

Northern Nevada Children's Cancer Foundation

Healthful Nutrition for the Childhood Cancer Survivor

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Introduction

Healthful nutritional choices are essential for childhood cancer survivors. The American Cancer Society (ACS), American Academy of Pediatrics (AAP), and the Children's Oncology Group emphasize the importance of nutrition and lifestyle in survivorship care. Survivors of childhood cancers face higher risks of cardiovascular disease, obesity, metabolic syndrome, osteoporosis, and secondary malignancies. Outcomes are strongly influenced by lifestyle going forward.

The American Cancer Society specifically recommends maintaining a healthy weight, engaging in regular physical activity, and making informed dietary choices to help prevent or delay the long-term effects of cancer treatments. Furthermore, the American Academy of Pediatrics also proactively addresses the need for health-focused behaviors, including nutrition, to reduce the risk of future chronic disease and improve overall health and well-being.

Despite these recommendations, observational studies demonstrate that many childhood cancer survivors have suboptimal lifestyle patterns. There is an overall lack of education and realization that nutrition plays a powerful role and should be a priority for the lifelong care of the childhood cancer survivor. Establishing healthy eating patterns not only with the patient but with the entire family unit supports long-term health and optimal quality of life.

Nutritional Priorities for Childhood Cancer Survivors

The nutritional priorities of childhood cancer survivors, while similar to those of adults, are slightly more complex. The focus is threefold: to support normal growth and development, to maintain a normal body weight, and to reduce the risk of long-term chronic health conditions that can be associated with treatment. Prevention of cardiovascular disease, obesity, metabolic syndrome, osteoporosis, as well as ensuring adequate dietary intake to support growth and developmental milestones, is best attained by families working with an oncology-specific dietitian to tailor recommendations to a survivor's specific needs. The following discusses the general strategies for meeting these goals.

A healthful dietary pattern for childhood cancer survivors emphasizes the following:

A very plant-forward, fiber-rich diet – rich in vegetables, fruits, whole grains, nuts, seeds, beans, and lentils

- Eat 5 or more servings of fruits or vegetables a day
- Choosing whole grain products, such as breads, pastas, and cereals

Adequate protein intake with healthy, lean protein sources – including poultry, fish, and plant-based proteins such as beans, lentils, and tofu

Limiting red and processed meat consumption – this includes beef, pork, bacon, sausage, salami, ham, hot dogs, and deli meats.

Limiting “added sugar” to less than 25 grams/day– this means reading all nutritional labels for packaged and processed foods, including: candy, cookies, sodas, juices, snacks, cereals, granola bars, flavored yogurts, etc.

Limiting “fast foods” and packaged, processed foods – focusing on whole food meals and snacks

Encouraging regular meal patterns and snacks combined with mindful, family-based eating behaviors

Encouraging hydration with water, as opposed to sugar sweetened juices, sodas, and sports drinks

This nutritional strategy provides a very plant-forward plate which is nutrient-dense, low in processed foods and unhealthy fats, and optimizes growth and development. Dietitians individualize recommendations based on age, growth, treatment history, and specific disease risks.

Nutrition for the Whole Family

Adopting healthy eating behaviors as a family can make a significant difference for childhood cancer survivors AND everyone in the household. When the entire family commits to eating well, it creates a supportive environment where healthy choices are the norm not the exception. Parents and caregivers play an important role as role models, leading by example and showing that healthy eating can be enjoyable and part of everyday life. Shared family meals offer an opportunity to not only eat more nutritious food but also strengthen family connections and establish positive mealtime routines.

There are several simple ways families can support healthier habits together. Planning, preparing, and cooking meals as a family helps children learn about nutrition and cooking skills. Keeping fruits, vegetables, and healthy snacks within easy reach encourages better choices during the day. Keeping water and milk on hand instead of sodas and juices helps limit added sugar. Most importantly, when parents and caregivers model a healthy lifestyle, children are more likely to follow suit, which builds a strong foundation for lifelong health.

When to Seek Help from a Registered Dietitian

Sometimes, additional support from a registered dietitian can be very helpful for childhood cancer survivors and their families. A dietitian can provide personalized nutrition guidance, especially if there are concerns about growth, unexpected weight changes, or lingering side effects from treatment that affect eating habits. They can also offer specialized support if the survivor has specific dietary needs, restrictions, or food preferences. Working with a dietitian ensures that survivors are getting the right balance of nutrients to support their health, growth, and recovery, while making meals enjoyable and sustainable for the whole family.

Kid-Friendly Snack Ideas

- A piece of fruit paired with 1 tablespoon of nut butter
- Cottage cheese accompanied by berries
- Banana roll-up: nut butter and banana rolled in a whole grain tortilla
- Fresh fruit (add mint and lime juice for an extra treat)
- Low-sugar Greek yogurt with berries
- Greek yogurt mixed with 2 teaspoons of nut butter and 1 teaspoon of honey
- Brown rice cake topped with 1 tablespoon of nut butter and berries
- A slice of whole grain toast spread with 1 tablespoon of nut butter and topped with berries
- A slice of whole grain toast with ½ avocado and Everything Bagel Seasoning
- Trail mix
- A cup of veggies (carrots, cucumber, broccoli, peppers, radishes) served with hummus
- A tuna pack with whole grain crackers
- Air-popped popcorn
- Edamame sprinkled with sea salt
- Baked sweet potato fries
- A hard-boiled egg alongside whole grain crackers
- Dates filled with nut butter
- Veggie egg bites
- Kale chips
- 1 cup of veggies served with a Greek yogurt dip (seasoned with dill, garlic powder, salt, and pepper)
- Roasted chickpeas
- A bento box containing cubed cheese, fruit (like grapes), and veggies (like carrots)
- Dried fruit paired with ¼ cup of nuts
- Chia seed pudding topped with berries
- Peanut Butter Energy Bites (select recipes with low added sugar)
- Freeze-dried fruit combined with Greek yogurt

