



FOOD & HEALING

*A Nutrition Guide for American Indian
& Alaska Native Cancer Survivors*



American Indian
Cancer Foundation.

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ABOUT AICAF

The American Indian Cancer Foundation

Cancer is the leading cause of death for American Indian and Alaska Native (AI/AN) women and the second leading cause of death for men. The American Indian Cancer Foundation (AICAF) is a national nonprofit organization that was established to address the tremendous cancer inequities in American Indian communities. AICAF's mission is to eliminate the cancer burdens on American Indian families through education, prevention, early detection, treatment and survivor support. With our knowledge and cultural wisdom, we can begin to change the cancer story across Indian Country.

INTRODUCTION

A **cancer survivor** is any person diagnosed with cancer, from the time of diagnosis until their journey into the spirit world. If you are an American Indian or Alaska Native person facing a cancer diagnosis, are in treatment for cancer, or are living in remission, this guide is for you. While there are many ways to support your healing journey, food and nutrition are a crucial part of caring for your body. Food and nutrition provide the strength that can aid in the healing process, and promote mental, physical, emotional and spiritual well being.

Since information provided by treatment centers can often be overwhelming, this guide was developed to help support Native cancer survivors, caregivers, and families of survivors through this emotional and difficult time. It is meant to serve as a resource to offer nutritional support during your cancer journey.

DISCLAIMER: *The material contained in this resource is for informational and educational purposes only and it is NOT intended to be a substitute for professional medical advice, diagnosis, or treatment. Reliance on the information in this guide is always at your own risk. Please seek the advice of your physician or other qualified healthcare provider with any questions you may have regarding a medical condition or issue prior to making changes in your diet.*



NUTRITION BASICS

Nutrition information can be complicated and seem overwhelming at times, but knowing the basics will give you the power to make decisions that will help heal the body, support the healing process, and take care of yourself.

There are three main food categories: protein, carbohydrates, and fat. These are called **macronutrients**

Protein is considered a “building block” of nutrition and is important for maintaining tissue structure and metabolism. There are many sources of healthy proteins that you can work into your meals:

- ▶ Lean Meats: 90% lean ground beef, bison, skinless chicken
- ▶ Fish: salmon, walleye
- ▶ Eggs
- ▶ Dairy: low-fat cottage cheese, natural yogurt
- ▶ Nuts: Unsalted pistachios, whole almonds
- ▶ Beans: black beans, white beans

Carbohydrates, fuel for the body and give us energy. Choose complex carbs instead of simple carbs. Be especially mindful if you are diabetic or are prone to diabetes. Complex carbs are a great source for vitamins and minerals. Examples of healthy complex carbs are:

- ▶ Vegetables: squash, corn, potatoes
- ▶ Legumes: lentils, kidney beans
- ▶ Whole Fruits: strawberries, apples, bananas, pumpkin
- ▶ Nuts: Walnuts, hazelnuts
- ▶ Seeds: Pumpkin, chia, wild rice
- ▶ Grains: brown rice, whole oats

Fats are important for your digestive system and hormone regulation. It is important to choose healthy fats instead of foods containing high amounts of trans or saturated fats. Eat healthy fats in moderation, but be mindful that too much fat restriction will not help your healing process. It is just as important to have good quality, healthy fats found in foods such as:

- ▶ Nuts: peanuts, almonds - nut butters are a good source of healthy fat
- ▶ Seeds: unsalted sunflower, pecan
- ▶ Avocado
- ▶ Olive Oil

There are other important nutrients to include in your diet in addition to healthy proteins, carbohydrates and fats. Fresh, unprocessed foods are packed with nutrients known as macrominerals and microminerals.

Important nutrients to help with the healing process are **calcium** and **iron**. Foods like milk, yogurt, dark leafy greens, beans, and nuts and seeds, are all excellent sources of calcium and iron.

DURING TREATMENT

Caring for yourself with your diagnosis: cancer survivor and caregiver nutrition strategies

All of this nutrition information can be overwhelming, so it helps to remember to stick to a few basic principles. Making healthy changes to your diet is not about learning what tasty foods you cannot have anymore, but instead learning new ways to make health-promoting indigenous foods good to eat without taking too much time or energy.

5 Basic principles to help your healing process

1. Eat every few hours:

Our bodies are constantly burning energy, even while we sleep! It is vital for you as a cancer survivor to constantly provide your body with the energy and nutrients you need to maintain normal body function, in addition to healing and repair. The healing process is greatly diminished when you do not eat enough food, allowing the cancer to cause greater harm.

2. Have protein every time you eat:

Protein is extremely important and often under-consumed. Unless your doctor suggests otherwise, try to have some type of protein-dense food every time you eat to give your body the building blocks it needs for strength and healing. Meat, poultry, beans, legumes, eggs, milk, yogurt, fish, or flavored protein powder all provide complete proteins essential for healing. If you do not eat meat, be sure to pay close attention to your protein intake from plant-based sources, as it can become more difficult to get enough protein. Include a diet with many types of plant-based foods, such as substituting beans and legumes a few meals a week.

3. Eat fruits or vegetables at each meal:

Food is medicine. Fruits and vegetables are an excellent source for vitamins and minerals. While adding fruits and vegetables into your eating habits, remember that quantity is not as important as consistency. Eat a serving of vegetables 3-5 times per day instead of all at once. Include as many different colored fruits and vegetables as you can to give your body the maximum amount of cancer fighting antioxidants possible.

