Workshop

# Nutrition for Healthy Aging

## Proactively Getting Ahead of Strength & Mobility Challenges

**WONCA World Conference 2023**

World Organization of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians
hosted by the Royal Australian College of General Practitioners (RACGP)

**Sydney, Australia**
**25th October 2023**

Nestlé HealthScience

FOR HEALTHCARE PROFESSIONALS ONLY

# Program

**Welcome & Introduction**
**CHAIRPERSON**
Prof. Ma. Teresa Tricia Guison-Bautista
Department of Preventive, Family, and Community Medicine at the University of Santo Tomas, Philippines.

**Nutritional adequacy: establishing and protecting the foundation for strength and vitality into old age**
Dr. Sandra Iuliano
Senior Research Fellow, Department of Endocrinology, Austin Health; Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne, Australia.

**An evidence-based approach to recommending nutrition or the prevention and management of mobility challenges**
Dr. Leonidas Karagounis
Professor of Research Translation and Enterprise, Australian Catholic University, Melbourne, Australia.

**Tools and resources to evaluate patients' nutritional status and prioritize actionable care**
Susan Bloomfield-Stone
Clinical Dietitian, Malnutrition Intervention Clinic, Concord Hospital, Sydney.

**Putting the research into practice – interactive case studies**
All, including audience

**Q&A, Closing**

**Prof. Ma. Teresa Tricia Guison-Bautista**
**MD, MHA, FPAFP, FPCGM**

# Welcome & Introduction

## Chair biography

Professor Bautista is a board-certified geriatrician and family medicine specialist. Currently, she heads the Department of Preventive, Family, and Community Medicine at the University of Santo Tomas, the largest medical school in the Philippines and the oldest in Asia. She also chairs the same department in two public tertiary hospitals. In academia and clinical practice, she promotes older adults' well-being and quality of life. Moreover, she is a crucial member of a think-tank that plans the evolving landscape of aged care by setting up Geriatric Centers offering services and training in public and private hospitals in the country. Her thesis dealt with the improvement of the health and wellness of community-dwelling seniors and continues to serve as fuel to this purposeful path. Just a couple of months back, Dr. Bautista was one of the recipients of the Australia Awards Fellowship Grant from the Department of Foreign Affairs and Trade that focuses on Capacity Building for Aged Care: Networks of Influence and Leadership among developing nations. This allowed her to visit aged care facilities in Adelaide, Canberra and Sydney and interact with the key people of the Department of Health.

Dr. Bautista is a dynamic leader in the health profession with years of hands-on initiatives in fast-paced hospital and community environments in the field of clinical medicine and research. She is committed to promoting age-friendly care.

# Abstract

"Nutrition for Healthy Aging: Proactively Getting Ahead of Strength & Mobility Challenges" is a topic that affects each of us, directly or indirectly. We all embark on a journey that intersects the realms of science, wellness, and aging gracefully. Nutrition plays a vital role in promoting not only long life, but also the quality of life as we age.

The number of older people is exponentially growing, especially in Africa, followed by Latin America, the Caribbean, and Asia. Eighty percent of the older population will live in less developed countries in 2050. Developing countries must adapt quickly to the aging population. Furthermore, aging is taking place alongside other broad social trends that will affect the lives of older people. Economies are globalizing, people are more likely to live in cities, and technology is evolving rapidly. Demographic and family changes mean fewer older people with families to care for them.

From 2015 to 2030, the World Health Organization (WHO) has shifted its primary emphasis to 'healthy aging.' This new approach replaces the previous policy framework known as 'active aging,' established in 2002. Both healthy aging and active aging underscore the importance of multidisciplinary efforts and the empowerment of older individuals to continue contributing to their families, communities, and economies.

Aging is a natural and inevitable part of the human experience. However, it does not mean we have to resign ourselves to the limitations that come with it. With the right knowledge and strategies, we can actively take charge of our health and well-being, by making conscious choices about our nutrition to empower us to maintain our strength and mobility well into our golden years.

