



PRESENTS...

## Nutrition Check-Up

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Section I

## NUTRITION REVIEW



# What is Nutrition?

“*Nutrition:* The process of providing or obtaining the food necessary for health and growth”

# Components of Nutrition

## Macronutrients

- Proteins
- Fats
- Carbohydrates

## Micronutrients

- Vitamins
- Minerals



# Macronutrients

- ‘Macro-’ means large
  - So *macronutrients* are the nutrients we require in *large* amounts
- Each macronutrient is built from small building blocks
  - Much like how individual Lego blocks make a larger structure





# Protein

- Building Block: Amino Acids (20)
- Function: maintenance of bone, muscle, skin, and immune system
- Amino Acids are grouped as either essential or non-essential
  - Essential: cannot be made by the body, must be consumed via the diet (9)
  - Non-Essential: can be made by the body (11)



# Protein Types

## Complete Protein

- Contain all of the essential amino acids (Animal Protein)
  - Meat
  - Eggs
  - Dairy
  - Quinoa

## Incomplete Protein

- Lack one or more essential amino acids (Plant Protein)
  - Grains
  - Nuts
  - Beans
  - Seeds

*\*\*As you can see, vegetarians will have a harder time getting complete proteins, and must combine foods in order to ensure proper nutrition (i.e. Grains + Legumes or Grains + Nuts)*



# Carbohydrates

- Building Block: Sugar
- Function: provides the energy to carry out all of the processes necessary for life (specifically glucose)
- Classification
  - Monosaccharide: single sugar molecule (glucose, fructose, galactose)
  - Disaccharide: two sugar molecules (sucrose, lactose)
  - Polysaccharide: three or more sugar molecules (starches, fibers)





# Carbohydrates: Good or Bad?

- We classify carbs as '*Good*' or '*Bad*' depending on how the body deals with them
- Glycemic Index: basically, how quickly the carb spikes blood sugar
  - Simple sugars (mono- and disaccharides) tend to be worse than complex (polysaccharides)
  - Depends largely on fibre content
- Carbohydrates are not just grains!
  - Fruits and vegetables are carbohydrates!!!



## Bad Carbs Spike Blood Sugar!

- Over consumption of the wrong types of carbs is responsible for causing Type II Diabetes
- Foods high in simple sugars (candy, pop, pastries, jellies/jams, brown/white sugar) as well as refined starches (white flour, white pasta, white rice) should be limited!

# Fat

- Building Block: Fatty Acids
- Functions: long term energy storage, formation of hormones, permits feeling full, provides taste to food
- Forms: monounsaturated, polyunsaturated, saturated, and trans fats





## Fats: The Good, the Bad, and the Ugly

- Not all fats are created equally!
- Good: mono- and polyunsaturated
- Bad: saturated
  - Mainly from animal fat and dairy
  - Should be used in moderation
- Ugly: trans
  - Man made fat created by high temperature processing of food, and should be completely avoided!

# Comparing the Fats



Type	Source	HDL/LDL Effect
Monounsaturated	Olives, olive oil, canola oil, peanut oil, cashews, almonds, peanuts and most other nuts, avocados	Lowers LDL Raises HDL
Polyunsaturated	Walnuts, sunflower seeds, sesame seeds, fish	Lowers LDL Raises HDL
Saturated	Milk products (whole milk, butter, cheese), solid shortening, lard, animal meat, coconuts, coconut oil, eggs	Raises LDL Raises HDL
Trans	Most margarines, vegetable shortening, partially hydrogenated vegetable oil, deep-fried chips, many fast foods, most baked goods	Raises LDL Lowers HDL



## Micronutrients

- Nutrients needed in smaller quantities
- Includes all vitamins and trace minerals
- With a few exceptions, the body cannot manufacture these, so they must be consumed through the diet
- In general, processed foods are void of essential micronutrients