4. Eat enough fat:

For years people avoided fat due to the belief that eating fat is unhealthy. It is vital that you eat enough fat each day to allow for important processes in your body to take place. Get in a little of each type of fat if possible, keeping trans fats to a minimum. Healthy fats are found in nuts, seeds, avocados, fatty fish- like salmon or mackerel - and plant-based oils such as olive, corn or sunflower oil. Try to minimize **trans** and **saturated** fats found in animal meats and butter, in processed foods like fried food, baked goods, frozen pizza, cookies, crackers, stick margarines and other spreads. Make sure to look at the nutrition facts panel to find the amount of trans fats in packaged food. Limit high fat foods such as those found in meat sources. You can also use lower fat cooking methods such as baking or broiling to limit your fat intake.

5. Drink non/low-calorie drinks often:

Just a tiny bit of dehydration in your body is enough to have a negative impact on your cancer. Pay attention to the labels on your drinks and choose drinks with little or no calories. Water and green tea are the best choices, but it is okay to drink other things like calorie-free sports drinks, if you have trouble consuming fluids that are less flavorful. Flavored packs that can be added to your water are a good option as well. Keep a large water bottle with you to always have a drink on hand and to stay hydrated.

We have major advantages over our ancestors, as most of us are able to pick and choose the food we want. You as a Native cancer survivor are in a unique position to cultivate and utilize traditional Indigenous foods to combat cancer and promote healing.

Managing side effects during treatment

Cancer treatment can be tough on your body. During treatment, you will need to adjust your diet to build up strength and withstand the effects of cancer and ongoing treatment. Treatment can make it hard for you to maintain a healthy weight. The type of cancer, type of treatment and its side effects must be considered when determining the best way to approach nutrition.

Your doctor may recommend one or more of the following treatments:



Chemotherapy

Chemotherapy, or chemo, is a whole-body drug therapy that kills cancer cells. Unfortunately, chemo also affects noncancerous cells, which may result in poor nutrition. Side effects from chemo can affect your ability and desire to eat. With a proper plan, you can avoid nutrition-related symptoms such as decreased bone marrow production, low iron levels, fatigue, nausea, vomiting, loss of appetite, inflammation of the digestive tract, changes in taste and smell, dry mouth, difficulty swallowing, diarrhea or constipation.



Radiation Therapy

Radiation therapy, or radiation, uses high levels of radioactive energy to shrink and kill cancer cells. About half of all cancer survivors undergo radiation therapy. Radiation can damage normal cells, which may cause side effects like fatigue, skin problems, hair loss, low blood counts, or difficulty eating.



Surgery

Surgery can be used to prevent, diagnose, stage, and treat cancer. For many patients, surgery will be combined with other cancer treatments like chemotherapy and radiation therapy.

Nutritional impacts of cancer treatments

It is important to stay nourished during and after your treatment for optimal health. Eating enough calories and getting plenty of vitamins and minerals will support the body through stressors of treatment and side effects.

Excessive weight loss

Cancer can wreak havoc on the body's ability to properly process and absorb food. Treatments such as radiation and chemotherapy combined with the mental and emotional stress of cancer often ends with large nutrient deficiencies and malnutrition.

Anorexia, or the lack of desire to eat, and weight loss are major issues in cancer care and is common for patients with advanced cancer. More than 50% of all people with cancer lose some body weight and more than one third lose more than 5% of their usual weight. Studies show that even small amounts of weight loss (less than 5% of body weight) before treatment is associated with a poorer prognosis and decreased quality of life, thus reinforcing the importance of early medical nutrition therapy intervention.

It will likely be easier to eat and digest soft foods with clear liquids. If swallowing is difficult, you may need to thicken your liquids to make them easier to get down. You may find you like foods that tasted bad before, so be open to trying new foods.

Since many patients often struggle to simply eat enough food, dietary restrictions are typically removed to give you more options when you do not feel well. However, there are times when a special diet is needed and your doctor will tell you more at the appropriate time. For example, an abdominal cancer patient will likely do better on a soft foods diet to prevent any blockages from occurring in the digestive tract.

Tips for managing difficult side effects of cancer treatment:

Low appetite and weight loss:

- ▶ Eat frequently throughout the day. Foods that are high in calories, protein and nutrients are the best for energy and healing
- ▶ Eat meals and snacks when you are feeling well, in a setting that brings on happy memories to help you associate food with pleasure again
- ▶ Be as physically active as your body allows (go for a walk, stretch, etc.)
- ▶ Foods to try: hard-boiled eggs, peanut butter, milkshakes, cheese, granola bars, liquid nutritional supplements, puddings, nuts, canned tuna or chicken, trail mix, fresh fruit

Nausea:

- ▶ Sip on cool liquids in small amounts
- ▶ Avoid greasy, spicy, or sweet foods
- ▶ Avoid strong-smelling foods
- ▶ Eat bland, soft, easy-to-digest foods on treatment days
- ▶ Foods to try: crackers, mashed potatoes, yogurt

Diarrhea:

- ▶ Drink plenty of clear liquids such as water, clear juices, broth and sports drinks
- ▶ Lower your intake of high fiber foods such as nuts, raw fruits, vegetables, and whole grains
- ▶ Avoid sugar free candies and gums since these ingredients can cause an upset stomach
- ▶ Eat easily digestible foods
- ▶ Foods to try: applesauce, bananas, canned peaches, white rice, pasta

Constipation:

- ▶ Be as physically active as your body allows (go for a walk, stretch, etc.)
- ▶ Drink plenty of healthy beverages - try warm prune juice 3-4 times per day
- ▶ Eat at the same time each day
- ▶ Eat foods with high fiber - try adding 1-2 tablespoons of wheat bran to your food
- ▶ Foods to try: whole grains, fruits, vegetables, dried fruits, beans, nuts

Sore throat:

- ▶ Experiment with different food temperatures to find which is the most soothing
- ▶ Eat soft, moist foods with extra sauces, dressings or gravies
- ▶ Avoid dry, coarse or rough foods
- ▶ Avoid alcohol, citrus, caffeine, tomatoes, vinegar and hot peppers

