

# Nutrition and Aging: Issues and Impact

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# Presenter Disclosure

- **Faculty / Speaker's name:** Kelly Smith, Registered Dietitian (RD)
- **Relationships with commercial interests:**
  - **Grants/Research Support:** None
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  - **Consulting Fees:** None
  - **Other:** Registered Dietitian, WRHA, Deer Lodge Centre

# Mitigating Potential Bias

- No identified sources of bias.
- Not applicable.

# Outline

- My 2 Grandmas
- Malnutrition
- Aging and Nutrition
  - Sensory changes
  - Structural and Functional changes
  - Medications
  - Psycho-social changes
  - Diet restrictions
  - Old Age
- Optimizing Nutrition
  - Food and Fluid
  - Cultural / Psycho-social
- Take Home Messages
- Questions?



# My Two Grandmas



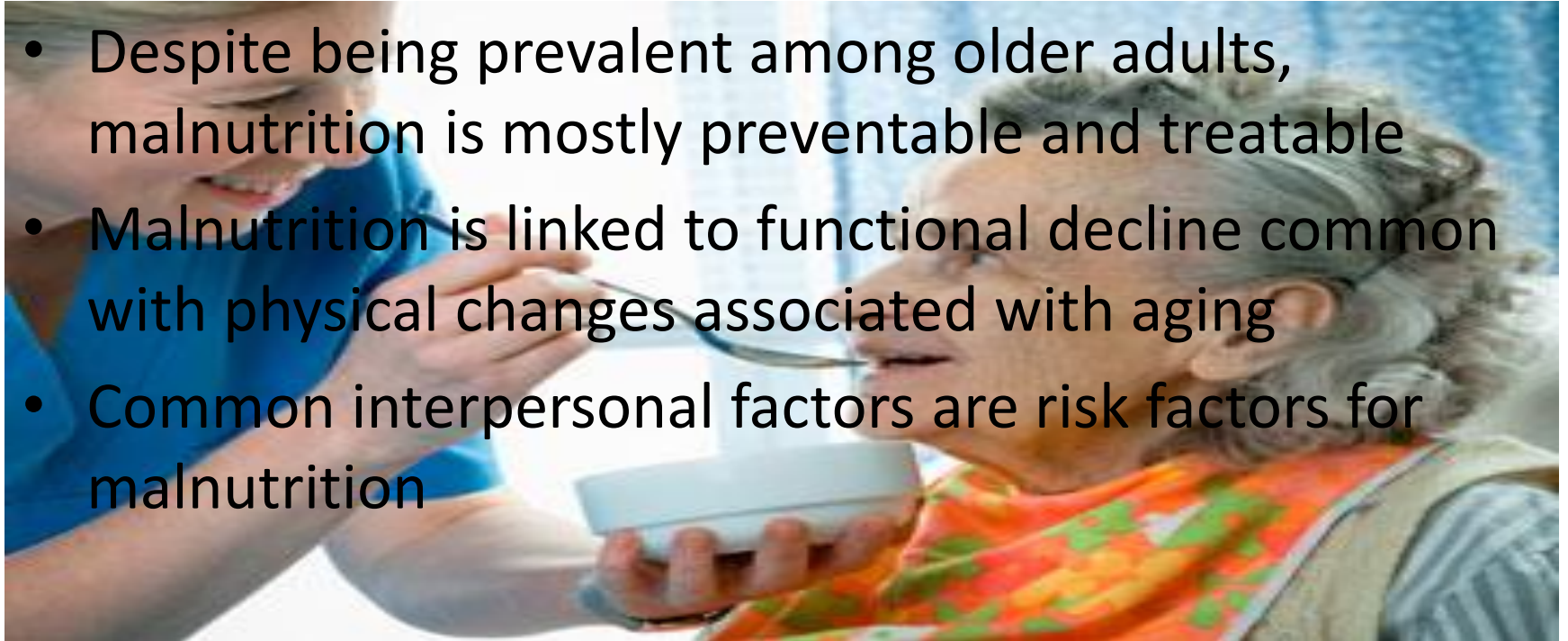
# What is malnutrition

- **What is Malnutrition?** Malnutrition = ‘undernutrition’
- Inadequate intake of energy, macro or micronutrients OR inappropriate amount of, or quality of nutrients comprising a healthy diet are not consumed for an extended period of time
- Sustained inadequate intake leads to functional change in tissues of the body e.g. muscle loss, weakness, immune function, decreased capacity for recovery, impaired cognition
- Responds to feeding

(CMTF website adapted from: AW McKinlay: Malnutrition: the spectre at the feast. *J R Coll Physicians Edinb* 2008:38317–21.)

