

Unite to Nourish: A small food with big benefits for cancer survivors

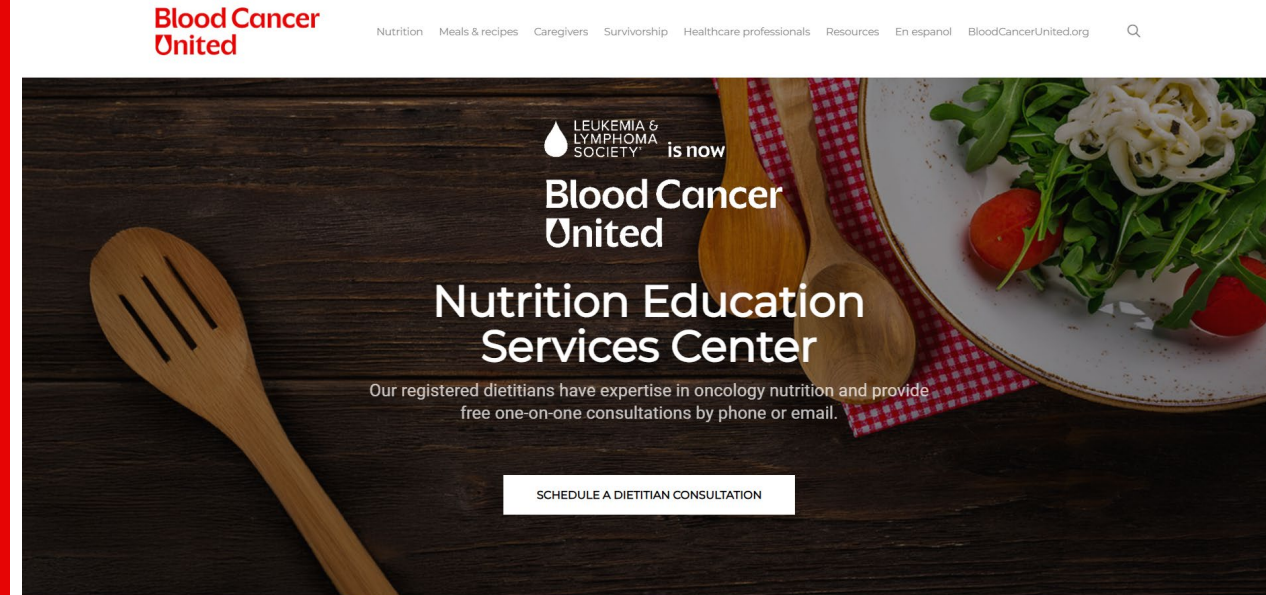


is now

**Blood Cancer
United**

Blood Cancer United Nutrition Education Services Center

BloodCancerUnitedNutrition.org



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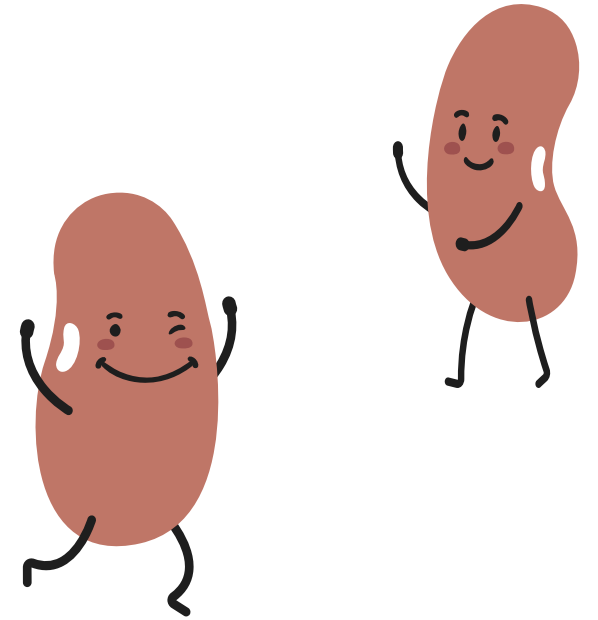
Heather Knutson MS, RD, CSO, LD
Registered Dietitian



Beans!

Objectives

- During this webinar, we will spill the beans on:
 - Why eating beans is beneficial for cancer survivors
 - How beans can help manage side effects
 - Ways to add beans to your diet
 - Strategies to improve digestion of beans



**WHY
BEANS?**



What kind of
beans are we
talking about?



On the pulse: Terms to know

Legumes:

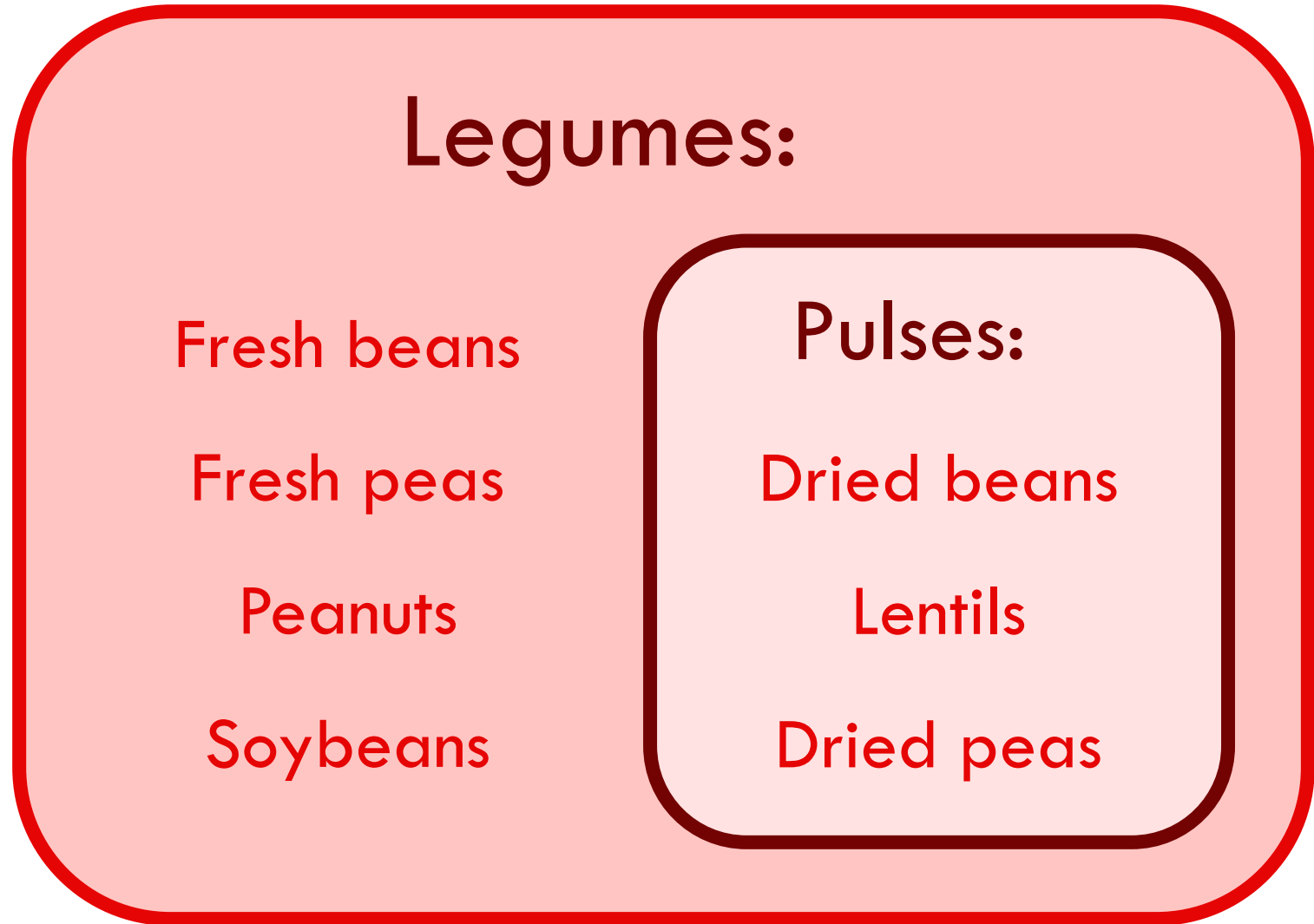
- Includes all types of beans
- Plant that grows in a pod

Pulses:

- Subtype of legume
- Dried seed of a legume

Beans:

- Interchangeable term



Types of dried beans



Black beans



Garbanzo beans
(chickpeas)



Pinto beans



Lima
beans



Kidney
beans



Navy
beans



Black- eyed
peas



Cranberry
beans

Pulses

Dried beans

Lentils

Dried peas

Types of lentils and dried peas



Red lentils



Yellow lentils



Split peas



Green lentils



Black lentils

Pulses

Dried beans

Lentils

Dried peas

Cooked lentils and dried peas



Red lentils



Yellow lentils



Split peas



Green lentils



Black lentils

Pulses

Dried beans

Lentils

Dried peas

Why are beans
helpful for cancer
survivors?

