Lymphoma and Nutrition

CHUM, Hôpital Notre-Dame
I hear and read all kinds of information about food and cancer:

*I don’t know what to eat anymore...*
Presentation content

• Eating well during treatments!

• Toxicity symptoms (resources)
  – Weight management
  – Fatigue

• Preventing food-borne infections

• Nutrition post-treatment
Importance of eating well

- Maintaining energy levels and leading a more active life
- Better tolerating treatments
- Reinforcing the immune system and reducing the risk of infection
What type of food is suggested for during treatments?
A balanced and varied diet

- Légumes frais, surgelés ou en conserve: 125 mL (1/4 tasse)
- Légumes feuillus: Cuits: 125 mL (1/4 tasse), Crus: 250 mL (1 tasse)
- Fruits frais, surgelés ou en conserve: 1 fruit ou 125 mL (1/4 tasse)
- Jus 100% pur: 125 mL (1/4 tasse)

- Pain: 1 tranche (35 g)
- Bagel: 1/2 bagel (45 g)
- Pains plats: 1/2 pita ou 1/2 tortilla (35 g)

- Riz, boulgour ou quinoa, cuit: 125 mL (1/4 tasse)
- Céréales: Froides: 30 g, Chaudes: 175 mL (1/4 tasse)

- Lait ou lait en poudre (reconstitué): 250 mL (1 tasse)
- Lait en conserve (évaporé): 125 mL (1/4 tasse)
- Boisson de soya enrichie: 250 mL (1 tasse)

- Yogourt: 175 g (1/4 tasse)
- Kéfir: 175 g (1/4 tasse)

- Fromage: 50 g (1 1/2 oz)

- Poissons, fruits de mer, volailles et viandes maigres et cuits: 75 g (2 1/2 oz)/125 mL (1/4 tasse)
- Légumineuses cuites: 175 mL (1/4 tasse)
- Tofu: 150 g ou 175 mL (1/4 tasse)

- Oeufs: 2 œufs
- Beurre d'arachide ou de noix: 30 mL (2 c. à table)

- Noix et graines écalées: 60 mL (1/4 tasse)
<table>
<thead>
<tr>
<th>Principaux éléments nutritifs</th>
<th>Légumes et fruits</th>
<th>Produits céréaliers</th>
<th>Lait et substituts</th>
<th>Viandes et substituts</th>
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<td>Protéines</td>
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<td>Potassium</td>
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Vitamin, mineral and anti-oxidant supplements

• Satisfy nutritional needs through a varied and balanced diet

EXCEPT:
• In cases of deficiencies and under a physician’s control

• In cases where a professional has identified that the dietary intake is inadequate over a long period of time

• Vitamin D (Canadian Cancer Society recommends 1000 IU daily)
Balanced meal
Are there anti-cancer foods?

- No food **by itself** can keep a cancer from developing.
- Instead, we should speak of **foods with anti-cancer properties**.
- The foods with anti-cancer properties can be part of a **balanced and varied diet**.
Symptoms of toxicity

Canadian Cancer Society

Québec Cancer Foundation
Weight management

When to worry:

• When you lose weight

<table>
<thead>
<tr>
<th>Weight loss in %</th>
<th>Time period</th>
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<tbody>
<tr>
<td>5%</td>
<td>1 month</td>
</tr>
<tr>
<td>10%</td>
<td>6 months</td>
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</tbody>
</table>

• When you gain weight
  – If you exceed your healthy BMI (BMI: 18.5 – 25)
Nutritional supplements

- Commercial
- Home-made
Food toxi-infections

Chemotherapy

Immune system

Infection
Prevention of food-borne infections

- Health and hygiene rules
  - Health Canada
  - Canada.ca
  - Food safety
  - For vulnerable populations
  - Weakened immunity
Foods most at risk