Sore mouth:

- ▶ Practice good oral hygiene
- ▶ Try foods at room temperature or chilled
- ▶ Eat soft, moist foods with extra sauces, dressings, or gravies
- ▶ Avoid alcohol, citrus, caffeine, tomatoes, vinegar and hot peppers

Fatigue:

- ▶ Be as physically active as your body allows (go for a walk, stretch, etc.)
- ▶ Drink lots of healthy beverages
- ▶ Keep nutrient dense snacks close by and snack as much as you can
- ▶ Eat easy-to-prepare, easy-to-eat foods
- ▶ Foods to try: fruits, vegetables, whole grains, beans, eggs

Low white blood cell count:

- ▶ Wash your hands often
- ▶ Keep kitchen surfaces and utensils clean
- ▶ Wash all fresh fruits and vegetables
- ▶ Do not eat raw or undercooked meat, poultry, eggs or fish

Dry mouth:

- ▶ Sip on liquids throughout the day
- ▶ Eat soft, moist foods with extra sauces, dressings or gravies
- ▶ Practice good oral hygiene
- ▶ Foods to try **if open sores are not present:** tart foods like cherries or grapefruit

Altered taste and smell:

- ▶ Practice good oral hygiene
- ▶ Use plastic utensils if metallic tastes are an issue for you
- ▶ Eat cooler temperature foods
- ▶ Try marinades and spices

Thickened saliva:

- ▶ Use a cool mist humidifier while sleeping
- ▶ Sip on liquids throughout the day
- ▶ Foods to try: club soda, seltzer water, coconut water

COMMON FOODS, EFFECTS ON CANCER AND RECOMMENDATIONS

Food and nutrition is important in the healing journey. Some foods that might be helpful in preventing the occurrence of cancer, can actually be harmful if cancer is present. Please check with your healthcare team before making changes to your diet.

Avoid or decrease if cancer is present:

Salt: Avoid and decrease for prevention and if cancer is present. Daily intake should be less than 2400 milligrams (<2400mg), equivalent to 1 teaspoon. For American Indian cancer survivors that may be struggling with heart disease and high blood pressure, less than 1500mg - roughly ½ teaspoon - is recommended.

- ▶ Effects on cancer: Foods preserved by salting may increase the chance of developing stomach cancer. Studies have shown high salt consumption can cause damage to the lining of the stomach.
- ▶ Recommendations: Most people consume more than 2300 mg (>2300mg) per day, but there are simple ways to lessen that amount. Processed foods are responsible for most of the salt in people's diets. While salty foods may not taste salty, make sure to check the **sodium** content on the Nutrition Facts label. Watch out for breakfast cereals, bread, frozen meals, pizza, chips, canned products like soups and sauces, and processed meats. Even sweet foods like cookies can contain high levels of salt.

Herbs: Avoid if cancer is present, especially if you are undergoing treatment

- ▶ Effects on cancer: Many herbs and their effects on cancer treatments have not been studied. Consuming herbs at the same time as chemotherapy may cause unexpected side effects, or reduce the effectiveness of cancer medications. For example, St. John's Wort can have dangerous interactions with chemotherapy. Herbs like ginger and garlic can interfere with anticoagulant drugs, increasing the risk of bleeding.

- ▶ **Recommendations:** It is extremely important for you as a survivor to research potential side effects and discuss herb use with your health-care team prior to consumption. Until more research is performed, it is recommended that you avoid adding any additional herbs or herbal supplements into your diet.

Dietary Supplements: Avoid, except for Multivitamins, Vitamin D, or Fish Oil

- ▶ **Effects on cancer:** There is not much information known about dietary supplements and their effect on cancer, or cancer treatment, it is safest to avoid them completely.
- ▶ **Recommendations:** Always discuss dietary supplements with your healthcare team.

Alcohol: Avoid if cancer is present, and if you are in treatment. Decrease for prevention

- ▶ **Effects on cancer:** Alcohol consumption increases risks for numerous cancers, including but not limited to: cancers of the mouth, pharynx, larynx, esophagus, lungs, colon, rectum, liver, and breasts.
- ▶ **Recommendations:** Avoid alcohol entirely during treatment, it can cause inflammation and irritate your system. If you are in remission, drink carefully and be mindful of how much you consume. Alcohol might reduce some nutrients in the blood that protect against cancer and cancer recurrence. For breast cancer survivors, 3-4 drinks per week after diagnosis could increase risk for recurrence.

BPA (Bisphenol A): Avoid! BPA is not a food, but a chemical. It is found in hard, clear plastics, such as reusable water bottles and children's sippy cups. It is also used as an epoxy liner in some soups and other canned foods

- ▶ **Effects on cancer:** It is theorized that BPA influences - mimics or disrupts - hormones, more specifically estrogen. Being exposed to endocrine disruptors may cause certain types of cancer. BPA also may impact the efficacy of chemotherapy.
- ▶ **Recommendations:** Use containers that are marked as BPA-free, or glass containers to store your food and beverages.

Coffee/Tea: Avoid or decrease if cancer is present.

- ▶ **Effects on cancer:** Both coffee and tea contain caffeine, which may not be appropriate for certain forms of cancer. Caffeine can cause stress to the stomach and raise blood pressure.
- ▶ **Recommendations:** Try to avoid or decrease your consumption if cancer is present. Once in remission, you can increase your consumption for prevention! Coffee and tea are major sources of antioxidants that help fight cancer. Green tea is better for prevention as the leaves have not been roasted prior to cooking and pressing, allowing for greater quantities of antioxidants to enter the body.

