



Optimizing Nutrition for Children with Cancer

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Objectives

- Overview of basic nutrition in paediatric cancer
- Review of commonly faced nutritional challenges and how to address them
- Alternatives to oral nutrition – practical options
- Question time!



Questions to consider:

- What does food and nutrition mean to you
 - in general?
 - when caring for your child?
- What nutritional challenges have you faced/continue to face since your child's diagnosis?
- Do you struggle to feed your child? If yes, how does this make you feel?



Why is nutrition important for a child with cancer?

- Continued growth and development
- Good nutrition can lead to:
 - Increased survival
 - Improved treatment tolerance
 - Fewer treatment delays
 - Increased capacity to fight off infection
 - Improved outcomes later in life
 - Higher quality of life



Barriers to provision of optimal nutrition during cancer therapy

- Treatment
 - Chemotherapy
 - Radiation
 - Immunotherapy
 - Other medication
- Changes to routine
- Loss of control (child and family)



General nutrition focus during cancer therapy

- Wide, varied diet based on Canada's Food Guide
- Adequate amounts of
 - macronutrients (carbohydrate, protein, fat)
 - micronutrients (vitamins, minerals)
- Focus on micronutrients affected by treatment
- Symptom management
- Focus on healthy high protein/high energy foods to balance good days with more difficult
- “Hospital rules” vs. “home rules”



Nutrients of note

- Macronutrients:
 - Carbohydrates – major source of energy
 - Protein – importance in maintenance of lean body mass (aka muscle – the tissue that uses chemotherapy most efficiently)
 - Fat – energy source, important for skin/cushioning organs
- Micronutrients:
 - Calcium/Vitamin D – important in bone health. Extra required with steroid use
 - Potassium/magnesium/phosphate
 - Treatment may impact the ability of the kidneys to hold on to these minerals
 - Diet changes or supplements may be recommended



Are there any “bad” foods?

- NO!
- Trying to maintain balance is the goal....but not always possible
- Home and hospital rule sets are helpful



Are there any foods that may help/worsen side effects?

- YES!
- Common side effects of therapy:
 - Nausea/vomiting
 - Constipation
 - Diarrhea
 - Mucositis (mouth sores)
 - Dry mouth
 - Swallowing difficulties (dysphagia)

Nausea and vomiting

- Most common side effect of therapy
- Awareness, prevention, and early management is vital
- Avoid favourite foods when your child is nauseous
- Avoid heavy/fatty/fried/smelly foods
- Choose bland/starchy/crunchy/salty foods
- Focus on fluids
- Good mouth hygiene can help
- Work with your team to come up with an anti-emetic regimen that works



Constipation

- Extremely common
- Will affect appetite because of a constant feeling of fullness
- Focus on fluids and higher fibre foods
 - Whole grains, oatmeal, fruit, nuts, dried fruits etc.
- Some children require a medication regime to keep them regular
- Encourage movement!





Diarrhea

- Choose soluble fibre to help bulk up stool
- Oatmeal, potatoes, oat bran, bananas, applesauce, rice
- Avoid large volumes of juice or sweetened beverages
- Avoid large amounts of artificial sweetener (including sugar-free gum)
- Your child may require additional salt and potassium if the diarrhea is chronic



Mucositis

- Mucositis is extremely painful and may appear throughout the entire GI system
- **Pain control** is key
- Focus on fluids and soft, cold/cool foods
- Add sauce or spreads to foods to make them more “wet”
- Avoid acidic (like citrus), spicy, salty foods when mucositis is active



Dry Mouth

- Extremely common with medication, radiation
- May affect taste and desire to eat
- May make chewing and swallowing more difficult
- Offer moist foods, and foods with sauces/spreads
- Offer cold/frozen foods
- Encourage your child to sip on a fluid in between bites
- Tart/sour candy or gum may help stimulate saliva
- Consider commercial saliva products





Swallowing difficulties (Dysphagia)

- Requires an assessment from an Occupational Therapist
- Your OT and dietitian will work together to help create a safe plan for your child's nutrition

Appetite changes

- Appetite changes or fluctuations are common
- To make up for the “bad” days, focus on healthy high protein/fat options on good eating days
 - High fat dairy products
 - Sauces/spreads
 - Nuts
 - Adding extra butter/oil/avocado/cream to regular food etc.
- Offer small, frequent meals and snacks
- If your child gets full easily and stays full for hours, speak to your team; they may have a solution
- Ask your child if he/she has any symptoms of GI reflux, and work with your team to treat it





Taste changes

- Usually related to chemotherapy
- Children may prefer strong flavours and textures – tart, salty, sour, tangy, crunchy – and juicy foods
- Metallic tasting meat? Use plastic cutlery or sauces
- Encourage new tastes as a family
- Oral supplement too sweet? Add a pinch of salt, or heat up
- Room temperature foods may be preferred





Fatigue

- An under-reported nutritional effect of therapy
- Treatment itself exhausts many children
- The act of eating may be too tiring
- Try:
 - Smaller portions on smaller plates
 - Healthy high calorie/protein/fat foods
 - Add extra calories where possible
 - Avoid carbonated drinks or snacks close to meals

Tyrannosaurus Dex/The Dexorcist

- Most children aren't capable of controlling or understanding the effects of steroids
 - Rage
 - Sleep disturbances
 - Ravenous appetite and thirst
- Consider lower fat/calorie versions of foods/snacks
- Avoid sugary or salty foods or drinks
- Encourage water and “juicy” foods (cucumber, peppers, watermelon etc.)





Behaviour changes

- Extremely common
- Usually related to a lack of control felt by the child and drastic changes to routine
- Eating is something a child can control
- Experiencing battles at the table? Speak to your team!
- “Hospital” and “home” rules help



What do you mean by a “healthy high energy/protein” diet?

- Boosting calories doesn't mean replacing healthy foods with high fat/calorie processed food or junk food
- Choose higher calorie/fat versions of healthy foods
- This helps avoid sibling rivalry or fights
 - Example: everyone gets vanilla yogourt, but your child with cancer gets full fat, and the others a lower fat version
- Add extra calories to your child's serving only after cooking
- Continue to offer fruits and vegetables, even if your child chooses not to eat them
- If your child gets dessert, everyone else does too
- Family treats are important

I've tried everything...but my child won't eat!

- Speak to your health care team about other options
- Oral supplements
 - Long term compliance is poor (taste fatigue)
 - Expensive
- Nasogastric (NG) feeding tubes
 - Can be a huge stress relief
 - Temporary solution
 - Easy to insert
 - Easy to manage at home
 - A way to provide nutrition, medication, and fluids without a fight
 - May help remind your child what full/hungry feels like
 - Most children adapt to tubes remarkably quickly





Self care

- Vital!
- Trying to take some time for yourself helps make you a better, healthier carer
- Far more difficult than anticipated
- Don't be afraid to ask for help – people are glad to say yes



Thank you!
Questions?