

# Bodyweight & CANCER

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Christina is a senior clinical dietitian at Brigham & Women's Hospital. She is board certified as an oncology nutrition specialist as well as a board certified nutrition support clinician. She enjoys creating individualized nutrition care plans for patients throughout their treatment course, particularly those requiring specialized nutrition support therapy.

## Maintaining a healthy weight has been shown to be an important factor in many aspects of health, including overall cancer survivorship and quality of life.

Body mass index (BMI) is used to determine if one is at a healthy weight for their height. BMI is calculated as weight in kilograms divided by height in meters squared. Overweight is defined as BMI > 25 kg/m<sup>2</sup> and obesity as BMI > 30 kg/m<sup>2</sup>. Normal BMI range is 18.5-24.9 kg/m<sup>2</sup>. Energy balance includes both diet and physical activity; imbalances in energy consumed and energy expended can lead to a positive energy balance and thus an increase in body weight.

Recent research has revealed that overweight/obesity, physical inactivity, and poor diet quality have been shown to decrease overall and cancer-specific survival. Additionally, obesity has been linked with worse outcomes in areas such as quality of life, cancer recurrence, and disease progression. This research also suggests that weight maintenance and avoiding weight gain during treatment as well as intentional weight loss following treatment may have important health-related benefits. Studies have shown that lifestyle interventions involving weight, dietary changes, and increased physical activity improve quality of life, minimize disease and treatment-related side effects, and may improve response to treatment. Additionally, some preliminary research is suggestive of improved prognosis in early-stage cancer diagnosis with lifestyle changes.

Several studies have shown that weight loss of as little as 5-10% of current weight is associated with improved quality of life and physical functioning in cancer survivors. This weight loss also leads to decreased risk for cancer recurrence or development of a secondary cancer. Additionally, as overweight and obesity are also linked to increased risk of many chronic illnesses, weight loss can also decrease risk for developing those illnesses. Research has suggested that for some, intentional weight loss of 1-2 pounds per week during treatment is safe and feasible, provided it is closely monitored by the oncology team and it does not interfere with treatment. For others, it may be more appropriate to postpone weight loss efforts until active treatment is completed. Even if not achieving weight loss, changes in diet and physical activity can lead to decreased fatigue, increased quality of life, and may improve survival. Therefore, small, sustainable changes to overall diet and exercise, as well as improvements in weight may lead to important positive outcomes in cancer survivors.

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### RECOMMENDATIONS: WEIGHT MANAGEMENT

- Maintain weight within a **healthy BMI range (18.5-24.9 kg/m<sup>2</sup>)**
- If BMI is greater than 25 kg/m<sup>2</sup>, even **modest weight loss** of 5-10% of current weight will improve overall health
- Modest **weight loss of 1-2 pounds per week** may be appropriate during treatment – discuss with your oncologist and dietitian
- **Avoid excess weight gain** in adulthood, even if within a normal BMI range
- **Fill your plate with colorful fruits and vegetables.** These contain phytonutrients, fiber, vitamins, and minerals that can help support a healthy immune system and protect against developing cancer. Aim for half of your plate to contain fruits and vegetables
- **Choose lean protein sources** at meals, including poultry, fish, eggs, low-fat dairy, beans, and nuts. Protein foods provide fuel for muscles and help improve satiety. Limit red meat and avoid processed meats
- **Choose whole grains** such as whole-wheat bread or pasta, brown rice, and quinoa at meals rather than refined (white) grains. Whole grains contain fiber, vitamins, and minerals that are missing in refined grains
- **Include healthy fats** like olive oil or nuts to help promote satiety
- **Avoid concentrated sweets** and sugar-sweetened beverages. These foods are calorie dense without much nutritional benefit and can lead to weight gain or hinder weight loss
- **Drink water!** Replace sugar-sweetened beverages with water
- **Be physically active.** Aim for at least 30 minutes of physical activity per day. Not only will this help with weight management, it can improve your overall physical and mental health
- **Meet with a registered dietitian.** A dietitian will provide personalized advice and support for weight maintenance and a healthy diet throughout cancer treatment.