AICR RECOMMENDATIONS FOR CANCER PREVENTION

A Blueprint to Beat Cancer

To prevent cancer, people should aim to follow as many of the **10 Cancer Prevention Recommendations** as possible. However, any change you make that works toward meeting the goals set out in the Recommendations will go some way to reducing your cancer risk.

EAT A DIET RICH IN WHOLE GRAINS, VEGETABLES, FRUITS AND BEANS

Make whole grains, vegetables, fruits and pulses (legumes) such as beans and lentils a major part of your usual daily diet



LIMIT CONSUMPTION OF RED AND PROCESSED MEAT

Eat no more than moderate amounts of red meat, such as beef, pork and lamb. Eat little, if any, processed meat



BE PHYSICALLY ACTIVE

Be physically active as part of everyday life – walk more and sit less



LIMIT CONSUMPTION OF SUGAR-SWEETENED DRINKS

Drink mostly water and unsweetened drinks



LIMIT CONSUMPTION OF "FAST FOODS" AND OTHER PROCESSED FOODS HIGH IN FAT, STARCHES OR SUGARS

Limiting these foods helps control calorie intake and maintain a healthy weight



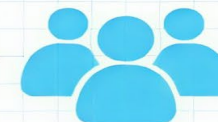
FOR MOTHERS: BREASTFEED YOUR BABY, IF YOU CAN

Breastfeeding is good for both mother and baby



AFTER A CANCER DIAGNOSIS: FOLLOW OUR RECOMMENDATIONS, IF YOU CAN

Check with your health professional about what is right for you



LIMIT ALCOHOL CONSUMPTION

For cancer prevention, it's best not to drink alcohol



DO NOT USE SUPPLEMENTS FOR CANCER PREVENTION

Aim to meet nutritional needs through diet alone



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AICR's Foods that Fight Cancer™



Pulses are a top source of dietary fiber and contain numerous potentially protective phytochemicals called polyphenol compounds.



EAT REGULARLY

LEUKEMIA & LYMPHOMA SOCIETY™ is now

Blood Cancer United



APPLES



ASPARAGUS



BLUEBERRIES



BROCCOLI AND CRUCIFEROUS VEGETABLES



BRUSSELS SPROUTS



CARROTS



CAULIFLOWER



CHERRIES



COFFEE



CRANBERRIES



FLAXSEED



GARLIC



GRAPEFRUIT



GRAPES



KALE



ORANGES



PULSES: DRY BEANS, PEAS, AND LENTILS (LEGUMES)



RASPBERRIES



SOY



SPINACH



SQUASH (WINTER)



STRAWBERRIES



TEA



TOMATOES



WALNUTS



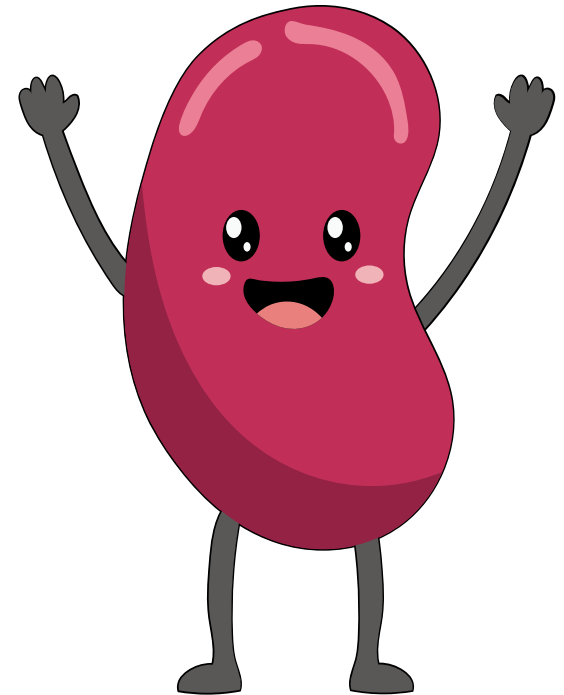
WHOLE GRAINS



AICR Food Facts
AICR Dry Beans, Peas, and Lentils

Beans are packed with nutrition!

- Fiber
 - ~6-8 gm per ½ cup
- Protein:
 - ~7-9 gm per ½ cup
- Phytochemicals
 - Anthocyanins
 - Phenolic acids
 - Flavan-3-ols
 - Proanthocyanidins
 - Lignans
 - Phytic acid
 - Saponins
- Vitamins and Minerals
 - B-vitamins
 - Folate
 - Copper
 - Iron
 - Manganese
 - Magnesium
 - Phosphorus
 - Potassium
 - Zinc



Fiber

- Fiber content of beans: ~6-8 gm protein per ½ cup
- Types of fiber:
 - Soluble fiber: lowers cholesterol, keeps blood sugar stable, keeps you feeling full
 - Insoluble fiber: helps with constipation
 - Resistant starch: feeds good gut bacteria, keeps blood sugar stable, keeps you feeling full
- For general cancer survivorship and prevention, consume 30+ gm fiber each day.
- Increase fiber in your diet **SLOWLY.**



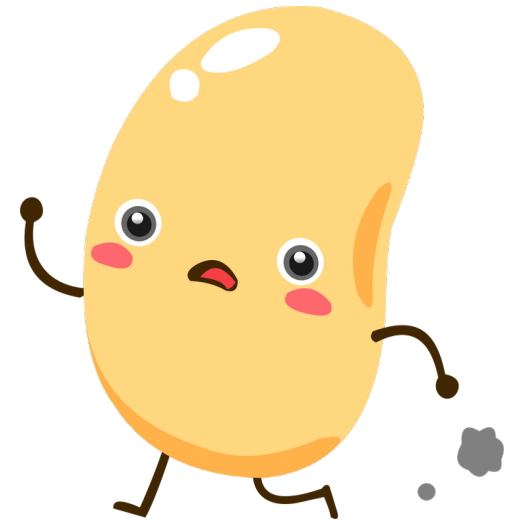
[Guidelines for Increasing Dietary Fiber](#)



Beans, beans...

To improve digestion:

- Add beans into your diet SLOWLY
- Eat slowly and chew well
- Aim to consume beans regularly
- Increase your fluid intake as you increase bean intake
- During preparation:
 - Dry beans:
 - Replace the water more often when soaking dry beans
 - Canned beans:
 - Drain the liquid and rinse with water



Black Bean and Roasted Red Pepper Mini Fritatta

Recipe for Easy Digestion



Ingredients

½ cup Pecorino or parmesan cheese grated

2 tablespoons flat-leaf parsley roughly chopped

1 teaspoon kosher salt

1 teaspoon fresh oregano chopped

10 eggs beaten

ground black pepper to taste

3 tablespoons breadcrumbs

3 tablespoons extra virgin olive oil

1 yellow onion large, halved and thinly sliced

1 Yukon gold potato peeled, ¼” dice

1 cup black beans cooked

½ cup red bell pepper roasted, in ¼” dice

Ricotta cheese whole milk ¾ cup

Nutrition Information

Serving size: 1g

Serves 12

Calories: 175; Total Fat: 10g; Saturated Fat: 3.5g; Total Carbohydrate: 10g; Fiber: 2g; Protein 10g

Directions

1. In a large bowl, whisk together ¼ cup of the pecorino (or parmesan), parsley, ½ teaspoon of salt, oregano, and eggs. Season with black pepper and set aside.