- A fruit or veggie smoothie blended with Greek yogurt or protein powder
 - Protein bars (such as Aloha, RX Bars, Perfect Bar, or Larabar; opt for those with whole food ingredients)
 - Apple slices with almond butter and a sprinkle of cinnamon
 - Celery sticks filled with peanut butter and topped with raisins
 - Bell pepper slices with guacamole
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Kid-Friendly Meal Ideas

BREAKFAST

- Oatmeal with toppings such as berries, nuts, and a drizzle of honey
- Low-sugar Greek yogurt with toppings such as berries, nuts, granola
- Smoothies (protein powder, frozen fruit, spinach, banana, nut butters, milk or unsweetened plant-based milk)
- Cottage cheese and fruit
- Whole grain toast with nut butter, banana slices
- Egg bites with veggies
- Spinach, veggie omelet, whole grain toast
- Whole grain toast, avocado, and an egg
- Tofu scramble with veggies and whole grain toast
- Lean ground turkey, veggie breakfast scramble
- Breakfast tacos or quesadilla (corn tortilla, egg, black beans, cheese, salsa)
- Overnight oats with chopped apple, cinnamon, and walnuts
- Whole grain pancakes topped with fruit
- Whole grain waffles, toasted, with nut butter and fruit

LUNCH / DINNER

- Turkey Quinoa Power Bowl: Ground turkey, quinoa, salsa, and avocado
- Tuna Veggie Salad: Tuna, chopped veggies (cucumber, greens, tomatoes), olive oil, and balsamic vinegar
- Classic Chicken, Rice and Veggies: Chicken, brown rice, steamed broccoli or other veggies
- Chopped Chicken Salad with mixed greens, veggies, avocado, and vinaigrette
- Chicken quinoa salad (as above with quinoa added)
- Chicken Fajita Bowl: chicken, brown rice, black beans, salsa, peppers and onions
- Tofu and Veggie Stir Fry: tofu, brown rice, mixed veggies
- Lentil and Vegetable Stir Fry
- Grilled Salmon and Quinoa Bowl: salmon, quinoa and roasted or steamed veggies
- Grilled Fish Tacos (grilled fish, corn tortillas, avocado, shredded cabbage, salsa)
- Roasted Cauliflower Tacos (corn tortilla, roasted cauliflower, black beans, salsa, avocado)
- Roasted sweet potato, quinoa, cooked lentils (or chickpeas), veggies

- Bean soups with vegetables, whole grain bread
- Lentils with veggies and brown rice
- Spaghetti Squash Pasta Bowl: Spaghetti squash, ground turkey, veggies, mushrooms, your favorite pasta sauce, olive oil

These combine protein, fiber, healthy fats, and essential nutrients to support growth, energy, and long-term health!

Budget-Friendly Strategies

Prioritizing nutrition while staying on a budget is crucial because it ensures that childhood cancer survivors receive the nourishment they need for growth, healing, and long-term health without adding financial stress to their families. Simple, cost-effective strategies can make healthy eating accessible and sustainable, thereby supporting the well-being of the whole family.

- **Plan meals and snacks in advance** – consider versatile ingredients which can be used for multiple meals (for example oats, eggs, beans, rice), this also avoids impulse purchases
- **Buy frozen produce** – frozen fruits and vegetables are just as nutritious, last much longer, and are typically more affordable
- **Embrace plant-based protein sources** – beans, lentils, tofu, and chickpeas are incredibly budget-friendly protein sources that are filling and very nutrient-dense
- **Cook in batches** – making large portions of soups, stews, and stir-fries can then be frozen and used on busy days, as well as snacks like energy balls or hard-boiled eggs cooked in batches save time and money
- **Reduce packaged and processed foods** – creating DIY snacks like trail mix, popcorn or yogurt with fruit from larger bulk products are healthier and cheaper

Wrap Up

Healthful nutrition is a key part of long-term health for childhood cancer survivors. Eating well can help reduce the risk of chronic conditions that can be related to cancer treatments. Preventing heart disease, metabolic syndrome, weight challenges (both under and overweight), as we work to support normal growth, strong bones, and overall well-being is a priority in long-term survivorship care in those who have experienced childhood cancers.

By incorporating balanced meals, nutritious snacks, and family-friendly recipes, survivors and their families can create a supportive environment at home which fosters lifelong health. Family

meals, cooking together, and modeling healthy choices can turn into a wonderful, shared, family experience. When extra support is needed, registered dietitians can provide personalized guidance tailored to specific health needs.

Prioritizing nutrition today helps ensure that childhood cancer survivors have the strength, energy, and foundation for a healthier future.

Resources

<https://www.myplate.gov/> for help designing a well-balanced diet

<https://survivorshipguidelines.org/> provides many helpful links, including nutrition and physical activity guidelines through the Children's Oncology Group

<https://www.aicr.org/cancer-prevention/recipes/> American Institute for Cancer Research has a large library of recipes that support cancer recovery

<https://www.cancer.org/cancer/childhood-cancer/nutrition-for-children-during-cancer-treatment.html> the American Cancer Society has detailed information regarding nutrition during and after treatment

<https://www.eatright.org/for-kids> Academy of Nutrition and Dietetics can help you find a registered dietitian who specializes in pediatric oncology dietetics in your area