Section II

## HEALTHY NUTRITION

# What is Healthy Nutrition?

- Simply put, healthy nutrition is maximizing the good foods and minimizing the bad foods
- Foods are classified 'good' or 'bad' depending on how they react in our bodies
  - Bad foods spike blood sugar and cause inflammation
  - Good foods promote health by stabilizing blood sugar, repairing damage (antioxidant), and healing inflammation
  - A lifetime of poor food choices can lead to diabetes, heart disease, obesity, cancer, and premature death







# Healthy Food Choices

- The following slides group foods as use liberally, use moderately, and avoid
  - Green: healthy promoting foods, which can be eaten daily
  - Yellow: neither overly bad nor overly beneficial, and should be limited to once or twice per day
  - Red: promote poor health, limit to once per week or less

# Choosing Vegetables



Green	Yellow	Red
<ul style="list-style-type: none"><li>• All but those mentioned</li><li>• Be creative, try new vegetables often</li><li>• Brassica Vegetables: Cabbage, Turnip, Broccoli, Cauliflower, Brussel Sprouts</li><li>• Greens: Collard, Mustard, Kale, Spinach</li><li>• Garlic and Onions</li><li>• Carrots, Peas, Green Beans, Yams</li></ul>	<ul style="list-style-type: none"><li>• Potatoes</li><li>• Tomatoes (Fruit)</li><li>• Bell Peppers</li><li>• Egg Plant</li><li>• Corn</li></ul>	<ul style="list-style-type: none"><li>• None, unless allergic or sensitive</li></ul>

# Choosing Fruit



Green	Yellow	Red
<ul style="list-style-type: none"><li>• All but those mentioned</li><li>• Berries: Blueberry, Blackberry, Raspberry, Cranberry</li><li>• Melons</li><li>• Apples, Plums, Pears, Grapes, Kiwi</li></ul>	<ul style="list-style-type: none"><li>• Citrus Fruits (inflammatory)</li></ul>	<ul style="list-style-type: none"><li>• Dried Fruit (high sugar content)</li></ul>



# Choosing Grains

Green	Yellow	Red
<ul style="list-style-type: none"><li>• Gluten Free Grains: Quinoa, Brown Rice , Wild Rice</li></ul>	<ul style="list-style-type: none"><li>• Gluten Grains: Barley, Oats, Rye, Spelt</li><li>• Whole wheat*</li><li>• Whole wheat* pasta</li></ul>	<ul style="list-style-type: none"><li>• White varieties of bread, rice, and pasta</li></ul>

*\*People with IBS/IBD or generalized digestive problems should avoid wheat completely*

# Choosing Meat

Green	Yellow	Red
<ul style="list-style-type: none"><li>• Cold Water Fish (Salmon)</li><li>• Poultry (Skinless): Chicken, Turkey</li><li>• Free Range Eggs</li><li>• Game Meat: Deer, Moose</li></ul>	<ul style="list-style-type: none"><li>• Lean Grass Fed Beef</li><li>• Lean Pork</li><li>• Lamb</li><li>• Shellfish</li></ul>	<ul style="list-style-type: none"><li>• Grain Fed Beef</li><li>• Processed Meat (Cold Cuts, Bacon)</li></ul>



# Choosing Dairy



Green	Yellow	Red
<ul style="list-style-type: none"><li>• Plant Based Milks: Almond, Hemp, Sesame Seed</li><li>• Yogurt (naturally sweetened)</li><li>• Hard Cheese</li></ul>	<ul style="list-style-type: none"><li>• Goat and Sheep Milk</li><li>• Organic Cow Milk</li></ul>	<ul style="list-style-type: none"><li>• Conventional Cow Milk*</li><li>• Mouldy Cheeses (blue, Brie, Camembert)</li><li>• Processed Dairy (ice cream)</li></ul>

