

# Healthy Eating During Radiation Therapy



This booklet guides you through the importance of healthy eating during your Radiation Therapy journey.

We are committed to ensuring you receive the highest standard of care. Part of that care is keeping you informed about how nutrition can support your treatment and recovery. If you have any questions or concerns, please speak with your doctor or medical team.

## Understanding Healthy Eating During Radiation Therapy

Nutrition is an essential component of a healthy lifestyle and plays an even greater role during radiation treatment. Eating well can increase your chances of successful treatment and improve your quality of life both during and after therapy.

As your body works to heal and regenerate healthy tissues affected by radiation, it requires sufficient calories, protein, and nutrients. Health City is here to support you at every step, and we hope this guide helps you feel confident and empowered throughout your journey.

Now is not the time to diet.



## Benefits of a Healthy Diet During Radiation

There are multiple benefits of maintaining a healthy diet while undergoing Radiation Therapy. A healthy diet can:

- **Speed up recovery** – Protein is essential for tissue repair. Without enough, the body breaks down muscle, delaying healing.
- **Lower the risk of infection** – Protein supports a healthy immune system.
- **Maintain energy and strength** – Carbohydrates and fats are vital for sustaining strength and rebuilding energy.
- **Manage side effects** – A balanced diet may help reduce side effects such as nausea, appetite loss, taste changes, and dry mouth.
- **Maintain weight** – Maintaining a healthy weight supports treatment efficacy.



# Three Diets Radiation Patients Have Found Helpful

## 1 Plant-based Diet

Plant-based foods contain natural compounds—phytochemicals and antioxidants—that may help fight carcinogens and protect cells from damage. A balanced diet including whole grains, legumes, nuts, seeds, and a variety of colourful fruit and vegetables is recommended.

Tips to Add More Plant-based Foods

1. Eat at least five servings of non-starchy vegetables and fruit per day.
2. Include whole grains or legumes in every meal (e.g. brown rice, quinoa, sweet potato, whole-wheat pasta).
3. Fill two-thirds of your plate with vegetables, fruit, and whole grains.

## 2 BRAT Diet

The BRAT diet—bananas, rice, apples, and toast—is helpful for managing nausea, vomiting, and diarrhoea. These foods are gentle on the stomach, easy to digest, and low in fat and fibre.

## 3 Rainbow Diet

This diet encourages eating a variety of colourful fruits and vegetables to ensure a wide range of nutrients:

**Red:**

Tomatoes, strawberries, red peppers – rich in vitamin C and antioxidants

**Orange/Yellow:**

Carrots, sweet potatoes, oranges – sources of beta-carotene and potassium

**Green:**

Spinach, broccoli, kale – high in vitamins A, C, and K

**Blue/Purple:**

Blueberries, aubergine, purple cabbage – contain anthocyanins for heart and brain health

**White:**

Garlic, cauliflower, onions – provide potassium, magnesium, and vitamin C

## A Well-Rounded Diet

Fruits and vegetables alone are not enough. For a well-rounded diet, ensure you're also consuming enough protein, carbohydrates, and healthy fats.

## The Importance of Protein

Protein is essential for healing, immunity, and muscle maintenance. Aim to include a protein source at every meal and snack. Some options are:

- Eggs
- Nuts and nut butters
- Seeds
- Tofu and soy products
- Dairy (full-fat milk, cheese)
- Poultry and fish
- Lean meats
- Legumes
- Protein powders/shakes (e.g. Ensure, Boost)

If solid food is difficult, try meal replacement shakes such as:

### Peanut Butter Shake

- $\frac{3}{4}$  cup cottage cheese or Greek yoghurt
- 2 tbsp peanut butter
- 1 banana
- Water and ice to blend

### Berry Shake

- $\frac{3}{4}$  cup cottage cheese or Greek yoghurt
- 1 scoop whey protein
- $\frac{1}{2}$  cup berries
- $\frac{1}{4}$  avocado
- Water and ice to blend



## Other Tips to Boost Protein/Calories

- Add Greek yoghurt or nut butter to smoothies.
- Use whole milk in cooking.
- Blend tofu into soups.
- Add avocado to meals.
- Freeze smoothies as nutrient-rich lollies.
- Spread nut butter on toast, pancakes, etc.
- Use high-calorie, high-protein supplements.

## Carbohydrates

A vital energy source, carbohydrates also provide fibre to support digestion and alleviate constipation.

Sources include:

- Whole grains (brown rice, wholegrain pasta/bread)
- Fibre-rich fruits (bananas, citrus fruits, kiwi, figs)
- Vegetables (broccoli, carrots, sweetcorn, kale).

Aim for at least 2.5 cups of fruit and vegetables daily.