# Further Defining Malnutrition

- Despite being prevalent among older adults, malnutrition is mostly preventable and treatable
- Malnutrition is linked to functional decline common with physical changes associated with aging
- Common interpersonal factors are risk factors for malnutrition



# Malnutrition Results from...

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### *Decreased intake*

- Poor appetite
- Needing assistance with meals
- Lack of access to food
- Dysphagia
- Alcohol dependence
- Depression

### *Increased Requirements*

- Infection
- Post-surgical
- Wound healing
- Pressure injury
- Cancer
- Trauma

### *Malabsorption/Nutrient Losses*

- GI diseases
- Bowel resection
- Wounds/drains



# Prevalence of Malnutrition in the Elderly

- Community Dwelling Elderly –  
5-20%  
–40% are at risk



# Consequences of Malnutrition

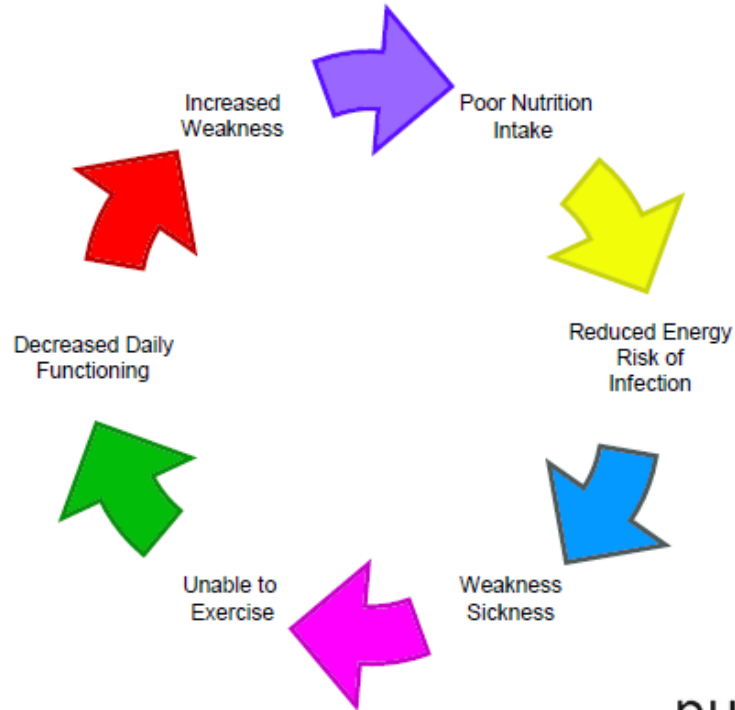
Once an older person is malnourished, they are at increased risk for:

- Higher admission rate to the hospital
- Pressure Ulcers, Delayed wound healing
- Osteoporosis, Falls / Fractures
- Impaired immune function
- Reduced ability to complete ADL's
- Apathy towards food and meal times

