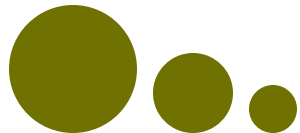


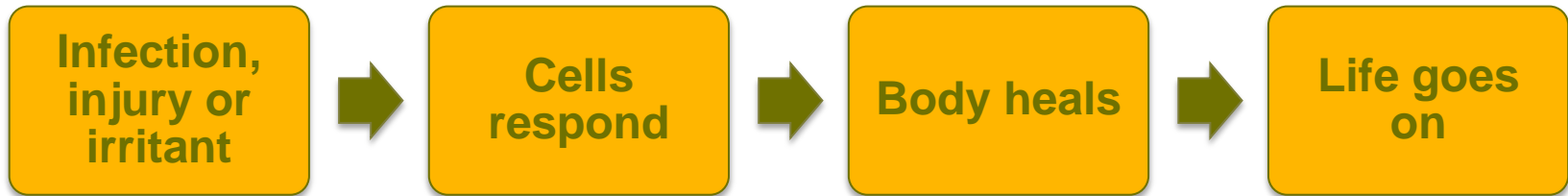
How to be a Flame Thrower: Managing Inflammation with a Healthy Lifestyle

Presented by Jennifer Spring RD LDN
Mandy Holliday MPH RD LDN CNSC
Oncology Dietitians, NC Cancer Hospital



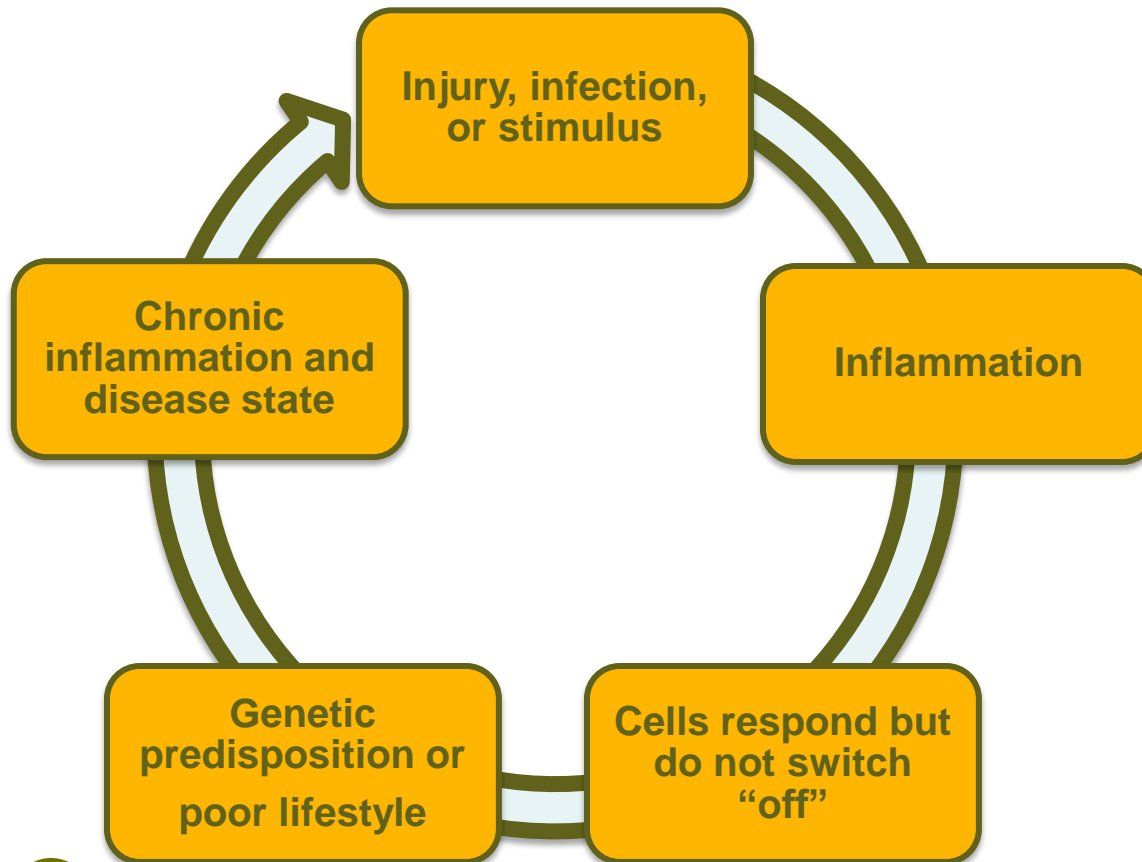
What is inflammation?

