

Eating Your Way to a Healthy Body & Mind

Lauren Roberson, PhD, RD, LD



Agenda

01

Overview of core nutrition concepts for older adults

03

Consequences of not maintaining a healthy diet

05

Burning nutrition topics

02

The aging body

04

Tools to help you lead a healthy lifestyle

06

Q & A Session





01

Overview of Core Nutrition Concepts for Older Adults



Why is Nutrition Important? Food as Fuel



Image Source: Canva

Why is Nutrition Important? Every Cell in your Body is Impacted by what you Eat

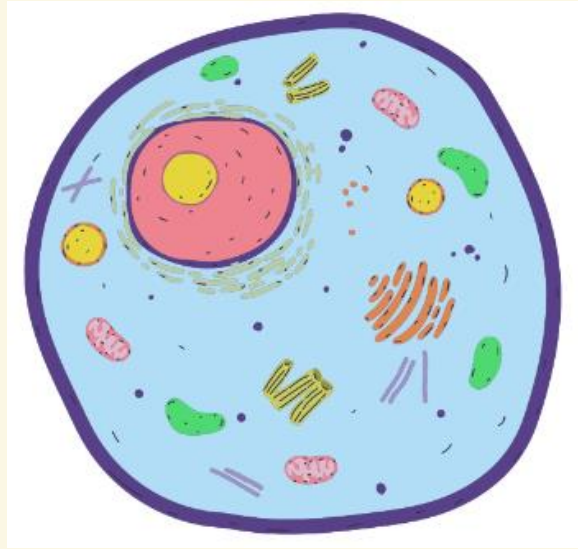


Image Source: Canva






2 Categories of Nutrients



Macronutrients

- Needed in **large** quantities
- Serve as primary source of body's fuel¹
 1. Carbohydrates
 2. Protein
 3. Fat
 4. + Fluid

Micronutrients

- Needed in **small** quantities
 - Support activities required for health¹
 - Essential vs. non-essential
 - Vitamins
 - Minerals
- 
- 
- 

Macronutrients

Carbohydrate^{2,3}

- Fiber needs *increase* with age to promote bowel regularity, heart health, & weight maintenance.
- How much should I eat?
 - 45-65% total daily calories
 - Men & women 51+ **130 g/day**
 - Needs are individualized.*

Protein⁴

- *Increased* needs with aging to prevent malnutrition, sarcopenia, improve muscle health, improve energy balance, weight management, & heart health
- How much should I eat?
 - **1.2 – 2.0 g/kg/day**
- Quality of protein matters!

Fat³

- *Decreased* need for saturated & trans fats. *Increased* need for unsaturated fats to promote heart health.
- How much should I eat?
 - Men & women 50+ **20-35% total daily calories**
 - Saturated fat: 8-10% total daily calories
 - Polyunsaturated fats: 10% total daily calories
 - Monounsaturated fats: 10-15% total daily calories

More on Fiber & Bowel Health

- What is fiber?
 - Complex carbohydrates the body can't digest³
 - Bacteria in colon feed on fiber
- How much do I need to eat?²
 - Men 60+: **30 grams per day**
 - Women 60+: **21 grams per day**
- Benefits:³
 - Promote bowel regularity
 - Manage diabetes
 - Reduce risk of cardiovascular disease & cancer
 - Lower cholesterol



Heart Healthy Fats⁵

Mono & Polyunsaturated Fats

- **Food Sources:**
 - Nuts, seeds, & their butters
 - Olives, avocados & their oils
 - Oily fish (salmon, sardines)
- **Benefits:**
 - Improve heart function
 - Decrease risk of blood clots that could lead to stroke
 - Lower triglycerides
 - Lower blood pressure
 - Delay plaque buildup in arteries



Fluid & Hydration

How much do I need?^{6,7}

- Women: 1.6 L per day
- Men: 2.0 L per day

Considerations:⁶

- Exercise
- Physical environment
- Chronic conditions

What to Drink:

- Water
- Coffee
- Tea
- Try to avoid sugar-sweetened beverages
- You can eat your fluid too!