Among chronic conditions, the most frequent ailment in older adults is impaired mobility affecting 40% of 50–70-year-olds. Contributing to this is sarcopenia - a well-recognized age-related loss of muscle mass and function -- associated with multiple variables, including age, sex, region, ethnicity, health status, gut microbiome, and a multitude of factors encompassing psychological, social, behavioral, genetic, and biochemical. Thus, malnutrition impacts overall health and resilience, and nutritional adequacy is the cornerstone.

In an era where personalized medicine and patient-centered care are at the forefront, understanding the nutritional status of our patients is paramount. It goes beyond the realms of dietary choices; it delves into the core of prevention. Proper assessment and prioritization of actionable care are the keystones in this process.

## References

1. UN Decade of Healthy Aging, 2020
2. WHO Healthy Ageing, October 2020

## Dr. Sandra Iuliano

# Nutritional adequacy: establishing and protecting the foundation for strength and vitality into old age

## Speaker biography

Dr. Iuliano is a senior research fellow in the department of medicine, University of Melbourne. She has worked extensively in the aged care sector in particular researching food-based approaches to improving health outcomes in residents. Dr Iuliano's most recent trial involved over 7000 residents in 60 residential aged care homes that reduced fractures and falls and prevented malnutrition. Dr Iuliano presented evidence at the Royal Commission in aged-care and is a member of the National Aged-care Advisory Council. She is a strong advocate for improving nutritional care and quality of life via improved food provision in aged care.

# Abstract

Ageing is associated with numerous physiological and other changes that increase nutrient requirements. One change is the greater need for protein to off-set the age-related blunting of the anabolic response to protein ingestion. The heightened nutrient requirements need to be reflected in adequate intake of foods that provide the respective nutrients and the number of servings from each of the food groups to fulfil requirements. As food intake is often lower in older compared to younger adults, intake of nutrient dense foods becomes even more important so nutrient needs can be met within a limited intake. Inadequate food intake and increased nutrient demand are contributors to malnutrition risk. The number of older adults that are malnourished or at risk of malnutrition is not well defined due to differences in assessment tools used and the method of selection of participants, so is likely under reported in the community and other settings. However, those that are malnourished are at increased risk of falls, fractures, hospitalisation (with protracted hospital stay), pressure injuries, negative outcomes from infections and mortality.

Preventing malnutrition is multifaceted, and so requires a combined approach. General practitioners are key players in malnutrition prevention as they are often the main health care professional that older adults see on a regular basis. Treatment often commences with the prescription of oral nutritional supplementation. Oral nutritional supplements are effective in falls prevention if compliance is maintained and enable regaining of weight over the short-term (up to 6 months). After this time food-based approaches need to be considered to ensure a continued intake of nutrient dense foods that have demonstrated efficacy in reducing adverse clinical outcomes. General practitioners have a significant influence on patients so are a central conduit in directing patients to the appropriate allied health professionals when required and will likely influence the adoption of recommendations.

## Dr. Leonidas G Karagounis, PhD

# An evidence-based approach to recommending nutrition for the prevention and management of mobility challenges

## Speaker biography

Dr. Karagounis is currently Professor of Research Translation & Enterprise at the Mary MacKillop Institute for Health Research (MMIHR) at ACU in Australia. He trained as a Nutritional Biochemist (BSc, Hons) and holds a Ph.D in Molecular Nutrition and Physiology from the University of Nottingham Medical School in the UK. Following postdoctoral studies in Melbourne, he was awarded a Fellowship from the Chinese Academy of Sciences, at the Institute of Biochemistry and Cell Biology in Shanghai. At the same time, he was appointed as a senior scientist and later a project manager at the global Nestlé Research Headquarters in Switzerland where he developed and led research into dietary needs and physical activity in both child and adult populations in health and disease prevention. In 2018 he was appointed the role of Global Science Lead in metabolic health and healthy aging at Nestlé Health Science where he was responsible for defining and leading multiple large-scale innovation projects.

In addition to his current role at ACU, Dr Karagounis is an adjunct Professor at the Institute of Social and Preventive Medicine (ISPM) in Bern, Switzerland. He is Chief Science Officer at NEAT Science and sits on the Board of Directors at Siftlink, a start-up company that develops computational modelling systems and AI to accelerate R&D in the health science ecosystem.

