



# **Food for Thought: *Nutrition Recommendations for Cancer Prevention***

**Inova Schar Cancer Institute**

***November 9<sup>th</sup>, 2019***

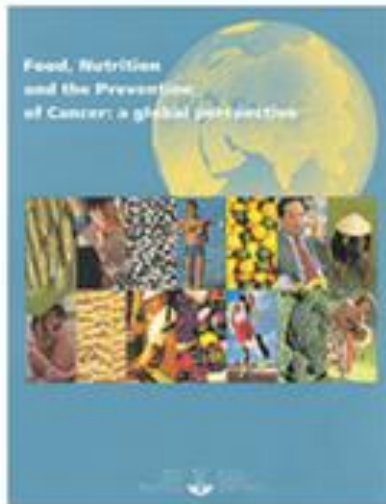


# What makes it so hard to know what to eat?



- Provide evidence based recommendations for diet and exercise to help reduce risk of cancer occurrence and recurrence
- Discuss and help clarify common misconceptions in regards to diet and cancer to help alleviate confusion (and stress!)
- Provide resources for reliable information, recipes, and nutrition counseling

# Current Recommendations



1997



2007



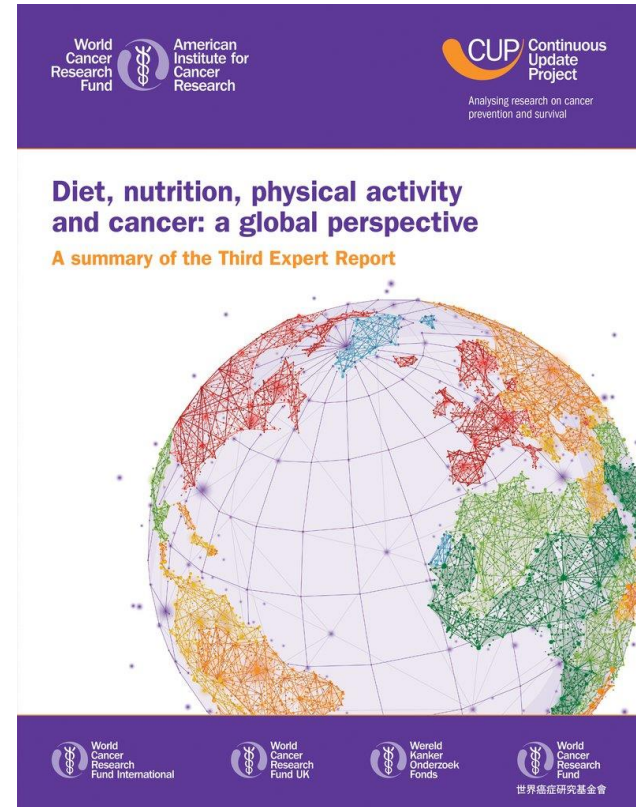
2018

World Cancer Research Fund/American Institute for Cancer Research. *Diet, Nutrition, Physical Activity and Cancer: A Global Perspective*. Continuous Update Project Expert Report 2018.

# Nutrition

In 2018, World Cancer Research Fund & American Institute for Cancer Research published their 3rd report:

## ***“Diet, Nutrition, Physical Activity, and Cancer: a Global Perspective”***



(World Cancer Research Fund/American Institute for Cancer Research, 2018)

# 1: Be a Healthy Weight


## Keep your weight within the healthy range and avoid weight gain in adult life


- Maintain body mass index within normal range: 18.5-24.9 kg/m<sup>2</sup>
- Avoid weight gain (measured as body weight or waist circumference) throughout adulthood



World Cancer Research Fund/American Institute for Cancer Research. *Diet, Nutrition, Physical Activity and Cancer: A Global Perspective*. Continuous Update Project Expert Report 2018.

# 1: Be a Healthy Weight


**WHAT YOU NEED TO KNOW ABOUT OBESITY AND CANCER** 


After not smoking,  
**BEING AT A HEALTHY WEIGHT**  
is **THE MOST IMPORTANT THING** you can do  
to prevent cancer. 

