

Eat for Health, Strength and Happiness

Nancy Birang BS, NC

Integrative Nutrition Consultant Board Certified, Holistic Nutrition <u>nancybirang@gmail.com</u>

www.fourseasonsnutrition.com

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Today's Talk Outline



- Role of nutrition for
 - health, optimal energy, happiness
 - dis-ease prevention
 - cancer prevention and management
- Healthy eating strategies and habits
- Top foods to enjoy
- What foods to avoid or limit
- Some resources and references
- Q and A



Role of Nutrition in Cancer



Repair/Restore/Regulate



Not Just Calories

- Food Quality
 - safety
 - source
 - processing
- Nutrient Density
 - amount of nutrients for the calories consumed
- Food Actions
 - food compounds "talk" to your cells





Food is not just calories, it is information. It talks to your DNA and tells it what to do. The most powerful tool to change your health, environment and entire world, is your fork.

Mark Hyman, M.D.

The science shows that food is information, and it gives instructions. It can upgrade or downgrade your biological software with every bite. ODEMATERHYMAN FAT-BURNING





Impact of nutrients and bioactives on genes



"Foods, when consumed in their full, natural and nutrient rich state, contain a number of messenger molecules released by digestion and metabolism. These messenger molecules impart specific cues to influence our genes."

Energy Metabolism

 "One of the many cancer targeting effects of botanical and food compounds is their ability to increase efficiency of energy metabolic pathways and potentially reprogram cancer cell metabolism." Glucose Growth factor

https://www.donnieyance .com/understandingcancer-glucosemetabolism/





Making Choices







Cell energy
 Cell communication
 Cell regulation
 Cell protection



Food compounds drive cellular reactions



The Human Biomolecular Atlas Program. NIH Common Fund

Nourish Your Microbiota

Beneficial gut bacteria

- biotransform food compounds into usable nutrients
- regulate digestion, elimination
- regulate caloric extraction
- provide protection against pathogens
- regulate immune cell response
- modulate inflammation
- Affect response to chemo
- Affect response to immunotherapy



"Some of My Best Friends Are Germs"

Michael Pollan

https://www.nytimes.com/2013/05/19/magazi ne/say-hello-to-the-100-trillion-bacteria-thatmake-up-your-microbiome.html



Crosstalk Between Intestinal Microbes and the Immune System



https://www.pharmamicroresources.com/2017/03/crosstalkbetween-intestinal-microbes.html

https://www.nature.com/articles/s41422-020-0332-7

Dysbiosis Disrupts Immune Response

"The gut microbiota plays a critical role in the anti tumor immune response. Data shows that antibiotics change the composition of the gut microbiota and affect the efficacy of immune checkpoint inhibitors."



Antibiotic use and the efficacy of immune checkpoint inhibitors in cancer patients: a pooled analysis of 2740 cancer patients https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6844 307/

Nourish Your Microbiota

Enjoy an abundance and diversity of plants

- >diverse fibers feed gut bacteria
- Skip processed sugars/Avoid excess sugar
 - Feeds bad bacteria, yeast
- Avoid artificial sweeteners
- Enjoy cultured foods
- Have filtered water



- chlorine kills bacteria
- Optimize bowel movements



Artificial Sweeteners Disrupt Your Microbiota





 <u>https://physiologicnyc.com/the-artificial-</u> <u>sweeteners-effect-on-the-gut-microbiome/</u>

Healthy Eating Strategies & Habits

- What to eat
- When to eat
- How to eat
- Making choices











What To Eat



Drink water and hydrating liquids Eat mostly plants \geq veggies, fruit, whole grains, beans, nuts, seeds, herbs, spices Enjoy what's in season Enjoy animal foods in smaller amounts >organic, grass fed, high quality Enjoy Mushrooms > fresh, dried, always cooked Tune in to individual needs >personalized diet

Be Well Hydrated

- Water, filtered
 - Add lemon or other fruit
 - Add a splash of juice
- Herb Tea
 - Green tea
 - Ginger tea
 - Tulsi tea (holy basil)
 - Chamomile tea
 - Chia drink
 - 1 Tbsp. chia in 1 cup hot water
 - Watermelon Cucumber Blend
- Veggies & Fruit







What To Eat



"Eat Plants, Not Food Made in Plants" Michael Pollan, Food Rules

What To Eat?

Don't eat anything your great-grandmother wouldn't recognize as food.