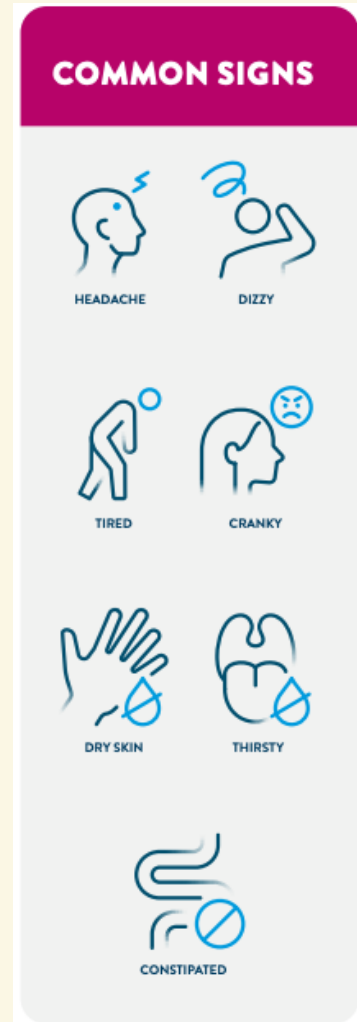


Image Source: Canva



Signs & Symptoms of Dehydration⁸

Source: Abbott Nutrition Health Institute.
Dehydration Infographic for Patients. Published
22 April 2024. Accessed 20 September 2024.
<https://anhi.org/resources/printable/dehydration-infographic-for-patients>



Staying Hydrated⁸

TIP

To see if you're dehydrated, check the color of your urine. Dark yellow to amber typically indicates dehydration, while pale yellow means you're properly hydrated.

< DEHYDRATED

HYDRATED >



Source: Abbott Nutrition Health Institute. Dehydration Infographic for Patients. Published 22 April 2024. Accessed 20 September 2024. <https://anhi.org/resources/printable/dehydration-infographic-for-patients>

Staying Hydrated, cont'd⁸

WAYS TO HELP YOU MAINTAIN PROPER HYDRATION LEVELS



Drink a glass of water when you wake up, before each meal, and 1 hour before bed.



Eat fruits and vegetables with a high water content (eg, watermelon, lettuce, cucumber, strawberries).



Avoid waiting until you're thirsty to take a drink. Being thirsty can be a sign that you're already dehydrated.



Check your urine. If dark yellow to amber, drink more fluids!



Take fluid breaks during exercise.



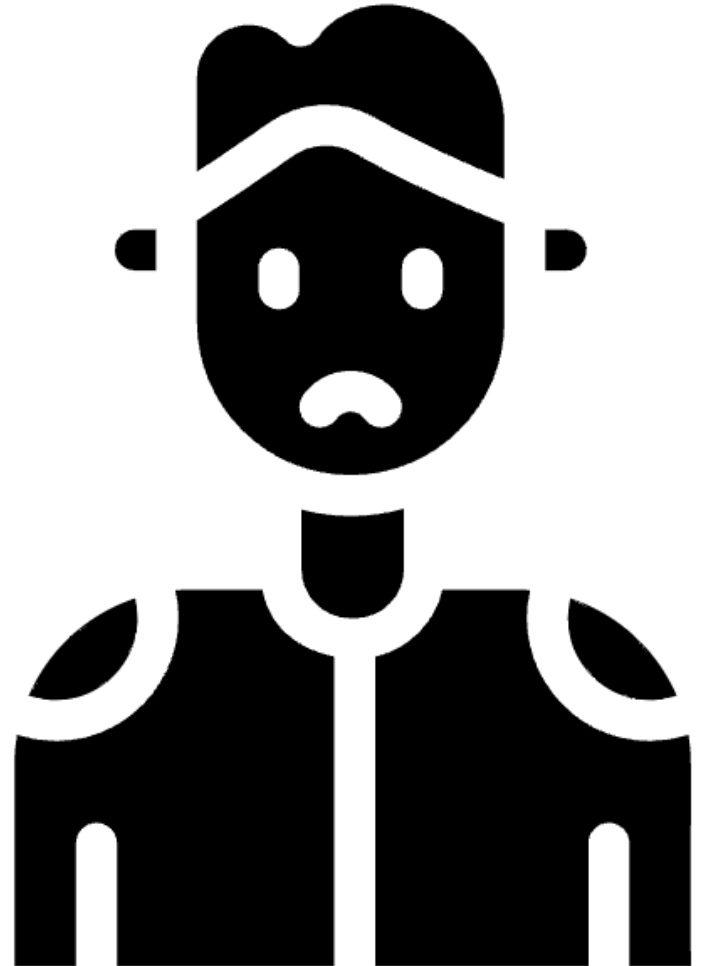
Stay hydrated in the winter. You may not feel as thirsty or sweaty, but your body loses fluid performing everyday functions even when it's cold.