Acute inflammation

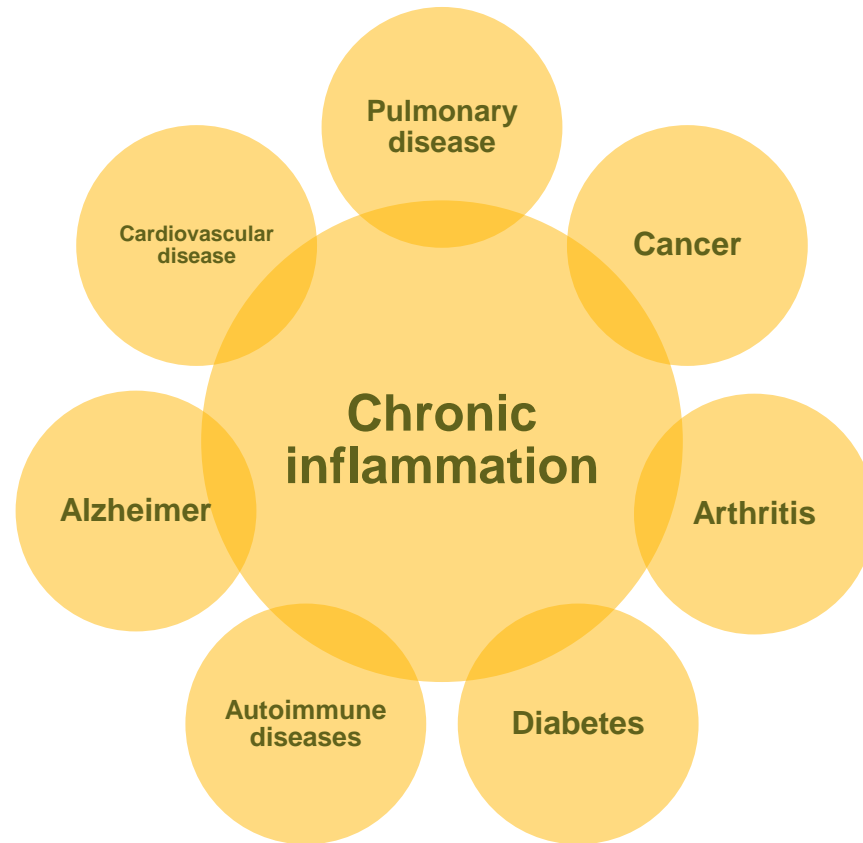


What is inflammation?









Chronic inflammation



What is the result of too much inflammation?



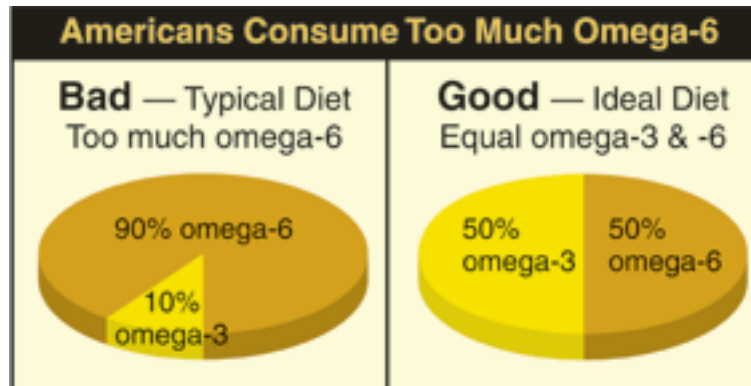
Factors influencing inflammation

Aggravates	Reduces
Traditional Western diet 	Mediterranean, Asian, Indian style diet 
Unmanaged anger, stress, unhappiness, loneliness 	Laughter, optimism, social support 
Sedentary lifestyle 	Daily physical activity 
Cigarette smoke and environment pollutants 	Clean environment 



