



Nutrition Considerations post ABI

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Overview:

- Importance of Nutrition Post ABI
- Role of Dietitian for ABI
- ABI Deficits Impacting Nutrition Status
 - Nutrition & Fatigue Management
 - Symptoms & Barriers to Healthy Eating
- Heart Healthy Diet Recommendations
 - Risk Factor Management
 - Foods & Supplements for ABI Recovery



Nutrition for Brain Health

- ▶ Brain is composed of 60% fat
- ▶ At rest, your brain uses 20% of your bodies energy ⁽¹⁾
 - ▶ Energy reserve quickly depleted
- ▶ ABI results in metabolic abnormalities, including impaired glucose metabolism ⁽²⁾
- ▶ Nutrition provides the energy, building blocks, and antioxidants required to combat inflammation and repair tissues in the body & brain.
- ▶ Improves thinking skills, mood, brain and physical function.
 - ▶ Reduces risk of falls, infections and subsequent complications.
- ▶ Diet as risk factor management



Dietitian's Role

- ▶ Clinically:
 - ▶ Assess nutrient deficiencies
 - ▶ Determine macronutrient requirements
 - ▶ Recommend supplements if indicated
 - ▶ Interpret lab values
 - ▶ Dysphagia assessments
 - ▶ Prescribe and implement EN regimes
 - ▶ Promote gut health/ bowel regularity
- ▶ Discharge planning & follow up
 - ▶ Diet education
 - ▶ Discussing diet change
 - ▶ Support pt w/ ABI deficits to plan, purchase, prepare healthy meals

Malnutrition

Assessed in hospital
via CNST nutrition
risk screening

- Unintended weight loss
- Prolonged poor intake

Malnutrition in
hospital ⁽⁷⁾

↑ Morbidity,
infections,
complications,
LoS, costs



Stroke Deficits Impacting Nutrition

- 
- Dysphagia
 - Fatigue
 - Cognitive
 - Physical
 - Emotional
 - Behavioural
 - Sensory



Dysphagia

- Swallowing difficulty ⁽²⁾
 - Phases: Oral preparatory, Oral motor, Pharyngeal, Esophageal
- Determine the safest route to provide adequate nutrition, hydration and medications without compromising airway protection and balancing QoL
- Assess physiologic swallow function, cognitive abilities, eating behaviors, predictive risk factors for aspiration pneumonia ⁽⁶⁾
 - Compensatory strategies
 - Dysphagia exercises
- Encourage oral hygiene



Dysphagia

- ▶ Tube feeding
- ▶ Education for pt's and caregivers
 - ▶ Safe eating guidelines
 - ▶ Foods that increase risk of aspiration
 - ▶ Promote independence – self feeding, choosing own meals
 - ▶ Preparing texture modified diets



Nutrition & Fatigue Management

- ▶ Fatigue makes it difficult to plan and prepare meals to acquire adequate nutrition
 - ▶ Lack of nutrition triggers fatigue
- ▶ Rule out other causes
 - ▶ Nutrient deficiencies ie. Iron, B vitamins, vitamin D
 - ▶ Endocrine disorder's
- ▶ What you eat: Foods to limit or avoid
 - ▶ Discourage restrictive diets
 - ▶ Salt, Sugar, Fat
 - ▶ Caffeine
 - ▶ Alcohol