Source: Abbott Nutrition Health Institute. Dehydration Infographic for Patients. Published 22 April 2024. Accessed 20 September 2024. <https://anhi.org/resources/printable/dehydration-infographic-for-patients>

Image Source: Canva

Malnutrition

- **Undernutrition** – micronutrient deficiency & weight loss.⁹
- **Overnutrition** – excess intake of macro- or micronutrients contributing to the development of chronic disease.⁹





Causes of Malnutrition



Psychosocial Factors

- Living alone
- Being socially isolated
- Mental health problems¹⁰



Cost

- Fresh fruits & vegetables can be expensive!⁹



Poor Appetite

- Dental problems, pain
- Swallowing difficulty
- Cognitive decline¹⁰



Accessibility

- Securing healthy foods is difficult⁹
- 



Consequences of Malnutrition



Chronic Disease¹¹

- Respiratory failure
- Heart problems
- Multiorgan failure



Decline in Functional Status¹¹

- Limited mobility
- Decreased physical activity
- Decreased quality of life & independence





Pressure Ulcers¹¹

- Wounds are slower to heal



Compromised Immune System¹¹

- Increased risk of infection
 - Impaired immune response
- 
- 



Preventing Malnutrition¹

2



Understand what malnutrition *is* and *isn't*.¹³

1. People of **all** sizes can be malnourished.
2. Malnutrition affects **all** people.
3. Might happen because of poor appetite, dental problems, chronic conditions, mental health struggles, living alone, or limited income.
4. **You can prevent it!**
5. Look for warning signs such as muscle weakness, fatigue, depression, increased illness, unexplained weight loss, and poor appetite.



Make *smart* food choices.¹⁴

1. Know what a healthy plate looks like.
2. Look for important nutrients.
3. Read the Nutrition Facts Label
4. Portion control.
5. Stay hydrated.
6. Stretch your food budget.



Try a Supplement¹⁴

- Boost
- Ensure

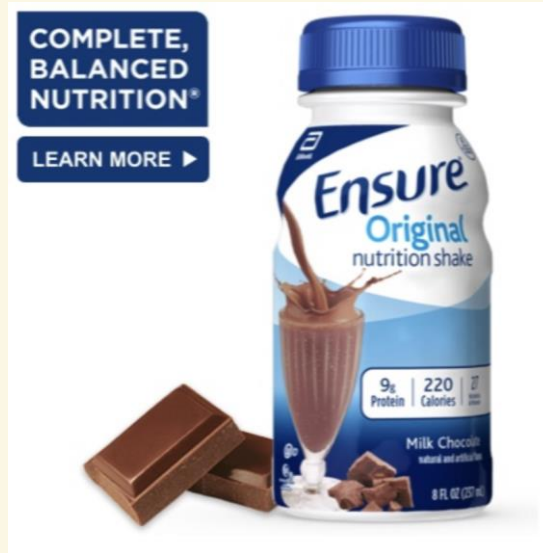


Image Source: Ensure.com



Image Source: Boost.com

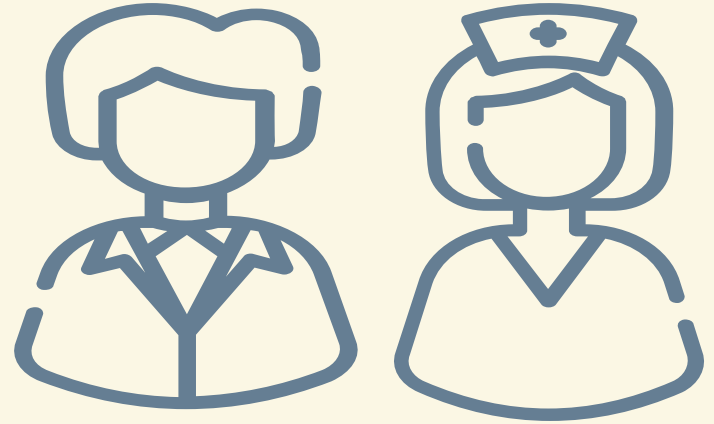
Take Care of Your Teeth¹⁴

- Your mouth is the gateway to your health.
- Brush & floss daily.
- Visit your dentist regularly.



