



## **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*

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## **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

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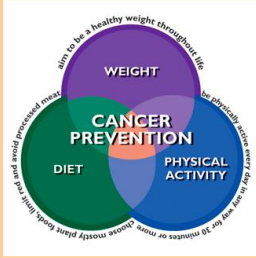
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### AICR Nutrition Guidelines




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**POOR NUTRITION**



**BonE MARROW Failure**

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**YOU HAVE CONTROL!!**




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### 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




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### 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




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### 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




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### 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)




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### Limit Alcohol Intake

- Drink alcohol in moderation

- Men: 2 drinks per day
- Women: 1 drink per day

- 5 fl oz of wine
- 12 fl oz of beer
- 1.5 fl oz 80-proof liquor



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

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### 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




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## 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

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## Supplements

### 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



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## 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

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## Supplements



Avoid mega-doses of vitamin A, C, E, Selenium, Zinc  
 >500% of the RDAs/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

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## 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"

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## Websites

- [www.naturaldatabase.com](http://www.naturaldatabase.com)
- <http://dietary-supplements.imfo.nih.gov>
- [www.ods.nih.gov](http://www.ods.nih.gov)
- [www.micromedex.com](http://www.micromedex.com)
- [www.consumerlabs.com](http://www.consumerlabs.com)
- [www.nccam.nih.gov](http://www.nccam.nih.gov)
- [www.quackwatch.org](http://www.quackwatch.org)

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# Proper Nutrition during Treatment

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## The New American Plate



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## 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

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### 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

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### 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

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### 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

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### 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 😊

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### 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

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### 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**

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### 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

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### 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




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### 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

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### Nutrition Resources

- American Institute for Cancer Research (AICR)  
[www.aicr.org](http://www.aicr.org)
- American Cancer Society  
[www.cancer.org](http://www.cancer.org)
- Academy of Nutrition and Dietetics  
[www.eatright.org](http://www.eatright.org)
- Center for Science in the Public Interest  
[www.cspinet.org](http://www.cspinet.org)

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**BE POSITIVE!!**

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