Negative effects of Western Diet

- High fat intake
- High sugar intake
- Highly processed
- Low in fruit and vegetables
- Low in fiber
- Omega 6 - Omega 3 ratio



	<u>Omega-6</u>	<u>Omega-3</u>	<u>Ratio</u>
Safflower Oil	79%	None	100:0
Sunflower Oil	69%	None	100:0
Corn Oil	60%	None	100:0
Soy Oil	50%	8%	6:1
Canola Oil	24%	10%	2.5:1
Flaxseed Oil	17%	55%	1:3.2

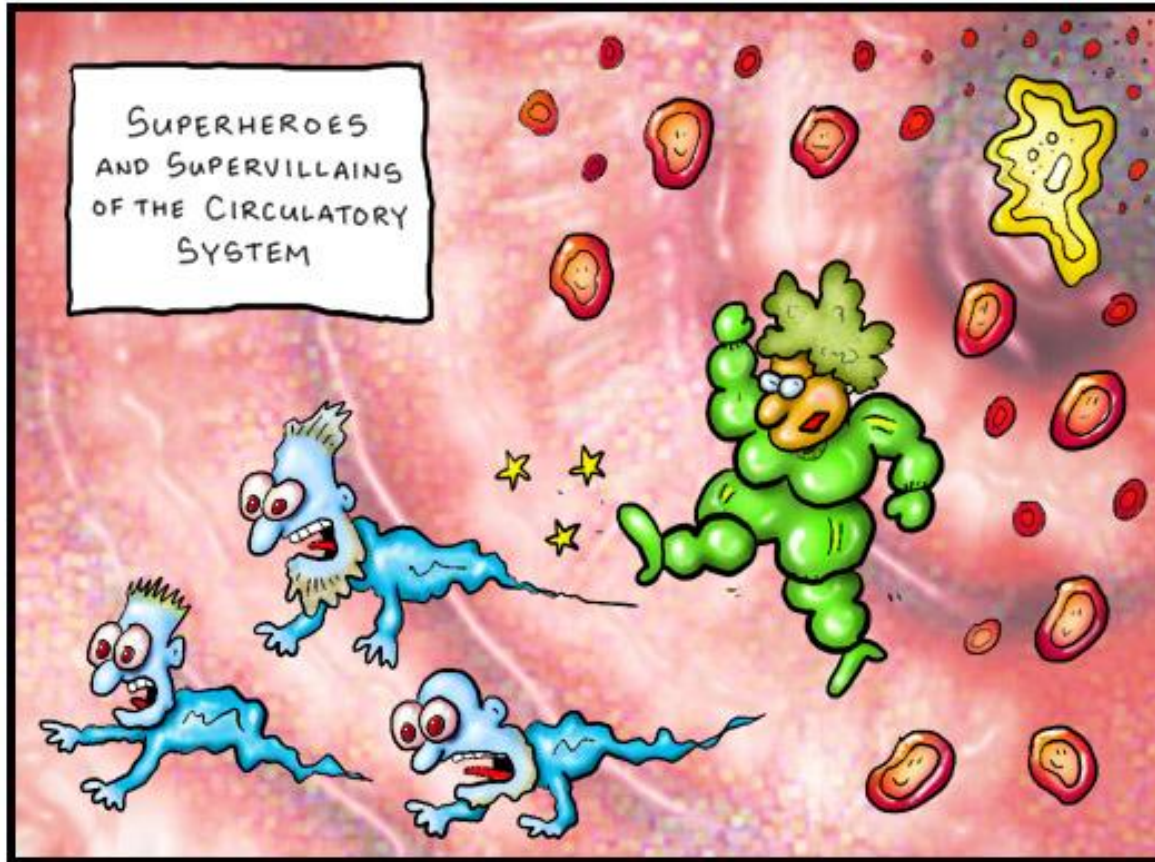
Ideal ratio is 1:1. Flaxseed oil helps bring the ratio into balance by compensating for the excess omega-6 fats found in vegetable oils.



