NUTRITION AND BONE MARROW FAILURE

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OBJECTIVES

- Understand how to maintain a healthy lifestyle with proper nutrition during treatment
- Determine the need for supplement usage
- Identify and manage the side effects of treatment
- Maintain appropriate lifestyle practices post treatment

AICR Guidelines

AICR: American Institute for Cancer Research

- Choose mostly plant foods, limit red meat and avoid processed meat
- Be physically active every day, for 30 minutes or more
- Aim to be a healthy weight throughout life
AICR Nutrition Guidelines

POOR NUTRITION

BonE MARROW Failure

YOU HAVE CONTROL!!
AICR Nutrition Recommendations:

1. Be as lean as possible
2. Be physically active for at least 30 minutes daily
3. Avoid sugary drinks. Limit consumption of energy-dense foods
4. Eat more of a variety of vegetables, fruits, whole grains and legumes
5. Limit consumption of red meats and processed meats
6. Consume alcohol in moderation
7. Limit salty foods and foods processed with salt
8. Don't use supplements to protect against cancer

Nutrition and Bone Marrow Failure

Be as lean as possible

BMI: Body Mass Index

Categories:

- Underweight: <18.5
- Normal weight: 18.5–24.9
- Overweight: 25–29.9
- Obesity: > 30
Be physically active

- Brisk walk for at least 30 minutes daily, or 2-15 minute walks
- As fitness improves, increase activity to 60 minutes of moderate activity or 30 minutes of vigorous activity daily
- Limit sedentary behaviors, such as sitting watching television for lengthy periods

Limit consumption of energy-dense foods

- Avoid high fat foods
- Avoid sugary drinks: sodas, juices
- Be mindful at the Fast Food Restaurants
- Limit your choices of processed foods

Eat more vegetables, fruits & legumes

- Low in calories
- High in vitamins and minerals (vitamins A, C, folate, iron)
- Loaded in fiber- fills you up and keep digestive system moving. (25-35 grams daily)
- Fill your plate with 2/3 vegetables, whole grains and/or fruits
Limit consumption of Red Meats

- Fill 1/3 of plate with meat, fish or poultry
- Eat lean red meat - limit to 18 ozs weekly
- Avoid processed meats
  - smoked, cured or salted meats (bacon, salami, bologna, ham, sausage)

Limit Alcohol Intake

- Drink alcohol in moderation
  - Men: 2 drinks per day
  - Women: 1 drink per day

- May have a protective effect: coronary artery disease
- Can lead to certain cancers

Limit intake of salty foods

Limit sodium to 2400 mg daily

Equals 1 teaspoon per day

In Addition:
- Avoid processed, cured foods
- Limit canned foods
- Use fresh herbs for marinating and seasoning foods
- Increase intake of fresh vegetables and fruits
Supplements

What is a dietary supplement?
“A product that contains vitamins, minerals, herbs or other botanicals, amino acids, enzymes and/or other ingredients intended to supplement the diet. The U.S. FDA has special labeling requirements for dietary supplements and treats them as foods, not drugs.”
— National Center for Complimentary and Alternative Medicine

What is a dietary supplement?

Before taking a supplement consider...
1. Is my diet restricted of nutrients?
2. Am I not eating sufficient amounts at meal time?
3. What medications am I taking?
4. Talk to my doctor and/or registered dietitian about taking a supplement

Supplement Recommendations

- **B vitamins**: B12, B6, folic acid
  - Blood cell production
- **Calcium**: 1200-1500 mg per day
  - Bone and skeletal structure
- **Vitamin D**: 600-1000 IU
  - Maintain skeletal health
Supplements

Avoid mega-doses of vitamin A, C, E, Selenium, Zinc >500% of the RDA/s/DRI
Limit Omega 3 (DHA & EPA): no more than 2 gm per day
Especially if platelets are low
Limit iron supplements; to minimize potential iron overload

Supplements

HERBS ARE SUPPLEMENTS TOO!!