**Overweight and obesity  
INCREASE RISK FOR**



**ESOPHAGEAL CANCER**  
**LIVER CANCER**  
**KIDNEY CANCER**  
**COLORECTAL CANCER**  
**ADVANCED PROSTATE CANCER**  
**POST-MENOPAUSAL BREAST CANCER**  
**GALLBLADDER CANCER**  
**PANCREATIC CANCER**  
**OVARIAN CANCER**  
**ENDOMETRIAL CANCER**

AICR ESTIMATES THAT **EXCESS BODY FAT** IS A CAUSE OF APPROXIMATELY  
**128,200**  
U.S. CANCER CASES EVERY YEAR.

**AND YET...**  
7 in 10 Americans  
are currently  
overweight or obese. 

**AND ...**  
Only about half of  
all Americans  
are even aware of the  
obesity-cancer link. 


**PROTECT YOURSELF!**



**Move More**  **Eat Smart** 

For tips on getting to, and staying at, a healthy weight, visit [www.aicr.org](http://www.aicr.org)

1. Cancer Statistics, 2016. CA Cancer J Clin. 2015;65:6-26. 2. AICR/WCRF Policy Report and Continuous Update Project reports. 3. US Center for Disease Control and Prevention: Obesity and Overweight. 4. 2015 AICR Cancer Risk Awareness Survey

The evidence is the latest from the Continuous Update Project (CUP), which systematically updates and reviews the research conducted worldwide into cancer risk related to diet, physical activity and body weight. All the evidence gathered is then assessed by a panel of independent scientists who make recommendations for cancer prevention.

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Phone: 202.328.7744 • Email: [Communications@aicr.org](mailto:Communications@aicr.org) • [www.aicr.org](http://www.aicr.org)

# 1: Be a Healthy Weight

## Why?? How does being overweight contribute to cancer risk?

### FAT'S CANCER-PROMOTING IMPACT

Factor	Mechanism
<b>Sex Steroid Hormones</b> (eg, estrogen, testosterone, progesterone)	Fat tissue is the main site of estrogen synthesis in postmenopausal women. High levels of estrogen are associated with postmenopausal breast and endometrial cancers and may impact other cancers. Lower testosterone levels in obese men may impact prostate cell differentiation.
<b>Growth Factors</b> (eg, insulinlike growth factor 1 [IGF-1], insulin)	Obesity increases levels and bioavailability of growth factors such as insulin and IGF-1, which can increase cell proliferation, inhibit cell death, and may promote the growth of certain cancers, such as tumors of the endometrium, kidney, and pancreas.
<b>Adipocytokines</b> (eg, leptin, adiponectin)	Leptin promotes cell growth. It's secreted by fat cells, and blood levels are higher in obese people. It's also an inflammatory factor. Blood levels of adiponectin, which may have antiproliferative effects, are lower in obese people.
<b>Inflammatory Factors</b> (eg, tumor necrosis factor, interleukin-6, C-reactive protein, leptin)	Obese people often have chronic low-level inflammation, which may contribute to the initiation and progression of cancer and has been associated with increased risk.
<b>Health Conditions</b>	Overweight and obesity raise the risk of conditions such as type 2 diabetes, gastroesophageal reflux disease, and gallstones, which are associated with higher cancer risk.

#### RESOURCES

1. WORLD CANCER RESEARCH FUND; AMERICAN INSTITUTE FOR CANCER RESEARCH. FOOD, NUTRITION, PHYSICAL ACTIVITY, AND THE PREVENTION OF CANCER: A GLOBAL PERSPECTIVE. [HTTP://WWW.WCRF.ORG/SITES/DEFAULT/FILES/SECOND-EXPERT-REPORT.PDF](http://www.wcrf.org/sites/default/files/second-expert-report.pdf). PUBLISHED 2007.

2. BERGER NA. OBESITY AND CANCER PATHOGENESIS. *ANN N Y ACAD SCI*. 2014;1311:57-76.

# 2: Be Physically Active

## Be physically active as part of everyday life

- Be moderately physically active at least ~30 minutes/day, 5 days per week
- Limit sedentary habits



World Cancer Research Fund/American Institute for Cancer Research. *Diet, Nutrition, Physical Activity and Cancer: A Global Perspective*. Continuous Update Project Expert Report 2018.