*\*Major source of inflammation, antibiotics, and synthetic growth hormones*



# Choosing Nuts, Seeds, Beans/Legumes

Green	Yellow	Red
<ul style="list-style-type: none"><li>• Seeds: Pumpkin, Sunflower, Flax, Sesame</li><li>• Nuts: Almond, Cashew, Brazil</li><li>• All beans and legumes* (split peas, lentils, kidney beans, pinto beans)</li></ul>	<ul style="list-style-type: none"><li>• None</li></ul>	<ul style="list-style-type: none"><li>• Peanuts</li><li>• Soy</li></ul>

*\*Beans and legumes can be effectively substituted in predominantly grain diets, since they contain healthy protein and carbohydrates*

# Optimal Daily Eating

- Vegetables: 7-10 servings
- Fruit: 2-4 servings
- Whole Grains: 2-4 servings
- Beans/Legumes, Nuts, Seeds: 2-4 servings
- Healthy Oil: 3-5 servings
  - Extra virgin (raw) or coconut (cooked)
- Meat & Eggs: 1-2 servings
  - Fish consumed 3-5 servings per week
- Dairy: 0-2 servings
- Water: 6-10 glasses







# Foods to Avoid

- All artificial sweeteners (worse than pure sugar)
  - Instead, use honey or maple syrup
  - Diabetics: use Stevia
- White **and** brown sugar
- All white flour and white rice
- All fruit juices
- Fried foods and trans fats
- Limit junk food to once or twice per week
  - Pop, chips, pastries, and cakes



# Portion Sizes

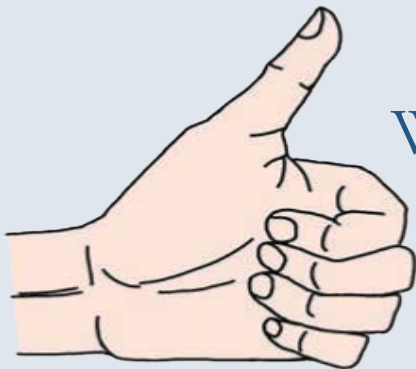


Fist = 1 serving of fruit, vegetable, milk/yogurt, or grain



Palm = 1 serving of meat

*\*Also roughly 1 serving of beans, nuts, and seeds, but refer to package for specific serving size!*



Thumb tip = 1 serving of healthy oil

Whole Thumb = 1 serving of hard cheese



# 80 : 20 Rule

- Sometimes the foods we love to eat also happen to be relatively unhealthy!
- Choose foods on the “Green” list 80% of the time, and others 20% of the time



# The Dirty Dozen

- Many pros and cons to going 'organic'
- Recommend consuming organic varieties for the 12 most contaminated foods!

