



Nutrition and Leukemia: Your questions answered

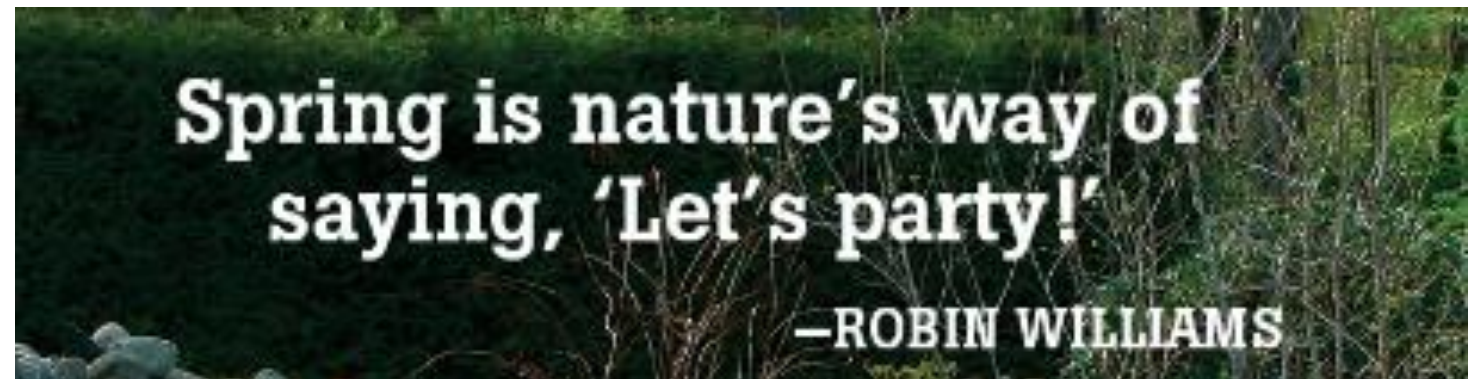
Lori Bumbaco, MS, RDN, CSO, LDN

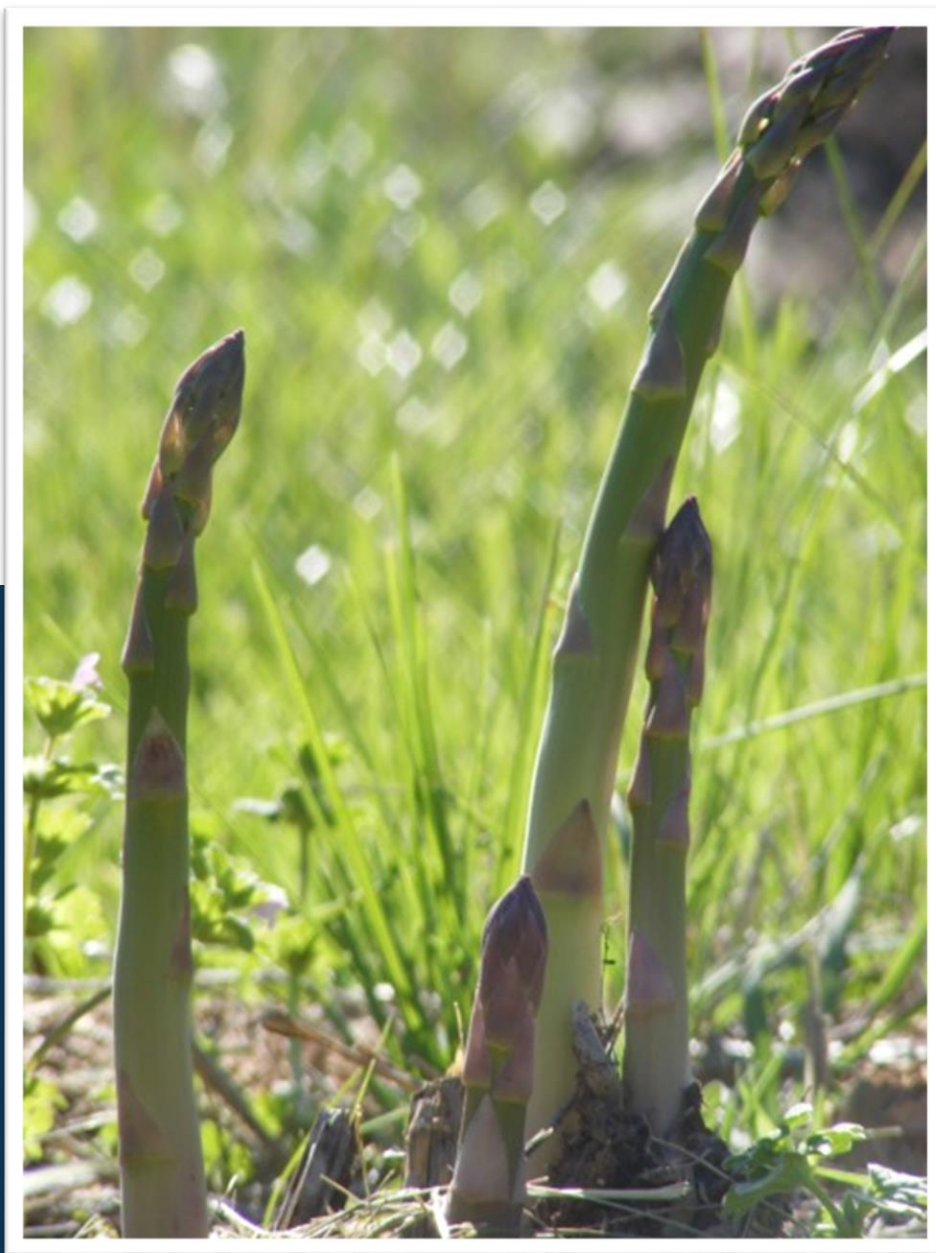
Answer submitted questions

Additional Q & A (if time allows)

Share with you a nourishing recipe

Agenda





Question Categories:

- General nutrition for leukemia
- Specific food and diet questions
- Nutrition for risk of progression
- Supplements
- Symptom management

Category 1: General Nutrition for Leukemia

I am looking to understand what the best foods to eat are as well as what not to eat.

Similar Questions

What are the top 5 specific foods for blood cancer? What are the 5 foods to avoid?

Basic food to eat

Need to know best diet for a person with CMML

What foods to stay away from? What foods to double up on?

What foods should be avoided?

I have never been a good eater nutritionally - where do I begin?

A registered dietitian (preferably one with a CSO credential) can best provide you with *specific* nutrition guidance.

In general, survivors are advised to consume a *diet pattern* that emphasizes whole plant foods.

Experts advise to limit:

Highly processed food
Sugary beverages
Alcohol

Highly processed food contains little to no nutrients, with a concentrated amount of sugar, salt, and saturated fat.