He has co-authored several books and scientific papers in the field of human nutrition and physiology across the life course in health and disease and is an active reviewer for several major journals in human nutrition and physiology.

# Abstract

Population ageing is a major demographic trend worldwide due to improved health and longevity. This global ageing phenomenon will have a major impact on health-care systems worldwide due to increased morbidity and greater needs for hospitalization and/or institutionalization. As the ageing population increases worldwide, there is an increasing awareness of the importance to maintain 'functional longevity', the capacity to remain functional for as long as possible. Skeletal muscle is fundamental to mobility, health, and overall physical independence. The progressive loss of skeletal muscle mass and function (i.e., muscle strength and endurance and ability to perform daily physical activities) with advancing age is a well-documented process [1] that may lead to functional limitations, frailty, and hospitalization. This impairment in functional longevity may be impacted by several factors including a) reductions in muscle protein synthesis (MPS) [2], b) impaired neuromuscular activation [3] and, c) increased rates of muscle protein breakdown and inflammation [4]. The ability to enable functional longevity relies on the early adoption of health behaviours such as appropriate nutrition and physical activity which in turn help maintain skeletal muscle function.

Certain nutrients such as protein and ω3 polyunsaturated fatty acids (PUFAs) are widely studied and have demonstrated efficacy in stimulating muscle protein synthesis. In addition, a newly emerging research area that has also been associated with improvements in muscle function is the inclusion of certain probiotics [5]. The exact mechanisms by which these help is unclear, but preclinical studies have shown that certain strains may lower markers of systemic inflammation [6].

# References

1. Morley, J.E., et al., Sarcopenia with limited mobility: an international consensus. J Am Med Dir Assoc, 2011. 12(6): p. 403-9.
2. Cuthbertson, D., et al., Anabolic signaling deficits underlie amino acid resistance of wasting, aging muscle. Faseb j, 2005. 19(3): p. 422-4.
3. Deschenes, M.R., et al., Adaptive Remodeling of the Neuromuscular Junction with Aging. Cells, 2022. 11(7).
4. Draganidis, D., et al., Low-Grade Systemic Inflammation Interferes with Anabolic and Catabolic Characteristics of the Aged Human Skeletal Muscle. Oxid Med Cell Longev, 2021. 2021: p. 8376915.
5. Prokopidis, K., Giannos, P., Kirwan, R., Ispoglou, T., Galli, F., Witard, O. C., Triantafyllidis, K. K., Kechagias, K. S., Morwani-Mangnani, J., Ticinesi, A., and Isanejad, M. (2023) Impact of probiotics on muscle mass, muscle strength and lean mass: a systematic review and meta-analysis of randomized controlled trials. J Cachexia Sarcopenia Muscle 14, 30-44 .
6. Seo, E., Truong, C. S., and Jun, H. S. (2022) Psoralea corylifolia L. seed extract attenuates dexamethasone-induced muscle atrophy in mice by inhibition of oxidative stress and inflammation. J Ethnopharmacol 296, 115490.

## Dr. Sandra Iuliano

# Tools and resources to evaluate patients' nutritional status and prioritize actionable care

## Speaker biography

Susan Bloomfield-Stone is a clinical dietitian, who, throughout her career, has worked at several major Sydney metropolitan tertiary teaching hospitals. She is currently working in the Malnutrition Intervention Clinic at Concord Hospital. Susan has clinical expertise across a variety of medical specialties including aged care, oncology, paediatrics, gastroenterology, and critical care, and has also held management positions. Susan's primary interest is in patient and family centred care. She is committed to helping patients achieve their nutrition goals through a combination of evidenced based practices and a nurturing holistic care approach. Susan is a member of the Dietitians Association Australia and is an Accredited Practicing Dietitian. In 2022 Susan's contribution to excellence in patient care was recognised by Sydney Local Health District when she was awarded "Allied Health Professional of the Year".