- Raw milk
- Raw milk cheese
- Brie, blue, camembert cheese
- Raw or insufficiently cooked eggs
- Sushi
- Steak tartare
- Raw oysters, clams, mussels
- Smoked salmon
- Pâtés and meat spreads
- Cold cuts: bologna, turkey breast, etc.
- Raw hotdogs
- Alfalfa sprouts, bean sprouts
- Unpasteurized fruit juice

See the guide for safer foods
• Order info
  • Healthcare professionals (multiple copies): fill order form www.nourishonline.ca
  • Patients: email to info@cmlnetwork.ca
The Gut Microbiome

- Genetic material of the microorganisms that colonize the digestive tract (Bacteria, Viruses…)
- Relatively young science.

- **Prebiotics** – food for the bacteria.
Probiotics

- This is a living organism that can have a beneficial effect on the body of the host when consumed in sufficient quantity

> 1 billion

> 1 billion

10 billion

1 billion
Probiotics

- C’est un organisme vivant consommé en quantité suffisante pour exercer un effet bénéfique sur la santé du porteur. 

To be avoided during treatments

> 1 milliard

ACTIVIA Nature

> 1 milliard

1 milliard

10 milliards

1 milliard

CHUM
Regular yogurt

- The bacterial cultures:
  - Streptococcus thermophilus
  - Lactobacillus bulgaricus

- Do NOT survive their passage through the stomach

Safe to eat during chemotherapy
Digestive upset from treatment

- **Diarrhea**
  - Low fibre
  - Avoid spicy, greasy, & fried.
  - Replace fluids
  - Replace electrolytes as needed

- **Nausea and/or Vomiting**
  - Medication as prescribed
  - Little and often
  - Bland foods as tolerated
Nutrition post-therapy

• Cancer is not attributable to a single cause
Recommendation
World Cancer Research Fund / American Institute for Cancer Research 2007

• Cancer survivors must follow the same recommendations as cancer prevention:
Recommendation 1
World Cancer Research Fund / American Institute for Cancer Research 2007

• Be as thin as possible without being underweight:
  – Maintain a healthy weight (BMI 18.5 to 25)

• Throughout life:
  – Avoid weight gain
  – Avoid increasing your waistline

< 80 cm (31.5 in) < 94 cm (37 in)
Recommendations:

1) During treatment
   • **Avoid gaining weight** for people with normal weight, slightly overweight or obese
   • No contra-indication for **intentional weight loss** for those obese / slightly overweight
     – Modest loss: 2 lbs / week

2) After recovery
   • **Intentional weight loss** for those obese / slightly overweight
     – Loss of 5-10% is beneficial
Recommendation 2
World Cancer Research Fund / American Institute for Cancer Research 2007

• Limit consumption of high caloric density foods.
  – Food that provides 225-275 calories / 100g

• Avoid drinks with added sugar

Avoid as much as possible:
- Fast food, highly processed foods
## Fat content of 2 meals

<table>
<thead>
<tr>
<th>Healthy dinner</th>
<th>Fat content (g)</th>
<th>Less healthy dinner</th>
<th>Fat content (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salmon sandwich: Whole wheat bagel with lettuce, tomato, cucumber and mayonnaise</td>
<td>14 g</td>
<td>Cheeseburger</td>
<td>24 g</td>
</tr>
<tr>
<td>Orange</td>
<td>0 g</td>
<td>French fries</td>
<td>17 g</td>
</tr>
<tr>
<td>Carton of 2% milk</td>
<td>4 g</td>
<td>Vanilla milkshake</td>
<td>12 g</td>
</tr>
<tr>
<td><strong>Total quantity of fat (mainly good fats)</strong></td>
<td><strong>18 g</strong></td>
<td><strong>Total quantity of fat (mainly bad fats)</strong></td>
<td><strong>53 g</strong></td>
</tr>
</tbody>
</table>
Recommendation 3
World Cancer Research Fund / American Institute for Cancer Research 2007