Sugary beverages are linked with weight gain.

A Diet Pattern vs. Specific Food Choices

Why an overall diet pattern?

- Evidence for diet and heme malignancies is inconclusive.
- A total diet combines *all* the potential cancer *protective* compounds rather than isolated choices.
- Better reflects the way we eat.

Experts advise to eat:

Most meals/snacks:

Vegetables
Fruit
Whole grains
Beans/lentils
Nuts/seeds

Plant based diets saturate the body with vitamins and minerals, fiber, anti-oxidants, and phytochemicals.

Whole Food Plant Based Diet

Mostly plant foods, most of
the time



Fight cancer cell formation and replication.

Rebuild healthy cells including immune cells.

Reduce certain types of inflammation.

Associated with desirable body weight.

Choices to Minimize

Sugary Beverages

SUGARY DRINKS



REGULAR SOFT DRINKS, SWEETENED TEA & COFFEE, SPORTS DRINKS, FRUIT DRINKS, ENERGY DRINKS, FLAVOURED WATER, FLAVOURED MILK & DRINKABLE YOGURT 100% JUICE

Alcohol



Processed meat and burned meat



Ultra-processed food



Cancer Protective Food

Cruciferous
veggies



Beans & lentils



Berries



Whole grains



Summary

The **overall** diet we eat matters for cancer risk.

