Managing the Side Effects of Cancer Treatment

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Preparing for Treatment

One size does not fit all

- NCI identifies over 100 types of cancer
- Each cancer can have multiple treatment paths/options

“Healthy” is different for every patient

- What type of cancer?
- Genetics of the cancer?
- Previous treatment history
- Co-morbidities
- Patient preferences
- Allergies
Why is Nutrition Important?

Well nourished patients:

- Maintain muscle mass
- Manage side effects
- Increased energy & QOL
- Less infections
- Fewer complications & treatment breaks
- Improved survival & outcomes
Risks of Poor Nutrition (Why Manage Side Effects?)

- Dehydration
- Increased fatigue
- Increased infection risk
- Loss of muscle mass
- Poor treatment tolerance
- Treatment delays
- Unintentional weight loss
- Vitamin/mineral deficiencies
Weight Loss Prior to Diagnosis

40% of people have unintentional weight loss at diagnosis

Weight is just a starting point, considered clinically significant if:
1% loss in 1 week
5% loss in 1 month
7.5% loss in 3 months
10% loss in 6 months

Treatment side effects can increase unintentional weight loss during and after treatment!
Malnutrition

<table>
<thead>
<tr>
<th>Tumor Site</th>
<th>Prevalence of Malnutrition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pancreas</td>
<td>80-85%</td>
</tr>
<tr>
<td>Stomach</td>
<td>65-85%</td>
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<tr>
<td>Head &amp; Neck</td>
<td>65-75%</td>
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<tr>
<td>Esophagus</td>
<td>60-80%</td>
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<tr>
<td>Lung</td>
<td>45-60%</td>
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<tr>
<td>Colon/Rectum</td>
<td>30-60%</td>
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<tr>
<td>Gynecological</td>
<td>15%</td>
</tr>
<tr>
<td>Urological</td>
<td>10%</td>
</tr>
</tbody>
</table>

Stratton et al, eds. Disease-Related Malnutrition: An Evidence-Based Approach to Treatment. CABI Publishing; Wallingford:2003.
Chemotherapy-Surgery-Radiation

Review side effects of chemo with Pharmacist and Registered Dietitian
   NCI Eating Hints booklet

Stress from surgery can lead to:
   Muscle mass loss
   Inflammation
   Poor wound healing

Radiation
   Hydration
   Protein
## Side Effects of Treatment

<table>
<thead>
<tr>
<th>Side Effects</th>
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<tbody>
<tr>
<td>Nausea/Vomiting</td>
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<tr>
<td>Diarrhea/Constipation</td>
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<tr>
<td>Lack of Appetite</td>
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<tr>
<td>Taste Changes</td>
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<tr>
<td>Feeling Full Fast</td>
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<tr>
<td>Dry Mouth</td>
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<tr>
<td>Mouth Sores (Mucositis)</td>
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<tr>
<td>Trouble Swallowing</td>
</tr>
<tr>
<td>Fatigue</td>
</tr>
<tr>
<td>Dehydration</td>
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</tbody>
</table>
Nausea/Vomiting

Small, frequent meals
- Watch out for smells
- Cool, light foods vs. greasy, heavy meals
- Rest with head elevated after eating

Other things that may help:
- Ginger flavors
- Acupressure bracelets or Acupuncture
- Relaxation techniques

Above all else...take your medication!
Diarrhea

Encourage:
- Low fat, low fiber
- Hydration
- Bulking agents
  - Applesauce, banana, oatmeal, potato, rice
- Identify problem foods with food and symptom diary

Things to avoid:
- Sugar alcohols
- Caffeine
- Alcohol
- Gas forming foods

Consult with Pharmacist for medication schedule!
Constipation

Proper hydration (coming up later)
Warm fluids
Caffeine
Adequate fiber

Other things that may help:
  Light physical activity
  Abdominal massage
  Stretching
  Peppermint oil massaged on the abdomen
Lack of Appetite/Feeling Full Fast

Small, frequent meals
Keep snacks available
High calorie, protein-rich foods
  Consider nutrition drinks
Plan meals by the clock
Drink liquids between meals
Use convenience foods to save energy
Optimize when you’re most hungry
Eat a bedtime snack
Taste Changes

Keep your mouth clean (this helps with “garbage mouth”)

1 teaspoon baking soda, 1 teaspoon salt, & 1 quart of room temp water.
Swish before and after eating

Commercial mouthwashes like Biotene

Try new flavors!!!!
Taste Changes—Choose the Right Flavor

If foods taste too sweet:
  Try foods with a slightly bitter or tart flavor
  Marinade in citrus juices
  Add coffee to a vanilla protein drink
  Add lemon/lime to water
  Cranberry juice

If foods taste too salty/bitter/acid:
  Add fats like butter, avocado, cream
    Example: Choose alfredo sauce over tomato
  Add sweetener or honey
Taste Changes-Choose the Right Flavor

If foods taste metallic:

Switch from metal to plastic utensils
Avoid foods from a can
Switch from red meat to poultry or fish

If foods taste, “blah”:

Turn up the flavor!
Use sauces or condiments:
   Teriyaki, BBQ, Italian dressing, spices (cumin)
Lemon custard or pudding
Add flavorful items like herbs, garlic, onion, bacon
Taste Changes - FASS Method Rebecca Katz

FASS™ = Fat + Acid + Salt + Sweet = YUM!