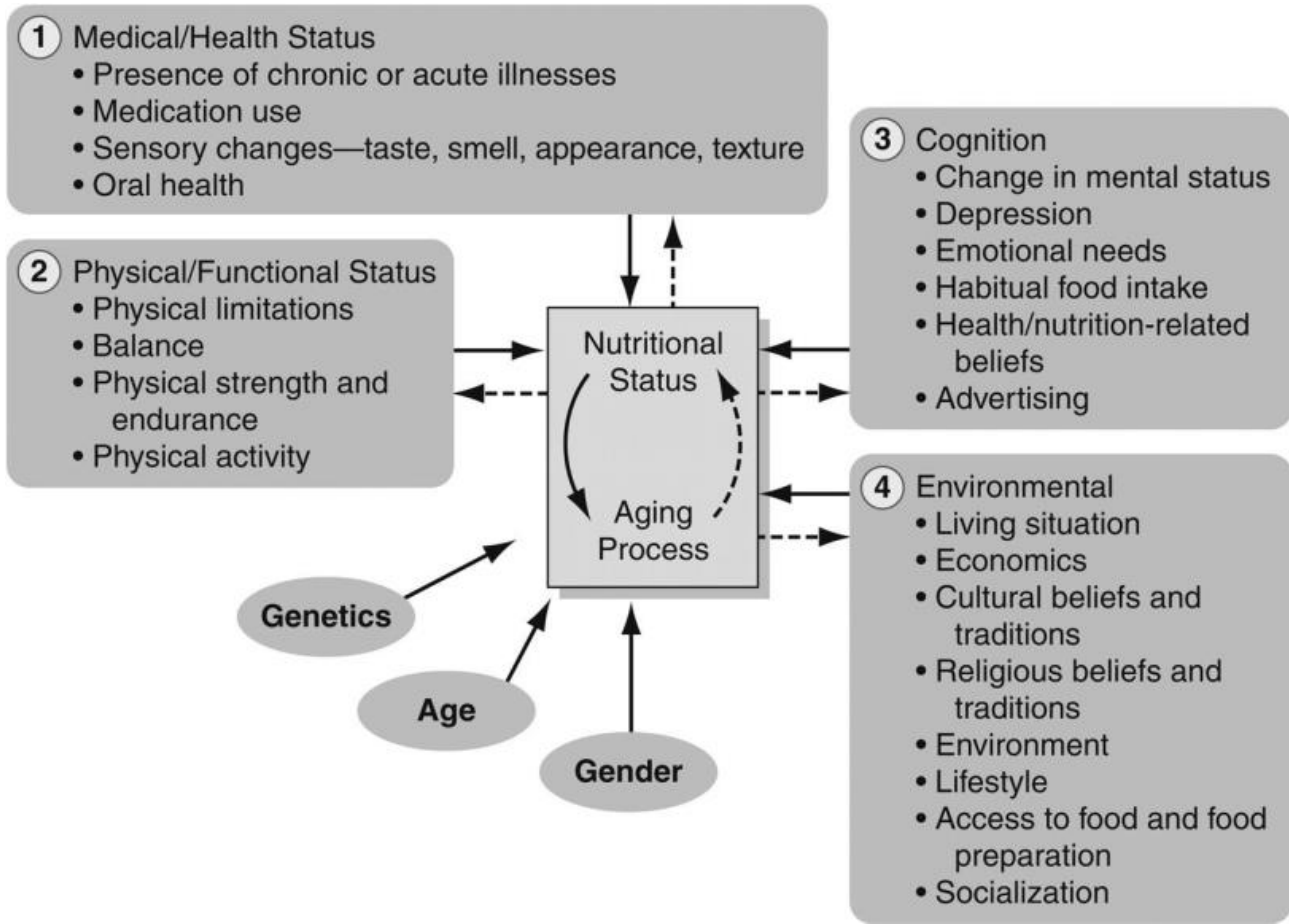




# Good nutrition can stop the vicious cycle



# Nutrition status and the Aging Process



# Imagine...





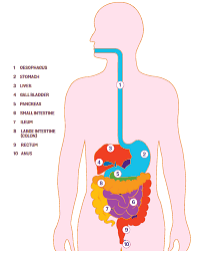
# Aging and Nutrition – Physiological



## SENSORY DECLINE

- Taste - fewer taste buds, decreased saliva, affected by disease and medications, poor oral care
- Smell - major impact on taste sensation
- Sight - ability to shop, cook, feed self
- Hearing
- Touch/ Manual dexterity
- Oral Health: Xerostomia (decreased salivation)-need for good oral hygiene, dental decay in 60% elderly, chewing less efficient with dentures, affects food choices
- Decreased thirst sensation

# Aging and Nutrition– Physiological



- Dysphagia
- GERD
- Slowing of the normal action of the digestive tract, constipation, changes in metabolism of nutrients
- Changes in central brain control, i.e. in the hypothalamus, which controls hunger and satiety. Older adults feel less hungry and snack less often.
- Lean body mass is lost as we age (Sarcopenia), increase in fat mass, metabolic rate declines
- Age-related changes affect vitamin D metabolism



# Aging and Nutrition - Functional Changes

## IMPAIRED MOBILITY

- People lose bone mass or density as they age.
  - Bones become brittle (Osteoporosis) and break (fractures).
  - Breakdown and inflammation of joints (Arthritis)
- Functional impairment affecting:
  - Ability to shop and prepare meals
  - Feeding ability



# Aging and Nutrition - Medications

## Medications

- Polypharmacy +++
- Medications can cause:
  - dry mouth, dysphagia, loss of taste, anorexia, nausea, weight loss; weight gain, muscle weakness, loss of appetite, dehydration, decreased alertness, constipation and diarrhea



# Aging and Nutrition - Psycho-social

(Determinants of Health)

- Depression
- Alcoholism
- Cognitive impairment -distorted perception of food, unaware of what food actually is, eat too much, or not at all
- Mental health
- Finances / Food insecure
- Isolation, Eating alone /Cooking for one, loneliness, boredom, geographic isolation
- **Housebound elderly who lack family support, men and recently bereaved at greatest nutrition risk**
- Personal beliefs (culture) and meaning of food
- Education / literacy