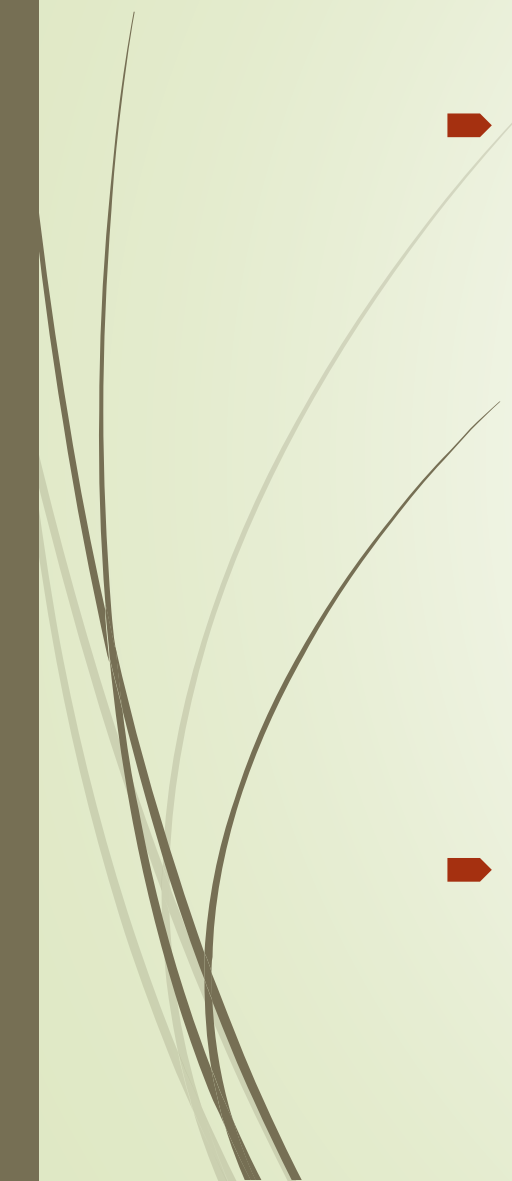


Fatigue Management

- ▶ When you eat
 - ▶ 3 meals per day, snacks as needed
 - ▶ Same time each day
 - ▶ Do not skip meals
- ▶ How much you eat
 - ▶ Portion control
- ▶ Prepare meals at times when you feel best



Fatigue Management

- ▶ Planning and preparing meals
 - ▶ Quiet environment/ minimize distractions
 - ▶ Pick simple recipes
 - ▶ One pot/ pan meals
 - ▶ Cook in batches
 - ▶ Delegate tasks
 - ▶ Buy pre-chopped items, frozen/ canned
 - ▶ Strategies to conserve energy while cooking
 - ▶ Don't multitask
 - ▶ Sit down
- 



Cognitive Changes

- ▶ Such as; lack of motivation, poor memory, decreased attention, new concepts, insight
- ▶ Remembering to eat
 - ▶ Alarms (body signals may not be reliable cues)
 - ▶ Pair with other daily activities
 - ▶ Pencil meals into calendar (paper or iphone)/ checklist
 - ▶ Ask for reminders
- ▶ Difficulty following recipe
 - ▶ Pick familiar recipes
 - ▶ Choose meals with few ingredients