Plant-based whole foods contain the **greatest** amount of nutrients and unique compounds for cancer protection.

Working with a dietitian can help establish how best to pursue a diet that meets your unique targets.



Category 2a: Specific Food Questions

**Are there any foods
or drinks (tea, red
wine) that actually
kill CLL cells?**

Similar Questions

What are your thoughts on chocolate?

Why is sugar so bad for cancer?

Please advise the top ten easy snacks to carry.

Please advise the top five energy drinks

Can you have egg whites in diet?

I heard the greatest food to help fight cancer is broccoli-,is this true for CLL?

No *single* food or ingredient by itself causes or cures from cancer.

A total diet pattern is *associated* with *risk* for cancer



Tea, Red wine, Broccoli:

Tea contains flavanols and EGCG.

Red wine contains flavanol, anthocyanins, phenolic acids, stilbenes.

Broccoli contains glucosinolates.



No single food or ingredient can cause or cure cancer.

That includes sugar!

- Cancer cells adapt to use whatever fuel source is available.
- No clinical evidence that omitting sugar in the diet exerts cancer protection.
- Other compounds show promise, however only in preclinical data.

Chocolate, egg whites, red wine energy drinks:

Dark chocolate (70%+)

contains some polyphenols but not necessarily the best cancer fighting food.

Egg whites have protein, but the *yolk* contains the nutrients.

Red wine (and all alcohol) metabolizes to a carcinogen.

Energy drinks are considered ultra-processed.

Whole Food Plant Based Diet

Optimize protection with a
combination of nutrients.



Fight cancer cell formation and replication.

Rebuild healthy cells including immune cells.

Reduce certain types of inflammation.

Associated with desirable body weight.

Top 10 Easy Snacks to Carry



Fresh fruit + nuts

Veggies + hummus

Roasted beans

Popcorn

Homemade granola bar

Edamame

Snap pea crisps

Whole grain cereal + dried fruit

Build your own trail mix

Energy bites made with oats, dates, and nuts

Energy Drinks

To drink or not to drink?

Support Energy Levels:

Light activity.

Adequate hydration.

A balanced diet with adequate fiber.

Quality choice?

51 grams added sugars – 12 $\frac{3}{4}$ teaspoons

410 mg sodium

Caffeine? Most products range from 17-242 mg

B vitamins **exceed** recommended daily value

Other additives? Taurine, green tea, etc.

Have been linked with sleep disturbances, stomach aches, increase heart rate and blood pressure, metabolic disease, and microvascular kidney damage.

Caffeine sensitive individuals should use with caution.

Summary

No **single** food or ingredient by itself causes or cures from cancer. Some choices are delicious and nutritious ways to pursue an overall diet.

A **total diet pattern** is associated with risk for cancer.

Eating mostly plant foods allows us to occasionally enjoy less nutrient dense ones like sugary treats.



Category 2b: Specific Diet Questions

There is so much confusing info about nutrition, diet and cancer. Some recommend a paleo or keto diet. Others recommend a vegan diet. What type of diet is the best for CLL?

Similar Questions

Are there any reliable data about vegetarian diets or even more targeted vegan diets, with special foods that have direct impact.

What are the thoughts on Ketogenic diet?

Nutrition misinformation is prevalent and potentially adds stress and anxiety for those diagnosed.

Fear and stress around food may create more harm than food could ever possibly do.



Social Media's Influence

48.5% were for profit.
34% were selling a product.

Health claims were common, with content that purported to **prevent** (41.8%), **treat** (27.2%), or **cure** (10.7%) cancer.

Vague phrases such as “anti-cancer,” “cancer-fighting,” or “cancer-busting” were also used.

Misinformation and Stress

- Patients and caregivers experience cancer misinformation on social media and this contributes to **distress** at varying levels.
- Caregivers described that cancer misinformation from social media **negatively** affects their **confidence** in caregiving and made them second guess their decisions.
- Nutrition research is subject to misinterpretation, distortion, and extrapolation, and much **online cancer-related misinformation** pertains to food and supplements.