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"...ONCE YOU HAVE A BRIGHT IDEA, SURROUND YOURSELF WITH PEOPLE SMARTER THAN YOU, AND GET THE HELL OUT OF THEIR WAY."

## CNC PROFILE: BRUCE MOSKOWITZ, MD

by Josh McHugh

**Like all physicians, Bruce Moskowitz has made a career out of diagnosing and treating his patients' ailments. But such is his focus on his patients that, over the years, he's been able to do things that most doctors don't:**

He's been able to address population-wide health issues by changing the way medical information is distributed to affected populations. And as a result of his tireless dedication to patient care, he's had the opportunity to help inform national healthcare policy along the way.

During his medical residency at the University of Rochester's medical school, Moskowitz frequently worked with inner city residents and migrant farm workers – two groups who he saw were often not getting quality medical care.

"I came away from the experience with a real appreciation of which services exist – or don't exist – for those populations."

The missing element in most cases, he realized, was information. "Whether it was a pregnant woman or new mother who needed nutritional information for herself and new baby, or folks who were overweight or underweight," Moskowitz says, "a big part of the problem was that they didn't have access to the information they needed to make the right decisions."

While at the University of Miami earning his M.D., Moskowitz was awarded the Jerome Krivanek award for innovation in medical education. Since then, he has made it his life's work to help patients get the information they need, when they need it, in innovative ways. Some examples: MyClinicalTrialLocator, a free website that helps patients find clinical trials relevant to their conditions; EmergencyMedicalCenterLocator, an iPhone app that points users to the nearest emergency rooms; a database tracking medical device safety issues; and more recently: the Cancer Nutrition Consortium.

Over the past few decades, Moskowitz has become renowned in the West Palm Beach, Florida area, where he practices primary care, for another trait that's less and less common these days: being available to his patients around the clock.

### THE SUMMIT

Those decades of connecting with patients above and beyond the standard of physician care have made him a highly sought-after adviser at the highest levels. Though Moskowitz declines to discuss the matter, healthcare industry trade press outlets described the following story: The month before Donald Trump was sworn in, his transition team sought to bring together a handful of healthcare industry leaders at Trump's Mar-a-Lago estate in Palm Beach to advise the president-elect on potential reforms to the Veterans' Administration, national healthcare policy and biotechnology regulation.

Knowing Moskowitz's reputation for being well-connected and well-liked, they called on him to help make the meeting happen. He was able to convene a group of executives from the country's top healthcare organizations, including the heads of the Cleveland Clinic, the Mayo Clinic, Johns Hopkins Medicine, and Partners Healthcare.

"I've had phone calls with Bruce at nights, weekends and over holidays," says CNC board member Terre McJoyn, operations administrator at Mayo Clinic who joined the CNC's founding team following one of those calls. "When Bruce calls, you answer, and you know it's going to be something exciting."

### CNC: ORIGINS

When describing how the Cancer Nutrition Consortium came to be, Moskowitz is characteristically modest. "Like all important things," he says, "the idea came not from physicians, but from patients."

One of his patients told Moskowitz how frustrated she had become while trying to find information on how to maintain a healthy nutrition regimen while undergoing her cancer treatment. The more Moskowitz looked



into ways to help that patient, the clearer it became to him that there was an opportunity to help another underserved population.

His strategy: harness the nutritional expertise amassed over the years by the world's leading cancer centers, and make it available to the global cancer treatment community.

So Moskowitz picked up the phone. One of his first calls was to Jeremy Jacobs, a healthcare philanthropist whose hospitality company, Delaware North, has extensive experience working with culinary directors at major cancer centers around the country. Once Jacobs was onboard, Moskowitz assembled a founding team who helped him recruit the top chefs and food service directors at Mayo Clinic, Cedars-Sinai, Dana-Farber/Brigham Women's, Culinary Institute of America, and a handful of other elite institutions.