## Fats

Healthy fats provide long-lasting energy and help transport essential vitamins. Avoid saturated and trans fats (e.g. fried foods, processed meats), and choose:

- Avocados
- Nuts and seeds
- Olive oil
- Oily fish
- Tofu and soybeans
- Flax and chia seeds
- Dark chocolate (in moderation)

## Nutrition for Managing Radiation Side Effects

Side Effect	Dietary Recommendations
Mouth/Throat pain	Choose soft, moist foods. Avoid spicy, salty, or acidic items. Use oral rinses as advised by your care team.
Nausea/Vomiting	Eat small, frequent meals. Avoid greasy, rich, or spicy foods. Sip clear fluids between meals.
Dry mouth/difficulty swallowing	Stick to soft foods like soups and smoothies. Rinse with water or use artificial saliva. Maintain oral hygiene.
Loss of appetite/taste	Add calories through sauces, dressings, and high-calorie snacks. Try cold foods or experiment with flavours.
Dehydration	Keep hydrated with water, juices, herbal teas, electrolyte drinks, or water-rich foods. Avoid caffeine.
Gas, bloating, diarrhoea	Avoid fizzy drinks, beans, cruciferous vegetables, and sugar-free products. Eat small meals and low-fibre foods.
Constipation	Increase fluid and fibre intake (fruit, veg, whole grains). Gentle exercise may help.
Taste/Smell changes	Try cold meals, plastic cutlery, or flavour enhancers. Avoid strong-smelling foods. Maintain oral hygiene.
Fatigue	Prepare meals in advance. Stay hydrated. Use ready-to-eat or frozen options when low on energy.



## Your Treatment Journey Is Unique

Everyone responds differently to Radiation Therapy. Some may prefer bland foods, others more flavourful ones. It's okay to listen to your body and adjust your diet as needed.

Your nutritional needs may shift during treatment. Foods often limited on typical diets may be beneficial during this time.

If you need personalised advice, speak to a registered dietitian. Health City can help arrange an appointment for you.



## Nutrition During Radiation Therapy by Cancer Type

Cancer Type	Common Side Effects	Dietary Recommendations
Breast Cancer	<ul style="list-style-type: none"> <li>• Fatigue</li> <li>• Skin irritation</li> <li>• Appetite changes</li> </ul>	<ul style="list-style-type: none"> <li>• Stay well-hydrated (8–10 cups of water day)</li> <li>• Eat an anti-inflammatory diet: fruits, vegetables, whole grains, omega-3s</li> <li>• Limit processed/sugary foods</li> <li>• Support skin health: Vitamins A, C, E</li> <li>• Have small, frequent meals</li> </ul>
Prostate Cancer	<ul style="list-style-type: none"> <li>• Diarrhoea</li> <li>• Bowel changes</li> <li>• Urinary frequency or urgency</li> <li>• Fatigue</li> </ul>	<ul style="list-style-type: none"> <li>• Low-fibre/low-residue diet if diarrhoea occurs</li> <li>• Avoid caffeine, alcohol, acidic/spicy foods</li> <li>• Drink 2–3L of fluid/day</li> <li>• Include probiotics (e.g. yoghurt)</li> <li>• Limit red/processed meat</li> </ul>
Head & Neck Cancer	<ul style="list-style-type: none"> <li>• Difficulty swallowing</li> <li>• Mouth/throat pain</li> <li>• Dry mouth</li> <li>• Weight loss</li> <li>• Malnutrition risk</li> </ul>	<ul style="list-style-type: none"> <li>• Soft, moist, blended foods</li> <li>• High-protein, high-calorie meals/snacks</li> <li>• Avoid acidic, spicy, or rough foods</li> <li>• Eat frequent, small meals</li> <li>• Maintain good oral hygiene</li> <li>• May require tube-feeding temporarily</li> </ul>

## FAQs

These are some common questions about Healthy Eating During Radiation Therapy.

### Q: Does sugar feed cancer?

**A:** This is a common myth. All cells use glucose for energy, and we can't eliminate it from our diet. Instead, choose healthier sources like fruit, vegetables, whole grains, and dairy—while reducing sugary processed foods.


### Q: Will a vegetarian diet reduce recurrence risk?

**A:** There's no strong evidence that vegetarian diets prevent recurrence. The best approach is a balanced diet rich in vegetables, fruit, whole grains, and quality protein. Reducing red meat may be recommended in hormone-sensitive cancers.

### Q: Should women with breast cancer avoid soy?

**A:** Current research shows that moderate soy consumption (e.g. tofu, soy milk) is safe and may even reduce breast cancer risk. Soy does not interfere with anti-oestrogen treatments.

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