Reliable Information

Your healthcare team!

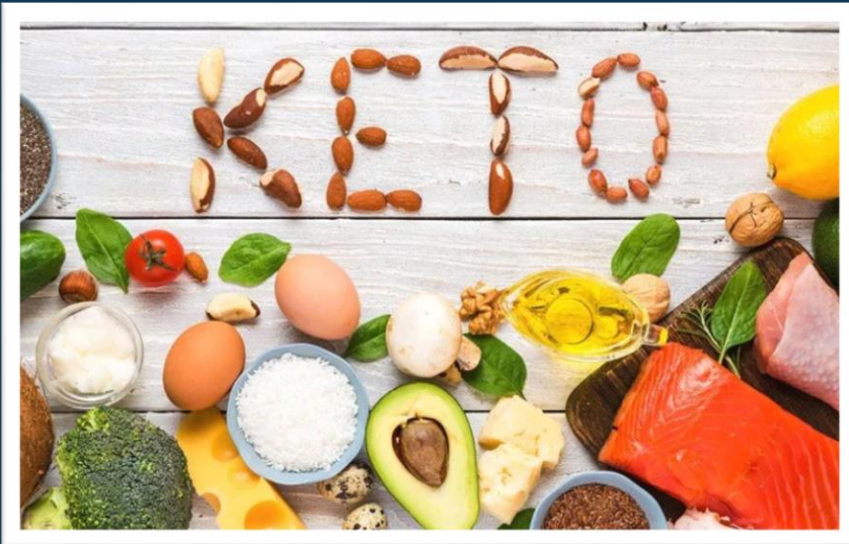
A registered dietitian

American Institute for Cancer Research:

www.aicr.org

Ketogenic Diet

Does sugar feed cancer?



<50 grams carbs per day

1 serving berries = 20 grams

Moderate in protein, **not** high in protein.

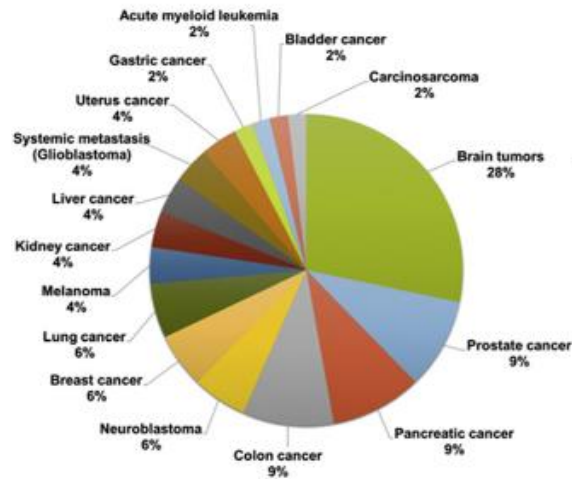
Is difficult to **sustain**.

Research remains **inconclusive** for benefits as part of cancer treatment.

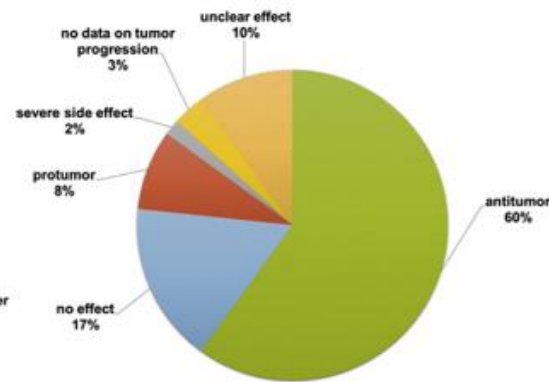
Concerns remain that cancer cells may **adapt** to use ketones as a fuel source.