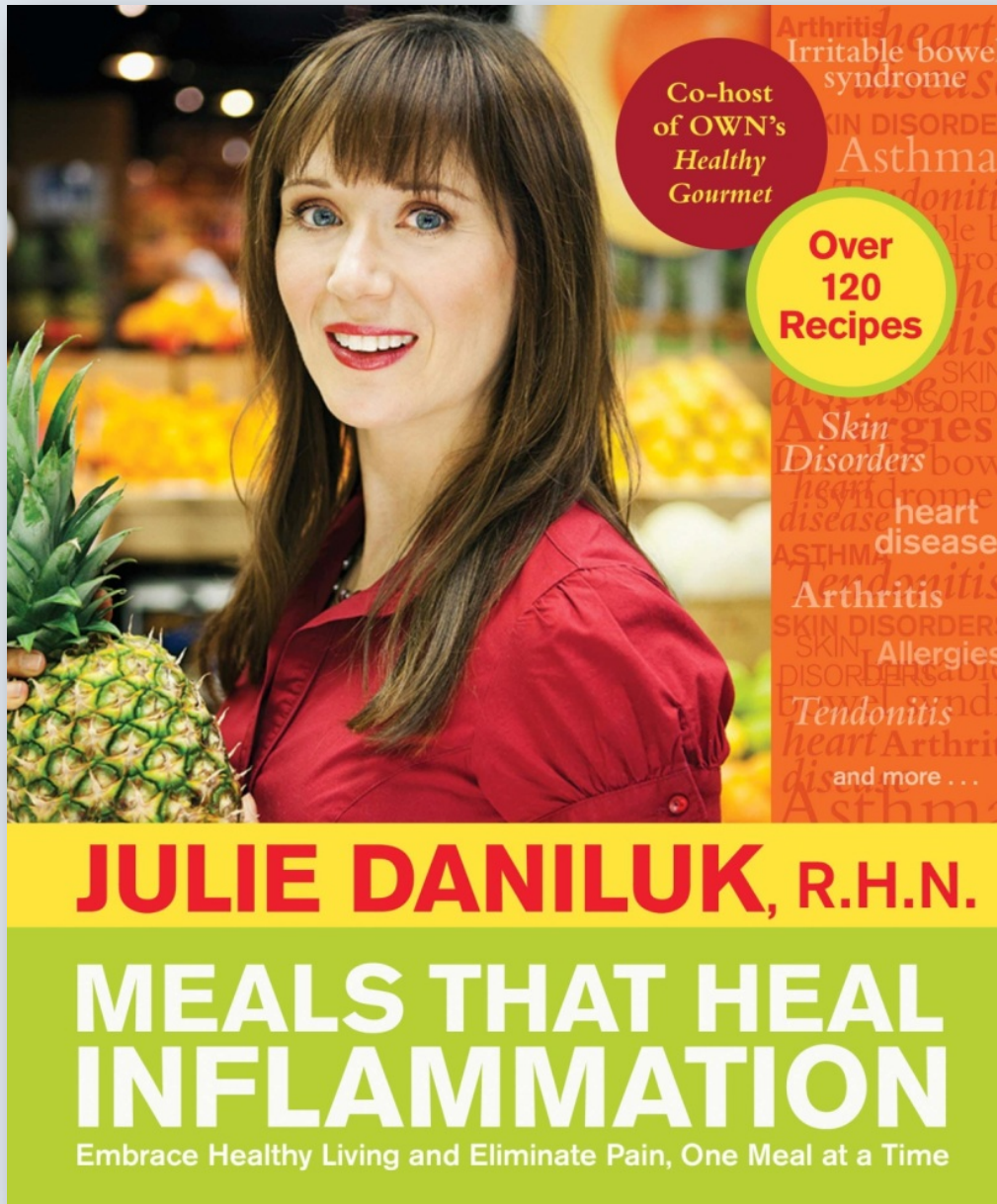
Most Contaminated	Least Contaminated
Apples	Asparagus
Bell Peppers	Avocado
Celery	Banana
Cherries	Broccoli
Imported Grapes	Cauliflower
Nectarines	Corn
Peaches	Kiwi
Pears	Mangos
Potatoes	Onions
Raspberries	Papaya
Spinach	Pineapple
Strawberries	Peas



# Super Foods!

- The following are considered ‘*Super Foods*’. They are the healthiest foods you can eat!

Super Foods	
Dark Green Vegetables (Spinach, Broccoli, Kale)	Legumes/Lentils
Nuts and Seeds	Berries
Cold Water Fish	Sweet Potatoes/Yams
Quinoa	Cinnamon
Garlic & Onions	Turmeric



Optimum

# Nutritional Challenges

1. Learn to eat quinoa and kale – try different recipes!
2. Eat at least two super foods/day.
3. Try consuming 7-10 servings of vegetables/day: you will feel great, and your digestive tract will thank you!
4. Are you drinking enough water????
5. Start taking 2000mg of Fish Oil/day





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**Upcoming  
Lectures/Appearances:**

*June 25 – The Aging Brain*

*More to be announced soon!*

*Today's lecture is available for download on our website.*

**Thank You!**