Taste, Taste, Taste! Is it too....? Then, play with a pinch or drop of...

**FAT**
Function: Distributes flavor across the palate.
Benefits: Increases satiety. Makes foods high in fat-soluble vitamins more bioavailable.
Examples: Avocado, olive oil, coconut oil, ghee, sesame oil

**ACID**
Function: Draws out and brightens flavors.
Benefits: Increases absorption of minerals and stimulates digestion.
Examples: Limes, lemons, citrus, vinegar

**SALT**
Function: Brings out the flavor of foods. Moves flavor to the front of the tongue, where it's best perceived.
Benefits: Improves appetite, balances ratio of potassium, essential for energy and cellular metabolism.
Examples: Sea salt, miso, tamari

**SWEET**
Function: Tames harsh, bitter, sour, spicy flavors. Rounds out or harmonizes flavors.
Benefits: Increases the desire to eat and the sense of pleasure.
Examples: Grade A Dark maple syrup, honey, dates, raisins
Dry Mouth

Good oral hygiene
Try mints, flavored candies, or drinks
Sip water throughout the day
Add moisture to foods
  Gravy
  Sauce
  Dressings
Avoid harsh flavors and crunchy, dry foods
Avoid alcohol and mouthwashes with alcohol
Mouth Sores

Easy to chew, soft foods
Cut food into small pieces or blend
Eat cool foods
Good oral hygiene
Check your mouth daily for sores
Don’t use tobacco or drink alcohol

*Meet with dietitian as soon as possible before starting radiation for head and neck cancer.


**Trouble Swallowing**

Modify foods to make them easier to swallow
  Cook until soft and tender
  Add moisture to foods
  Choose soft foods
    Mashed potatoes, yogurt, scrambled eggs, oatmeal, etc.

Avoid items that may irritate your throat
  Hot foods
  Spicy foods
  Crunchy foods
  Acidic items (tomato, oranges, lemonade)

*Ask your oncologist if a speech therapy consult would be helpful!*

uchealth
Fatigue

• Increase fluid intake to meet needs
• Increase calorie and protein intake with nutrient dense foods
  - Include variety when possible to maximize vitamin/mineral intake
• Increase activity as tolerated
  - Spread activity throughout the day
  - Short segments may be more beneficial
• Request consult with Oncology Rehab Specialist for specific exercises to assist with fatigue
• Allow others to help with usual daily activities such as cooking, and shopping
• “Give yourself a break”
Hydration

Everyday
• Water is a critical nutrient to the body
• Regulates body temperature, removes waste/toxins, lubricates joints
• Transports nutrients throughout the body
• Used by every cell, tissue and organ in the body
• Controls heart rate and blood pressure

During Treatment
• Creates saliva
• Protects organs trying to filter chemotherapy and other medications
• Balances electrolytes
• Fight fatigue
• Prevent constipation

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2908954/
Hydration-Tips

Keep track of intake!

Supplies needed:
- Water bottle
- Rubber bands

Use additives

Supplies needed:
- Fruit
- Drip drop
- Herbs
- Bouillon
- Recipe book

Eat fluid-rich foods
Avoiding Infection - Food Safety

CDC estimates that 95% of food borne illnesses could have been prevented with good food handling practices.

1. Wash hands, utensils, counters, and tables with hot soapy water before and after preparing food.
2. Don’t use sponges or wooden cutting boards.
3. Avoid cross contamination.
4. Always defrost food in the refrigerator.
5. Refrigerate or freeze leftovers within 2 hours. Do not use leftovers that have been in the refrigerator for more than 2 days.
6. Do not eat from other people’s plates, utensils, or glasses.
Avoiding Infection-Food Safety

To ensure that your foods are cooked safely, always:

1. Use a food thermometer to measure the internal temperature of cooked foods.
2. Cook ground beef to at least 160 °F and ground poultry to a safe minimum internal temperature of 165 °F.
3. Reheat fully cooked hams packaged at a USDA-inspected plant to 140 °F. Cook seafood to 145 F.
4. Cook eggs until the yolks and whites are firm. Use only recipes in which the eggs are cooked or heated to 160 °F.
5. Cook all raw beef, lamb, pork, and veal steaks, roasts, and chops to 145 °F with a 3-minute rest time after removal from the heat source.
6. Bring liquid to a boil when reheating.
7. Heat leftovers to 165 °F.

https://www.foodsafety.gov/keep/charts/mintemp.html
https://www.fda.gov/Food/FoodborneIllnessContaminants/PeopleAtRisk/ucm312565.htm
Avoiding Infection-Hand Hygiene

Hand washing should be done:
1. Before eating, drinking, and taking medicine
2. After using the bathroom
3. Before touching food
4. Before and after any type of physical care (ex: mouth care.)
5. Before and after touching the eyes, nose, or mouth
6. After touching things that may be dirty
7. After contact with pets
RESOURCES

American Institute for Cancer Research
www.AICR.org

American Cancer Society
www.cancer.org

National Cancer Institute
www.cancer.gov

Oncology Nutrition Dietetics Practice Group
http://www.oncologynutrition.org

Recipes:
Eating Well Through Cancer – Book Cook for your Life-
www.cookforyourlife.org
THANK YOU!

**Note:** At UCHealth, consults with an RD are **free**! We can provide an individualized plan to keep you nourished through treatment!

Just ask a member of your care team!