"To paraphrase the best business book in recent years – *Bossypants* by Tina Fey," Moskowitz says, "once you have a bright idea, surround yourself with people smarter than you, and get the hell out of their way."

### THE FUTURE OF NUTRITION

"The fact is, we've got an aging population," Moskowitz says. "We need to pay more attention to people who get behind on caloric intake, whether they're cancer patients or people with hip fractures, or anything else they're in treatment for or recovering from."

Moskowitz points to the Hormel Vital Cuisine brand, which the CNC co-developed with Hormel Foods specifically for people recovering from illness or undergoing treatment, as an example.

"It's my hope that our work will eventually impact nutrition on a larger scale, and leapfrog past serving only cancer patients."



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## AFTER A CANCER DIAGNOSIS What Should I Be Eating?

Emily Biever, MS, RD  
Sr. Clinical Dietitian  
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Emily is a senior clinical dietitian at Dana-Farber Cancer Institute. She brings her integrative approach, love of fitness, and appreciation for the complexity of our relationships with food to the Dana-Farber dietitian team. Em works one-on-one with patients to optimize nutrition, while managing common side effects of cancer treatment.

### After a cancer diagnosis, many individuals are motivated to find the best foods to eat for their diagnosis.

This often leads to reading books, searching the Internet and using the media for guidance. In addition to these sources, it's not uncommon to receive recommendations on what to eat from well-intending friends and family. Information from all these sources can leave a newly diagnosed person feeling overwhelmed and confused. The following article aims to provide clarity and solid ground on how to move forward in nourishing your body after a cancer diagnosis.

Although there are many extreme diets that claim to benefit cancer patients, the most up-to-date evidence shows that dietary recommendations do not drastically change before and after a diagnosis. Authors of the 2018 Continuous Update Project, (a comprehensive analysis of cancer prevention and survival research), suggest that patients follow the dietary patterns and lifestyle recommendations that are associated with reduction in cancer occurrence. Recommendations include consuming a primarily plant-based, whole food diet, while reducing intake of foods that are processed and are associated with inflammation and disease.

### RECOMMENDATIONS IN DETAIL

#### CONSUME MOSTLY PLANTS

Plant-based refers to eating patterns rich in: whole grains (like oats, wheat, barley, brown rice), non-starchy vegetables (like leafy greens, tomatoes, carrots, broccoli), and fruits and pulses (like berries, beans, and lentils). These foods are high in fiber and contain phytonutrients, plant "immune systems" that are helpful in healing and repairing during treatment.

#### EAT MORE "WHOLE" FOODS IN PLACE OF PROCESSED FOODS

"Fast foods," convenience foods, (i.e., chips, candies, white flour-based foods like breads, pastas, cakes, cookies), and sugary beverages (sports drinks, sodas, sweetened coffee beverages), are typically higher in calories, unhealthy fats, and/or added sugars, and low in immune-supporting, anti-inflammatory nutrition. These are not considered whole foods, and their intake should be limited.

A quick way to determine if a food is more processed than whole, is to ask yourself whether you can identify the ingredients without looking at the label. Foods that are whole have easy to identify ingredients (think an apple, a hard-boiled egg, or plain rolled oats), while foods that are more processed and refined have longer lists of ingredients, including added sweeteners, fats, preservatives and artificial colors (think sugary cereals, snack bars, boxed macaroni and cheese).

To move towards more whole foods, consider the following upgrade. Instead of consuming a packaged breakfast bar in the morning, scoop a few spoonfuls of plain yogurt into a to-go container, then add frozen berries and a small handful of nuts or seeds on top. All components of this upgraded breakfast are identifiable (whole foods), and quick and simple to prepare!

