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NUTRITION – WHAT NOW?

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Objectives

- To discuss side effects from treatment
- What can I do for prevention
- What do now that you are in survivorship
- Popular diet trends among cancer survivors
- What does research recommend

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Treatment

- Surgery
- Chemotherapy
- Radiation

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Side Effects and Management

- No matter the treatment option, side effects may happen that affect your eating
- Some patients may require a feeding tube for either short-term or long-term use
- Some side effects may have a lasting affect but it is important to learn how to manage these

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Most Common Side Effects

- Poor appetite/ early satiety
- Fatigue
- Dry mouth and thick saliva
- Taste and smell changes
- Modified textures

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Poor Appetite/ Early Satiety	Fatigue
<ul style="list-style-type: none">• Small frequent meals• Nutrient dense foods• Eat by the clock rather than waiting for hunger cues• Light physical activity may stimulate• Eat easy to prepare meals• Consume oral supplements when eating is too tiring	<ul style="list-style-type: none">• Monitor weight and modify intake plan as needed to stabilize weight• Easy to prepare foods• Soft, easy to chew foods• Eat well when appetite is best• Save your energy

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Dry Mouth and Thick Saliva

- Eat small frequent meals
- Alternate bites and sips at meals
- Add broths, gravies, and sauces to meals
- Sip liquids often throughout the day
- Chew on carrots/celery
- Swish and spit using club soda or carbonated water
- Use humidifier
- Good oral hygiene
- Suck on hard candy, frozen grapes, or melon balls
- Avoid alcohol and alcohol containing mouthwash

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Taste and Smell Changes

- Rinse mouth and brush teeth before eating
- Foods with little or no taste
 - Marinades for meats, use lemons, herbs & spices, pickles, or hot sauce
- Foods have "off" taste
 - Fruity and salty flavors usually well accepted
 - Sugar free lemon drops, gums, or mints improve mouth taste
- Bitter or metallic taste
 - Use spices or seasonings like onion, garlic, or chili powder
- Suck on lemon drops or mints
 - Eat using bamboo or plastic silverware
 - Flavor water with lemon juice or other fruit flavors
- Too salty, bitter or acid taste
 - Choose naturally sweet foods
 - Use low sodium
- Meats taste bitter or strange
 - Add fruit based marinade or sweet and sour sauce to meats
 - Pick a different protein source
- Bothersome smells
 - Avoid cooking areas during meal prep
 - Choose cold foods and not cooked
 - Avoid use of microwave ovens that spread odor
 - Use cup with lid and straw

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Can I get enough?

- Modified textures
 - It may seem difficult to get all of your nutrition needs when only able to have Pureed foods or Mechanical Soft
 - May need to add Protein shakes or medical nutrition supplements
 - Add "extras" when needed to make food more nutrient dense
 - Consists of sour cream, cheese, butter, etc.

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But now treatment has completed, why is nutrition still important?

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Prevention

- Foods that supply carotenoids, such as dark green and orange fruits and vegetables, help protect against cancer of the mouth, pharynx, larynx, and lung
- Poor nutrition and vitamin deficiencies have been linked to laryngeal and hypopharyngeal cancers
- Avoiding alcohol consumption

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Survivorship

- What to do now?
- Research recommends the Plant Based Diet
 - 2 ½ cups fruits and vegetables everyday
 - Choosing whole grains, pastas, and cereals
 - Choose fish, poultry or beans instead of red or processed meats

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Let's talk about the trends...

- As many as 48% of cancer patients may pursue popular diets
- There can be positive aspects to these diets such as increasing fruits and vegetables; however there may be some nutrient insufficiencies

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Diet trends among cancer patients

- Vegan
- Paleolithic
- Ketogenic
- Macrobiotic
- Alkaline
- Raw Food

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Diet trends

- Many diet trends may be insufficient in some nutrients
- Lists of foods high in these certain vitamins/minerals to follow

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References of nutrient food lists

Calcium Rich foods

- Milk
- Yogurt
- Salmon, sardines
- Fortified cereals
- Cheese
- Fortified orange juice
- Tofu made with calcium
- Leafy greens

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Zinc Rich Foods

- Red meat
- Oysters
- Ground Turkey
- Poultry
- Fortified breakfast cereals
 - Fortified means that certain nutrients, such as zinc, are added to the food.
- Beans
- Nuts
- Whole grains

