



**Nutrition during COVID 19 times**  
immunity, isolation and food: advice and practical solutions

Webinar for Dietitian Connection  
June 17, 2020

Ngairé Hobbins APD

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**Disclosure:**

*I present this webinar for Dietitian Connection acknowledging that I have received financial support from Abbott Australasia to prepare and present this content. I consider this to be an opportunity to present material to an audience of dietitians with whom I may not otherwise be able to speak directly in the interests of advancing understanding among my peers of specific issues around nutrition and older adults. I do not believe the material I present herein is unduly influenced by the financial support I have received for this work.* Ngairé Hobbins, June 2020

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**Overview:**

- Most recent focus has been on acute care and treatment options
- What increases vulnerability to COVID and seasonal flu
- Signs that alert to heightened risk and how dietitians can help
- Gathering evidence/developing theories - nutrition & prevention of COVID
- Particular issues in aged care – residential and community
  - dietitian role and responsibilities
  - working with the new standards to ensure support for aged care ‘consumers’
  - strategies to help ‘consumers’ maintain capacity through these times
- Recovery strategies

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**Learning Objectives:**

1. Understand the part played by nutrition in COVID-19 incidence
2. Explain why older adults may be more vulnerable, how they can reduce their risk and strategies to minimise infection and maintain capacity during home confinement (or isolation/semi-isolation)
3. Describe the challenges and suggested strategies for dietitians supporting older adults through these times

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**Muscle is much more than what moves us around**



Muscle provides a protein reserve for:

- the immune system
- organ repair and maintenance
- repair after injury/surgery etc
- brain glucose supply

Muscle also assists insulin action:

- helps avoid diabetes and minimise symptoms

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**Bodyweight and impact of weight loss**

	Younger adults (below mid 60s)	Older adults
<b>Weight Loss</b>	Vital if overweight	Not necessarily helpful
<b>Fat vs Muscle</b>	Proportionally more fat lost	Muscle loss can be substantial
<b>Ability to Rebuild Muscle</b>	Relatively easy to rebuild	Lack of anabolic stimuli impairs rebuilding
<b>Role of Physical Activity</b>	Physical activity important but dieting alone helpful	Must include good resistance exercise – dieting alone more likely harmful

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**Muscle loss can be disastrous – especially in later adulthood**



- Increased incidence and severity of illness, impaired wound repair, slowed recovery from illness/accident or surgery
- Drives chronic inflammation
- Worsens (or initiates diagnosis) of T2 diabetes/Insulin Resistance
- Potential impact on brain fuel supply
- Alters medication clearance rate
- Increases physical incapacity/social isolation

**Malnutrition worsens outcomes in COVID 19: ESPEN May 2020**

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**ESPEN Practical Guidance for Nutrition in COVID**

Based on the best of knowledge and clinical experience

- emphasis on hospitalisation
- no dedicated studies in community, but guidance applies

Malnutrition increases risk of morbidity, mortality:

- Prevention
- Screening and assessment
- Prompt treatment

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**Nutrition and muscle**

European Journal of Sports Science. May 12, 2020. *Impact of sedentarism during COVID home confinement (sic)*. Narici et al:

- Looked at studies on inactivity, bed rest, limb suspension etc
- Influence on metabolic flux – (incl glycogen and lipid synthesis and lysis)
- Influence on systemic inflammation
- Impact on various aspects of health/capacity

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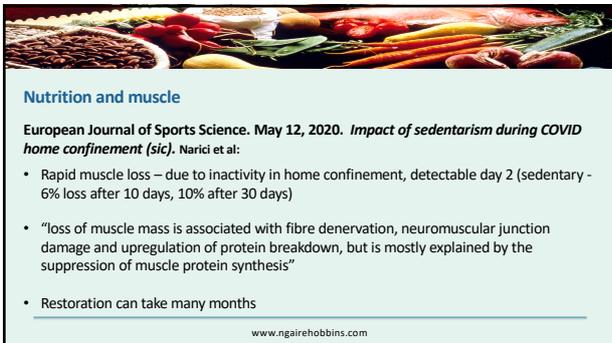
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**Nutrition and muscle**

European Journal of Sports Science. May 12, 2020. *Impact of sedentarism during COVID home confinement (sic)*. Narici et al:

- Rapid muscle loss – due to inactivity in home confinement, detectable day 2 (sedentary - 6% loss after 10 days, 10% after 30 days)
- “loss of muscle mass is associated with fibre denervation, neuromuscular junction damage and upregulation of protein breakdown, but is mostly explained by the suppression of muscle protein synthesis”
- Restoration can take many months