- Limiter consumption of alcoholic beverages

Scientific evidence related to cancer justify abstaining from alcohol.
Recommendation 3
World Cancer Research Fund / American Institute for Cancer Research 2007

• In case of alcohol consumption, no more than:

≤ 1 drink/day

≤ 2 drinks/day
Recommendation 4
World Cancer Research Fund / American Institute for Cancer Research 2007

• Limit consumption of red meat
  • Beef, pork, lamb, goat
  • < 500 g per week

• Avoid processed meats
  – Smoked, salted, dried meats, meats with added conservation agents: ham, pepperoni, salami, bacon, pastrami, sausages
Recommendation 4
World Cancer Research Fund / American Institute for Cancer Research 2007

• Replace red meats more often by other products, like:
Recommendation 5
World Cancer Research Fund / American Institute for Cancer Research 2007

• Limit salt consumption (< 6g per day)

Sources de sel

- 77% ajouté à la préparation
- 12% ajouté dans l'assiette
- 5% naturellement présent dans les aliments
- 6% aliments transformés
### Sodium content of 2 meals

<table>
<thead>
<tr>
<th>Meal high in sodium</th>
<th>Sodium content (mg)</th>
<th>Meal low in sodium</th>
<th>Sodium content (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multigrain bread (2 slices)</td>
<td>300</td>
<td>Multigrain bread (2 slices)</td>
<td>300</td>
</tr>
<tr>
<td>Cold cuts (2 ounces)</td>
<td>765</td>
<td>Roast beef (2 ounces)</td>
<td>37</td>
</tr>
<tr>
<td>Cheddar cheese (1 once)</td>
<td>176</td>
<td>Lettuce and Cucumber</td>
<td>0</td>
</tr>
<tr>
<td>Mustard (1 tsp)</td>
<td>56</td>
<td>Mustard (1 tsp)</td>
<td>56</td>
</tr>
<tr>
<td>Dill pickle</td>
<td>385</td>
<td>Carrot sticks</td>
<td>60</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,682</strong></td>
<td></td>
<td><strong>453</strong></td>
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</tbody>
</table>
Recommendation 6
World Cancer Research Fund / American Institute for Cancer Research 2007

Prefer foods of plant origin

• Consume at least 5 portions/day of varied and coloured fruits and non-starchy vegetables
  
  *Starchy vegetables: potatoes, corn, peas, cassava, yams*

• Have whole grains and legumes at every meal
Phytochemical compounds

• Natural compound in plants, legumes, grains
  – Lycopene: tomatoes
  – Lutein: kale, spinach, broccoli
  – Flavonoids: blueberries, raspberries, red beans, hazelnuts
  – Indole: broccoli, cabbage
  – Isoflavones: soy
Recommendation 7

- Try to satisfy nutritional needs only from your diet.

- Food supplements are not recommended for cancer prevention.
Risk factors

- **POSSIBLE** risk factors for NHL:
  - Obesity
  - High meat diet
  - High saturated fat diet
  - High intake of dairy products
  - Low intake of fruits and vegetables

- No food factor identified for Hodgkin’s lymphoma
Thank you for your attention

Questions
References


• Websites
  – www.cancer.ca (Canadian Cancer Society)
  – www.fqc.qc.ca (Québec Cancer Foundation)
  – www.hc-sc.gc.ca (Health Canada)
  – www.extenso.org
  – www.passeportsanté.net
  – www.savourersante.ca
References

- http://cat.inist.fr/?aModele=afficheN&cpsidt=14391955
It seems that...

- **Whey proteins** improve the function of the immune system
It seems that...

- Dairy products cause cancer
It seams that...

- **Organic fruits and vegetables** prevent cancer and are better for our health
It seems that...

- **Turmeric, green tea and dark chocolate** fight cancer
Warning: interaction!

Grapefruit
Grapefruit juice
Seville oranges
Tangelo

Ask your doctor or pharmacist