# 3: Eat a Diet Rich in Wholegrains, Vegetables, Fruit and Beans

**Make whole grains, vegetables, fruit, and pulses (legumes) such as beans and lentils a major part of your usual daily diet**

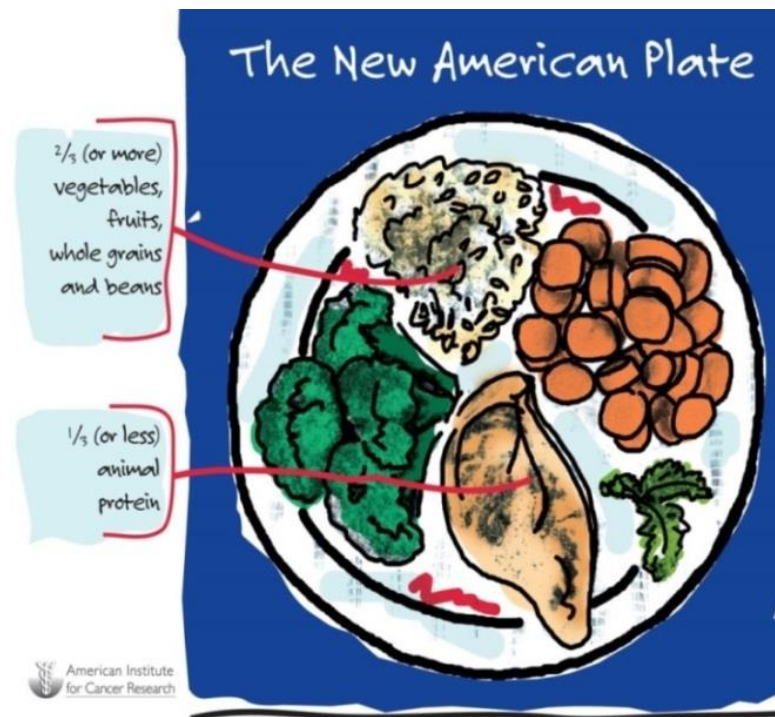
- Consume a diet that provides 30 grams/day of fiber from food sources
- Include at most meals foods containing whole grains, non-starchy vegetables, fruit and legumes



World Cancer Research Fund/American Institute for Cancer Research. *Diet, Nutrition, Physical Activity and Cancer: A Global Perspective*. Continuous Update Project Expert Report 2018.

# 3: Eat a Diet Rich in Wholegrains, Vegetables, Fruit and Beans

- Eat a diet high in all types of plant foods including at least 5 servings of non-starchy vegetables and fruit daily



World Cancer Research Fund/American Institute for Cancer Research. *Diet, Nutrition, Physical Activity and Cancer: A Global Perspective*. Continuous Update Project Expert Report 2018.

# 3: Eat a Diet Rich in Wholegrains, Vegetables, Fruit and Beans

- Which fruits and vegetables are the 'best' to eat?



# ALL OF THEM!!!

# 3: Eat a Diet Rich in Wholegrains, Vegetables, Fruit and Beans

- **I need ideas!!!**



# 3: Eat a Diet Rich in Wholegrains, Vegetables, Fruit and Beans



- **Ideas of ways to increase your 'plant' intake:**
  - Check out a local farmers market or sign up for a CSA ([www.localharvest.com](http://www.localharvest.com))
  - Make a goal of trying one different fruit or vegetable per week
  - Swap common meat portions of a dish for vegetables:
    - Black Bean 'Burgers'
    - Buffalo Cauliflower or Cauliflower 'Steaks'

# **3: Eat a Diet Rich in Wholegrains, Vegetables, Fruit and Beans**

**High Fiber Content + Low Calorie Content=  
SATIATION for LESS CALORIES**

# Nutrition

## Low calorie-dense foods include:

- Oatmeal, brown rice and whole-grain pastas and legumes like lentils and beans
- Most vegetables and fruits
- Other low-calorie dense foods include broth-based soups and plain nonfat yogurt

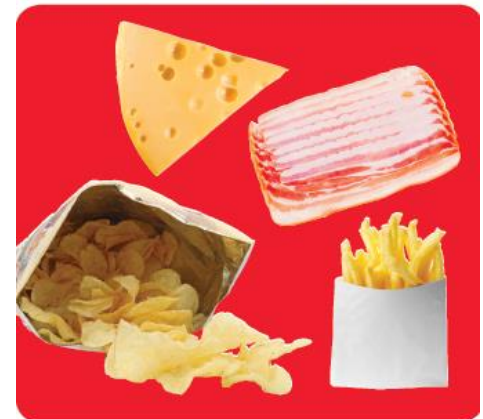
## Medium calorie-dense foods include:

- Whole-grain bread, lean meat, poultry and fish

## High calorie-dense foods:

- Contain high amounts of added fat, such as chips and other fried foods like French fries
- Are made with high amounts of added sugar and fat, such as cookies, candy and rich desserts
- Contain little fiber, such as processed breads, cereals and snack foods
- Are naturally high in fat, such as cheeses and high-fat meats like bacon

Low calorie-dense  
(eat more)



High calorie-dense  
(eat less)

# Plant Based Recipes

American Institute for Cancer Research's Healthy Recipes

[www.aicr.org/healthyrecipes](http://www.aicr.org/healthyrecipes)



## 4: Limit Consumption of 'Fast Foods' and other processed foods

### Limiting these foods helps control calorie intake and maintain a healthy weight

- Limit consumption of processed foods high in fat, starches, or sugars- including 'fast foods'; many pre-prepared dishes, snacks, bakery foods and desserts; and confectionary (candy)



World Cancer Research Fund/American Institute for Cancer Research. *Diet, Nutrition, Physical Activity and Cancer: A Global Perspective*. Continuous Update Project Expert Report 2018.

# 5: Limit Consumption of Red and Processed Meat

**Eat no more than moderate amounts of red meat,  
such as beef , pork, and lamb.  
Eat little (if any) processed meat.**



- If you eat red meat, limit consumption to **no more than 18 oz per week**
- Definition of ‘processed meat’: preserved by smoking, curing or salting, or addition of chemical preservatives (examples: ham, bacon, pastrami, sausages, hot dogs and deli meats are all considered processed meat).

# 6: Limit Consumption of Sugar Sweetened Drinks

## Drink mostly water and unsweetened drinks

- Do not consume sugar sweetened beverages



World Cancer Research Fund/American Institute for Cancer Research. *Diet, Nutrition, Physical Activity and Cancer: A Global Perspective*. Continuous Update Project Expert Report 2018.

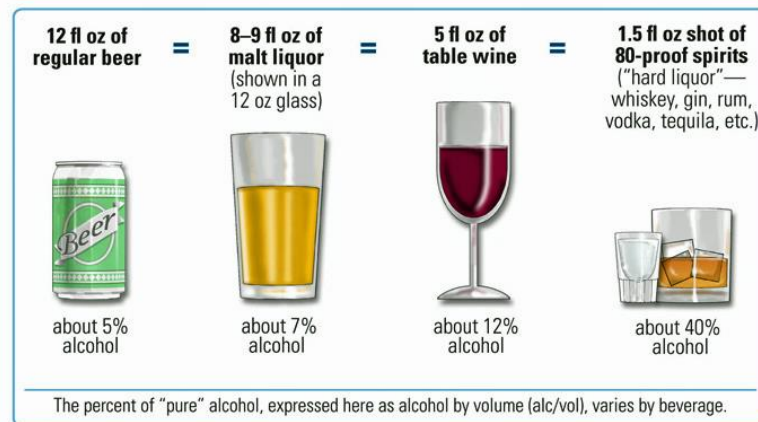
# Speaking of sugar.....



## does it feed cancer?

# 7: Limit Alcohol Consumption

## For cancer prevention, it is best not to drink alcohol



- If you do choose to consume alcohol, it is recommended to consume less than 1 drink/day for women, and 2 drinks per day for men

World Cancer Research Fund/American Institute for Cancer Research. *Diet, Nutrition, Physical Activity and Cancer: A Global Perspective*. Continuous Update Project Expert Report 2018.

# 8: Do Not Use Supplements for Cancer Prevention

## Aim to meet nutritional needs through diet alone

- High dose dietary supplements are not recommended for cancer prevention



World Cancer Research Fund/American Institute for Cancer Research. *Diet, Nutrition, Physical Activity and Cancer: A Global Perspective*. Continuous Update Project Expert Report 2018.

# 8: Do Not Use Supplements for Cancer Prevention

N Engl J Med. 1994 Apr 14;330(15):1029-35.

**The effect of vitamin E and beta carotene on the incidence of lung cancer and other cancers in male smokers.**

Alpha-Tocopherol, Beta Carotene Cancer Prevention Study Group.

JAMA. 2011 Oct 12;306(14):1549-56. doi: 10.1001/jama.2011.1437.