2. Spray a muffin tin with vegetable spray and coat each with some breadcrumbs. Add about 1 teaspoon of the grated cheese to each muffin.

3. Preheat an oven to 350°F.

4. For the potato bean mixture: Heat the oil in a sauté pan over medium-high heat. Add the onions and cook for 3 to 4 minutes until soft and just starting to color. Add potatoes, and remaining salt, and cook, stirring occasionally, until lightly browned and soft, about 15 minutes. Remove from the heat and place in a large bowl. Add the cooked black beans and red peppers and stir to combine.

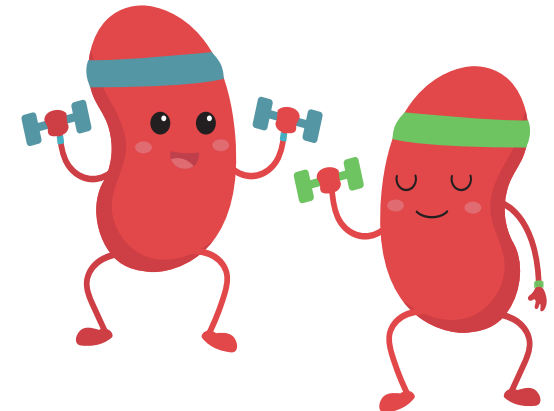
5. For the muffin tins: Spoon about 2 tablespoons of the bean mixture into each muffin cup, then top with 1 tablespoon of the ricotta, and sprinkle each with the remaining pecorino cheese. Stir the egg mixture again and pour into each muffin cup ⅔ of the way up the sides.

6. Place the muffin pan in the preheated oven and cook for 10 minutes, or until the center is set. Remove from the oven and cool for 5 minutes. Run a rubber spatula around the edges of each cup and remove from the muffin pan.

Recipe from: [The Bean Institute](#)

Health benefits of beans

- Heart healthy:
 - Low in fat
 - Cholesterol free
 - Virtually no saturated fat
 - Essentially no sodium
- Diabetes management:
 - Supports blood sugar management
- May aid in managing weight
- Associated with longevity
- Fits in many eating styles and patterns:
 - Cancer survivorship
 - DASH eating plan
 - Mediterranean eating pattern
 - Gluten-free
 - Vegetarian / vegan
 - Heart Healthy
 - Diabetes
 - MIND eating pattern



Beans are a less expensive food.



- Cost per serving:
 - Dried beans: \$0.15
 - Canned beans: \$0.35
 - Ground beef: \$1.60
- Beans are one of the most nutrient dense foods.
 - Protein, fiber, other vitamins and minerals
- Beans can stretch meals:
 - Use ½ # ground meat and 2 cans of drained black beans for taco filling
 - Use ½ # ground meat and 2 cans of drained lentils in spaghetti sauce
 - Add 1 cup of cooked lentils to meatloaf mixture
 - Add a drained can of black beans to burger mixture
 - Use ½ chicken and ½ cooked chickpeas in soup, curry, etc.

ROASTED CHICKPEAS 3 WAYS

Budget-Friendly Recipes



Rosemary, Red Chile and Sea Salt

Ingredients

1 1/2 cups cooked chickpeas
1 tbsp olive oil
2 tsp chopped fresh rosemary
red pepper flakes, to taste
sea salt flakes

Directions

Preheat oven to 400°F. Place chickpeas on a rimmed baking sheet and toss with olive oil, rosemary, red chile flakes, and salt. Roast, tossing occasionally, until crispy and golden, about 20-25 minutes. Season to taste with additional salt and finish with a sprinkle of chopped rosemary.

Cacio e Pepe

Ingredients

1 1/2 cups cooked chickpeas
1 tbsp olive oil
freshly ground black pepper
kosher salt
1/3 cup fresh grated Parmesan cheese

Directions

Preheat oven to 400°F. Place chickpeas on a rimmed baking sheet and toss with olive oil, black pepper, and kosher salt. Roast, tossing occasionally, until crispy and golden, about 20-25 minutes. Transfer to a bowl and toss with Parmesan cheese and a few more grinds of black pepper. Season with additional salt to taste.

Umami

Ingredients

1 1/2 cups cooked chickpeas
1 tbsp olive oil
2 tsp fish sauce
2 tsp maple syrup
1 clove garlic, finely minced
red pepper flakes
kosher salt
toasted sesame seeds

Directions

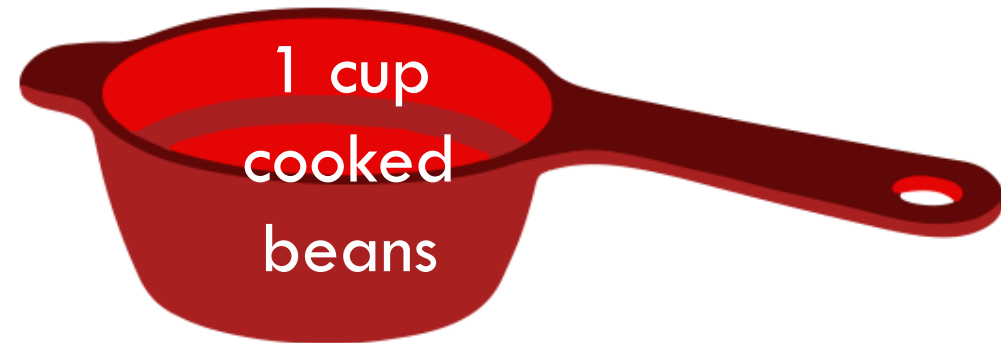
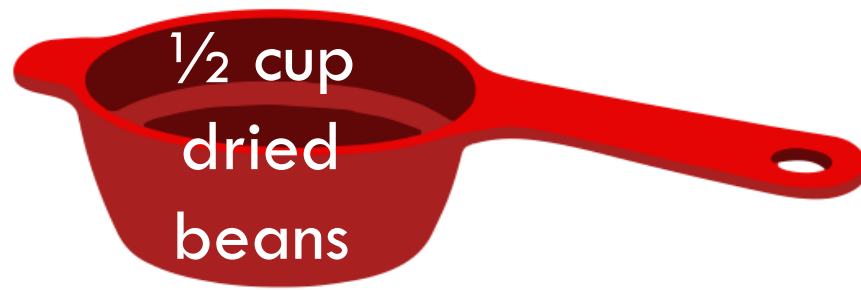
Preheat oven to 400°F. In a medium bowl, whisk together olive oil, fish sauce, maple syrup, garlic, red pepper flakes, and kosher salt. Add chickpeas and toss to coat evenly. Spread chickpeas on a rimmed baking sheet. Roast, tossing occasionally, until crispy and golden, about 30-35 minutes. Season with salt and finish with a sprinkle of toasted sesame seeds.



Recipe from: [USA Pulses](https://www.usapulses.org/)

Dried beans

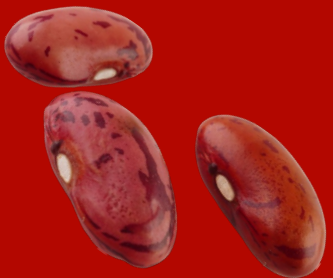
- Save money
- Almost no sodium
- Requires planning ahead
- Take time to soak and cook
- Long shelf life
- More variety of beans available
- Some people prefer the taste and texture.



Dried bean preparation

Clean and rinse:

- Place the beans in a colander
- Pick out and discard any leaves, small stones, twigs, and broken beans
- Rinse the beans under cold running water



Soak:

- Place the beans in a pot and cover with cold water
- Soak beans for 8 hours or overnight
- Drain beans and discard water
- Rinse beans with fresh, cool water

*Lentils and dried peas don't require soaking prior to cooking.