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Vitamin B12 rich foods

- Chicken
- Beef
- Fish
- Dairy
- Eggs
- Fortified cereal, non-dairy milks, and soy products

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High Iron Foods

- Fortified cereals
- Oatmeal
- beans,
- Rice
- Leafy greens such as spinach
- Nuts
- Seeds

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Vegan

- What is it?
 - Avoids all animal products including dairy and honey
- Possible Nutrition Problems:
 - At risk for iron, calcium, zinc, Vitamin D, and Vitamin B12 deficiency
- Nutritional Considerations
 - Consider B12 supplement
 - May need fortified foods for Vitamin D (for example orange juice, cereal, soy milk)
 - Emphasize calcium rich foods: leafy greens, nuts, seeds, sea vegetables, sardines
 - Emphasize zinc-rich foods: legumes, whole grains, nuts and seeds
 - Recommend high iron foods: leafy greens, nuts, seeds, whole grains
 - Need to add protein foods

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Paleolithic

- What is it?
 - Varies, but mostly lean meats or animal products, fruits and vegetables
 - Avoids legumes, grains, dairy, added salt, coffee, alcohol, processed foods
- Possible Nutrition Problems:
 - At risk for Vitamin D, calcium, and iodine deficiency
- Nutritional Considerations
 - Need to add healthy proteins (chicken, fish), not just conventional red and processed meats
 - Emphasize minimally processed vegetable-source fat choices: olive oil, canola oil, nuts, seeds, coconut oil, coconut cream, and avocado
 - Ensure adequate consumption of fruits and vegetables

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Ketogenic

- What is it?
 - ≥ 65% of calories from fat with restricted carbohydrates
 - Meat, poultry, fish, some dairy, vegetables with low net-carbohydrates, fats and oils, seeds and small amounts of low net-carbohydrate fruits (such as berries)
 - Carbohydrate restriction on sugar, grains, legumes, milk, fruit, starchy and low-net carbohydrates
- Possible Nutrition Problems:
 - Inadequate fruit, vegetable, fiber intake
 - High saturated fat
 - Risk for Vitamin D, calcium, electrolyte insufficiency
 - Risk for kidney stones
- Nutritional Considerations
 - Daily multivitamin, Vitamin D and calcium supplement
 - Dark-green vegetables with every meal
 - Healthy protein sources – fatty fish, poultry
 - Vegetable sourced fat choices

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Macrobiotic

- What is it?
 - Whole grains, white-meat fish, soy, legumes, vegetables, nuts, seeds, and green tea
 - Avoids red meat, pork, poultry, most fish, animal fats, eggs, dairy, refined sugars and food containing artificial sweeteners and other chemical additives, alcohol
- Possible Nutrition Problems:
 - At risk for Vitamin D, calcium and Vitamin B12 deficiency
 - Possible weight loss from inadequate intake
- Nutritional Considerations
 - Try fatty fish
 - Foods fortified with Vitamin D
 - Try to add more calcium and Vitamin B12 rich foods

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Alkaline

- What is it?
 - Alkaline foods, usually vegetables, "low sugar" fruits, some legumes
 - Avoids "acid-forming" foods to <20% of calories -> include red meat, pork, poultry, fish, eggs, dairy, corn, wheat, coffee, sugar, and alcohol
- Possible Nutrition Problems:
 - Similar to vegan diet but lower risk
 - May be low in protein -> not optimal if still with high protein needs
- Nutritional Considerations
 - Consider B12 supplement
 - Foods fortified with Vitamin D
 - Try to add more calcium, Vitamin B12 and zinc rich foods
 - Foods high in iron

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Raw Food Plan

- What is it?
 - Raw foods or foods heated to 105 degrees F
 - 75% of foods are fruits and vegetables but also allows seaweed, sprouts, beans, seeds, whole grain and nuts
 - Avoids meats, dairy and eggs
- Possible Nutrition Problems:
 - Possibly deficient in calories, protein, B12 and zinc
- Nutritional Considerations
 - Try to add more Vitamin B12 and zinc rich foods
 - Recommends B12, Vitamin D and calcium supplements
 - May need to add protein rich foods

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To wrap up...

- If still struggling with side effects from treatment, work on finding what works for you
- If not able to get full calories or protein – try to incorporate shakes or medical nutrition supplements into daily intake
- In survivorship focus on getting adequate fruits and vegetables and healthy lifestyle changes

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