**Vitamin E and the risk of prostate cancer: the Selenium and Vitamin E Cancer Prevention Trial (SELECT).**

Klein EA<sup>1</sup>, Thompson IM Jr, Tangen CM, Crowley JJ, Lucia MS, Goodman PJ, Minasian LM, Ford LG, Parnes HL, Gaziano JM, Karp DD, Lieber MM, Walther PJ, Klotz L, Parsons JK, Chin JL, Darke AK, Lippman SM, Goodman GE, Meyskens FL Jr, Baker LH.

# 9: Breastfeeding

## Mothers to breastfeed; children to be breastfed

- Aim to breastfeed infants exclusively up to 6 months and continue with complementary feeding thereafter



World Cancer Research Fund/American Institute for Cancer Research. *Diet, Nutrition, Physical Activity and Cancer: A Global Perspective*. Continuous Update Project Expert Report 2018.

## Follow the recommendations for cancer prevention

- ***If able to do so\*\*\****, aim to follow the recommendations for diet, healthy weight, and physical activity
- All cancer survivors should receive nutritional care from an appropriately trained professional

World Cancer Research Fund/American Institute for Cancer Research. *Diet, Nutrition, Physical Activity and Cancer: A Global Perspective*. Continuous Update Project Expert Report 2018.

# Oncology Dietitians at Inova



Jennifer  
Ahmed, RD,  
CNSC



Caitlin Benda,  
MBA, MS, RD,  
CSO



Lauren Fay,  
RD, CSO,  
CNSC



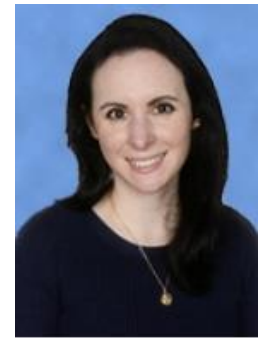
Taylor Horne,  
RD, CSO



Angie Lord, RD



Kirsten  
Martinson, RD



Sara Negron,  
MS, RD, CSO

**Appointments can be made through the Inova Life with Cancer website [www.lifewithcancer.com](http://www.lifewithcancer.com) or by calling the Inova Life with Cancer Connect line: 703-206-5433 (LIFE)**

# Do these recommendations work?

Population and Prevention Science

Cancer  
Research

## Cancer-Specific and General Nutritional Scores and Cancer Risk: Results from the Prospective NutriNet-Santé Cohort



Céline Lavalette<sup>1</sup>, Moufidath Adjibade<sup>1</sup>, Bernard Srour<sup>1</sup>, Laury Sellem<sup>1</sup>, Thibault Fiolet<sup>1</sup>, Serge Hercberg<sup>1,2</sup>, Paule Latino-Martel<sup>1</sup>, Philippine Fassier<sup>1</sup>, Mélanie Deschasaux<sup>1</sup>, Emmanuelle Kesse-Guyot<sup>1</sup>, and Mathilde Touvier<sup>1</sup>

- A large prospective population-based cohort study published in July 2018 indicates for each AICR recommendation followed is associated with a 12% reduction of risk for all cancer types.<sup>[4]</sup>

# Additional Thoughts: Diet patterns rather than individual foods

- These guidelines emphasize a **holistic** approach to diet, rather than individual foods and nutrients

**“It appears increasingly unlikely that specific foods, nutrients, or other components of foods are themselves important singular factors in causing or protecting against cancer”**