#### LIMIT THE AMOUNT OF RED AND PROCESSED MEATS IN YOUR DIET

Red meat (like beef, pork, lamb) and processed meats (like ham, bacon, sausages, hot dogs) have been associated with colorectal cancers, and associated with other diseases like cardiovascular disease, stroke and type 2 diabetes. Aim to limit intake of red meat to no more than 3 servings per week, or no more than 18 ounces of cooked meat per week. Recommendations for processed meats are to consume little to none. To lower red and processed meats in your diet, replace with a variety of lean poultry, fish, beans, lentils, dairy and/or eggs.

#### BALANCE YOUR MEALS TO MAXIMIZE YOUR NUTRIENT INTAKE

Modifications to these suggestions may be necessary if you start to experience side effects of treatment, or if you are already experiencing side effects from your diagnosis. An example may be choosing lower fiber-containing vegetables and grains if you are having digestive issues. Without any side effects or issues consuming a normal diet, aim to build plates at mealtimes with 50% of your meal coming from colorful vegetables or fruit, 25% from whole grains, and 25% from lean proteins.

#### FIND HEALTHFUL FOODS THAT ALSO PLEASE YOUR TASTE BUDS

This is a sustainable way to nourish yourself instead of shifting into a way of eating that feels restrictive or like dieting. If you have an aversion to kale, no worries! Find another green vegetable to include in your diet instead. If you need help coming up with healthful foods that you also enjoy eating, reach out to the nutrition staff at your cancer hospital to help!

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# Superfoods

NUTRITION SUPERSTARS OR  
MERELY SUPER MARKETING?

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Stacy is a Board-Certified Specialist in Oncology Nutrition and senior clinical nutritionist for the Dana-Farber/Brigham & Women's Hospital Cancer Care, Harvard Medical School teaching affiliates, in Boston, MA. Stacy is adjunct faculty at Simmons College, an American College of Sports Medicine Certified Personal Trainer and Group Exercise Instructor.

**It's hard to go grocery shopping lately without being tempted to supercharge your health with superfoods.**

Globally, reports show a 36% increase in the number of foods and beverages featuring "superfood" on their labels, with the U.S. consuming more than any other country. Popular examples include goji and acai berries, green tea, chia, flax and hemp seeds, teff, sprouts, pomegranate, cacao, maca, Kombucha and spirulina/chlorella/algae. Superfoods expected to hit the mainstream American marketplace in 2018 include watermelon seeds, chaga mushrooms, tiger nuts and maqui berries.

#### SUPER DUPED?

The bad news: no one really knows exactly what a superfood is. While the E.U. clamped down on the unsubstantiated use of the term "superfood" in 2007, food marketers in the U.S. can currently use the term without getting approval from the USDA and FDA, which regulate nutrition labeling and health claims. While words like "organic," "all-natural" and "gluten-free" must meet specific criteria for health claims and labeling, "superfood" has thus far gotten a pass.

That lack of regulation has proven to be a goldmine for marketers, who are happy to keep adding new and exotic food types to the rapidly-expanding category. But it's problematic for those looking to improve their health – especially people looking to prevent, fight, or recover from cancer, who are particularly susceptible to overblown nutritional claims.



#### SUPER CLAIMS

Many foods of the foods below, commonly marketed under the "superfood" banner, have shown some indications of beneficial results during in vitro or animal trials, but haven't been proven to work in human clinical trials:

› **Chaga mushroom** - Contains Inonotus obliquus, used in Russian traditional medicine, said to have antioxidant and antimicrobial properties. High in oxalates, toxic in high doses  
**Unproven claim:** Inhibits cancer progression

› **Chia seeds** - Contain some fiber, omega-3 healthy fats, calcium, magnesium, iron, zinc, niacin and protein  
**Unproven claim:** Extracts from chia seeds can help cancer patients hold up better during treatment

› **Goji berries** - Contain fiber, Vitamin C, Vitamin A and iron  
**Unproven claim:** preliminary in vitro studies looking at breast and liver cancer cells suggest goji berries may help the body kill cancer cells

› **Moringa** - Comes from Africa and Asia and contains antioxidants, flavonoids, phenolic acids and isothiocyanates  
**Unproven claim:** It may have potential to slow the growth of breast cancer and neuroblastoma cells, and positively impact glucose metabolism and fats in the liver