# Abstract

Malnutrition in the ageing population is an increasing phenomenon which unfortunately, for many, remains undetected. Chronic comorbidities, changing cognition and complex social situations can make identification of malnutrition challenging, particularly in the primary healthcare arena where clinicians are frequently time poor. However, if risk factors are detected early, effective interventions such as nutrition education, oral nutrition supplementation and the implementation of increased family and community supports can help reduce the negative impacts of malnutrition on health status. Key nutritional risk factors can be identified as "red flags" and time-effective nutrition screening tools and management strategies can be utilized in general practice. A triage model that can be used by GPs to prioritise nutritional concerns and decision making is presented with key evidence-based resources highlighted to facilitate this process (Malnutrition Action Pathway). Finally, authentic patient case studies, each an example of the success of early nutritional intervention in this vulnerable population, are included.

# Malnutrition Action Pathway

## Part A

**Look & Listen for Red Flags**
that could indicate malnutrition or risk.

*Tick any that apply*

### Visual Indicators

- [ ] Unintentional weight loss
- [ ] Visible fat or muscle loss
- [ ] Other visual signs of poor nutrition

### Social Indicators

- [ ] Poor Food Access
- [ ] Food Insecurity
- [ ] Career Stress
- [ ] Social Isolation
- [ ] Bereavement
- [ ] Limited Nutrition or Cooking Skills
- [ ] Fixated eating
- [ ] Unnecessary food restrictions

### Clinical Indicators

- [ ] Loss of appetite
- [ ] Swallowing Difficulty
- [ ] Poor Dentition
- [ ] GI or Bowel Issues
- [ ] Medication Side Effects
- [ ] Polypharmacy
- [ ] Low Mood
- [ ] Chronic Disease

## Part B

**Note Early Suspicion**
based on noted Red Flags.

### If no red flags in Part A

No obvious suspicion of malnutrition

"Look & Listen" at future appointments.

**No FURTHER ACTION required at this moment.**

### If any red flags in Part A

Suspected malnutrition OR Malnutrition risk

**Go to PART C** or
**Go to Part D** (if limited time)

## Part C

*(if time permits)*

**Screen for Malnutrition**
Using a Simple, Validated Malnutrition Screening Tool

eg MNA or MST.

### Mini Nutritional Assessment (MNA) Screening Tool

Mini Nutritional Assessment (MNA)

User's Guide

Scores of 8 - 11 points are indicative of malnutrition risk/malnutrition.

### Malnutrition Screening Tool (MST)

Malnutrition Screening Tool (MST)

Scores of 2 or above are indicative of malnutrition risk/malnutrition.

Nestlé HealthScience

# Part D

## Follow Recommended Action Plans

### Normally Nourished

**Provision of an 'Eating Well for Older People' resource, e.g:**

Healthy eating for adults

Nutrition and older adults

Healthy eating over 60

Australian guide to healthy eating

**"Look and Listen" (Part A) at future appointments.**

**No FURTHER ACTION required at this moment.**

**Remember that even those who are overweight or obese can be malnourished or at risk of malnutrition.**

### Malnutrition Risk OR Malnourished

- Encourage frequent meals and snacks
- Encourage consumption of protein and energy rich foods + food fortification
- Consider a supplement drink
- Relax non-priority dietary rules
- Monitor weight and rescreen at future appointments

**Also consider the need for:**

- [ ] Dietitian Referral
- [ ] Swallow or Dental assessment
- [ ] Medication changes or rationalisation
- [ ] Gastro/Bowel Management review
- [ ] Mood Management or Psychology input
- [ ] Nutritional biochemistry
- [ ] Use of a meal delivery or shopping service
- [ ] Optimised use of family or home care support
- [ ] Community meal / dining options

**Carefully monitor at each follow-up visit**

# CASE STUDY 1 | Mrs. E.B

## Female – 87 years

### Medical

Arthritis – impacts mobility.
Recent fall.
Hypertension.
Hypercholesterolaemia- well controlled.
Osteoporosis.
Vitamin D deficiency – well controlled.
Type 2 DM – not testing BSLs.
Past anterior resection for bowel cancer.
Recurrent UTI's.
Previous iron deficiency anaemia.
Depression/Anxiety.

### Social

Lives alone.
Husband passed away 12 months ago.
2 adult children – both living overseas.
Reduced social interaction since COVID-19 pandemic.
Home Care Package – superfluous funds.
Responsible for own meal preparation.
Walks to local shops to buy groceries.