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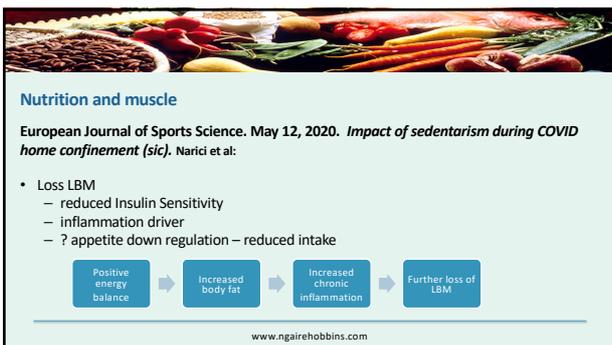
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**Nutrition and muscle**

European Journal of Sports Science. May 12, 2020. *Impact of sedentarism during COVID home confinement (sic)*. Narici et al:

- Loss LBM
  - reduced Insulin Sensitivity
  - inflammation driver
  - ? appetite down regulation – reduced intake

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graph LR; A[Positive energy balance] --> B[Increased body fat]; B --> C[Increased chronic inflammation]; C --> D[Further loss of LBM]
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**Nutrition and muscle**

European Journal of Sports Science. May 12, 2020. *Impact of sedentarism during COVID home confinement (sic)*. Narici et al:

- Reduce kJ intake to avoid weight gain (15-25%)
- 1.3 g protein/kg bodyweight/day
- Largest meal early, smallest meal in evening at least 12 hr overnight fast
- Protein evenly spread across meals
- Avoid processed, refined foods as much as possible (“Consumption of ultra-processed foods is strongly associated with frailty risk in older adults” Sandoval-insausti et al)

**BUT - older adults need different consideration**

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**Nutrition and muscle**

European Journal of Sports Science. May 12, 2020. *Impact of sedentarism during COVID home confinement (sic)*. Narici et al:

**Different considerations for older adults:**

- Reduce kJ intake - **might also reduce protein intake**
- 1.3 g protein/kg bodyweight/day - **might need to be higher at 70+, given most recommend 1.2g protein/kg/day for 70+**
- Largest meal early, smallest in evening at least 12 hr overnight fast - **reduced appetites, small meals may not be achievable with longer breaks**
- Protein evenly spread across meals - **yes**
- Avoid processed, refined foods as much as possible - **yes**

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**What else to consider in COVID times?**

**An effective immune system:**



- Advice to 'boost' immune capacity is misguided
- Strengthening immune capacity is important
  - Vitamin C, Zinc
  - Antioxidants/Anti-inflammatory foods
  - Vegetables, fruits, nuts, seeds – local, seasonal, fresh if possible
  - Good oils – olive, nut, seed, marine sourced (oily fish)

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**An effective immune system:**

**Zhang, L, Liu, Y. Potential interventions for novel coronavirus in China: A systematic review.**

- Vitamins and minerals associated with increased viral infection/ respiratory illness risk:
  - Vitamins A, B, C, D, E
  - Selenium, zinc, iron
  - Omega 3 fats/oils
- Foods:
  - Antioxidants/Anti-inflammatory foods
  - Vegetables, fruits, nuts, seeds – local, seasonal, fresh if possible
  - Meat, fish, seafood
  - Good oils – olive, nut, seed, marine sourced (oily fish)

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**What else to consider in COVID times?**

**Vitamin D**

- Evidence low Vit D is associated with poor outcomes in COVID-19
- Higher incidence of COVID-19 in European countries with low Vit D status
- Home isolation/reduced outdoor activity impacts levels

**In older people, isolation itself can impact appetite, food security and thus nutritional status**

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**What about Residential Aged Care?**

- Malnutrition incidence is likely to increase
  - Social isolation, boredom – reduced appetite
  - Reduced food assistance from family/ special food provision
  - Reduced engagement with or attention to value of the dietitian
- Ongoing screening, weight monitoring and dietitian support is essential
- Physical activity initiatives become increasingly important
- Protein intake needs close attention – fortification, supplementation likely to be necessary
- Special food days, treat foods to maintain interest and appetite

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**To summarise the role of dietitians:**

1. **Reduce muscle loss:** Create awareness of the dangers of muscle loss with inactivity/weight loss
2. **Increase protein intake:** Offer guidance on activity/protein especially – food first with supplements/ fortification as necessary : variety/interest essential
3. **Advocate for social connection:** Advocate in aged care for ongoing dietitian involvement, for ongoing dining room access, for whatever social connections are possible, for physical activity
4. **Focus on new ACQ standards:** Consumer focused, dignity of risk, choice.
5. **Improve recovery:** physical activity; getting out and about; protein, colours, good Omega-3

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**Key Points:**

- Prevent, screen for and promptly treat malnutrition
- Ensure older adults are supported with protein, access to activity and foods to supply essential vitamins and minerals
- Advocate for attention to the specific needs of older adults

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**Questions?**

**References and links**

- Vitamin D and COVID: [www.thelancet.com/pdfs/journals/landia/PIIS2213-8587\(20\)30183-2.pdf](http://www.thelancet.com/pdfs/journals/landia/PIIS2213-8587(20)30183-2.pdf)
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