- Michael Pollan



Amount Per Serving	
Calories 110 Calories fro	m Fat 1
% Dai	ly Value
Total Fat 1g	29
Saturated Fat 0.5g	29
Cholesterol Omg	0%
Sodium 150mg	6%
Total Carbohydrate 24g	89
Dietary Fiber 1g	39
Sugars 19g	
Protein 2g	





Eat a Rainbow



Enjoy What's in Season





It's Cherry Time



Enjoy cherries

- As a snack
- Nutrient rich
 - Vitamin C
 - Potassium
 - Fiber
- Tart cherries
 - Sleep aid
 - As a tea
 - Add juice to yogurt

Eat A Peach



- As a snack
- With breakfast
- In a salad
- As a peach crisp
 - peaches, oats, yogurt
 - <u>https://www.wellplated.com</u>
 <u>/peach-crisp/</u>
 - Grilled
 - With grilled salmon or chicken, green salad
- Peach salsa
 - <u>https://www.dinneratthezoo</u>
 <u>.com/peach-salsa/#recipe</u>

Power Nutrients in Veggies & Fruit

"Cell Protectors and Regulators"

- Antioxidants
- Vitamins (C, E, K, folate)
- Minerals
 - calcium, potassium, selenium
- Polyphenols
 - EGCG
- Flavonoids
 - Anthocyanins
- Carotenoids
 - Beta carotene, lycopene
- Glucosinolates

- Lignans
- Ellagic acid
- Sulfur
- Stilbenes
- Fiber
 - Intestinal health
 - Feeds beneficial bacteria





 Fruit and Vegetable Consumption and Mortality from All Causes, Cardiovascular Disease and Cancer

https://pubmed.ncbi.nlm.nih.gov/25073782/





Plant Nutrients Act On Cancer Stem Cells

- Flavonoids, carotenoids (leafy greens)
- Apigenin (parsley, celery, chamomile)
- Lycopene (tomatoes, watermelon)
- Luteolin (celery, peppers, chamomile)
- Polyphenols (pomegranate, green tea)
- Resveratrol (grapes)
- Curcumin (turmeric)
- Piperine (black pepper)
- Gingerol (ginger)
- Quercetin (onions, apples)







A Healthy Meal



- colorful veggies, such as salad greens, tomatoes, cucumber, red cabbage, green beans, broccoli, cauliflower, sprouts
- a starch, such as bread, cracker, tortilla, rice, wild rice, quinoa, potato, sweet potato
- a protein, such as eggs, meat, chicken, fish, beans, tofu, tempeh, mushrooms
- some healthy fat, such as avocado, olives, olive oil, nuts, seeds, peanut or almond butter, fish, organic (grass fed) animal foods



A Healthy Meal



Cultured foods

yogurt, sauerkraut, kim chi

Spices/herbs



 sea salt, black pepper, garlic, turmeric, ginger, basil, oregano

Booster foods

 apple cider vinegar, ground flax seeds, chia, nutritional yeast, whey



Simple Green Smoothie

- In a blender, add
 - 1 cup+ spinach, chopped



- 1 cup+ other leafy green-baby kale, collards, chard
- 1 cup parsley or cilantro
- 1 cup fruit-cut apple, berries, mango, pineapple
- Some fat:
- 1/2 avocado, 2 T almond butter, 2 T any nut
- Other add in options: lemon, celery, fennel
- Option: yogurt or kefir
- Blend until smooth.

Cultured (Probiotic) Foods

- yogurt, kefir, sauerkraut, kimchi, kombucha
- BioK & other concentrated probiotic foods
- replenish beneficial bacteria
- help keep bad bacteria in check
- support immune strength & balance



make your own
 www.krautsource.com



Add Spices

- "Mounting evidence suggests that spices in one's diet may lower cancer risk and affect tumor behavior.
- There are approximately 180 spices commonly being used for culinary purposes. Without question, evidence exists that multiple processes, including proliferation, apoptosis, angiogenesis, and immunocompetence, can be influenced by one or more spices......"

(Kaefer, C. Herbs and Spices in Cancer Prevention and Treatment, Herbal Medicine: Biomolecular and Clinical Aspects. 2nd edition)

http://www.ncbi.nlm.nih.gov/books/NBK92774/

Some Anti Cancer Super Stars























Cancer Fighting Crucifers Liver Detoxers, Cell Protectors



Cruciferous Veggies

- Radish
- Radish sprouts
- Kale
- Mustard greens
- Rutabaga
- Turnip
- Watercress
- Cabbage



- Bok choy
- Broccoli



- Broccoli sprouts
- Brussels sprouts
- Cauliflower
- Collards





Energize Salad

Wide mouth bowl





Basic

- lettuce or mixed salad greens
- tomatoes
- cucumbers
- onions

Creative Add Ins

- arugula, baby kale, cabbage
- sliced radishes
- bell pepper, carrot, edamame
- sliced beets
- sliced artichoke hearts
- broccoli or kale sprouts
- berries
- beans or cooked lentils
- cooked quinoa
- sliced avocado, olives
- roasted pecans or other nuts
- toasted sunflower seeds
- hard boiled egg
- salmon, chicken

Make Your Own Dressing

- Juice from a fresh lemon
- Olive oil and vinegar
- Strawberry infused vinaigrette
- Basic salad dressing
 - Apple cider vinegar- 3T
 - Drizzle in slowly: Extra virgin olive oil -6 T
 - Options:
 - Miso paste-1 T
 - Dijon mustard-1/2-1 tsp
 - Honey-1/2-1 tsp
 - Spices-black pepper, garlic powder, turmeric



Why are Cancer Researchers Studying Cruciferous Vegetables?