### Anthropometry

7.5kg loss of weight past 7/12.
BMI: 18kg/$m^2$ (ideal range for age/height: 22-27)

## Scenario

**Mrs B, a long-term patient of yours, has come into your clinic, following a fall on the carpet at home. Her mood is flat and she appears frailer than she did a few months ago. You suspect that she is malnourished. Although you have only a short appointment slot scheduled, you take a quick minute to ask how she has been eating.**

**Although Mrs B is happy to talk about what she is eating at home, she does not present as concerned about her poor appetite and weight loss. However, her tone of voice, affect and descriptions of what she is eating definitely raise some 'red flags' for you.**

# CASE STUDY 1
## Questions

### Question One

**You decide to start a conversation with Mrs B about her current weight and eating. What discussion point should be your priority when talking to her?**

- Tea and biscuits are not very nutritious and she shouldn't be existing on them
- Getting meals is not just another "job" but should be enjoyable
- She's doing a great job choosing the right foods for her diabetes and cholesterol
- **That losing weight and poor eating should not be considered a "normal" part of getting older**

### Question Two

**To arrest further weight loss and help maximise muscle retention, you explain to Mrs B that she should prioritise which two nutrients in her diet?**

- Calcium and Iron
- **Energy and Protein**
- Energy and Calcium
- Iron and Vitamin D

### Question Three

**Mrs B has agreed to see a dietitian at the local hospital however you know that current waiting times are lengthy. You feel that she will benefit from a few simple dietary recommendations to follow at home pending her appointment. Which recommendations would be appropriate for you to give to Mrs B?** (choose all that apply)

- **To have a snack between each of her meals and some ice-cream for dessert**
- **To have a fried egg with breakfast each day**
- To keep a detailed record of her calorie intake each day
- **To choose full cream dairy products and increase her cheese consumption**

# CASE STUDY 1
## Questions

### Question Four

**You note that Mrs B has some surplus funds in her aged care assistance package which you feel could be used to help support her nutritional health. Which support options would you suggest that Mrs B consider?** (choose all that apply)

- **Commencing a meal delivery service**
- **Arranging someone to provide weekly assistance with her grocery shopping**
- Having family members deliver a cooked meal every day
- **Organising someone to assist with simple meal preparation and cooking**

### Question Five

**You feel proud that you managed to pick up on Mrs B's nutritional risk, as you know that malnutrition is an insidious public health concern. Evidence shows that in Australia, the proportion of older people who live in aged care facilities or within the wider community, who are either malnourished or at risk of malnutrition currently sits at:**

- 5%
- 12%
- 30%
- **50%**

# CASE STUDY 1
## Conclusion

When you raised the issue of malnutrition with Mrs EB, she initially remained unconcerned, convinced that her eating habits were quite normal for her age. However, when you pointed out that poor nutrition and weight loss can make it very difficult to maintain independence at home, Mrs EB became more engaged, stating that she would hate to end up in a nursing home.

You validated the challenges involved with eating and cooking for one, emphasising that, after a life of motherhood and looking after a husband, you know Mrs EB knows how to cook and care for people. However, you also, emphasised the importance of making changes to diet as we get older.

You made the following suggestions to Mrs EB.

- that she consider using a meal service
- that she speak to her HCP about organising someone to assist with grocery shopping
- that she introduce some mid-meal snacks into her day, providing reassurance that it is okay to "relax the rules" around sugar and fat.
- that she try and include some protein-rich foods into her meals and snacks.
- that she buy a tin of supplement powder and start having a glass per day (made on milk).

You feel that this was enough information for this appointment, particularly as Mrs EB had other health issues to address.

You arrange to review Mrs EB again in 2 months. At this review, she reports that she has been eating so much better since starting her meal service. She described having 5 meals delivered a week and making something "easy" for dinner on weekends. She also admits to enjoying some ice-cream each night and a little bit of cake at morning tea each day. She also described how much she loves having "Mary" take her to grocery shopping each week (especially when they have time to stop and get a cappuccino and scone)

Looking at Mrs EB she appears to have more colour in her face, and she seems to have taken a little more effort with her presentation. She doesn't appear as gaunt, and her mood and tone seem chirpier. You take a moment to pop her on the weigh scales and celebrate the fact that her weight has not fallen further. In fact she has put on almost 1 kg since her previous presentation.