Depending on cancer type:

Fiber: Increase or decrease depending on cancer type

The majority of foods have both **insoluble** and **soluble** fiber. Soluble fiber absorbs water, while insoluble fiber does not. Insoluble fiber helps maintain a healthy gut by “scrubbing” the intestinal tract clean, while soluble fiber helps reduce cholesterol levels and your risk of heart disease.

- ▶ Effects on cancer: Depending on your cancer type, fiber may be more harmful than helpful to your healing journey. Especially if your cancer type affects your digestive tract, please check with your health-care team before making any changes to your diet.
- ▶ Recommendations: If your healthcare team has approved fiber for your diet, there are many great ways to incorporate fiber rich foods. Fiber rich foods are fantastic sources of vitamins and minerals. Oatmeal is a great source for soluble fiber and is a staple for heart protection. Other good sources of fiber are fruits, vegetables, legumes, beans, and whole grains, which all contain high amounts of both soluble and insoluble fiber.

Non-Caloric Sweeteners: Consume in moderation

- ▶ Effects on cancer: Although there has been much controversy surrounding artificial sweeteners like sucralose (Splenda/Stevia) or aspartame (Nutrasweet), 20 years of research has proven them safe in **normal** quantities.
- ▶ Recommendations: If you use sweeteners, be aware that too much can cause stomach discomfort, gas, and bloating. If you prefer to use a natural sweetener, use small amounts of honey or maple syrup.

Increase if cancer is present and for prevention:

Fruits and Vegetables: Increase consumption for both prevention and if cancer is present

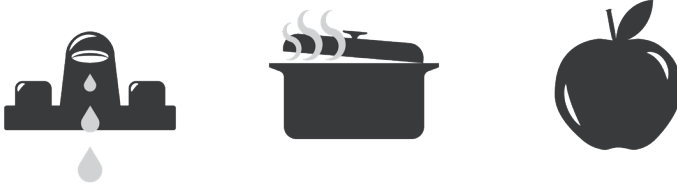
- ▶ Effects on cancer: Fruit is protective against cancers of the mouth, pharynx, larynx, esophagus, cervix, lung, and stomach.
- ▶ Recommendations: Increase the consumption of fruits and vegetables since they contain cancer fighting substances including **antioxidants**, vitamins, and minerals.



PREVENTION

Lifestyle changes to lower risk of (re)occurrence

Nutrition affects every aspect of cancer, from prevention, to treatment, and remission. Therefore, it is important to maintain a healthy diet before, during, and after cancer treatment. Small, meaningful adjustments to your lifestyle can help reduce your risk and your family's risk of cancer occurrence.



Food Safety:

With some types of treatment, your doctor may prescribe a low-microbial diet. It is important that you handle your food safely by doing the following:

- ▶ Avoid foods that contain unsafe levels of bacteria
- ▶ Thoroughly wash your hands
- ▶ Use special care when handling raw meats and unpasteurized beverages
- ▶ Avoid untested well water
- ▶ Store foods at appropriate temperatures (<40°F and >140°F)
- ▶ When in doubt, throw it out! It is better to throw out food that may be contaminated than to eat it and get sick

Recommendations for Cooking Methods:

The way your food is cooked plays a role in cancer development and prevention.

Carcinogens, cancer forming chemicals, can form in our food from cooking methods that apply direct heat to food surfaces, like toasting and grilling. Any form of cooking that darkens foods is likely to increase carcinogens in that food as well. Avoid toasting, grilling, broiling, as these all promote carcinogen formation. While baking does form carcinogens, it does not produce as much as the previous methods.

What can you do?

- ▶ Try other cooking methods: boiling, sautéing, steaming, or poaching food is a great alternative
- ▶ Remove charred portions of food prior to consumption

Preserved Foods: Fresh instead of processed

Nitrates are added to processed meats to help preserve them from spoiling. The nitrates can interact with other chemicals in the diet to create cancer causing carcinogens. Fattier meats tend to be more carcinogenic, so avoid high nitrate foods including ham, bacon, pastrami, salami, pepperoni, hot dogs, sausages, and bratwurst. Instead, try fresh, unprocessed meats like boiled, sautéed, steamed, or poached chicken, bison, venison, rabbit, steak, turkey or pork.

READING NUTRITION FACTS

Understanding nutrition facts is a helpful skill in making informed decisions about your food. The following are helpful, quick tips on reading the Nutrition Facts label. Remember to consult your healthcare team before making adjustments to your diet.

Nutrition Facts	
8 servings per container	
Serving size	2/3 cup (55g)
Amount per serving	
Calories	230
% Daily Value*	
Total Fat 8g	10%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	13%
Dietary Fiber 4g	14%
Total Sugars 12g	
Includes 10g Added Sugars	20%
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%

* The % Daily Value (DV) tells you how much a nutrient in

Serving size:

Serving size is the recommended amount a person should eat at one time. Check the amount, and also the number of servings in the package. Think about your portion size and compare it to the serving size on the label.

Total calories:

Total calories are the amount in a single serving. Like serving size, think about your portion size with respect to total calories.

Percent Daily Values (Percent DV):

Percent DV represents the average amount of nutrients for a person eating 2,000 calories per day. Check with your healthcare team to see how many calories you should be eating per day and adjust your consumption accordingly.

Nutrition terms:

Important terms to look out for in the nutritional facts:

- ▶ **Low in saturated fat:** Keep an eye out for this - saturated and trans fats are unhealthy fats and linked to an increased risk of heart disease.
- ▶ **Added Sugars:** Eating fewer foods with added sugars will help in the healing process. Eating less processed foods may help reduce your risk for chronic disease.
- ▶ **Added Sodium:** Similar to added sugars, eating fewer foods with added sodium may help reduce your risk for chronic disease and help the healing process.