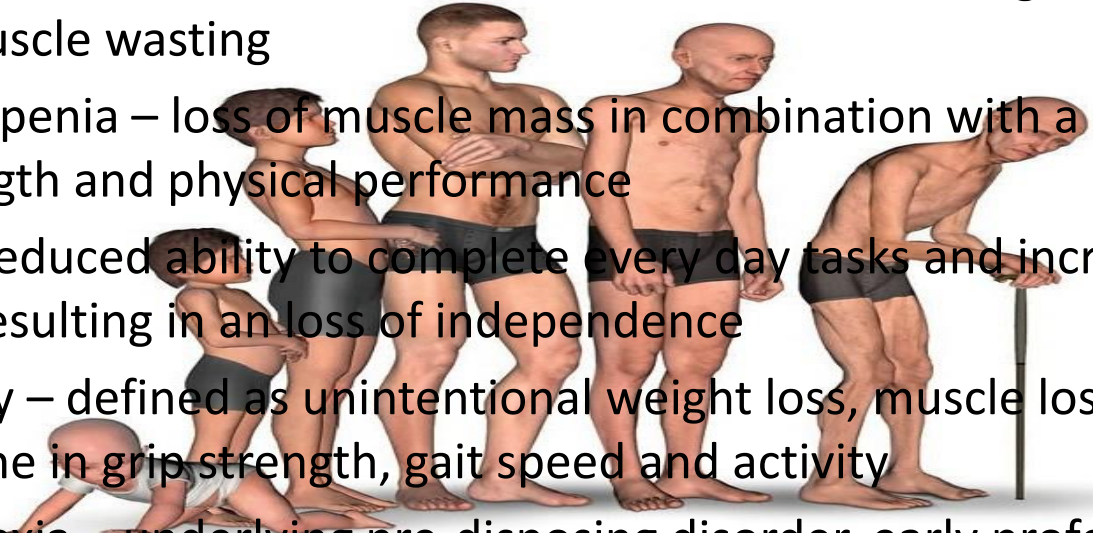
# Aging and Nutrition – The “diet”



- Anorexia of Aging
- Therapeutic diets may contribute to malnutrition and dehydration through restriction of preferred food & beverages
- Culturally significant foods may not may not be available in the person’s current living situation
- Texture Modified diets – It is essential to provide the most safe and adequate diet texture to those living in the community

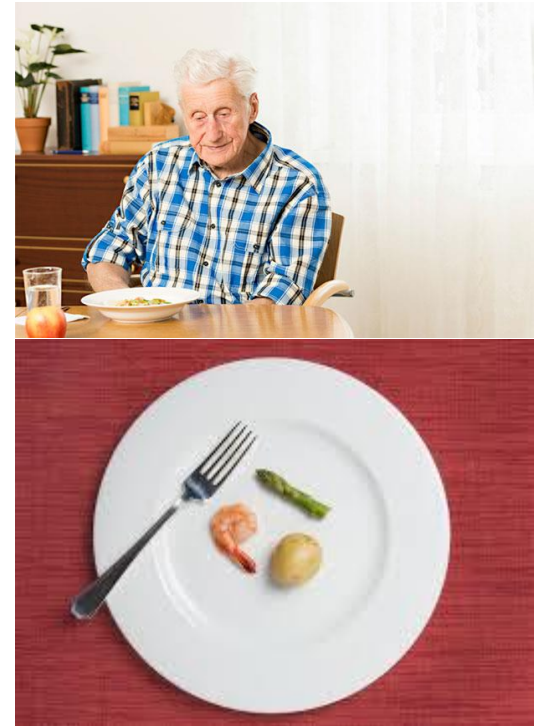
# Aging and Nutrition - Old Age

- Malnutrition – reduced intake with associated findings such as weight loss or muscle wasting
- Sarcopenia – loss of muscle mass in combination with a loss of muscle strength and physical performance
  - Reduced ability to complete every day tasks and increased risk of falls, resulting in an loss of independence
- Frailty – defined as unintentional weight loss, muscle loss, exhaustion and decline in grip strength, gait speed and activity
- Cachexia – underlying pre-disposing disorder, early profound muscle mass loss



# What's happening?

- A smaller appetite, no appetite, just not hungry?
- Jewelry slipping off becoming loose
- Tightening the belt buckle an extra notch
- Changes in mood
- Increase in illness
- Troubles swallowing, coughing at meals
- Dentures loose
- Skin is dry, cracked, red and open.
- Face looks sunken in