- Green Tea: avoid Green Tea & Velcade
- Avoid herbs that may interact with medication/treatment: St John’s Wort, Gingko Biloba, Grapefruit
- Caution with labels that read “immune-enhancing” or immune-stimulating”

Websites

- www.naturaldatabase.com
- www.ods.nih.gov
- www.micromedex.com
- www.consumerlabs.com
- www.nccam.nih.gov
- www.quackwatch.org
Proper Nutrition during Treatment

- Eat protein and fiber at each meal
- Eat several nutritious snacks during the day
- Plan your meals for the day
- Drink sufficient fluids
- Take a low impact exercise or yoga class
- Keep aware of your body’s need to rest
- Push yourself, but not to the point of exhaustion

The New American Plate

Fatigue

- Eat protein and fiber at each meal
- Eat several nutritious snacks during the day
- Plan your meals for the day
- Drink sufficient fluids
- Take a low impact exercise or yoga class
- Keep aware of your body’s need to rest
- Push yourself, but not to the point of exhaustion
**Taste Changes**

- Choose foods that look and smell good
- Marinate foods
- Try tart foods and drinks
- Add extra flavors to foods, such as lemon
- For metallic taste, try eating with a plastic utensils
- Keep mouth clean. Rinse mouth after each meal

**Nausea**

- Eat easy to digest foods - yogurt, broth, toast
- Eat 5-6 small meals per day
- Sip on small amounts of liquid during meals
- Plan meals or snacks before treatment
- Speak to your doctor about an appropriate anti-nausea medication

**Diarrhea**

- Drink adequate fluids
- Eat 5-6 small meals per day
- Eat low-fiber foods
  - soluble fiber: oranges & apples; carrots; oats
- Avoid high fat, greasy foods
- Avoid foods that may cause gas, i.e. cruciferous vegetables, excess fiber
**Constipation**
- Drink adequate fluids
- Eat high fiber foods
- Try hot liquids
- Exercise - a healthy gut likes movement
- Try a stool softener, but speak to your doctor before using a laxative
- Try soaking figs overnight, eat then softened figs in morning to assist with bowel movements; As per Dr. Oz 😊

**Loss of Appetite**
- Plan meals for each day
- Eat 5-6 small meals per day
- Keep high protein/calorie snacks close by for when you feel like eating
- Include extra protein and calories in your meals, be sure to include it at breakfast
- Create a relaxed environment
- Try a variety of foods

**Food Safety Guidelines**
- **WASH hands and surfaces often**
  - Wash hands in warm soapy water for at least 20 seconds
- **Rinse fruits and vegetables well with tap water**
- **Prevent cross-contamination**
  - Use one cutting board for raw foods and another for ready-to-eat foods
- **Separate raw meats from other foods**
- **Use paper towels to clean up kitchen surfaces**
Food Safety Guidelines

- Cook poultry and ground meat to minimum of 165°F
- Cook meats to minimum of 145°F
- Avoid undercooked eggs
- USDA Meat & Poultry Hotline: 1-888-674-6854
- FDA Food Information Line: 1-888-723-3366

Food Safety Guidelines

- Dining Out:
  - Avoid buffets and open salad bars
  - Avoid ordering salads or cut-up fruit, as these may not be properly washed
  - Refrigerate leftovers immediately and do not keep longer than 72 hours

Summary

- Focus on a plant based, balanced meal plan
- Eat a variety of fruits and vegetables
- Choose mainly lean proteins
- Limit red and processed meats
- Be physically active for at least 30 minutes daily
  *maintain a BMI of 18.5-24.9*
- Do your research and use supplements with caution
  Speak to your healthcare team about supplement usage
Nutrition Resources

• American Institute for Cancer Research (AICR)
  www.aicr.org
• American Cancer Society
  www.cancer.org
• Academy of Nutrition and Dietetics
  www.eatright.org
• Center for Science in the Public Interest
  www.cspinet.org

BE POSITIVE!!