Work with Your Doctor¹⁴

- Lost weight unintentionally?
- Have a poor appetite?
- Let your doctor know about it.



Use the Resources Available to You¹⁴

- Meals on Wheels
- Supplemental Nutrition Assistance Program (SNAP)




Image Source:

<https://www.knoxseniors.org/snap/>



Micronutrients

Potassium¹⁵




Functions: cellular ionic balance, membrane potential, muscle contraction

Vitamin D¹⁶



Functions: bone health, prevention of neurological, autoimmune, and psychiatric diseases; maintains the nervous system, protects against inflammation & high blood pressure

Calcium¹⁵



Functions: maintain bone structure, vasodilation, vasoconstriction, muscle contraction, blood clotting, nerve transmission

Vitamin B12¹⁶



Functions: coenzyme in DNA methylation pathway, maintains neurological function



Portion Control

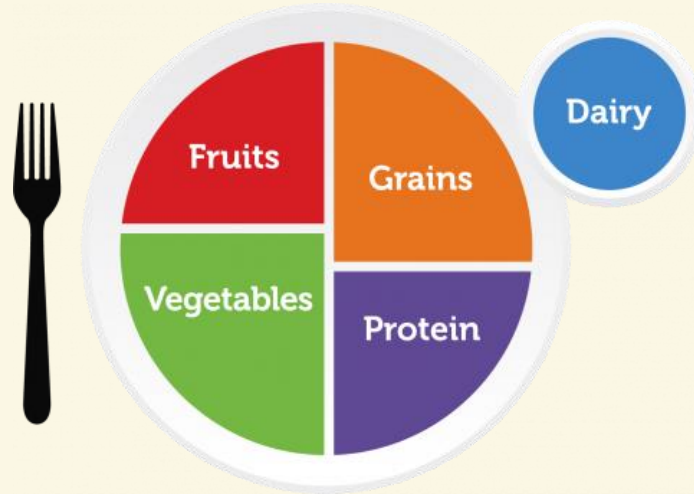


Image Source: <https://www.myplate.gov/eat-healthy/what-is-myplate>

Calorie Needs & Weight



Lose Weight

- Cut 500 calories / day to lose 1lb. / week¹⁷
- Cut 1,000 calories / day to lose 2lbs. / week¹⁷
- **Strategies:**
 - Gradual weight loss¹⁸
 - Combine diet & exercise¹⁸
 - Limit portion size¹⁹
 - Stay hydrated¹⁹
 - Set specific goals¹⁹
 - Track what you eat¹⁹
 - Talk with your doctor about anti-obesity medications*¹⁸

Maintain Weight

- **Men:** 2,000 – 2,600 calories / day³
- **Women:** 1,600 - 2,000 calories / day³
- **Strategies:**
 - Calories in = calories out¹⁹
 - Eat a balanced diet¹⁹
 - MyPlate
 - Exercise
 - 150 minutes of physical activity each week¹⁹
 - 2 days of strength training¹⁹

Gain Weight

- 25 calories / kg²⁰
- **Strategies:**
 - Eat more healthy fats¹⁹
 - Eat small meals or snacks often¹⁹
 - Add nuts, cheese, or dried fruit to foods & snacks¹⁹
 - Stay active to boost your appetite¹⁹
 - Try supplements



O2

The Aging Body



Changes in Body Composition²¹



Muscle



Fat



Bone



Body Weight



Fluid



Image Source: Canva





03

Consequences of *Not* Maintaining a Healthy Diet



Increased Risk Of...