Additional nutrients, vitamins, minerals, and fiber:

Fiber, potassium, vitamin D, calcium and iron are important for maintaining good health and healing through your cancer journey

- ▶ Nutrition Fact labels will list the food's percentage DV for each nutrient; aim for a high percentage of DV.
- ▶ Fruits and vegetables are excellent sources of these nutrients.

NATIVE FOODS GUIDE

Indigenous foods to fight cancer

Traditional foods remind us of comforting memories that have a positive impact on our attitudes. We bring these foods together as a community and share in the medicine that food provides us. Aside from the nutritional benefits, traditional foods can provide American Indian and Alaska Native cancer survivors with a sense of well-being.

1. Corn:

Corn has served Native people as both a drink and diet staple for many years. Along with squash and beans, corn makes up the trio of vegetables known as “The Three Sisters” that were commonly grown together. The corn stalk allowed bean vines to climb around them, and the beans replaced the nitrogen in the soil for the corn and squash. The squash spread out its broad leaves to keep other plants from crowding out the corn. Corn is very nutritious, containing vitamins C and K, fiber and other important vitamins and minerals that help prevent cancer. According to the Academy of Nutrition and Dietetics, corn can reduce your lung cancer risk.

Indigenous recipes for this well-known food include sweet corn soup and chowder, cornbread, and popcorn. Enjoy ears of fresh or roasted corn, and cut corn to add into salads or wraps. Try different colored corn, as those colors represent different immune boosting nutrients.

2. Berries:

Widely available around the country, blackberries, strawberries, blueberries and raspberries played a part in many Native diets. By providing large amounts of fiber, vitamins, and minerals, berries have been shown to protect against stroke and heart disease. While blackberries and raspberries have nearly double the fiber of strawberries and blueberries, a cup of strawberries contains more vitamin C than you will need in a day. Blackberries, raspberries and strawberries also contain antioxidants which may help to protect us against cancer.

Berries appear in Ojibwe, Dakota and Lakota recipes for teas, puddings and berry soup. You can also try mixing them into your own signature berry jam, pies, cakes, muffins and over hot or cold cereal.

3. Pumpkin:

One cup of pumpkin is packed with potassium and fiber, and more than 300% of the Recommended Daily Allowance of Vitamin A. It is also rich in antioxidants which may help slow aging and reduce problems related to type 2 diabetes.

Oneida recipes for pumpkin and squash can include cranberry pumpkin cake and silky winter squash soup. You can include pumpkin in stews, or try stuffing small pumpkins with red peppers and roasting them.

4. Mushrooms:

Mushrooms are high in antioxidants. White button mushrooms bring a lot

of antioxidants as well as other nutrients that help lower cholesterol. Try a grilled portobello sandwich as a substitute for meat. Mushrooms play a huge role in sauces, stir-frys, soups, and spreads. Try them over acorn squash with sage and onion for a nutritious treat.

5. Beans:

Completing the Three Sisters trinity, beans were a staple of many tribes across the continent. Tiny nutrient powerhouses, beans like black, red, and pinto are fiber rich and good sources of heart-boosting potassium, B vitamins and folic acid. Traditional ways to enjoy them include Three Sisters dishes and bean salad. You can also find them in chili, soups, burritos and tacos.

6. Bison:

Many Plains tribes subsisted almost entirely on bison. It is one of the healthiest meats available. Although pushed to near extinction, bison are making a comeback. Bison is a red meat that contains some saturated fat but the makeup of this fat is different from cattle, and contains a healthy amount of omega-3 fat and antioxidants, which may help fight cancer. Studies have shown that folks that eat bison over beef have better heart health. Bison also contains zinc, which is helpful for rebuilding tissues, repairing wounds and growing hair.

Traditionally, Plains tribes consumed bison plain, as jerky or in soups. It can be used in any dish needing a source of meat such as soups, stews, and casseroles. Avoid grilling or frying to minimize the formation of cancer-causing substances.

7. Salmon:

Salmon is a staple in the diets of tribes along the Pacific Coast and north into Alaska. A single serving contains more than the daily recommended intake of vitamin D. Vitamin D blocks the development of blood vessels that feed tumors and stops the growth of cancerous cells. One study found that people who eat fish more than twice a week and baked the fish with olive oil - rather than frying or preserving in salt - were found to be at a much lower risk for cancer. Salmon is the best fish source of omega-3 fatty acids, which may help fight and prevent cancer.

Traditionally, Natives of the Pacific Northwest have cooked salmon on a wood frame over a wood fire, but to reduce carcinogens, it is better to steam fish. Try it with lemon juice and a side of asparagus and potatoes. Top salads with a salmon fillet for a high-protein, nutritious lunch.



NATIVE FOODS GUIDE

Regional Recipes

Alaska:

Caribou meat is very nutritious and high in protein, iron, zinc, and omega-3 fat. The following recipe is very simple and the amount of seasoning can be adjusted to suit your taste.

CARIBOU STEW: MAKES 6 SERVINGS

- 1 LB. CARIBOU MEAT
- 3 MEDIUM SIZED POTATOES
- 1 ONION, CHOPPED
- 1 LARGE PACKAGE OF MIXED VEGETABLES
- 1 CAN OF TOMATOES, PREFERABLY LOW-SODIUM
- 1 TABLESPOON BEEF SOUP BASE
- ¼ TEASPOON TABASCO SAUCE
- 3 TABLESPOONS SPIKE SEASONING
- 2 CUPS COOKED RICE
- 1 CUP RAW CASHEWS (CHOPPED)

INSTRUCTIONS: BOIL CARIBOU IN A LARGE POT OF WATER FOR 30 MINUTES. ADD REMAINING INGREDIENTS AND SEASONING TO TASTE. SIMMER FOR 1 HOUR.