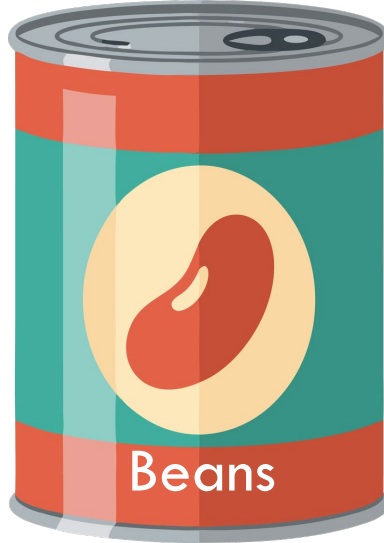
Cook:

- Place beans in a large pot and cover with fresh, cold water
- Place over medium heat, maintaining a simmer, stirring occasionally
- Add warm water as needed to keep beans covered
- Cook for 30 minutes to 2 hours, depending on the variety, until beans are tender but not mushy



Canned beans

- As nutritious as dried beans
- Slightly more expensive
 - But still a less expensive protein
- To reduce sodium, look for:
 - Low sodium (<140 mg/serving)
 - No added sodium (~0-15mg/serving)
- Drain liquid, rinse with water to decrease sodium ~ 40%



Fatigue: Canned beans made easy

Drain and rinse canned beans to:

- Top a salad
- Add to soup for extra protein and fiber
- Mash with avocado to spread on a toast or use as a dip
- Make a quesadilla with refried beans, cheese, and salsa
- Add to your favorite pasta dish
- Mash chickpeas to use instead of tuna in a "tuna" salad
- Use blended beans to thicken soup



Mediterranean Pita Pizza Recipe

Recipe for Fatigue

Ingredients

2 whole-wheat pitas (6-inch diameter)

¼ cup hummus

½ cup fresh or frozen spinach, chopped (if frozen, defrost and drain first)

½ cup black beans, rinsed

½ cup artichoke hearts, cut into quarters

¼ cup fat-free or low-fat shredded Swiss cheese

Directions

Before you begin: Wash your hands.

Preheat oven to 325°F (162°C).

Spread hummus evenly over pitas. Add beans, spinach and artichoke hearts.

Top with cheese.

Bake in the oven for 15 minutes or until pita is toasted. Let cool and enjoy.



Recipe from: [EatRight.Org](https://www.eatright.org)

Nutrition Information

Serving size: ½ pita

Serves 4

Calories: 160; Total Fat: 2g; Saturated Fat: 0g; Total Carbohydrate: 29g; Fiber: 7g; Protein 8g

Taste change

- Lighter proteins, such as beans, eggs, and dairy, can be helpful.
- Beans are mild tasting.
- Beans can be flavored to fit a taste profile that you tolerate.

When **SWEET** tastes good, try:

- Baked beans, bean granola, bean dessert

When **SOUR** tastes good, try:

- Bean salad with citrus or vinegar dressing

When **SALTY** tastes good, try:

- Refried beans, bean soup, roasted chickpeas



Spicy Chickpea Salad Sandwich

Recipe for Taste Change

Recipe from: [Have a Plant](https://haveaplant.org)

Ingredients

- 1 ½ cups canned chickpeas, drained and rinsed
- ¼ cup mayonnaise
- 1 tablespoon sriracha (or more for heat preference)
- 1 teaspoon pickle brine
- 1 teaspoon lemon juice
- ¼ cup celery, finely chopped
- 2 tablespoons scallions, thinly sliced
- 3 tablespoons pickles, finely chopped
- 1/8 teaspoon salt (optional)
- 1/8 teaspoon pepper
- 1/8 teaspoon smoked paprika
- 4 slices multigrain bread
- 4 pieces romaine lettuce
- 4 slices tomato

Directions

1. Mash about 75% of the chickpeas for desired consistency.
2. Mix with mayo, sriracha, pickle brine, lemon juice, celery, scallions and a pinch of salt, pepper and smoked paprika.
3. Toast the multigrain bread.
4. Layer lettuce, tomato and about ¾ cup of the chickpea mixture per sandwich.
5. Serve.

Nutrition Information

Serving size: N/A

Serves 2

Calories: 430; Total Fat: 12g; Saturated Fat: 2g; Total Carbohydrate: 64g; Fiber: 14g; Protein 19g



Constipation

- Consuming more fiber helps treat constipation.
 - Beans are one of the most fiber dense foods.
 - Beans contain ~ 6-7 gm fiber in ½ cup.
- Remember to increase fiber SLOWLY in your diet.
- Make sure you are consuming enough fluid through your day as you increase fiber foods.



Mouth sores or swallowing difficulty

- Cooked beans are soft, and typically easy to swallow.
- If chewing causes mouth pain, try adding foods with 'smooth' beans:
 - Hummus
 - Pureed bean soup
 - Refried beans
 - Dishes made with red or yellow lentils

BONUS

Smooth or broken-down beans are easier to digest!



Red Lentil Soup

Recipe for Difficulty Swallowing

Ingredients

- | | |
|------------------------------|---------------------------------------|
| 1 tsp. olive oil | 1/2 tsp. smoked paprika |
| 1 small onion, chopped | Pinch salt/pepper |
| 4 garlic cloves, chopped | 5 cups vegetable broth |
| 3 celery sticks, chopped | 1 1/2 cups red lentils |
| Large baking potato, chopped | 1 (28 oz) can diced tomatoes, drained |
| 1 tsp. ground cumin | 1/4 cup chopped parsley or cilantro |
| 1 tsp. ground turmeric | 1 tbsp. fresh lemon juice |
| | 1/2 tsp. ground ginger |

Directions

1. Heat 1 tsp. olive oil over medium heat in a large sauce pan.
2. Add the onion and cook for 5 minutes until soft.
3. Add garlic, celery, and potato chunks. Cook until soft and lightly browned, 2-3 minutes.
4. Add cumin, turmeric, ground ginger, paprika and salt/pepper. Stir until fragrant.
5. Add vegetable broth, lentils, and canned tomatoes. Bring to a simmer.
6. Cover and cook for 20 minutes until lentils are tender.
7. Remove from heat and puree 1/2 of the soup using a blender or immersion blender.
8. Add back the remaining soup and stir in herbs and lemon juice.
9. Season to taste with salt/pepper if needed and serve.



Nutrition Information

Serving size: 1 cup
Serves 4
Calories: 164
Total Fat: 2g
Saturated Fat: 0.2g
Total Carbohydrate: 29g
Fiber: 5g
Protein: 10g

Recipe from: [Delish Knowledge](#)

Beans: Sustainable and eco-friendly

- Improved soil quality
- Reduced fertilizer needed
- Use less land and water resources
- Reduced greenhouse gas emissions
- Reduced food waste





Never "bean" better

- Aim to consume $\frac{1}{2}$ cup x 3 weekly.
 - Or 1.5+ cups per week
- Or set goals that work for you:
 - Include beans once a week to start
 - Try a new bean recipe most weeks
 - Or each month
 - Try a new type of bean each month



Simple ways to include more beans



Simple ways to include more beans

BURGERS

REPLACE:
½ OR ALL
GROUND
BEEF



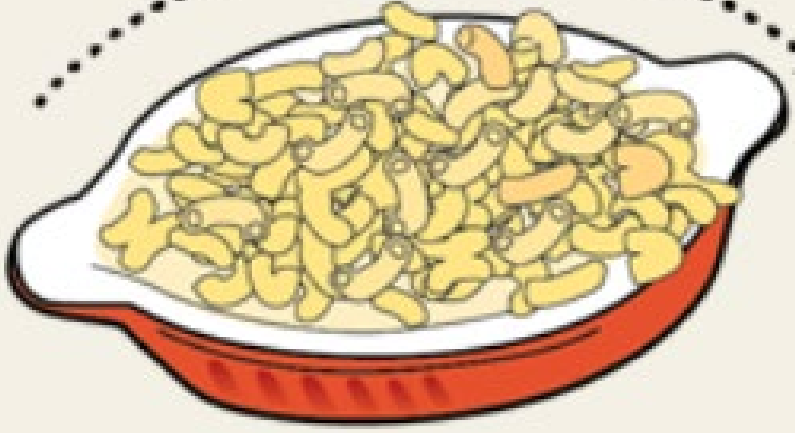
WITH THIS:
✓
MASHED
PINTO
BEANS

BENEFITS:
✓ Fewer **CALORIES** ✓ Less **FAT** ✓ Less **SATURATED FAT** ✓ More **FIBER**