Chronic Disease^{4,22}  **Illness**²³ 

Heart disease, diabetes, high blood pressure, cancer, obesity

Weakened immune system, slower recovery

Sarcopenia^{4,22} 

Progressive loss of muscle

Malnutrition¹¹ 

Increases risk of morbidity & mortality

Functional Status¹¹ 

Limited mobility, functional decline, fall risk

Quality of Life²³ 

Loss of independence due to limited mobility



04

Tools to Help
You Lead a
Healthy Lifestyle



Tools for Eating Healthy

Nutrition Facts Label

- Learn how to check for key nutrient content

Senior Centers

- Nutrition education
- Meals
- Social support

USDA, Extension

- MyPlate
- Supplemental Nutrition Assistance Program (SNAP)
- Nutrition education

Health Department

- Nutrition education
- Medical care

Congregate & Home-Delivered Meals

- Family and Social Services Administration
- Area Agencies on Aging

Registered Dietitian

- Individualized meal plans
- Nutrition counseling
- Medical nutrition therapy



How to Read a Nutrition Facts Label

1. Serving Information → 4 servings per container
Serving size 1 cup (227g)

2. Calories → Amount per serving **Calories 280**

3. Nutrients →

	% Daily Value*
Total Fat 9g	12%
Saturated Fat 4.5g	23%
Trans Fat 0g	
Cholesterol 35mg	12%
Sodium 850mg	37%
Total Carbohydrate 34g	12%
Dietary Fiber 4g	14%
Total Sugars 6g	
includes 0g Added Sugars	0%
Protein 15g	
Vitamin D 0mcg	0%
Calcium 320mg	25%
Iron 1.6mg	8%
Potassium 510mg	10%

4. Quick Guide to percent Daily Value (%DV)
• 5% or less is **low**
• 20% or more is **high**

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Source: <https://www.fda.gov/food/nutrition-facts-label/how-understand-and-use-nutrition-facts-label>



05

Burning Nutrition Topics



Burning Nutrition Topics



Cognitive Function

- Diet to improve cognitive performance & preserve cognitive function



Anti-Obesity Medications

- What are they?
- Do they work?
- Are they safe?
- Are they right for me?

MIND Diet & Brain Health

Brain Health - “a life-long dynamic state of cognitive, emotional and motor domains underpinned by physiological processes” (p. 10).²⁴

Mental Processes²⁵

Acquiring new knowledge, thinking, reasoning, concentrating, remembering, problem-solving, making decisions, attention...



Mental Status

Mood, emotion, stress



Brain Health

“A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (p. 4-5).²⁴



MIND Diet²⁵

Mediterranean-DASH Diet Intervention for Neurodegenerative Delay = MIND

Increase

1. **Green leafy vegetables**
2. Other vegetables
3. Nuts
4. **Berries**
5. Beans
6. Whole grains
7. Fish
8. Poultry
9. Olive oil
10. Wine

Decrease

1. Red meat
2. Butter & stick margarine
3. Cheese
4. Pastries & sweets
5. Fried or fast foods



Image Source:
Canva

Benefits of the MIND Diet²⁵

- **Improved cognition**
 - Higher cognitive performance
 - Better memory & language functions
 - Working memory
 - Verbal recognition memory
 - Attention
 - Higher verbal memory scores
- **Slower rate of global cognitive decline**
 - Slower decline in executive function
 - **50% lower risk of cognitive decline**
 - **35-53% reduction in rate of developing Alzheimer's disease**

“MIND diet was superior to Mediterranean, DASH, pro-vegetarian and Baltic Sea diets for improving cognition” (p. 8071).²⁵



What are Anti-Obesity Medications?

Medications that were either developed for the sole purpose of weight loss, or were developed for diabetes management that had the side effect of weight loss. They contribute to weight loss by a number of different mechanisms.

Criteria for Use:²⁶

- BMI \geq 30 kg/m²
- BMI \geq 27 kg/m² with the presence of other comorbid conditions and abdominal obesity



How do Anti-Obesity Medications Work?²⁶

Mechanism is different, depending on the medication. The most common mechanisms are:

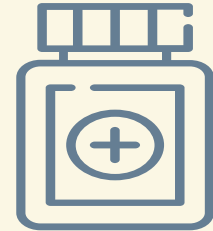
- **Appetite suppression**
 - Example: Phentermine/topiramate ER (Qysmia)
- **Slowed gut motility & feelings of satiety**
 - Example: Liraglutide (Saxenda, Victoza)
- **Decreased ability to absorb fat & calories**
 - Example: Orlistat (Alli)
- **Inhibits dopamine & norepinephrine reuptake, antagonizes opioid dependent feedback loop**
 - Example: Naltrexone/bupropion (Contrave)



Do Anti-Obesity Medications Work?²⁶

Most have demonstrated successful weight loss over the short- & long-term. For example:

- Orlistat (Alli)
 - **2.4%** loss in total body weight after 4 years
- Phentermine/topiramate (Qysmia)
 - **7.8-10.9%** loss in total body weight after 1 year
- Naltrexone/bupropion (Contrave)
 - **5-9.3%** weight loss after 56 weeks
- Liraglutide (Saxenda)
 - **8%** weight loss after 56 weeks



Are Anti-Obesity Medications Safe?²⁶

Yes, in most cases. They have undergone rigorous clinical trials before FDA approval. However, as with all medications, there are side effects to consider.