Antioxidants

DOCTOR FUN

23 May 2000



Auntie Oxidant kicks out the Free Radicals.

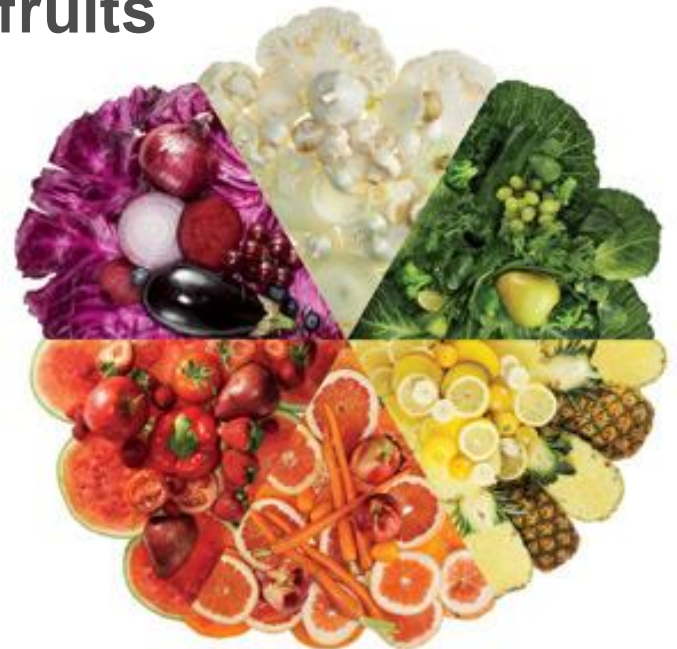
Copyright © 2000 David Farley, d-farley@metablab.unc.edu
<http://metablab.unc.edu/Dave/drfun.html>

This cartoon is made available on the Internet for personal viewing only. Opinions expressed herein are solely those of the author.

Fruits and vegetables

- Rich in antioxidants → anti-inflammatory activity
- Rich in flavonoids and carotenoids
- Aim for 5-9 servings daily
- Make half your plate veggies and fruits

Eat the rainbow

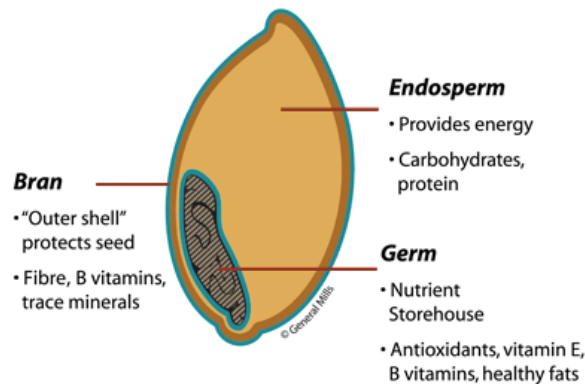


Whole Grains

“Whole grain” means that all 3 parts of the grain kernel are included

Refined grains are usually just the endosperm

Look for the word “whole” in the ingredient list



Barley

Brown or wild rice

Bulgur (tabouleh)

Corn or popcorn

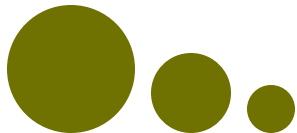
Kasha (buckwheat)