Simple ways to include more beans

MAC N' CHEESE

REPLACE:
UP TO ½
CHEESE
SAUCE

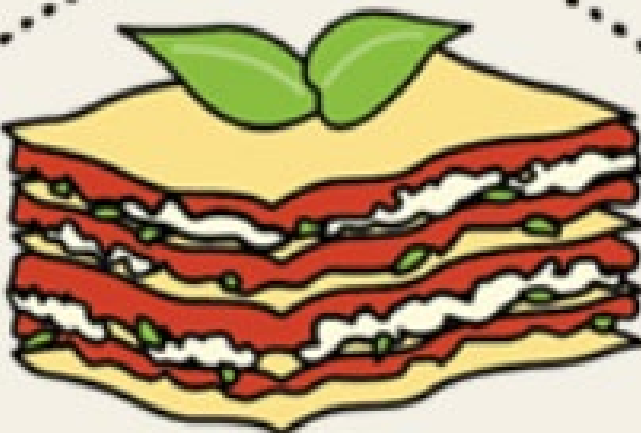


WITH THIS:
✓
YELLOW
SPLIT PEA
PUREE

BENEFITS:
✓ Less **FAT** ✓ More **FIBER**

Simple ways to include more beans

LASAGNA



REPLACE:
 $\frac{1}{2}$ OR ALL
RICOTTA
CHEESE

WITH THIS:
PUREED
WHITE
BEANS

BENEFITS:
✓ Fewer **CALORIES** ✓ Less **FAT** ✓ More **FIBER**

Simple ways to include more beans

TACOS
OR: replace $\frac{1}{2}$ the meat in any recipe

REPLACE:
 $\frac{1}{2}$ OR ALL
SHREDDED
PORK



WITH THIS:
COOKED
GREEN
LENTILS

BENEFITS:
✓ Fewer **CALORIES** ✓ Less **FAT** ✓ More **FIBER**

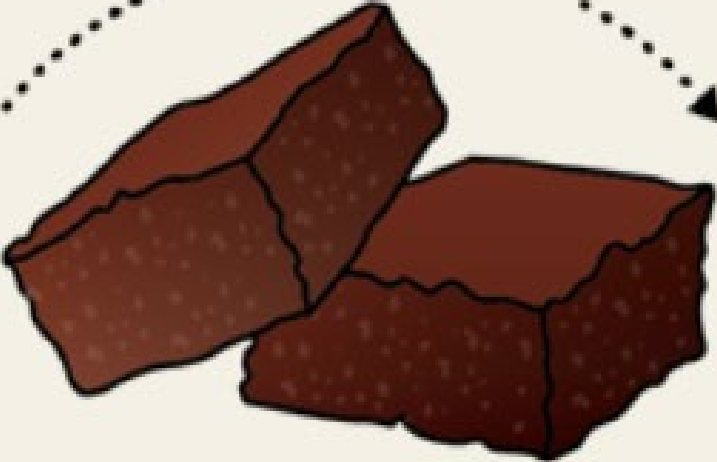
Simple ways to include more beans

BROWNIES

REPLACE:
1 CUP
FLOUR

WITH THIS:
✓
1 15oz. CAN
BLACK
BEANS,
PUREED

BENEFITS:
✓ More **FIBER** ✓ More **PROTEIN**

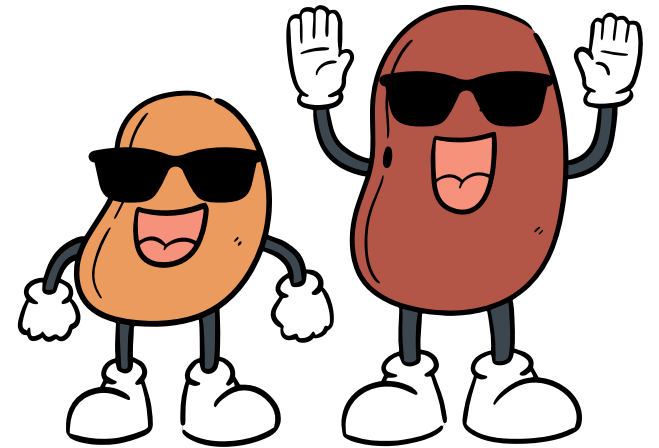
An illustration of three brownies, one slightly behind the other two, which are arranged in a triangular shape. Dotted lines with arrows point from the word 'BROWNIES' to each of the three brownies.

Simple ways to include more beans



Beans are versatile!

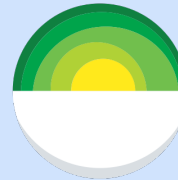
- Included in cancer survivorship and prevention eating patterns
- Can be used in side effect management
- Adaptable to any flavor palate
- Easy to add to most all foods
- Packed with nutrients
- Helpful for many health conditions
- Lower cost
- Easy to use
- Long-shelf life
- Environmentally friendly
- Part of many eating patterns
- Fit into a variety of recipes
- Many varieties to explore



(and so cool!)

Looking for more ways to include beans?

- [USA Pulses Recipes](#)
- [Bean Institute Recipes](#)
- [Fred Hutch – Cook for Your Life: Take the Pulse: Protein Packed & Vegetarian](#)
- [Cook for Your Life - Stay on the Pulses – Bean and Pea Recipes](#)
- [Canned Beans](#)
- [Alberta Pulse Growers](#)
 - [Easy Peas-y Cookbook for Kids](#)



FRED HUTCH
COOK FOR
YOUR LIFE®



Canned
Beans®

OPEN THE POSSIBILITIES



Want to learn more?

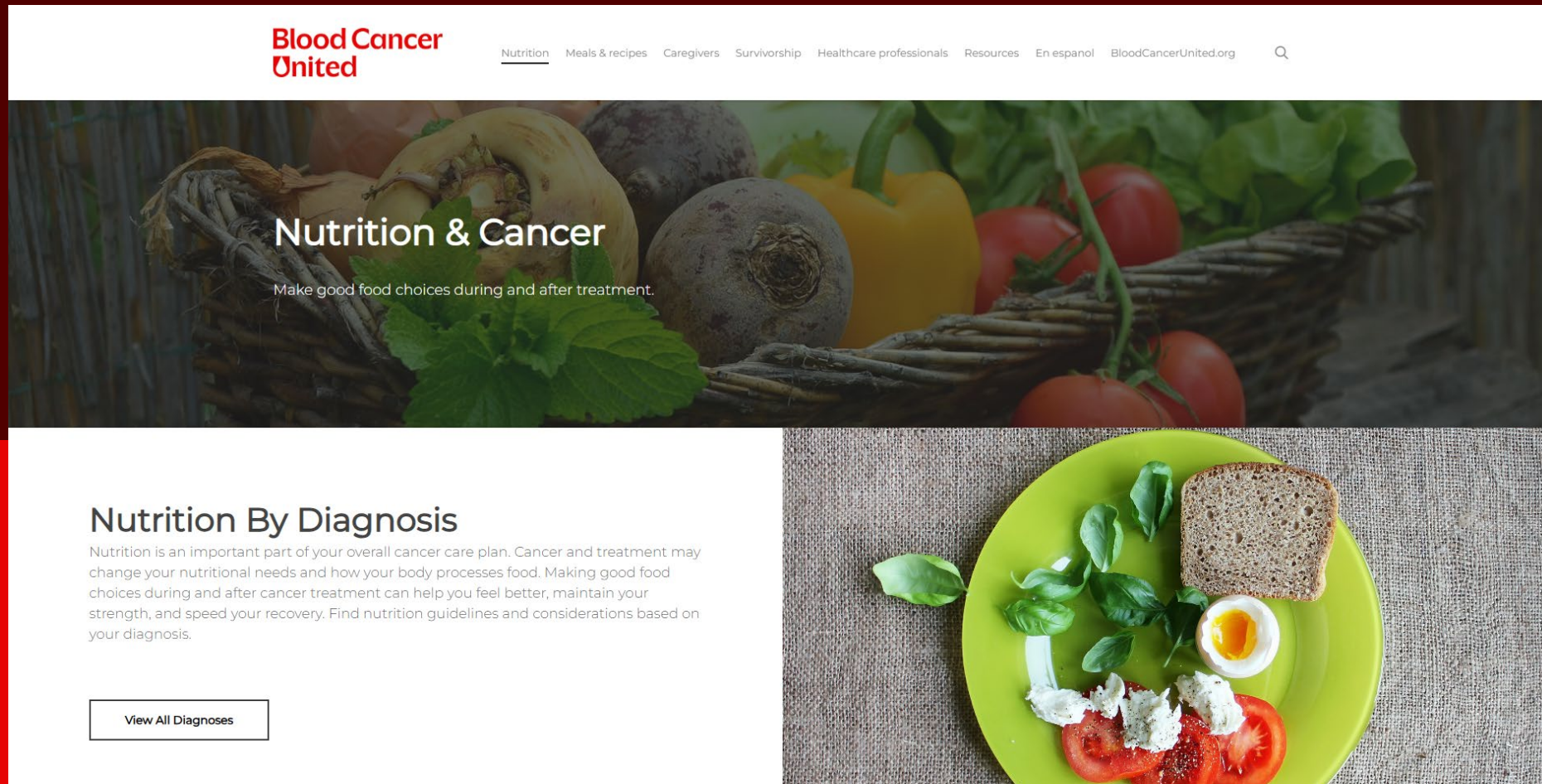
- [USA Pulses](#)
- [Bean Institute](#)
- [AICR Food Facts: Pulses: Dry Beans, Peas, and Lentils \(Legumes\)](#)
- [Johns Hopkins Meatless Monday: Beans Resources](#)
- [Harvard T.H. Chan School of Public Health: The Nutrition Source - Legumes and Pulses](#)
- [WCRF Why you should be eating more pulses](#)
- [All About Beans \(NDSU\)](#)
- [A Legume A Day](#)