## Tools for Weight Management Success



Companion to the *New York Times* BESTSELLER

the Beck  
**DIET**  
solution

# Weight Loss Workbook

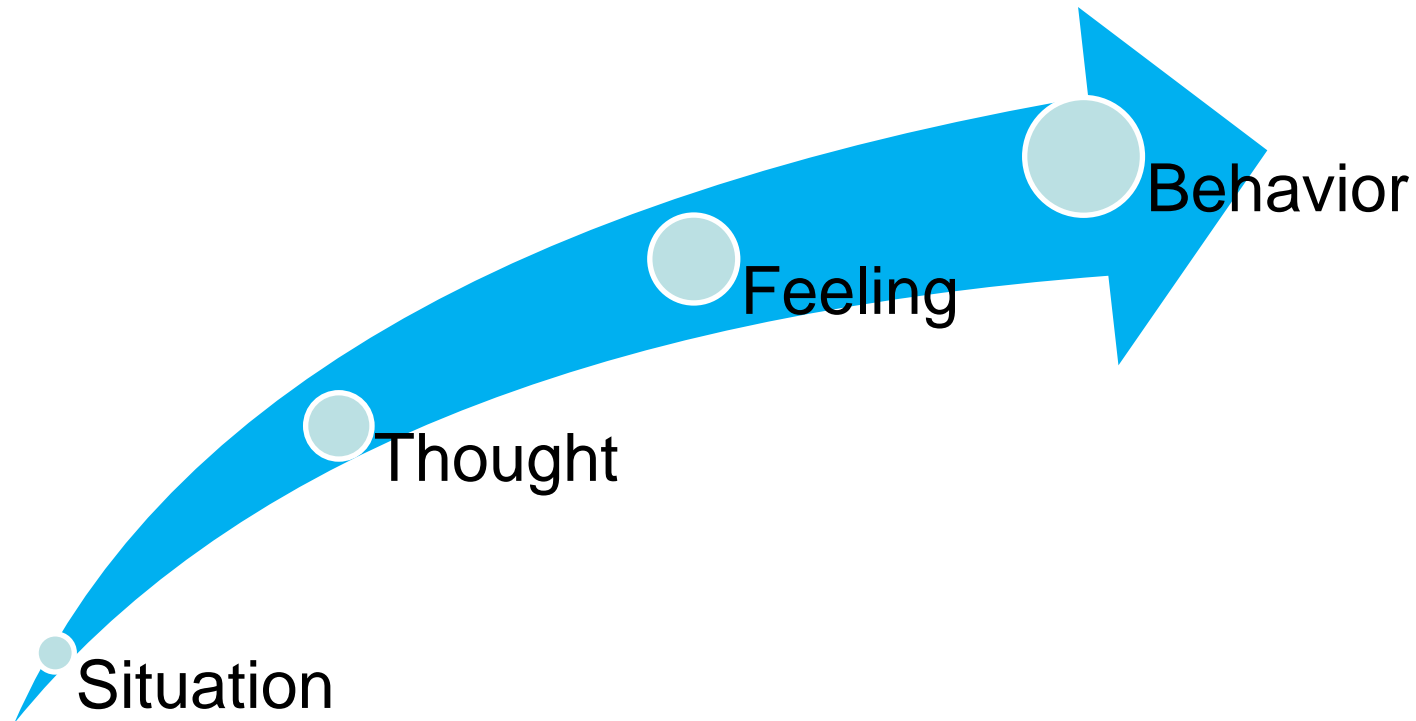
**The 6-Week Plan to Train Your Brain  
to Think Like a Thin Person**

- *counteract sabotaging thoughts*
- *overcome weight loss obstacles*
- *succeed on any nutritious diet*

**Judith S. Beck, Ph.D.**

*Beck Institute for Cognitive Therapy and Research  
Clinical Associate Professor of Psychology in Psychiatry  
University of Pennsylvania*

# Cognitive Behavioral Therapy & Weight Management



# Automatic Thoughts



# Sabotaging Thoughts

- “I worked so hard today, I deserve this.”
- “I won’t look at the scale.”
- “I really want to eat \_\_\_\_\_ or eat more of \_\_\_\_\_.”
- “I already blew it today, so I’ll just keep eating and begin again tomorrow.”
- “I’d rather just see how things go instead of planning.”