Adapted from the Traditional Food Guide for Alaska Native Cancer Survivors

Nutrition Facts

6 servings per container

Serving size

Amount Per Serving

Calories 480

% Daily Value*

Total Fat 14g 19%

Saturated Fat 3g 15%

Trans Fat 0g

Cholesterol 85mg 28%

Sodium 410mg 18%

Total Carbohydrate 59g 21%

Dietary Fiber 5g 18%

Total Sugars 7g

Includes 0g Added Sugars 0%

Protein 32g 64%

Not a significant source of vitamin D, calcium, iron, and potassium

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

East:

Corn, beans, and squash, otherwise known as the “Three Sisters” are mixed together with deer meat to provide a well-rounded antioxidant punch with a solid source of protein.

THREE SISTERS SOUP WITH VENISON: MAKES 4 SERVINGS, CAN BE MADE

VEGETARIAN

- 1 LB. VENISON (OMIT FOR VEGETARIAN)
- 3 TABLESPOONS BUTTER
- 4 CUPS CHICKEN STOCK (REPLACE WITH VEGETABLE STOCK FOR VEGETARIAN)
- 1 CUP ONION, DICED
- 1 CLOVE GARLIC, MINCED
- 1 BUTTERNUT OR ACORN SQUASH, PREBAKED AND PUREED
- 1 TEASPOON CURRY POWDER
- ¼ TEASPOON SALT
- ½ CUP YELLOW CORN KERNELS
- ¼ TEASPOON GROUND CORIANDER
- ½ CUP HOMINY, COOKED
- 1 CUP WHITE BEANS
- ¼ TEASPOON CRUSHED RED PEPPER

INSTRUCTIONS: BOIL VENISON IN LARGE, COVERED POT FOR 1 HOUR OR UNTIL TENDER AND SET ASIDE – TOUGHER CUTS MAY NEED TO SIMMER UP TO 4 HOURS. MELT BUTTER IN A LARGE SAUCEPAN OVER MEDIUM-HIGH HEAT. ADD ONION AND GARLIC, COOK FOR 3 TO 5 MINUTES OR UNTIL TENDER. STIR IN SPICES, COOK FOR 1 MINUTE. ADD STOCK, CORN, HOMINY, AND BEANS, AND BRING TO A BOIL. REDUCE HEAT TO LOW AND COOK, STIRRING OCCASIONALLY, FOR 15–20 MINUTES TO DEVELOP FLAVORS. STIR IN PUREED SQUASH, COOK FOR 5 MINUTES OR UNTIL HEATED THROUGH. ADD VENISON AND SERVE WARM WITH CHIVES AND PLAIN YOGURT AS A GARNISH

Adapted from firstnations.org

Nutrition Facts

4 servings per container

Serving size

Amount Per Serving

Calories 560

% Daily Value*

Total Fat 14g 18%

Saturated Fat 8g 40%

Trans Fat 0g

Cholesterol 150mg 50%

Sodium 460mg 20%

Total Carbohydrate 62g 23%

Dietary Fiber 11g 39%

Total Sugars 11g

Includes 0g Added Sugars 0%

Protein 50g 100%

Not a significant source of vitamin D, calcium, iron, and potassium

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Northern Plains:

A staple in the diets of plains tribes for thousands of years, bison provides a multitude of nutritional benefits. Lower in saturated fat than beef, and tastier as well, it is loaded with many cancer-fighting vitamins and minerals. The large amounts of vegetables also contribute to the fight against cancer by adding a healthy dose of antioxidants to the mix.

BISON MEAT CHILI: MAKES 4 SERVINGS

- 1 LB. BISON MEAT, CUBED
- 2 CLOVES OF GARLIC, MINCED
- 2 ONIONS, CHOPPED
- 2 CUPS TOMATO SAUCE
- 4 TABLESPOONS CHILI POWDER
- 1 TABLESPOON UNSWEETENED COCOA
- 1 TABLESPOON VINEGAR
- 1 TEASPOON CUMIN
- 1 TEASPOON PAPRIKA
- 1 TEASPOON SALT
- 1 DASH EACH OF PEPPER, ALLSPICE, AND CINNAMON
- 1 TEASPOON OF HONEY OR MOLASSES
- 1 CAN DARK KIDNEY BEANS, LOW SODIUM
- 1 CAN DARK BLACK BEANS, LOW SODIUM

INSTRUCTIONS: IN 4 CUPS OF WATER, BOIL BISON MEAT FOR 30 MINUTES. ADD REMAINING INGREDIENTS EXCEPT BEANS. SIMMER 3 HOURS UNCOVERED. ADD BEANS AND SIMMER FOR 1 MORE HOUR.

Adapted from Healthy Traditions: Recipes of Our Ancestors, University of North Dakota

Nutrition Facts

4 servings per container

Serving size

Amount Per Serving

Calories **320**

% Daily Value*

Total Fat 11g **14%**

Saturated Fat 2g **10%**

Trans Fat 0g

Cholesterol 60mg **20%**

Sodium 350mg **15%**

Total Carbohydrate 28g **10%**

Dietary Fiber 10g **36%**

Total Sugars 7g

Includes 0g Added Sugars **0%**

Protein 34g **68%**

Not a significant source of vitamin D, calcium, iron, and potassium

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Pacific Coast:

The most important food source for the Pacific coast was by far the Pacific salmon runs, which arrived in annual migrations and provided ample supplies of fresh and dried food year-round. Not surprisingly, salmon is the ingredient that first comes to mind in this region, and with good reason. Several varieties are available and may be prepared easily and quickly, offering rich flavor. They are also an excellent source of protein and omega-3 fatty acids, which are important for heart health.