Q&A

 LEUKEMIA &
LYMPHOMA
SOCIETY™ is now

**Blood Cancer
United**

NESC website



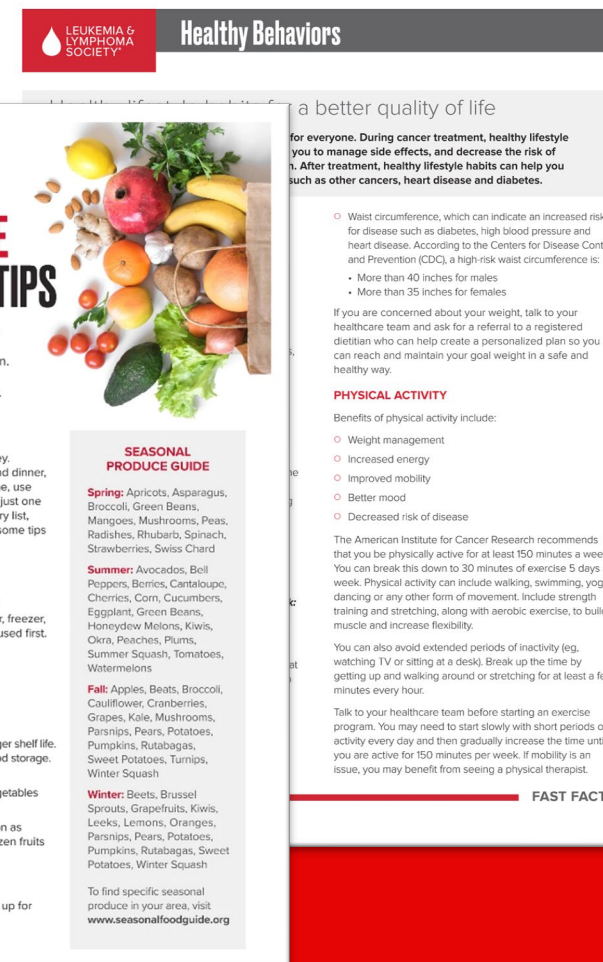
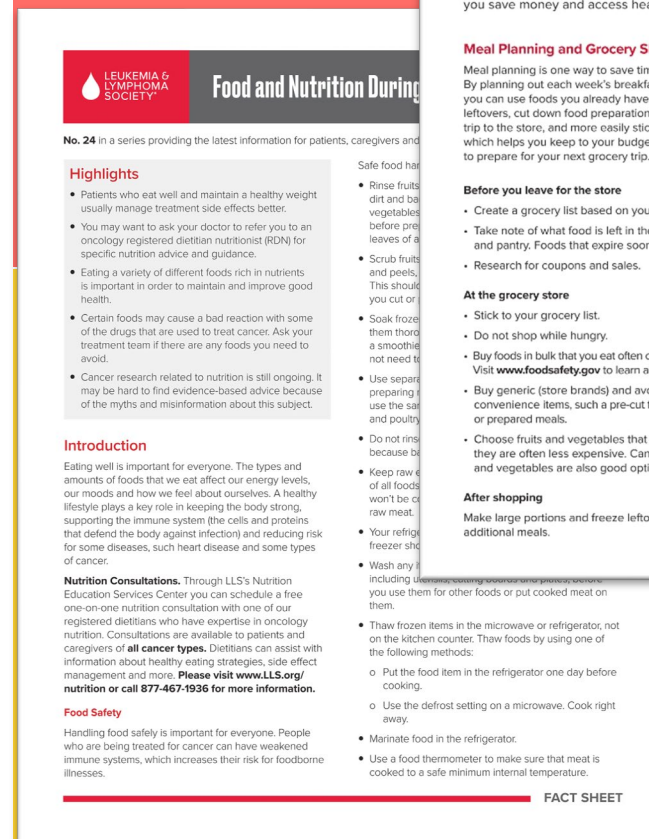
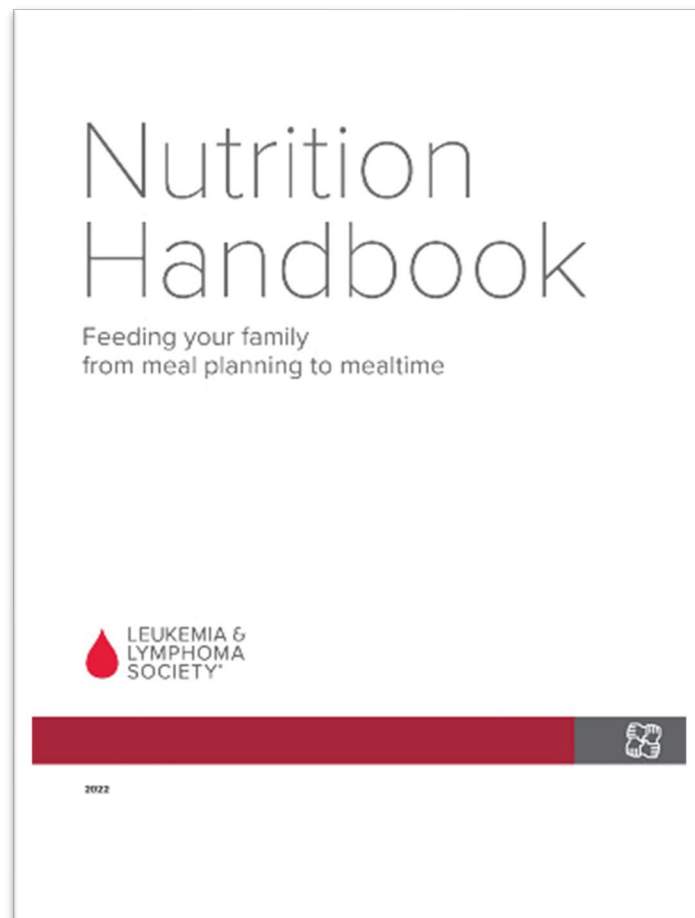
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**Blood Cancer
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BloodCancerUnitedNutrition.org

Resources and publications



Get information and support



Peer-to-peer support



Patient community



Caregiver support



Children & young adults



Webcasts & videos



Online chats



Podcasts



Information booklets



Local programs



Advocacy

Information Specialists

Blood cancer Information Specialists are oncology social workers and nurses who are ready to help you or your loved one navigate a blood cancer diagnosis and connect you to financial and social support information.