Effect of the Ketogenic Diet on Cancer

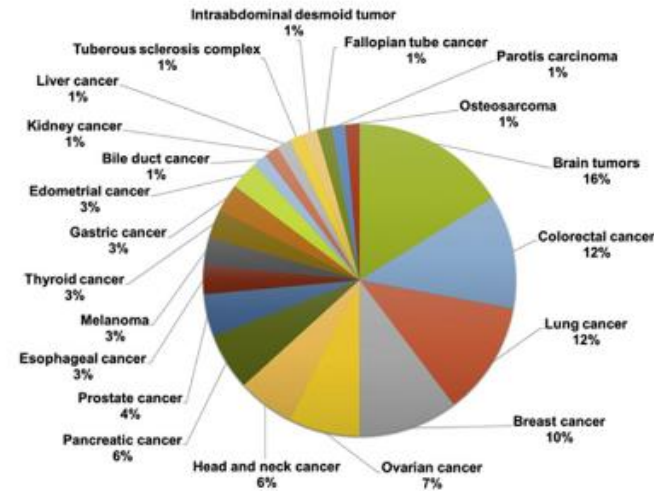
Preclinical studies



Proposed effect on tumor cells



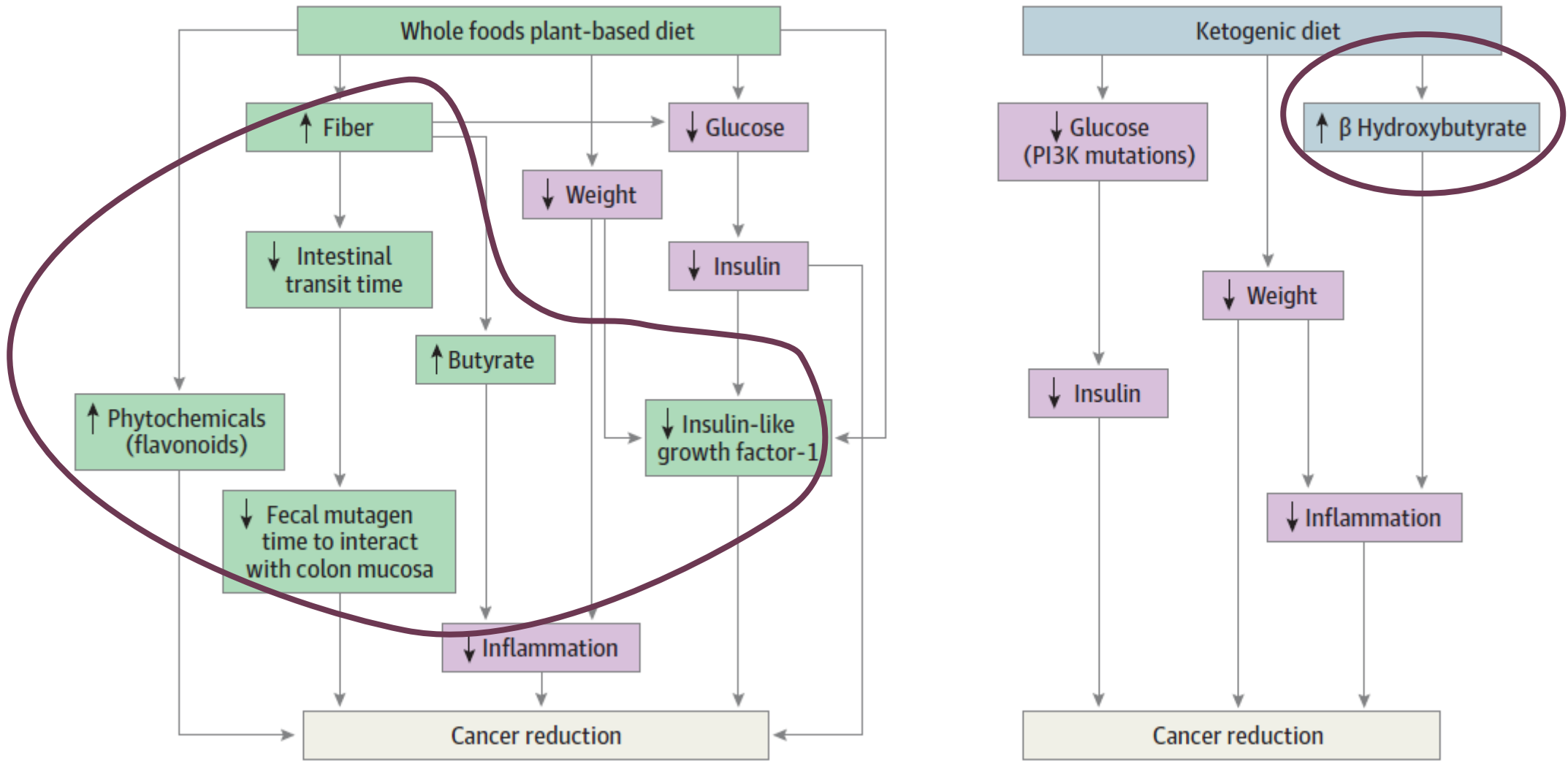
Clinical studies



Proposed effect on tumor cells



Preclinical studies = in vitro and animal studies.
 Clinical studies in humans – *lacking* for heme malignancies.
 More research is needed.



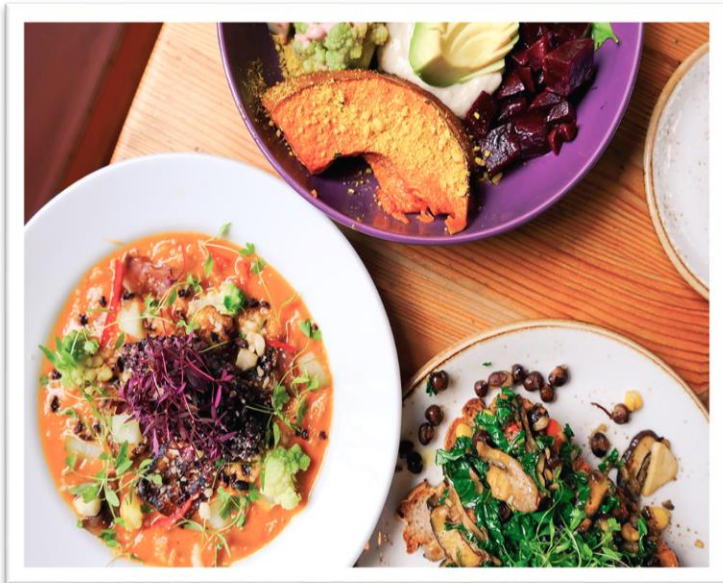
How plant based vs. keto diets compare with cancer protection:
WFPBD won in this study

Summary

Research about nutrition and diets is an emerging, yet active area of interest.

Stay informed using **trustworthy** resources.

Experts advise that an **unprocessed plant-based** diet provides the optimal nutrients to exert cancer protection.



Category 3: Nutrition and Disease Progression

I am in remission now for almost a year but am curious to see what I can do nutritionally, to help stay this way and prevent my AML from returning.?

Similar Questions

I am in a wait & see mode. Will having a good nutrition base help me delay my CLL progression?

Diet for people on Watchful Waiting?

Can proper nutrition impact relapse chances?

Food to boost my immune system.

Nutrition to improve the immunocompromised status in CLL patients?

A dietitian can assess and recommend specific nutrition goals for your **unique** situation.

For example, treatment may result in malnutrition. An important first step will be to reverse malnutrition.



Consume a whole food
plant-based diet.

A “**Western diet**” was associated with increased risk for CLL. SAD Diet is characterized by **highly processed** food.



Does nutrition matter for recurrence?

Evidence is lacking.

- The same mechanisms that are cancer preventive exert protection across the continuum of the carcinogenic process.
- Experts advise that all survivors consume a cancer protective diet.

Why are Ultra-processed foods problematic?

Replaces nutrient dense food that possess cancer fighters.

May alter gut microbiota which negatively impacts **immune** function.

Contributes to **inflammation**.