Oatmeal or oat products

Quinoa

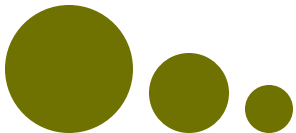
Rye bread or cereals

Whole wheat bread, pasta, or cereal



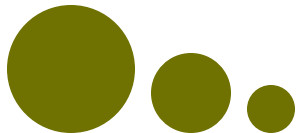
Legumes

- **Beans, peas and lentils**
 - Rich in fiber, low in calories
 - Flavonoids, saponins
- **Soy**
 - Sources: edamame, tofu, soymilk, and soy nuts
 - Rich in isoflavones



Healthy fats

- Olive oil, walnuts, avocados, ground flaxseed, chia seeds, cold-water fatty fish, omega-3 enriched eggs
- Rich in omega 3 and monounsaturated fatty acids
- 5-7 servings a day
 - 1 tsp oil, 2 walnuts, 1 Tbs flaxseed, 1 oz avocado



Lean protein

- Skinless chicken, fish and seafood, beans and legumes, skim milk, soy, and eggs
- 5-6 ounces a day



Herbs & Spices

Basil

Black pepper

Cayenne pepper

Chili pepper, dried

Cilantro

Cinnamon, ground

Cloves

Cumin



Dill

Ginger

Mustard seeds

Oregano

Parsley

Peppermint

Rosemary

Sage

Thyme

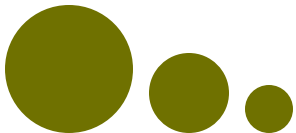
Turmeric



Packing a big punch

Garden variety thyme

4-Terpineol, alanine, anethole, apigenin, ascorbic acid, beta carotene, caffeic acid, camphene, carvacrol, chlorogenic acid, chrysoeriol, eriodictyol, eugenol, ferulic acid, gallic acid, gamma-terpinene isochlorogenic acid, isoeugenol, isothymonin, kaempferol, labiatic acid, lauric acid, linalyl acetate, luteolin, methionine, myrcene, myristic acid, naringenin, oleanolic acid, p-coumoric acid, p-hydroxy-benzoic acid, palmitic acid, rosmarinic acid, selenium, tannin, thymol, tryptophan, ursolic acid, vanillic acid



Tea, red grapes, and dark chocolate

- **Tea**

- White, green and oolong
- Rich in catechins
- 2-4 cups per day

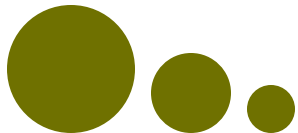
- **Red grapes**

- Rich in resveratrol



- **Dark chocolate**

- Rich in polyphenols
- Choose dark at least 70% pure
- Sparingly – 1 ounce few times a week