Call: (800) 955-4572

Email or chat live online:

BloodCancerUnited.org/InformationSpecialists

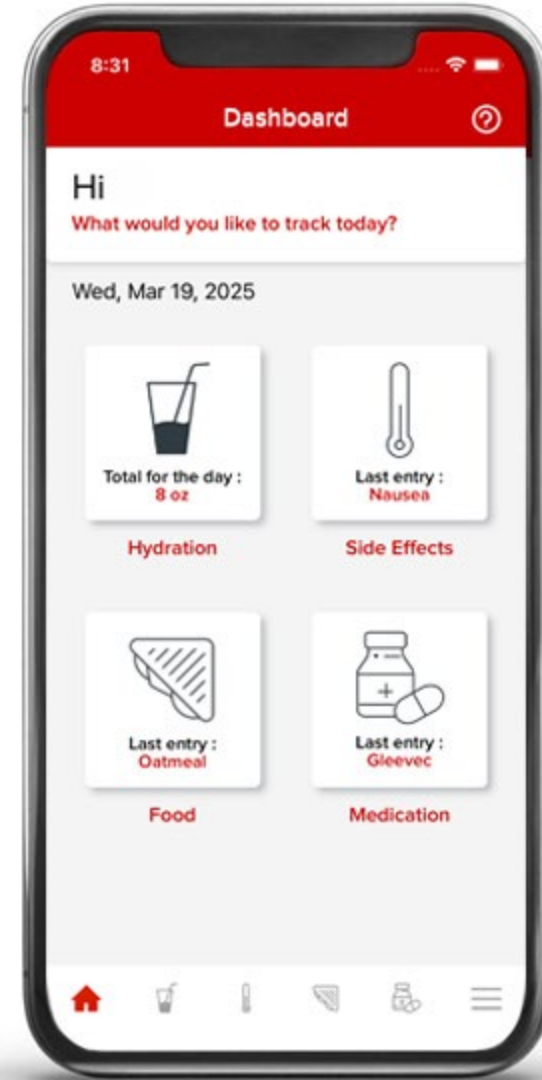
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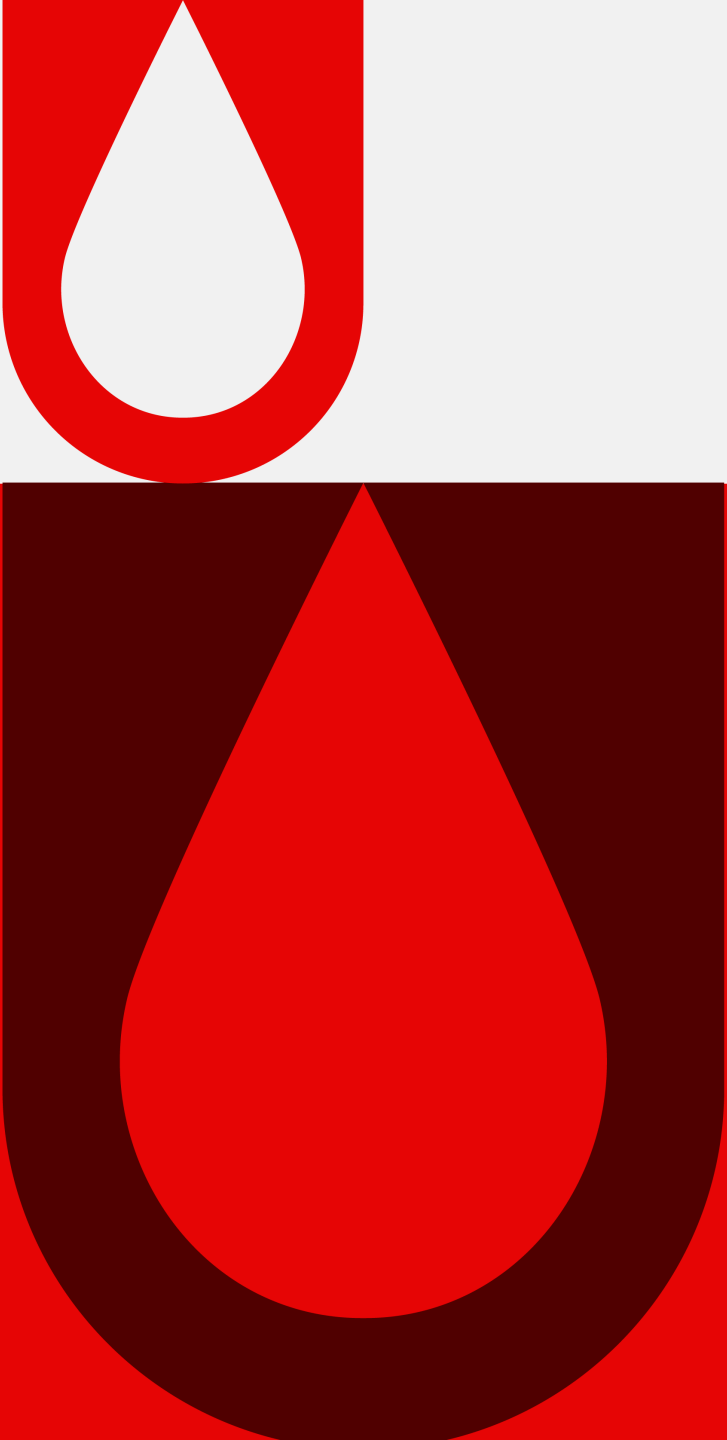
**Blood Cancer
United**

Health Manager™ mobile app

With Blood Cancer United Health Manager™, you can now use your phone to manage your daily health by tracking side effects, medication, food and hydration, questions for the doctor, grocery lists, and more.

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References

American Institute for Cancer Research. Add more fiber to your diet: 15 tips from dietitians. Accessed June 10, 2026.

<https://www.aicr.org/resources/blog/add-more-fiber-to-your-diet-15-tips-from-dietitians/>

American Institute for Cancer Research. Food facts: Pulses—Dry beans, peas, and lentils (legumes). Accessed June 10, 2026.

<https://www.aicr.org/cancer-prevention/food-facts/dry-beans-and-peas-legumes/>

American Institute for Cancer Research. 10 cancer prevention recommendations. Accessed June 10, 2026. <https://www.aicr.org/resources/media-library/10-cancer-prevention-recommendations/>

Bean Institute. Accessed June 10, 2026. <https://beaninstitute.com/>

Bazzano LA, Thompson AM, Tees MT, Nguyen CH, Winham DM. Non-soy legume consumption lowers cholesterol levels: a meta-analysis of randomized controlled trials. *Nutr Metab Cardiovasc Dis*. 2011;21(2):94-103. Available at: <https://pmc.ncbi.nlm.nih.gov/articles/PMC5391775/>

Bultman SJ. The microbiome and its potential as a cancer preventive intervention. *Semin Oncol*. 2016;43(1):97-106.

doi:10.1053/j.seminoncol.2015.09.001. Available at: <https://pubmed.ncbi.nlm.nih.gov/26970128/>

Campos-Vega R, Oomah BD, Loarca-Piña G, Vergara-Castañeda HA. Common Beans and Their Non-Digestible Fraction: Cancer Inhibitory Activity—An Overview. *Foods*. 2013; 2(3):374-392. <https://doi.org/10.3390/foods2030374>

References continued

Didinger C, Foster MT, Bunning M, Thompson HJ. Nutrition and human health benefits of dry beans and other pulses. In: Siddiq M, Uebersax MA, eds. *Dry Beans and Pulses*. 2nd ed. Wiley; 2022. doi:10.1002/9781119776802.ch19. Available at: <https://doi.org/10.1002/9781119776802.ch19>