Common Side Effects:

- Decreased appetite
- Nausea
- Vomiting
- Diarrhea
- Dry mouth
- Constipation
- Headache
- Indigestion



Are Anti-Obesity Medications Right for Me?²⁷

- Research shows that lifestyle changes should come first. If lifestyle changes are unsuccessful at promoting weight loss, pharmacotherapy should be considered.
- Consult your physician.
- Go over benefits and risks.
- Consider cost.
- How is the medication given? Are you comfortable with that?

Bottom Line: The decision should be *individualized* and made between you and your physician.

*“Aging and low muscle mass are associated with a low level of physical activity and a low BMR, which can be associated with sub-optimal obesity management”
(p.854).²⁷*





06

Question & Answer Session



Thanks!

What questions do you have?

Roberson.177@osu.edu

614-688-0261



in

CREDITS: This presentation template was created by [Slidesgo](#), and includes icons by [Flaticon](#), and infographics & images by [Freepik](#)



Alternative resources

- USDA's MyPlate website - Nutrition for Older Adults - <https://www.myplate.gov/life-stages/older-adults>
- Indiana Family and Social Services Administration - Department of Aging - Indiana Pathways for Aging - <https://www.in.gov/fssa/da/>
- Indiana Health Department Directory - <https://www.in.gov/health/lhd/local-health-department-map/>
- Directory of Dietitians and Nutritionists in Indiana - <https://www.healthpros.com/us/nutritionists-dietitians/indiana>
- MIND Diet Guide for Beginners - <https://www.healthline.com/nutrition/mind-diet>
- National Council on Aging - Eating Tips for Seniors - <https://www.ncoa.org/article/healthy-eating-tips-for-seniors/>



References

1. Cheng WH, Bohr VA, de Cabo R. Nutrition and aging. *Mech Ageing Dev*;2010;131(4):223-224. Doi: [10.1016/j.mad.2010.03.011](https://doi.org/10.1016/j.mad.2010.03.011)
2. Li I. Nutrition for Seniors. *Delta J Public Health*;2016;2(3):24-26. Doi: [10.32481/djph.2016.06.012](https://doi.org/10.32481/djph.2016.06.012)
3. Bernstein M, Ostenso K. Macronutrient, Water, and Alcohol Recommendations in Older Adults. In: Bernstein M, Munoz N (eds.). *Nutrition for the Older Adult*;2020;Jones & Bartlett. p. 61-90.
4. Baum JI, Kim IY, Wolfe RR. Protein consumption and the elderly: What is the optimal level of intake? *Nutrients*;2016;8:359. Doi: [10.3390/nu8060359](https://doi.org/10.3390/nu8060359)
5. Heart Foundation. Fats, oils and heart health. Updated 22 October 2023. Accessed 20 September 2024. <https://www.heartfoundation.org.au/healthy-living/healthy-eating/fats-oils-and-heart-health>
6. Li S, Xiao X, Zhang X. Hydration status in older adults: Current knowledge and future challenges. *Nutrients*;2023;15:2609. <https://doi.org/10.2290/nu15112609>
7. Volkert D, Beck AM, Cederholm T, Cruz-Jentoft A, Hooper L, Kiesswetter E, Maggio M, Raynaud-Simon A, Sieber C, Sobotka L et al. ESPEN practical guideline: Clinical nutrition and hydration in geriatrics. *Clin. Nutr.*2022;41:958-989.
8. Abbott Nutrition Health Institute. Dehydration Infographic for Patients. Published 22 April 2024. Accessed 20 September 2024. <https://anhi.org/resources/printable/dehydration-infographic-for-patients>
9. World Health Organization. Malnutrition. Published 15 April 2020. Accessed 18 September 2023. <https://www.who.int/news-room/questions-and-answers/item/malnutrition>
10. Mathewson SL, Azevedo PS, Gordon AL, Phillips BE, Greig CA. Overcoming protein-energy malnutrition in older adults in the residential care setting: A narrative review of causes and interventions. *Ageing Research Reviews*; 2021;70:101401. Doi: <https://doi.org/10.1016/j.arr.2021.101401>