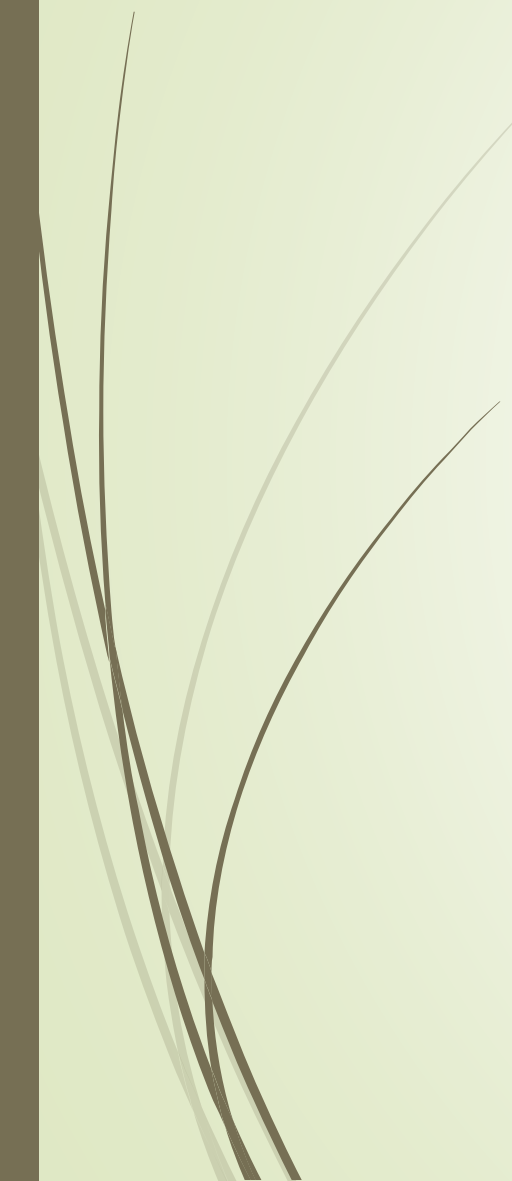


Cognitive Changes

- ▶ Organizing, sequencing and planning
 - ▶ Lists
 - ▶ Labels
 - ▶ Batch prep
 - ▶ Keep premade foods on hand



Communication Impairments

- Difficulty reading
 - Use images to convey information
 - Difficulty expressing food related desires or
 - Supportive communication as per SLP
 - Appreciate the impact of nutrition and dysphagia education
 - Difficult to ask questions
- 




Emotional Changes

- ▶ Easily frustrated
- ▶ Low mood/ depression
- ▶ Stress:
 - ▶ Exacerbates fatigue
 - ▶ Suppresses appetite
 - ▶ Lead to over- or under- eating
 - ▶ Induces GI issues
 - ▶ Elevated cortisol levels raise blood glucose levels
- ▶ Nutrition counselling:
 - ▶ Focus on familiar- something is better than nothing
 - ▶ Allow yourself to be flexible
 - ▶ Discuss mindful eating practices
 - ▶ Have someone else make decisions for you



Sensory + Perceptual Changes

- Taste
 - Smell
 - Headaches
 - Lack of appetite
 - Hyperphagia
 - Nausea
 - Light/ sound sensitivity
 - Altered vision
- 



Sensory Changes:

- Nutrition Suggestions:
 - Visually appealing colours on a white plate
 - Journal foods that are well tolerated
 - Add or reduce seasoning
 - Adjust temperature of foods
 - Small frequent meals
 - Relaxation techniques
- Grocery Shopping Strategies:
 - Online shopping
 - Sensory friendly hours
 - Quiet hours
 - Order meal delivery services (pre-made or box kits)
 - Have a friend or family member do the shopping



Physical Deficits

- ▶ Hemiparesis- dexterity
 - ▶ Utensils and adaptive equipment as per OT
- ▶ Ataxia
 - ▶ Difficulty self-feeding
- ▶ Proprioception
 - ▶ Lack of sensation can make cooking dangerous
- ▶ Fatigue
 - ▶ Reduced endurance for shopping, preparing meals



Other Barriers to Healthy Eating

▶ Cost:

- ▶ Difficulty budgeting
- ▶ Reduced income
- ▶ Rising cost of food prices
- ▶ Preconceived notions

Suggestions:

- ▶ Buy bulk
- ▶ Canned, dried, frozen
- ▶ Flyers & apps

▶ Accessibility:

- ▶ Unable to drive, rural living, safety cooking

Suggestions:

- ▶ Grocery delivery service
- ▶ Mobile markets
- ▶ Meal prep services



Heart Healthy Diet

- ▶ Mediterranean Diet ⁽¹¹⁾
 - ▶ Anti-inflammatory foods
 - ▶ Lifestyle modifications
- ▶ Establish new eating behaviors
 - ▶ Goal setting
 - ▶ Tipping the scale: add 1-2 foods at time, until the cumulation of heart healthy foods yields favourable outcomes



Risk Factor Management:

Diet Education

- Dyslipidemia
- Hypertension
- Diabetes



Dietary Management of Dyslipidemia

- Fibre:
 - Lowers LDL, improves HDL ⁽¹⁰⁾
 - Beta glucan
 - Psyllium
 - Plant sterols
 - Blood glucose control
 - Bowel regularity
 - Satiety
- Recommended Daily Intake ⁽³⁾
 - Adult women up to 25 grams/ day
 - Adult men up to 38 grams/ day



Unsaturated Fatty Acids

- ▶ Poly- and Mono- unsaturated fatty acids
- ▶ Omega 3's
 - ▶ DHA (Docosahexaenoic acid)
 - ▶ EPA (Eicosapentaenoic acid)
 - ▶ ALA (Alpha-linolenic acid)
- ▶ Not produced by the body ⁽⁹⁾
- ▶ Omega's 3oz twice per week of fish or 1 tbsp ground flax = 1.8 g omega 3
 - ▶ 1100-1600 mg per day ⁽³⁾
- ▶ No more than 3- 4 tbsp added fats per day
- ▶ Decrease red meat intake (3oz. 2x per week), dairy milk w/ > 2% MF content, icecream, cream cheeses, butter, palm and coconut oils



Dietary Management of Hypertension

- ▶ Low sodium
 - ▶ Label reading < 5% DV
- ▶ 1 tsp salt = 2,300mg sodium
- ▶ Salt is salt!
- ▶ Avoiding ultra processed foods
- ▶ Avoid smoked, brined and cured products
- ▶ Choose No added salt canned vegetables and beans
- ▶ Add herbs and spices for flavour
- ▶ Cook from scratch



Dietary Management of Diabetes

- ▶ Associated medications can change sense of taste and lower appetite
- ▶ Referral to Diabetes Management Centre
- ▶ Weight management
- ▶ Educate on heart healthy eating
 - ▶ Focus on ↑ intake of foods containing unsaturated fat and fibre



Community Nutrition Resources

- ▶ Meal prep services;
 - ▶ Heart to Home
 - ▶ Meals on Wheels
 - ▶ VON Frozen favourites
 - ▶ Nutrition Education Clinic
 - ▶ Community Health Teams
 - ▶ Atlantic Superstore Dietitians
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Summary



- ▶ Every ABI is unique.
- ▶ As are individuals nutrition requirements, and the strategies to overcome barriers to healthy eating.
- ▶ Diet is only one pillar of risk factor management, but all supports are required for improved outcomes post ABI.



Resources

- 1.) https://braininjurycanada.ca/en/living-brain-injury/nutrition/?gclid=CjwKCAjwwL6aBhBIewADycBIGguTlfOXEwTlxKgp_KgmLS5nQG8nkKbtxoPrk2w-C1zar0wyeDm6hoC1EkQAvD_BwE
- 2.) ERABI-Module-5-V14-Updated-Jul-21-2022-PLAIN-TEXT.pdf
- 3.) <https://www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/dietary-reference-intakes/tables.html>
- 4.) Benefits of Eating Plant Based - Unlock Food
- 5.) Feed Your Body, Feed Your Brain: Nutritional Tips to Speed Recovery | BrainLine
- 6.) Assessment and Management of Dysphagia and Malnutrition following Stroke | Canadian Stroke Best Practices
- 7.) <https://www.albertahealthservices.ca/assets/info/nutrition/if-nfs-cnst-presentation.pdf>
- 8.) https://www.foodserviceandnutrition-digital.com/csnq/0122_winter_2022/MobilePagedArticle.action?articleId=1750975#articleId1750975
- 9.) <https://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/fats-and-cholesterol/types-of-fat/>
- 10.) <https://dhhs.ne.gov/Documents/Foods%20to%20Choose%20to%20Lower%20Your%20Cholesterol.pdf>
- 11.) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4663587/>
- 12.) <https://pearlpoint.org/nutrition-tips-for-managing-fatigue/>



Questions?