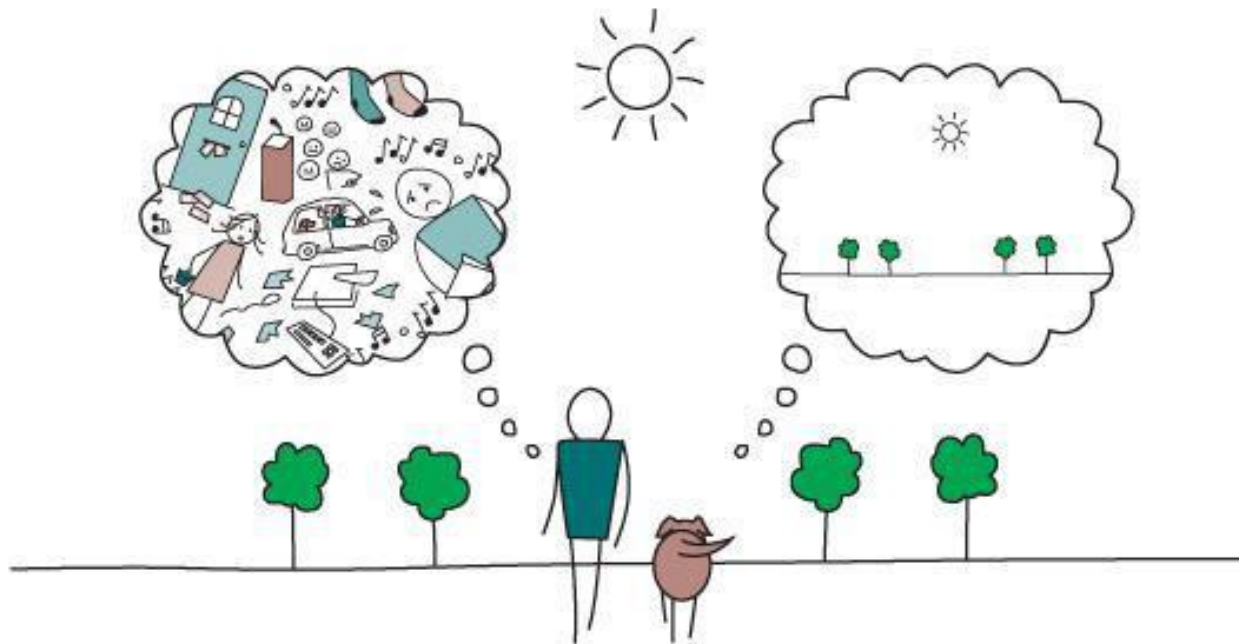
“Between stimulus and response  
There is a space.

In that space is our power  
To choose our response.

In our response lies our  
Growth and our freedom”

Viktor Frankl

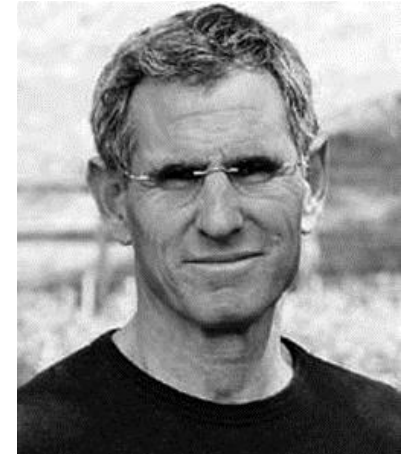




Mind Full, or Mindful?

*Mindfulness means paying attention in a particular way:*

*on purpose  
in the present moment  
non-judgmentally*



*Jon Kabat-Zinn*

# Mindful Eating

- Food selection; appreciate your food
- Meal preparation
- Setting/Environment
- Intention
- Eat with others/eat sitting down
- Eat slowly without distraction
- **Listen to hunger cues**
- Distinguish between actual hunger vs. non-hunger triggers for eating
- Engage your senses by noticing colors, smells, sounds, textures, tastes



- Increase weight loss
- Helps to recognize emotions and physical sensations
- Decrease response to inappropriate cues for eating such as advertising, boredom or anxiety
- Gain control over eating habits

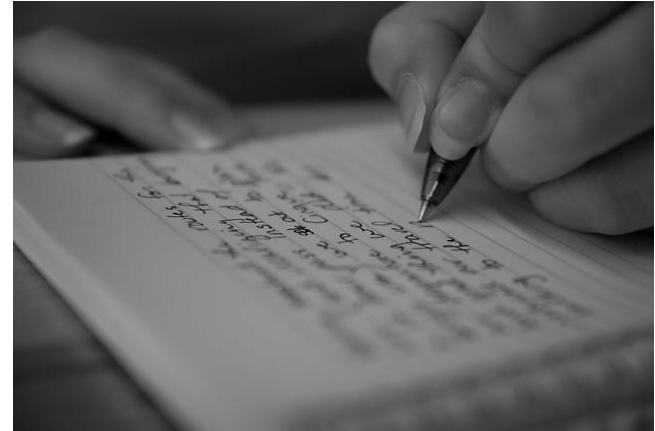


# Cognitive Behavioral Journaling

- What did I do today to avoid unplanned eating?
- If I deviated, what happened?
- What thinking mistakes did I make?
- What can I learn from this for next time?



- **Pen & Paper**
- **Electronic:**
  - Myfitnesspal
  - WW (Weight Watchers)
  - Loseit!