GRILLED SALMON WITH SWEET POTATOES AND SPINACH:

MAKES 4 SERVINGS

2 SALMON FILLETS, ABOUT 12 OZ. EACH
2 MEDIUM YAMS, HALVED
1 BAG SPINACH, 5oz
1 LEMON, HALVED, DIVIDED
2 TEASPOON OLIVE OIL
1 CUP FRESH MUSHROOMS, SLICED

INSTRUCTIONS: PREHEAT OVEN TO 450°. PLACE YAMS ON A BAKING SHEET AND BAKE UNTIL TENDER, ABOUT 45 MINUTES. AFTER YAMS HAVE BAKED FOR ABOUT 25 MINUTES, PREHEAT GRILL TO MEDIUM HEAT. SQUEEZE HALF OF THE LEMON OVER SALMON FILLETS AND BRUSH WITH OLIVE OIL. PLACE SALMON ON GRILL AND COOK UNTIL OPAQUE THROUGHOUT, ABOUT 5 MINUTES ON EACH SIDE. WHILE THE SALMON IS COOKING, LIGHTLY COAT A LARGE SKILLET WITH BUTTER-FLAVORED COOKING SPRAY AND PLACE OVER MEDIUM-HIGH HEAT. ADD MUSHROOMS AND SAUTÉ FOR 3 MINUTES. ADD SPINACH AND SAUTÉ UNTIL WILTED, ABOUT 3 MORE MINUTES. PLACE A PORTION OF SALMON ON A BED OF SPINACH ALONG WITH A HALF YAM ON EACH PLATE. SQUEEZE REMAINING LEMON OVER SALMON AND SPINACH

Adapted from foodal.com

Nutrition Facts

4 servings per container

Serving size

Amount Per Serving

Calories 320

% Daily Value*

Total Fat 11g 14%

Saturated Fat 2g 10%

Trans Fat 0g

Cholesterol 60mg 20%

Sodium 350mg 15%

Total Carbohydrate 28g 10%

Dietary Fiber 10g 36%

Total Sugars 7g

Includes 0g Added Sugars 0%

Protein 34g 68%

Not a significant source of vitamin D, calcium, iron, and potassium

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Southern Plains:

Native people from this region ate a diet similar to their northern neighbors as tribes both farmed and hunted for their food. Wild game of all types was consumed, and rabbits were commonly eaten. In fact, rabbit meat is a much more efficient way of growing food compared to beef, so it may soon be a more common item on dinner menus. This extremely simple recipe uses rabbit meat as protein, but can be substituted for other wild game. Rabbit is a great source of protein with less cholesterol and fat than chicken, beef, lamb, or pork.

EASY RABBIT STEW: MAKES 2 SERVINGS

- 1 FULL SIZED RABBIT, CUT INTO CHUNKS
- 2 CARROTS, CUBED
- 2 STALKS OF CELERY, DICED
- 1 MEDIUM ONION, DICED
- 1 PINT OF GRAVY, BEEF OR CHICKEN
- 2 MEDIUM POTATOES, CUBED

INSTRUCTIONS: MIX INGREDIENTS TOGETHER IN A SLOW COOKER AND POUR GRAVY OVER THE TOP. COOK ON LOW FOR 7-9 HOURS.

Adapted from howtohuntrabbit.com

Nutrition Facts

2 servings per container

Serving size

Amount Per Serving

Calories **550**

% Daily Value*

Total Fat 9g **12%**

Saturated Fat 3g **15%**

Trans Fat 0g

Cholesterol 210mg **70%**

Sodium 1500mg **65%**

Total Carbohydrate 52g **19%**

Dietary Fiber 7g **25%**

Total Sugars 8g

Includes 0g Added Sugars **0%**

Protein 65g **130%**

Not a significant source of vitamin D, calcium, iron, and potassium

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Southwest:

Corn is the most well-known food of the southwest with influence coming from South American indigenous people as well. This simple dish uses turkey meat paired with a variety of fresh vegetables to help strengthen your immune system.

TURKEY CORN CHILI: MAKES 4 SERVINGS

1 ½ LBS LIGHT AND DARK COOKED TURKEY MEAT, SHREDDED
1 TABLESPOON OLIVE OIL
1 MEDIUM ONION, CHOPPED
1 LARGE BELL PEPPER, CHOPPED
1 JALAPEÑO PEPPER, SEEDED AND CHOPPED
1 BAY LEAF, FRESH OR DRIED
2 TABLESPOONS CHILI POWDER
2 TABLESPOONS GROUND CUMIN
2 TEASPOONS CAYENNE PEPPER
COARSE SALT
2 CUPS FRESH CORN
2 CUPS BLACK BEANS
1 32 OZ. CAN OF CHUNKY STYLE CRUSHED TOMATOES
2 CUPS CHICKEN STOCK
2 SCALLIONS, CHOPPED

INSTRUCTIONS: HEAT A DEEP POT OVER MEDIUM HIGH HEAT. WORK CLOSE TO THE STOVE FOR YOUR CHOPPING. ADD OIL TO YOUR POT, TURNING THE PAN TO MAKE SURE THE OIL IS EVENLY DISTRIBUTED. ADD VEGETABLES – ONION AND PEPPERS – AS YOU CHOP THEM. ADD BAY LEAF AND COOK VEGETABLES 5 MINUTES, STIRRING FREQUENTLY. REDUCE HEAT IF VEGGIES START TO STICK. STIR IN DICED TURKEY MEAT AND SEASON WITH CHILI POWDER, CUMIN, AND CAYENNE PEPPER. SEASON WITH SALT TO TASTE. ADD CORN, TOMATOES, AND BROTH. MIX CHILI WELL, ADJUST SEASONINGS TO TASTE. REDUCE HEAT TO MEDIUM LOW, AND SIMMER FOR 7 TO 10 MINUTES. GARNISH CHILI WITH CHOPPED SCALLIONS.