- Nutrient rich:
 - beta carotene, lutein, zeaxanthin, vitamins C, E, K, folate, minerals: calcium, potassium
- Fiber
- Indole 3 carbinol
 - potent detoxifier
- Sulphoraphane & isothiocyanates
 - sulfur-containing chemicals
 - stimulates liver detox activity
 - well studied cancer fighting activity
 - active against cancer stem cells





https://www.cancer.gov/about-cancer/causesprevention/risk/diet/cruciferous-vegetables-fact-sheet https://www.nature.com/articles/s41392-020-0110-5

What To Avoid Or Limit

- Sugar
- Refined carbs
- Food Additives
- Hydrogenated oils
- Animal foods with
 - Hormones
 - Antibiotics
 - Chemicals
 - Inhumane conditions

- Fast foods
- Fried foods
- Sodas
- Diet sodas
- Artificial Sweeteners





When To Eat

- Enjoy regular meals at regular times that work for you
- Balance blood sugar & energy levels
- In general:
 - Larger meal earlier
 - Dinner by 7pm
 - Avoid large portions at one sitting



"What To Eat When" -National Geographic

Calorie Restriction and Fasting

Term	Definition
Calorie Restriction	20-40% reduction in calorie intake over a long period of time (1200 calories for women vs 1400 calories for men per day)
Intermittent Calorie Restriction	50-70% reduction in calorie intake for short periods of time (600-1000 calories per day)
Fasting	Complete avoidance of calorie intake for anywhere from 1 day to several weeks
Intermittent Fasting (Overnight Fast)	Complete avoidance of calorie intake for 16-18 hours daily or alternating a fasting day with a normal energy intake day

https://osher.ucsf.edu/patient-care/integrative-medicine-resources/cancer-and-nutrition/faq/cancer-and-fasting-calorie-restriction

Overnight Fasting

12-16 hrs overnight fast

- If possible
- No calories between dinner and breakfast
- If possible-dinner by 7pm/bed by 10pm
- Can have water, herb tea



- Optimizes metabolism
- Regulates Glucose and IGF1
- Improves mitochondrial function (energy)
- Increases brain derived neurotropic factor (bdnf)
- Induces autophagy (cell detox)
- Induces cell survival systems

https://lifeandhealth.org/lifestyle/intermittentfasting-does-it-work

https://www.ncbi.nlm.nih.gov/pmc/articles/P MC7351063/

Fasting-Normal vs Cancer Cells

- Normal cells can switch their metabolism toward maintenance pathways.
- Tumor cells are unable to activate this protective response.
- "The differences in metabolism between normal cells and cancer cells could be used to enhance anticancer therapy by selectively increasing the resistance of normal cells to chemotherapy — that is, by augmenting differential stress resistance rather than by developing more aggressive and toxic drugs."



How to Eat

Mindful Eating

what, why
when, where, how
Set Intention
meal/snack/drink planning
eating habits

- sit
- food on a plate
- five deep breaths
- say a grace/read a passage
- chew





Nutritional Advice for Cancer Patients During Treatment

- "Do The Best That You Can"
- Drink more water or other liquids.
- Eat regularly even if small bites.
- Make a "meal" with
 - Some starch
 - bread, tortilla, rice, sweet potato, quinoa
 - Some protein
 - eggs, beans, fish, nuts, nut butter, protein powder
 - Some fat
 - olives, olive oil, coconut, fish



Nutritional Advice for Cancer Patients During Treatment

- As is possible eat more vegetables
 - soups, smoothies, juices, popsicles, any other way
- If appetite is low or taste is poor,
 - Have 4 "go to foods" on hand:
 - Frozen or canned soup, or broth
 - Peanut or almond butter, crackers
 - Bread for toast, avocado
 - Yogurt with berries
 - Smoothie ingredients
 - Whey protein powder, almond milk, spinach or baby kale, berries, nuts or nut butter



The secret to living well and longer is: eat half, walk double, laugh triple and love without measure.

Tibetan Proverb.

Some Resources

- What To Eat When, National Geographic
- 2021 Your Body's Many Cries For Water, F. Batmanghelidj
- How To Eat, Thich Nhat Thanh
- How To Eat, Mark Bittman
- The Blood Sugar Solution, M. Hyman
- You Are What You Eat Cookbook, G. McKeith
- Eating on the Wild Side
- The Earth Diet, L. Werner-Gray
- Home Fermentation, K. Green
- Spice For Life, E. Bauman, S. Moorthy
- The Longevity Diet, V. Longo
- After Cancer Care, G. Lemole, P. Mehta, D. McKee