References

11. Brownie S. Why are elderly individuals at risk of nutritional deficiency? *International Journal of Nursing Practice*;2006;12:110-118. doi: 10.1111/j.1440-172X.2006.00557.x
12. National Council on Aging. 10 Ways Malnutrition can Impact your Health – and 6 Steps to Prevent it. Published 13 February 2024. Accessed 20 September 2024. <https://www.ncoa.org/article/10-ways-malnutrition-can-impact-your-health-and-6-steps-to-prevent-it/>
13. National Council on Aging. Video: 5 Facts about Older Adult Malnutrition. Published 11 September 2017. Accessed 20 September 2024. <https://www.ncoa.org/article/video-5-facts-older-adult-malnutrition/>
14. National Council on Aging. Healthy Eating Tips for Seniors. Published 11 April 2024. Accessed 20 September 2024. <https://www.ncoa.org/article/healthy-eating-tips-for-seniors/>
15. Chapman-Novakofski K. Mineral Requirements of the Older Adult. In: Bernstein M, Munoz N (eds.). *Nutrition for the Older Adult*;2020:Jones & Bartlett. p. 113-135.
16. Tucker KL. Nutrient intake, nutritional status, and cognitive function with aging. *Ann. N.Y. Acad. Sci.*;2016;1367:38-49. Doi: 10.1111/nyas.13062
17. Kim JY. Optimal Diet Strategies for Weight Loss and Weight Loss Maintenance. *J Obes Metab Syndr.* 2021 Mar 30;30(1):20-31. doi: 10.7570/jomes20065. PMID: 33107442; PMCID: PMC8017325.
18. Academy of Nutrition and Dietetics. Nutrition Care Manual. nutritioncaremanual.org. Accessed 4 October 2024.
19. National Institute on Aging. Maintaining a Healthy Weight. Reviewed 7 April 2022. Accessed 20 September 2024. <https://www.nia.nih.gov/health/healthy-eating-nutrition-and-diet/maintaining-healthy-weight>
20. Bounoure L, Gomes F, Stanga Z, Keller U, Meier R, Ballmer P, Fehr R, Mueller B, Genton L, Bertrand PC, Norman K, Henzen C, Laviano A, Bischoff S, Schneider SM, Kondrup J, Schuetz P; Members of the Working Group. Detection and treatment of medical inpatients with or at-risk of malnutrition: Suggested procedures based on validated guidelines. *Nutrition.* 2016 Jul-Aug;32(7-8):790-8. doi: 10.1016/j.nut.2016.01.019. Epub 2016 Feb 18. PMID: 27160498.

References

21. Visser M, Harris TB. Body Composition and Aging. In: Newman AB, Cauley JA (eds.) *The Epidemiology of Aging*. 2012:Springer. p. 275-292.
22. Agarwal E, Miller M, Yaxley A, Isenring E. Malnutrition in the elderly: A narrative review. *Maturitas*; 2013;76(4):296-302.
23. Norman K, Haß U, Pirlich M. Malnutrition in Older Adults—Recent Advances and Remaining Challenges. *Nutrients*. 2021;13:2764. <https://doi.org/10.3390/nu13082764>
24. Chen Y, Demnitz N, Yamamoto S, Yaffe K, Lawlor B, & Leroi I. Defining brain health: a concept analysis. *Int J Geriatr Psychiatry*. 2021;1-13. DOI: 10.1002/gps.5564
25. Kheirouri S, Alizadeh M. MIND diet and cognitive performance in older adults: a systematic review. *Critical Reviews in Food Science and Nutrition*. 2022;62(29):8059-8077. DOI: 10.1080/10408398.2021.1925220
26. Tak YJ, Lee SY. Anti-obesity drugs: long-term efficacy and safety: an updated review. *World J Mens Health*. 2021;39(2):208-221. <https://doi.org/10.5534/wjmh.2000`0>
27. Song JE, Ko HJ, Kim AS. Comparison of the efficacy of anti-obesity medications in real-world practice. *Drug Design, Development and Therapy*. 2024;845-858. DOI: 10.2147/DDDT.S445415