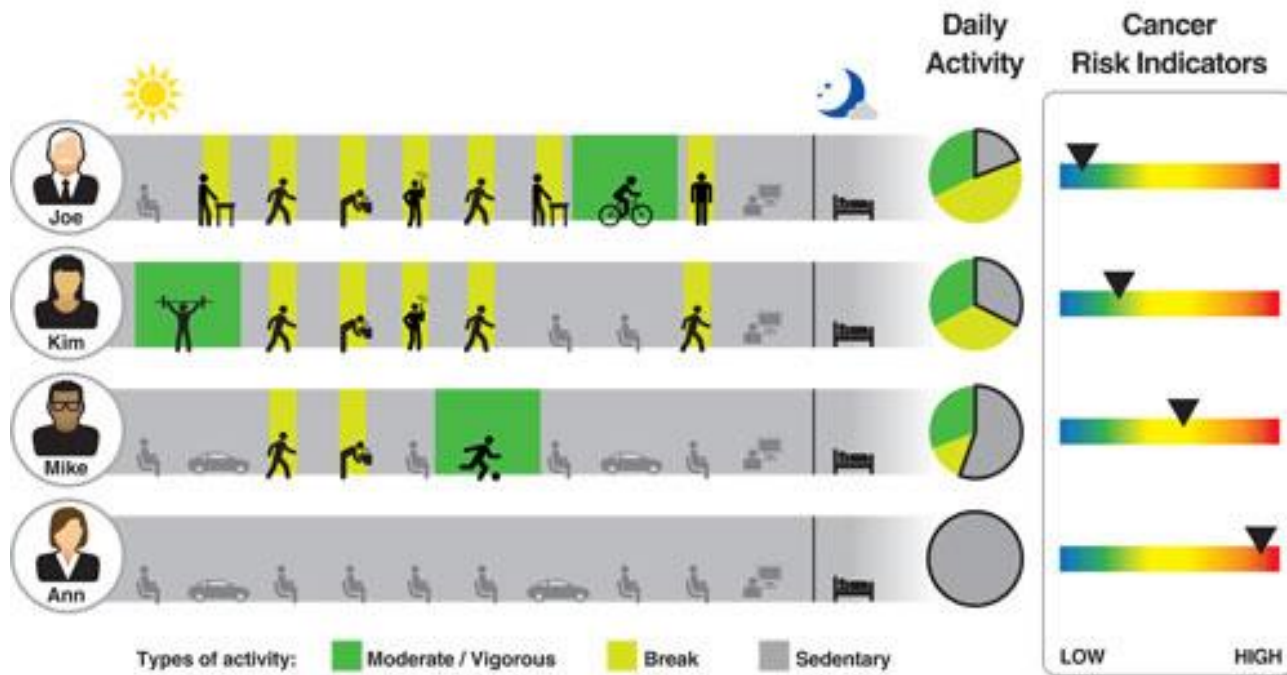
Don't forget your fluid...

- Sip water throughout the day
- Aim for 8-10 glasses per day or ~64 oz
- Cut out sweetened beverages



Physical Activity

Make Time + Break Time = Cancer Protection



Physical Activity

Aim to exercise for at least 150 minutes per week.

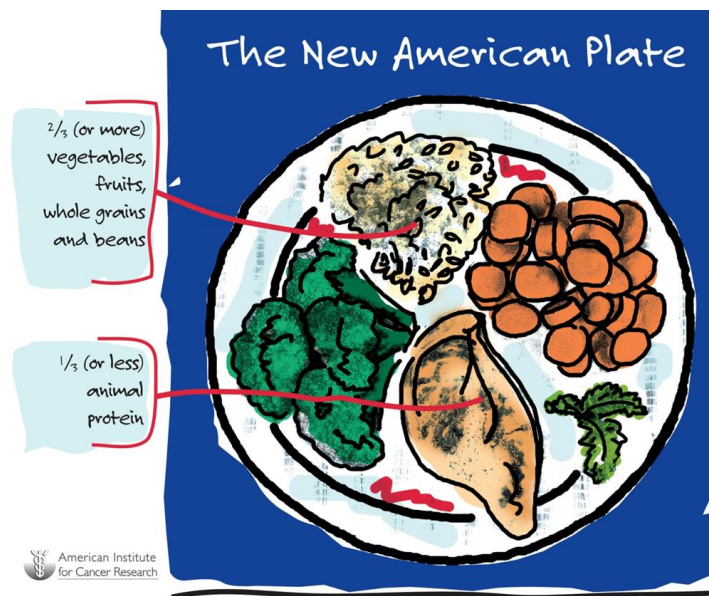
Include strength training exercises at least 2 days per week.



AICR Recommendations

The World Cancer Research Fund/AICR says:

- Be as lean as possible without becoming underweight
- Be physically active for at least 30 minutes every day
- Limit intake of energy-dense foods and avoid sugary drinks
- Eat a variety of vegetables, fruits, whole grains, and legumes/beans
- Limit intake of red meat and avoid processed meat
- Limit intake of salty foods and foods processed with salt
- Limit alcoholic drinks
- Don't use supplements to prevent cancer



Are you ready to be
a Flame Thrower?

