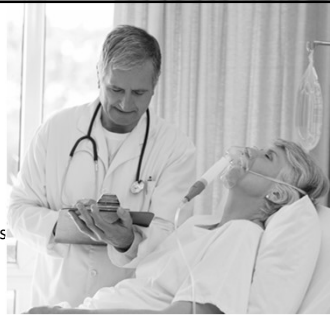
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## Lessons Learned from Our Colleagues in Italy

Most COVID-19 infected patients present with:

- Severe inflammation and anorexia leading to a drastic reduction of food intake
- Eating difficulties due to symptoms
- Many patients at risk for or malnourished



Caccaolanaza, et al. Early nutritional supplementation in non-critically ill patients hospitalized for the 2019 novel coronavirus disease (COVID-19): Rationale and feasibility of a shared pragmatic protocol. *Nutrition* 2020 online pre-proof

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## Italian Protocol for Non-ICU COVID19 Patients

- Oral whey protein (20g/d)
- IV multivitamin, multiminerals, trace minerals to = RDA
- 50,000 IU/week vitamin D if 25(OH)D < 20 ng/mL; 25,000IU/week if 25(OH)D > 20 ng/mL to < 30 mg/mL
- 2-3 high Pro, high Kcal ONS/d (600-900 Kcal, 35-55 g Pro consumed between or after meals)
- If ONS not tolerated for 2 consecutive days, consider more aggressive nutrition support

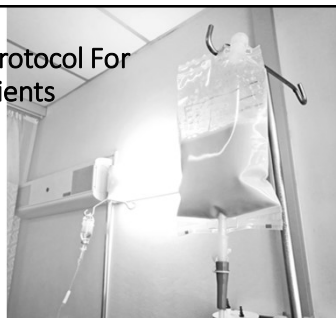
Caccaolanaza, et al. Early nutritional supplementation in non-critically ill patients hospitalized for the 2019 novel coronavirus disease (COVID-19): Rationale and feasibility of a shared pragmatic protocol. *Nutrition* 2020 online pre-proof

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## Advantages of Italian Protocol For Non-ICU COVID-19 Patients

- Simplified & practical approach
- Reasonable to implement in current emergency crisis in Italian healthcare system
- Addresses nutrition needs that may be overlooked
- Protocol based on best scientific evidence available



Caccaolanaza, et al. Early nutritional supplementation in non-critically ill patients hospitalized for the 2019 novel coronavirus disease (COVID-19): Rationale and feasibility of a shared pragmatic protocol. *Nutrition* 2020 online pre-proof

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## Limitations of Italian Protocol For Non-ICU COVID-19 Patients

- Not an Evidenced Based Guideline
- Based on observation of nutritional characteristics of COVID-19 patients
- Based on a reasonable approach for Italian health care system with limitations to do comprehensive nutrition assessments
- Not always consistent with other current guidelines in clinical nutrition

Caccaolanaza, et al. *Nutrition* 2020 online pre-proof

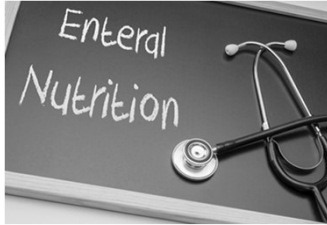
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## Practical Guidance for Nutrition for Adults with COVID-19 Diagnosis in ICU

- Goal: Start enteral feeding within 24-36 hours of admission to ICU or within 12 hours of intubation and placement on mechanical ventilation
- Follow SCCM/ASPEN guidelines for nutrition support of critically ill patient (70-80% energy needs and 1.2-2.0 g protein/kg actual body wt)
- Start slowly and monitor for refeeding syndrome



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## Enteral Nutrition for Individuals in ICU

- Acute Respiratory Distress Syndrome proning is used for improved oxygenation
- Episodes of proning usually last 12 hours or more
- If adult is fed by NG tube, turn off feeding 1 hour before prone position turn. Restart TF in prone position as ordered.
- Risk for pressure injuries. See free infographic on PI Prevention with Proning [www.NPIAP.com](http://www.NPIAP.com)

Prone



Image from [https://upload.wikimedia.org/wikipedia/commons/7/7c/Supine\\_and\\_prone\\_2012-02-20.jpg](https://upload.wikimedia.org/wikipedia/commons/7/7c/Supine_and_prone_2012-02-20.jpg)

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## Definitions

- **Trendelenburg Position:** body is laid supine or prone, or flat on the back on a 15-30 degree incline with the feet elevated above the head
- **Reverse Trendelenburg position:** body supine or prone on an incline but with the head elevated 15-30 degrees



Image from Clinical Procedures for Safe Patient Care, 2012. Used under <https://creativecommons.org/licenses/by/4.0/>



Image from AHRQ.gov

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## Enteral Nutrition Feeding in Prone Position