# Video of Lyn

<https://www.youtube.com/watch?v=f1ERiWm5aBA>

# Is Anne overweight?





# Optimizing Nutrition

- Food and Fluid
- Cultural / Psycho-social



# Food and Fluid

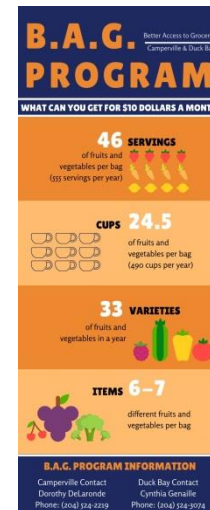
- Food is the tool. Food is medicine
- Liberalize diet prescriptions to maximize intake
- Small meals and snacks more often throughout the day
- Nutrient dense foods (high protein high energy) and fluids
- Hydration at home – water cooler, water bottle filled every morning
- Vitamin and mineral supplements based on need / requirement
- Oral nutrition supplements
- Softer to chew foods – make a dentist appointment
- Ensure all medications are absolutely necessary to minimize side-effects





# Cultural / Psycho-social

- Prepare meals in bulk or with a family / friend
  - Make foods culturally appropriate
  - Make favorite foods
  - Make easy recipes (3-4 ingredients)
- Eat meals with family and friends
- Understand and incorporate cultural values as part of a nutrition plan
- Locate a community kitchen or congregate meal program in the area (local Senior's guide), local meal delivery services, volunteer services or community food access programs (eg. B.A.G), grocery store tours; local food banks
- Consider inter-generational skill sharing
- Contact a community RD (city and rural), Access Centre RD, Home Care RD, Dial-a-Dietitian, Cancer Care Manitoba RD's, Western Manitoba Cancer Centre RD's



# Eating Together

- <https://www.youtube.com/watch?v=yLsSy64xIU>

# Take Home Messages

- Malnutrition is prevalent amongst older adults.
- Malnutrition is preventable and treatable.
- We must ensure effects of aging are considered - Malnutrition is linked to:
  - Physiological changes
  - Functional changes
  - Determinants of health (cultural / psycho-social)
  - Medications
  - Diet
  - Old age
- High protein, high energy, nutrient dense foods make more sense. Oral nutrition supplements may be useful.
- Hydration in the home!!!



# Take Home Messages Continued...

- Understand and incorporate cultural values as part of a nutrition plan
- Meal programs, congregate meals and meal delivery companies, food banks, and other community food access programs (e.g., B.A.G) can be an integral component to older adults living in the community.
- Dial-a-Dietitian and other community RD's are important practitioners who can address and treat malnutrition.
- Cancer Care Manitoba and the Western Manitoba Cancer Centre have dedicated oncology dietitians.
- Patients with cancer in rural Manitoba may receive support from community dietitians. There is a Provincial Oncology Dietitian Network for dietitians who see patients with cancer.



# Resources

- <http://nutritioncareincanada.ca>
- <http://www.malnutritiontaskforce.org.uk>
- [http://www.malnutritiontaskforce.org.uk/wp-content/uploads/2017/10/AW-5625-Age-UK-MTF\\_Report.pdf](http://www.malnutritiontaskforce.org.uk/wp-content/uploads/2017/10/AW-5625-Age-UK-MTF_Report.pdf)
- Malnutrition, fatigue, frailty, vulnerability, sarcopenia and cachexia: overlap of clinical features. Khursheed N Jeejeebhoy *Curr Opin Clin Nutr Metab Care* 2012. 15:213-219
- <https://www.nidcd.nih.gov/health/hearing-loss-older-adults>
- *Geriatr Gerontol Int* 2014; **14 (Suppl. 2): 17–22** REVIEW ARTICLE **Nutritional management of older adults with cognitive decline and dementia**
- <https://www.dietitians.ca/Downloads/Public/Nutrition-and-Mental-Health-1.aspx>
- *Health Expect*. 2017 Dec; 20(6): 1342–1349. Published online 2017 May 24. Understanding food vulnerability and health literacy in older bereaved men: A qualitative study Jill Thompson, BSc (hons), MA, PhD, corresponding author 1 Angela Tod, RN, BA(hons), MMedSci, MSc, PhD, 1 Paul Bissell, BA, MA, PhD, 3 and Michael Bond, BA (Hons), CQSW, MSc, MPH 2

# Questions?