› **Tiger nuts & Watermelon seeds** - Currently rising fad foods without much research to back up claims that range from aphrodisiac powers to cancer prevention

#### BOTTOM LINE

What we do know: a balanced diet plentiful in plant-based foods, such as fruits, vegetables and whole grains, along with healthy fats, and lean proteins like fish, peas and lentils, animal and soy proteins, in combination with regular physical activity, can help reduce the risk for developing certain cancers and can help promote survivorship. And though "superfoods" may not be especially effective in preventing or curing cancer, most of them can be a part of a well-balanced diet. Just make sure you take their purveyors' claims with a healthy grain of salt.

## Stir-Fried Cabbage with Red Peppers, Peanuts & Peas

Chef Suvir Saran  
Cookbook Author, Educator

New Delhi-born Saran is an accomplished chef, cook-book author, educator and organic farmer. He has been a featured judge on Next Iron Chef and Iron Chef on the Food Network along with Bravo's Top Chef Masters. He is Chairman of Asian Culinary Studies for the Culinary Institute of America (CIA) and travels extensively to teach audiences ranging from home cooks and fellow chefs to physicians and nutritionists. He has penned three widely acclaimed cookbooks: Indian Home Cooking, American Masala and Masala Farm.

SERVINGS: 5



### INGREDIENTS

**3 tbsp** CANOLA OIL

**1 tsp** CUMIN SEEDS

**1 tsp** TURMERIC

**3 dried** RED CHILIES

**2 cups** TOASTED UNSALTED PEANUTS

**(1) 3 1/2 lb** HEAD OF CABBAGE, CORED AND FINELY CHOPPED

**2** RED PEPPERS, SEEDED AND FINELY CHOPPED (PEA SIZED PIECES)

**1 cup** FROZEN PEAS

**3/4 tsp** KOSHER SALT

### DIRECTIONS

Heat the canola oil with the cumin seeds, turmeric and chilies in a **large pot** or wok over medium-high heat, stirring occasionally, until the chilies become smoky, about 3 minutes. Add the peanuts and cook for 2 minutes, to brown them slightly and heat them up.

Add half of the cabbage and all of the red pepper and peas and stir to combine with the spices.

When the cabbage begins to wilt (couple of minutes), stir in the remaining cabbage.

Cook, stirring often, until the volume has reduced by 1/3 and the cabbage looks very browned, about 15 to 30 minutes (depending on your pot or wok).

Mix in the salt and serve warm or at room temperature.

## Grilled Pesto Chicken Piccata

Certified Master Chef Ron DeSantis  
CulinaryNXT

Chef DeSantis oversaw the production of over 13,000 meals each day at Yale. He provides leadership for all facets of culinary concept design, development of innovative menus and cuisine and training of the culinary team. A 1981 CIA alumnus, Chef DeSantis has received many citations during his professional career. Chef DeSantis is currently the Chair of the ACF Certification Commission. A Certified Hospitality Educator (C.H.E.), Chef DeSantis holds a Masters in Business Administration (MBA) from Empire State College in Saratoga Springs, NY.

SERVINGS: 1 per chicken breast



### INGREDIENTS

**1 lb** CHICKEN BREAST, RAW, SLICED THIN (PRESLICED IN SUPERMARKET POULTRY SECTION)

PAM COOKING SPRAY

KOSHER SALT

**1 3/4 tbsp** PESTO SAUCE, READY-TO-SERVE, REFRIGERATED

### DIRECTIONS

Spray thinly sliced chicken breast with 1-second burst of Pam Cooking Spray on each side.

Season 1 side with kosher salt.

Spread same side with 1 tsp pesto on each slice of chicken breast.

Place chicken on very hot, **preheated grill** – pesto side up.

Grill for 2-3 minutes.

Turn over (grill WILL flare up!) and grill for 1-2 minutes on pesto side.

Remove from grill and serve immediately.