Whole Food Plant-Based Diet

Supports Immune Function



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Mediterranean diet is an example of a plant-based diet.

May lower **inflammation**.

High in fiber, which supports beneficial gut **microbiota**.

Provides hefty dose of **anti-oxidants** and **phytochemicals**.

Consume a whole food plant-based diet.

Fiber.

Anti-oxidants.

The vitamins/minerals
necessary to support
immune function.

Fermented food.



Does food boost immunity?

It's complicated.

- Most of our immune function resides in our gut.
- Overall diet patterns are linked with beneficial gut microbiota.
- No specific food can “boost” immune function.

Top Foods to Include

Green leafy veggies.

Orange, red, & yellow fruit and veggies.

Citrus fruit.

Nuts and seeds.

Beans and lentils.

Fermented dairy
/dairy alternatives.

Summary

Research about nutrition and diets is an emerging, yet active area of interest.

Stay informed using **trustworthy** resources.

Immune function can be **supported** (not “boosted”) by eating a whole food plant-based diet.



Can you briefly discuss supplements/ vitamins (e.g. B Complex, Fish oil, etc) recommended for people with CLL or other cancers

Similar Questions

Any advice on **supplements** post treatment.



Experts and Cancer Organizations advise **against** the use of supplements in cancer treatment/survivorship.

Dietary supplements are **not regulated** and have **not been shown to be effective** in cancer care.

Supplements

May contain contaminants such as lead or cadmium.

May contain less or more than what is claimed on the label.



Dietary Supplements

Evidence is lacking.

- Research has not found that dietary supplements exert cancer protection.
- **Exceptions** are for those with a diagnosed deficiency of a vitamin/mineral.
- Herbals and other DS need to be evaluated for safety.

Food first, Supplements second.

Food contains an entire package of nutrients that interact in ways to exert cancer protection.

Example:

Vitamin C vs. **Broccoli**

Vitamin C +
Potassium + Iron +
Calcium + Magnesium +
Folate + Vitamin B6
+ glucosinolates +
flavanols + carotenoids

Summary

Experts advise that dietary supplements are **not recommended for cancer care:**

Not regulated, may contain **harmful** ingredients or an excessive dose.

May **interact** with treatment.

Are inferior to the **package** of nutrients contained within a whole food.



Category 4: Symptom Management

How do you feel about high protein or high fat diets for weight gain?

If anorexic, losing weight, or poor appetite:

Request a referral to dietitian.

Similar Questions

I am **anorexic**, and take lots of medicine including Cancer meds. Help!

What do you recommend to increase **appetite**?

Suggestions for combating low iron levels in CLL and Osteoporosis, I may be wrong, but it seems some foods counteract each other.

How to build up iron without stomach problems and constipation.

Along with CLL, I am in treatment for a stage 2 pancreatic cancer. Am taking a Creon enzyme along with lomotil but have continued varying degrees of **diarrhea**! Any nutrient suggestions to lessen diarrhetic effects?

Foods to decrease **heartburn**. I already skip alcohol, chocolate and fried foods and spicy foods. Have hiatal hernia and on calquence

Best **protein** sources to avoid arthritic changes brought on by using Ibrutinib?

Recommendations for High Calorie, High Protein diet

Healthful fats:

Avocado, nuts/seeds,
nut butters, olive oil,
flaxseed oil

Nutrition shakes,
commercial or
homemade.

Quality proteins:

Eggs, fish (salmon,
mackerel, anchovies,
sardines, herring)

Anorexia, poor appetite, desirable weight gain

- Calories from all sources are recommended.
- Use of “bang for buck” choices (foods with FAT)
- Include multi-modal intervention: light activity, address mood changes, consider Rx. if indicated

Other Tips

Light activity to help
move food through the
GI tract.

Approach eating as an
overall part of
treatment.

Eat when appetite is
best.

Eat by the clock.

Foods high in iron

Meat, poultry, oysters, sardines.

White beans, red lentils, fortified breakfast cereals, spinach, tofu.

Consume plant sources of **iron** with **vitamin C** to enhance absorption: red bell peppers, citrus fruit, potatoes.