Adapted from foodnetwork.com

Nutrition Facts

4 servings per container

Serving size

Amount Per Serving

Calories

500

% Daily Value*

Total Fat 12g	15%
Saturated Fat 3g	15%
Trans Fat 0g	
Cholesterol 160mg	53%
Sodium 910mg	39%
Total Carbohydrate 44g	16%
Dietary Fiber 9g	32%
Total Sugars 9g	
Includes 0g Added Sugars	0%
Protein 58g	116%

Not a significant source of vitamin D, calcium, iron, and potassium

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Great Lakes:

"Wild rice is extremely nutritious, with twice the amount of protein as brown rice, and it's far richer in vitamins than wheat, barley, oats, or rye. Native Americans traditionally have served it in many ways - cracked, popped, ground, and boiled." Wild rice is extremely versatile and can be used in a variety of salads, soups, stews, and cakes. After it's cooked, it will keep for several weeks in the refrigerator, and up to a year when frozen in a plastic freezer bag" (*The Sioux Chef, 2017*). This recipe is vegetarian friendly, and simple to prepare.

WILD RICE PILAF: MAKES 6 SERVINGS

- 1 ½ TABLESPOON EXTRA VIRGIN OLIVE OIL
- 4 SPRIGS FRESH THYME OR 1 TEASPOON DRIED
- 1 ½ CUP WHOLE WILD RICE, RINSED
- 3 CUPS VEGETABLE OR CHICKEN STOCK
- 1 LARGE ONION, CHOPPED
- 1 BUNCH SCALLIONS, THINLY SLICED (ROUGHLY ¾ CUP)

INSTRUCTIONS: HEAT OLIVE OIL IN A SMALL SAUCEPAN OVER MEDIUM HEAT. ADD THE CHOPPED ONION AND SAUTE FOR ABOUT 2 MINUTES. ADD THE WILD RICE AND COOK, STIRRING WITH A WOODEN SPOON, UNTIL LIGHTLY TOASTED FOR ABOUT 1 MINUTE. STIR IN THE STOCK AND THYME AND BRING TO A BOIL. REDUCE HEAT TO A RAPID SIMMER AND COVER AND COOK FOR 20 MINUTES OR UNTIL RICE IS TENDER. REMOVE FROM THE HEAT, SCATTER SCALLIONS OVER THE SURFACE, FLUFF WITH A FORK AND REMOVE HERB SPRIGS BEFORE SERVING. SEASON WITH BLACK PEPPER TO TASTE. VARIATIONS: ADD ¼ C LEMON JUICE FOR A SWEETER/TART TASTE; MIX IN SAUTEED VEGETABLES OF YOUR CHOICE; TOP WITH ALMONDS OF PARMESAN CHEESE.

Adapted from Dream of Wild Health's Healthy Lifeways Cookbook

CONCLUSION

Change is circulating in Indian Country as more tribal members are becoming interested in nutrition. American Indians have always known that food is medicine with healing power that we must learn to harness. Foods such as the Three Sisters are cancer-fighting powerhouses that Indigenous people across the continent have been eating for centuries with no prior exposure to disease. Traditional Native foods are nourishing, but there is still much to learn about them and the ways they help our bodies heal. Reclaiming Indigenous relationships to food is just the beginning. Together, we can improve our health in Indian Country.

Contributing Author

Ryan Bad Heart Bull, R.D., is an enrolled member of the Oglala Sioux Tribe in Pine Ridge, South Dakota. Bad Heart Bull's first experience with cancer came in the form of a brain tumor of his 74-year-old auntie, Gladys Swallow. Swallow was an incredibly loving, compassionate woman with a heart of gold; this guide was developed in her honor. As a Registered Dietitian, Ryan Bad Heart Bull hopes to connect people with the healing power of food and nutrition.

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GLOSSARY

Anorexia: The lack of desire to eat, a common side effect for patients with advanced cancer

Antioxidant: A chemical compound that helps protect against the breakdown of cells

Calcium: A naturally occurring mineral in the body found in bones and teeth, and helps with body functions. Calcium rich foods include dairy products, whole fish, green leafy vegetables, and nuts and seeds.

Calorie: A unit of measure for the amount of energy the body gets from food

Cancer: A disease in which cells in the body grow out of control. There are many different types that affects each person differently

Cancer survivor: any person diagnosed with cancer, from the time of diagnosis until their journey into the spirit world

Carbohydrates (carbs): A main source of energy for the body. There are two types - complex carbohydrates and simple sugars. Complex carbohydrates are excellent sources of vitamins and minerals, including fiber

Carcinogens: Cancer forming chemicals that form from cooking methods that apply direct heat to food, like toasting, grilling or any other form that darkens food

Fats: A form of energy storage that is essential for good health and body function.

Unsaturated Fats: Healthy fats found in nuts, seeds, avocados, fatty-fish, and plant-based oils

Trans/Saturated Fats: Fats found in animal meats, butter and processed foods

Fiber: A type of carbohydrate that helps with digestion

Soluble Fiber: Fiber that absorbs water and helps reduce cholesterol levels and risk of heart disease

Insoluble Fiber: Fiber that does not absorb water and helps with digestion by "scrubbing" the intestinal tract clean

Iron: A mineral in the body that helps with building muscles and carrying oxygen through the bloodstream. Iron rich foods include meat like bison and venison. Plant sources of iron include dark leafy greens, whole grains, and beans

Macronutrients: Three main food categories - protein, carbohydrates, and fats

Nitrates: Chemicals that are added to processed meats to help preserve them

Nutrition: The process of providing or obtaining the food necessary for health and growth

Percent Daily Values (Percent DV): Found on nutrition facts labels; represents the recommended average amount of nutrients for a person eating 2,000 calories per day

Protein: An energy source from food - known as the building block of nutrition and is responsible for maintaining tissue structure and metabolism

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