- Feed in supine or prone position
- Use Reverse Trendelenburg Position at least 10-25% degrees
- Nasogastric feeding preferred
- Continuous feeding preferred over bolus
- Secure feeding tube away from skin



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## Short Term Consequences of COVID-19

- Weakness
- Loss of muscle mass
- Functional decline - difficulty with ADLs
- Inflammatory stress of COVID may increase risk of other chronic diseases
- Victims of ICU - physical, cognitive and mental health problems
- Many unknowns

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## Practical Guidance for Nutrition for Adults Recovering from COVID-19

- Undernutrition, malnutrition and vitamin mineral deficiencies are likely and need to be addressed with foods, fortified foods and dietary supplements
- Restoration of lost lean mass and strength will require sufficient protein and exercise
- Use sarcopenia guidelines to improve functional status unless contraindicated



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## Keep Reading News on COVID-19

- Many studies are being published on ways to treat COVID-19
  - Use critical thinking skills to see if the authors conclusions are consistent with nutrition science
- 15,000+ Americans reported COVID-19 scams to Federal Trade Commission! (As of 4/10/20)
- Nearly \$12 million in losses due to fraud!



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## Thank you!



### To Mary Litchford for Supporting this Webinar

- Contact mdlphd@casesoftware.com

### For more information

- Visit [www.beckydorner.com/COVID-19](http://www.beckydorner.com/COVID-19)
- Sign up for our free electronic newsletter to stay up to date on current news
- References and resources provided with handout

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## Resource

- Enhancing Nutritional Value with Fortified Foods: A Resource for Professionals  
<https://www.beckydorner.com/wp-content/uploads/2018/04/2018EnhancingNutritionalValue-3859.pdf>
- Taylor, B, Patel J, Martindale, R, Warren, M, McClave, S. Joint webinar from Society of Critical Care Medicine and A.S.P.E.N. on Nutrition Support for Critically Ill Patients with COVID-19 Disease: Top 10 Key Recommendations. April 7, 2020. <https://www.youtube.com/watch?v=dNmMW3ybXdY>



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### Our most popular publications include:

- Diet and Nutrition Care Manuals (2019 Comprehensive or Simplified)
- Policy and Procedure Manual (2019)
- Emergency/Disaster Plan for Food and Dining Services (2018)

### More titles (see website for all titles – added frequently):

- Nutrition and Integrative Medicine: A Primer for Clinicians (2020)
- The Genomic Kitchen: Your Guide to Understanding and Using the Food-Gene Connection for a Lifetime of Health (2020)
- Salt Fat Acid Heat: Mastering the Elements of Good Cooking (2020)
- Nutrition & Diabetes Pathophysiology and Management (2019)
- Minimum Data Set (MDS) 3.0 RAI Manual v1.17 Course (2019)
- CMS State Operations Manual Appendix PP Course (2019)
- AADE Quick Guide to Medications (2019)
- Sports Nutrition: A Handbook for Professionals, 3<sup>rd</sup> Edition (2019)
- Nutrition for the Older Adult (2019)
- Food Code 2017 Course (2019)

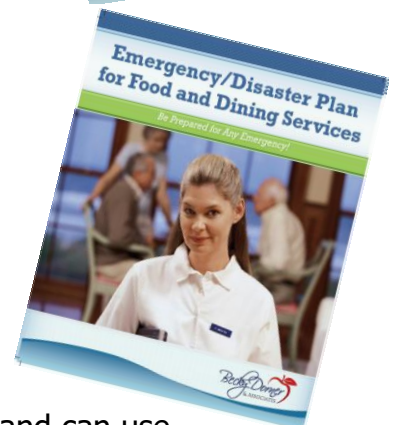
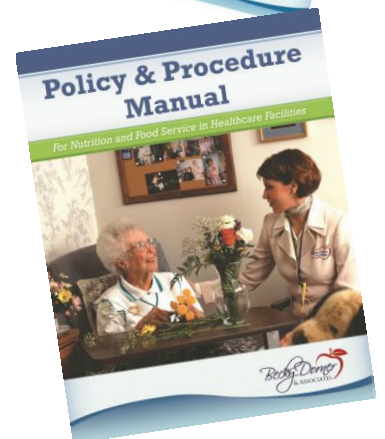
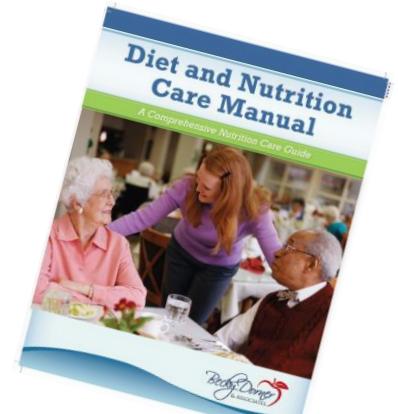
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- Kathy Warwick, RD, CDE, Owner, Professional Nutrition Consultants, LLC, Madison, Mississippi