Iron

- Inquire about “slow iron” which is a slow release into body, aids in digestive relief.
- Ask if CLL or treatment is causing low iron. Anemia does not always = iron deficiency.

Foods for bone health

If eating for bone health and treating low iron, try to **separate** eating high calcium food with food high in iron.

Plant-based diets support bone health. Include calcium rich food:
Yogurt, fortified tofu, salmon with bones, spinach, kale, pinto beans.

Foods to improve diarrhea

Food with soluble fibers:

banana, oats, potatoes, applesauce.

RICE, rice congee

Banana flakes with meals.

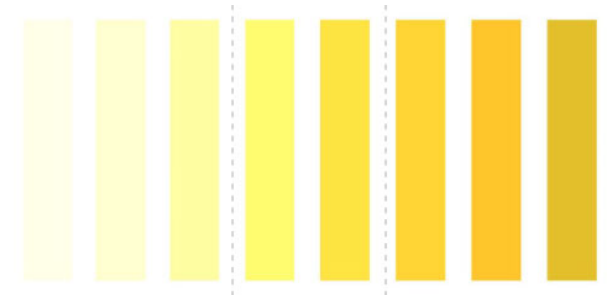
Low lactose and low-fat choices advised because they can trigger diarrhea.

Enzymes with Pancreatic Dysfunction

- Appropriate **dosing** and **timing** matters.
- Inquire if you need an acid reducing medication.
- Sometimes a different brand of enzymes may be necessary if all else fails.

Adequate hydration

Check urine color:
Apple juice = likely dehydrated.



Consume enough water to meet need, plus additional 8 oz. for each loose BM

Problematic Food

Large portions

High fat foods

Spicy food

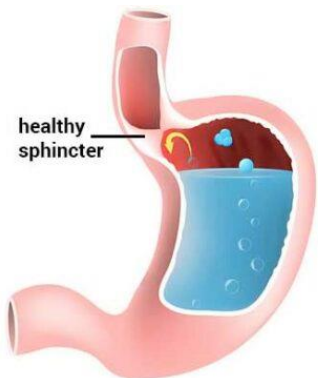
Peppermint

Chocolate

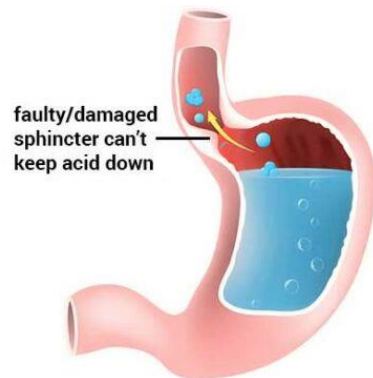
Garlic/onions

Caffeine

Alcohol



Normal



Acid Reflux

Heartburn

- Inquire about medical management.
- Identify ***YOUR*** specific and unique food triggers.
- Sometimes, the ***dose*** is the poison.

Other tips

Elevate your head after eating

Raise head of bed while sleeping – 7-8”

Weight loss, if indicated may improve reflux.

Adjust meals to small, frequent ones.

Summary

No single food or ingredient by itself causes or cures from cancer.

A total diet pattern is *associated* with *risk* for cancer.

Nutrition misinformation is prevalent and potentially adds stress and anxiety for those diagnosed.

Fear and stress around food may create more harm than food could ever possibly do.

A dietitian can assess and recommend specific nutrition goals for your **unique** situation.



Resources



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American Institute for Cancer Research: <https://www.aicr.org/>

Oncology Nutrition Practice Group:
<https://www.oncologynutrition.org/home>

Memorial Sloan Kettering's About Herbs Database:
<https://www.mskcc.org/cancer-care/diagnosis-treatment/symptom-management/integrative-medicine/herbs>

Cancer Protective Recipe



Mediterranean Nourish Bowl

Hummus

Farro

Spinach and fresh vegetables

Herbs & spices

Can be assembled using
premade ingredients

Easy to customize according
to flavor or dietary need



Thank you!