Doma K, et al. Canned beans decrease serum total and LDL cholesterol in adults with elevated LDL cholesterol in a 4-wk multicenter, randomized, crossover study. *J Nutr*. 2021;151(12):3701-3709. doi:10.1093/jn/nxab323. Available at: <https://doi.org/10.1093/jn/nxab323>

Drewnowski A, Zavela C, Tran V, Mallya G, Conrad Z. Pulse consumption trends in the US in the context of 2025–30 Dietary Guidelines for Americans: analyses of NHANES data for 1999–2018. *Front Nutr*. 2025;12:1638519. doi:10.3389/fnut.2025.1638519. Available at: <https://doi.org/10.3389/fnut.2025.1638519>

Fernandes MR, Aggarwal P, Costa RGF, Cole AM, Trinchieri G. Targeting the gut microbiota for cancer therapy. *Nat Rev Cancer*. 2022;22(12):703-722. doi:10.1038/s41568-022-00513-x. Available at: <https://pubmed.ncbi.nlm.nih.gov/36253536/>

Food economics: Canned beans versus cooked dried beans. Vegetarian Resource Group. Published August 12, 2025. Accessed June 10, 2026. <https://www.vrg.org/blog/2025/08/12/food-economics-canned-beans-versus-cooked-dried-beans/>

Jones JB, Mount JR. *Sodium reduction in canned bean varieties by draining and rinsing*. Presented at: Institute of Food Technologists Annual Meeting; 2009; Anaheim, CA.

References continued

Jayalath VH, de Souza RJ, Sievenpiper JL, et al. Effect of dietary pulses on blood pressure: a systematic review and meta-analysis of controlled feeding trials. *Am J Hypertens*. 2014;27(1):56-64. doi:10.1093/ajh/hpt155. Available at: <https://pmc.ncbi.nlm.nih.gov/articles/PMC5391775/>

Ley SH, Hamdy O, Mohan V, Hu FB. Prevention and management of type 2 diabetes: dietary components and nutritional strategies. *Lancet*. 2014;383(9933):1999-2007. Available at: <https://pmc.ncbi.nlm.nih.gov/articles/PMC4751088/>

McDonald D, Hyde E, Debelius JW, et al. American Gut: an open platform for citizen science microbiome research. *mSystems*. 2018;3(3):e00031-18. Available at: <https://pmc.ncbi.nlm.nih.gov/articles/PMC5954204/>

Meatless Monday, Johns Hopkins Center for a Livable Future. Facts about beans and environment. Accessed June 10, 2026. <https://meatlessmonday.publichealth.jhu.edu/resources/facts-about-beans-and-environment>

Mego, M., Manichanh, C., Accarino, A., Campos, D., Pozuelo, M., Varela, E., Vulevic, J., Tzortzis, G., Gibson, G., Guarner, F. and Azpiroz, F. (2017), Metabolic adaptation of colonic microbiota to galactooligosaccharides: a proof-of-concept-study. *Aliment Pharmacol Ther*, 45: 670-680. <https://doi.org/10.1111/apt.13931>

Moreno-Jiménez MR, López-Barraza R, Cervantes-Cardoza V, et al. Mechanisms associated to apoptosis of cancer cells by phenolic extracts from two canned common beans varieties (*Phaseolus vulgaris* L.). *J Food Biochem*. 2019;43(6):e12680. doi:10.1111/jfbc.12680. Available at: <https://pubmed.ncbi.nlm.nih.gov/31353616/>

References continued

Mitchell DC, Lawrence FR, Hartman TJ, Curran JM. Consumption of dry beans, peas, and lentils could improve diet quality in the US population. *J Am Diet Assoc.* 2009;109(5):909-913. doi:10.1016/j.jada.2009.02.029. Available at: <https://pubmed.ncbi.nlm.nih.gov/19394480/>

Oncology Nutrition Dietetic Practice Group. *Oncology Nutrition for Clinical Practice*. 2nd ed. Oncology Nutrition Dietetic Practice Group; 2019.

Papanikolaou Y, Slavin J, Fulgoni VL III. Adult dietary patterns with increased bean consumption are associated with greater overall shortfall nutrient intakes, lower added sugar, improved weight-related outcomes and better diet quality. *Nutr J.* 2024;23(1):36. doi:10.1186/s12937-024-00937-1. Available at: <https://doi.org/10.1186/s12937-024-00937-1>

Papandreou C, et al. Legume consumption and risk of all-cause, cardiovascular, and cancer mortality in the PREDIMED study. *Clinical nutrition.* 2019;38(1):348-356. <https://doi.org/10.1016/j.clnu.2017.12.019>

Patel, L., La Vecchia, C., Negri, E. *et al.* Legume intake and cancer risk in a network of case-control studies. *Eur J Clin Nutr* **78**, 391–400 (2024). <https://doi.org/10.1038/s41430-024-01408-w>

Pugh JE, Cai M, Altieri N, Frost G. A comparison of the effects of resistant starch types on glycemic response in individuals with type 2 diabetes or prediabetes: a systematic review and meta-analysis. *Front Nutr.* 2023;10:1118229. doi:10.3389/fnut.2023.1118229. Available at: <https://doi.org/10.3389/fnut.2023.1118229>

Quagliani D, Felt-Gunderson P. Closing America's fiber intake gap: Communication strategies from a food and fiber summit. *Am J Lifestyle Med.* 2016;11(1):80-85. Published 2016 Jul 7. doi:10.1177/1559827615588079. Available at: <https://pmc.ncbi.nlm.nih.gov/articles/PMC6124841/>

References continued

Rao S, Chinkwo KA, Santhakumar AB, Blanchard CL. Inhibitory Effects of Pulse Bioactive Compounds on Cancer Development Pathways. *Diseases*. 2018; 6(3):72. <https://doi.org/10.3390/diseases6030072>

Record high beef costs result from low supplies. Mississippi State University Extension Service. Published 2025. Accessed June 10, 2026. <https://extension.msstate.edu/news/feature-story/2025/record-high-beef-costs-result-low-supplies>

Rizwan A, et al. Anticancer potential of polyphenols in legumes: Mechanisms and insights. *Current Drug Metabolism*. 2025;26(7):489-506. <https://doi.org/10.2174/0113892002377364250906070612>

Rondini EA, Barrett KG, Bennink MR. Nutrition and human health benefits of dry beans and pulses. In: Siddiq M, Uebersax MA, eds. *Dry Beans and Pulses: Production, Processing and Nutrition*. Wiley-Blackwell; 2012. doi:10.1002/9781118448298.ch14. Available at: <https://doi.org/10.1002/9781118448298.ch14>

Sanjeevi N, Monsivais P. Consumption trends and eating context of lentils and dried peas in the United States: a nationally representative study. *Nutrients*. 2024;16(2):277. doi:10.3390/nu16020277. Available at: <https://doi.org/10.3390/nu16020277>

Slavin J. Fiber and prebiotics: mechanisms and health benefits. *Nutrients*. 2013;5(4):1417-1435. Published 2013 Apr 22. doi:10.3390/nu5041417. Available at: <https://doi.org/10.3390/nu5041417>

USA Pulses. Sustainability. Accessed June 10, 2026. <https://usapulses.org/industry/sustainability/>

References continued

Viguiliouk E, Blanco Mejia S, Kendall CW, Sievenpiper JL. Can pulses play a role in improving cardiometabolic health? Evidence from systematic reviews and meta-analyses. *Ann N Y Acad Sci*. 2017;1392(1):43-57. doi:10.1111/nyas.13312. Available at: <https://pmc.ncbi.nlm.nih.gov/articles/PMC5413842/#nyas13312-bib-0038>

Winham DM, Hutchins AM. Perceptions of flatulence from bean consumption among adults in 3 feeding studies. *Nutr J*. 2011;10:128. doi:10.1186/1475-2891-10-128. Available at: <https://doi.org/10.1186/1475-2891-10-128>

Zargarzadeh N, et al. Legume consumption and risk of all-cause and cause-specific mortality: A systematic review and dose-response meta-analysis of prospective studies. *Advances in nutrition*. 2023;14(1):64-76. <https://doi.org/10.1016/j.advnut.2022.10.009>