# Priority Chart

Essential Activities	Highly Desirable	Desirable
Work	Work in garden	TV
Food shopping	Clothes shopping	Manicures



(Beck, 2017)

- Short term, small weight loss goals is often a more effective way to work towards achieving a larger weight loss goal
  - Weight loss between 5-10% is likely to produce health benefits, such as improvements in blood pressure, blood cholesterol, and blood sugar
- 5-10% of your current body weight is a reasonable weight loss goal to begin with, making incremental changes as your weight loss progresses

# Other Measurements of Weight Loss

- **Waist Circumference**

- Abdominal fat is more likely to be visceral fat (rather than subcutaneous) which can have more negative health consequences and contribute to chronic inflammation
- Recommend weight measurement for women is <31.5 inches and <37 inches for men

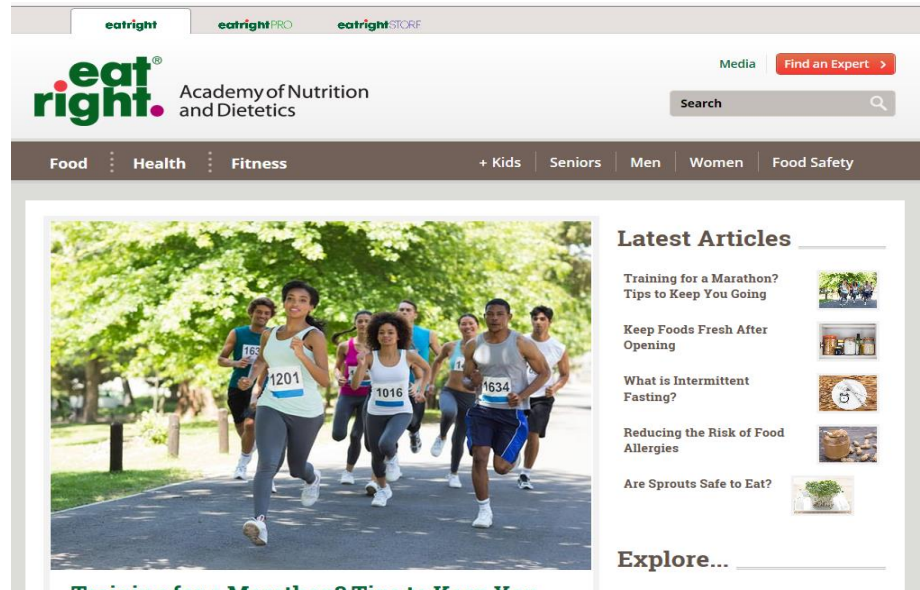


# Reliable Nutrition Resources

- **American Institute for Cancer Research:**  
[www.aicr.org](http://www.aicr.org)
- **American Cancer Society:**  
[www.cancer.org](http://www.cancer.org)
- **Academy of Nutrition and Dietetics:**  
[www.eatright.org](http://www.eatright.org)
- **Oncology Dietetics Practice Group**  
[www.oncologynutrition.org](http://www.oncologynutrition.org)

*Reputable resources for the latest research, information, pamphlets, and recommendations regarding nutrition and cancer.*

# Finding a Registered Dietitian



- Academy of Nutrition and Dietetics: [www.eatright.org](http://www.eatright.org)
  - Click on “find an expert”
  - Search by zip code and specialty

# More Questions?



**Contact:** [Emily.Biely@inova.org](mailto:Emily.Biely@inova.org); [Lauren.Fay@inova.org](mailto:Lauren.Fay@inova.org);  
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Beck, J. S. (2007, 7th Printing 2017). The Beck diet solution: Weight loss workbook. Birmingham, Ala.: Oxmoor House.

Blackburn G. (1995). Effect of degree of weight loss on health benefits. Obesity Research 3: 211S-216S

Dalen, J., Smith, B.W., Shelley, B.M., Sloan, A.L., Begay, D. (2010). Pilot study: Mindful eating and living (MEAL): Weight, eating behavior, and psychological outcomes associated with a mindfulness-based intervention for people with obesity. Complement Ther Med, Dec: 18(6), 260-264.

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Lavalette C, Adjibade M, Srouf B, et al. Cancer-Specific and General Nutritional Scores and Cancer Risk: Results from the Prospective NutriNet-Santé Cohort. *Cancer Res*. 2018;78(15):4427-4435.

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