Unfortunately, Mrs EB does report another minor fall and describes having lost confidence in walking. You refer her to the local STRONG Program at the local Hospital, where you know she will see an Exercise Physiologist and a Dietitian to work on falls prevention, and muscle retention.

You encourage Mrs EB to continue the efforts she has been making and make a file note to check on her eating and weight at her next medical appointment.

# CASE STUDY 2 | Mr.John

## Male – 90 years

### Medical

Urinary Tract Infection for 3 weeks,
on antibiotics.

### Social

Residential care home for the past 5 years.

### Anthropometry

Height 170 cm.
Weight 88 kg but 4.5kg loss of weight.
BMI: 30kg/$m^2$ (ideal range for age/height: 22-27)

## Scenario

**John is 90 years old. For the past 5 years, he has lived in a residential aged care home. John has largely managed on his own requiring minimal help with activities of daily living. In particular, he has enjoyed eating in the dining room with the other residents for all meals.**

**But for the past 3 weeks, John has been having problems with urinary tract infections. The antibiotics have given him stomach problems, and he no longer likes to get out of his own room.**

## Check-up

**John's nurse, Mary, visits to check up on the urinary tract infection. John is in bed, and it becomes apparent to Mary that John has lost weight and can barely stand. Although John is usually a little overweight (height 170 cm, weight 88 kg, BMI 30 kg/m 2 ), he has lost 4.5 kilos, including an obvious lot of muscle mass, which is obvious on his arms, legs, and thorax.**

**Asked how he eats, John says he has not felt like eating. He has nausea, the food does not taste like usual – in fact, it tastes ugly – and he is also afraid to go to the toilet when he has eaten.**

**He no longer feels safe walking to the toilet on his own and is afraid that he will not make it in time. Upon closer inspection, John still has a fever, and he has now developed oral thrush.**

# CASE STUDY 2
## Questions

### Question One

**What would be your first step in this case?**

- **Perform nutritional screening tool**
- Talk to the kitchen staff
- Create a meal plan
- Instruct the carer to force-feed him

### Question Two

**The nutrition screening tool showed that John was at risk of malnutrition. Mary decides to talk to John, what should be her approach?**

- In a kind and caring way, Mary should advise John about the nutritional screening tool results
- In an easy-to-understand language, Mary should discuss the implications of ongoing poor intake
- Offer to consider consuming food for comfort
- **All of the above**

### Question Three

**John was very keen to improve his intake to prevent further nutrition deterioration. The following are realistic goals of care, EXCEPT:**

- To get back to his usual function and lifestyle
- To eat the foods he used to enjoy eating
- To regain his lost weight over the next 3 months
- **To regain his lost weight over the next 2 months**

### Question Four

**John and Mary agreed to initiate a nutrition plan, which could include:**

- Hot meals
- Cold, soft meals
- Two oral nutritional supplements daily
- **All of the above**

# CASE STUDY 2
## Questions

### Question Five

**What would be the more important and appropriate component/s of John's management?**

- Arrange for a dietitian to conduct a thorough nutritional assessment and a more specific nutrition care plan.
- A medication review by the doctor, particularly the antibiotics.
- Evaluation and treatment of John's oral thrush.
- Call in a physiotherapist to make a physical rehabilitation plan.
- Arrange for John's relatives to visit him.
- **All of the above**

## Conclusion

John's infection eventually resolved. After regular provision of oral nutritional supplement twice daily on top of his customized meals amid a pleasant and supportive environment, John regained 4 kilograms in 3 months. His physical strength and functional status gradually improved, allowing him to socialize again.

# Nutrition for Healthy Aging

## Proactively Getting Ahead of Strength & Mobility Challenges

**WONCA World Conference 2023**

Nestlé HealthScience

www.nestlehealthscience.com

November 2023. "Communication for Healthcare Professional only"