



Nutrition, simplified!

A beginner's guide to making healthy diet choices

Mini Med-School 2017

Dr. Josh Melegrito

Who am I?



Nutrition - Why do we care?

- “Lifestyle changes”
 - **DIET**
 - Exercise, smoking/alcohol, stress reduction
- CAD – MI, CVA, death
- DM – MI, CVA, CKD, retinopathy, neuropathy, death
- HTN – MI, Afib/CHF, CVA, death
- Obesity – quality of life, all the above, death
- OP – Hip #, QOL, death
- You are what you eat!

My goal...

- Eating well is a HABIT, not a fad
- Habits take more than 1hr to form
 - “You can’t teach an old dog new tricks!”
- Provide you with knowledge to use as tools to create healthy eating HABITS!
- *What we won’t be talking about: carb counting, calorie counting, weight loss, gluten, antioxidants, vegan diet, supplements, caffeine, wine*

Outline

- Nutrition Labels - What does it all mean?!
 - Nutrients 101
 - Serving size
 - Calories
 - DV%
- Special Diets – Heart health and more!
- Getting started – Healthy eating habit tips
- Resources – Your homework (sorry!)

Nutrition labels

Serving size
Portion size that all the nutrition facts are based on.

Calories
Number of calories per serving

Total fat
Number of grams per serving.

Saturated fat
Number of grams per serving. This type of fat raises blood cholesterol. Foods with more than 1 gram of saturated fat per serving should be limited.

Trans fat
Number of grams per serving. Like saturated fat, trans fat raises blood cholesterol. Choose foods with the lower combined amount of saturated fat and trans fat and low cholesterol.

Nutrients
Shows cholesterol, sodium, sugar and protein amounts per serving.

Sodium
Number of milligrams per serving. Healthy diets limit sodium to 2,400 milligrams each day; however, your doctor may restrict your sodium further.

Nutrition Facts	
Serving Size	3 (120g)
Servings per container	2
Amount Per Serving	
Calories	180
Calories from Fat 20	
% Daily Value*	
Total Fat 2.5g	4%
Saturated Fat 1g	4%
Trans Fat 0g	0%
Cholesterol 10mg	4%
Sodium 430mg	18%
Total Carbohydrate 34g	11%
Dietary Fiber 2g	3%
Sugars 3g	
Other carbohydrate 30g	
Protein 7g	
Vitamin A 0%	• Vitamin C 0%
Calcium 4%	• Iron 8%
Thiamin 15%	• Riboflavin 10%
Niacin 8%	
* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carb.	300g 375g
Dietary Fiber	25g 30g
Calories per gram: Fat 9 • Carbohydrate 4 • Protein 4	
Ingredients: Water, enriched flour, (flour, niacin, iron, thiamin, riboflavin, folic acid), hydrolyzed soy protein, dehydrated cheese, eggs, margarine, salt, dehydrated onions, spices.	

Calories from fat
Number of calories per serving that come from fat.

% Daily Value
A percentage of daily intake in a serving, based on a 2,000-calorie diet. This is of limited value when selecting foods.

Fiber
Number of grams of fiber per serving. Most people should aim for 25 or more grams of dietary fiber per day.

Daily Value chart
Recommended daily intake of key nutrients, for both 2,000- and 2,500-calorie diets. Your calorie needs may be more or less than this amount.

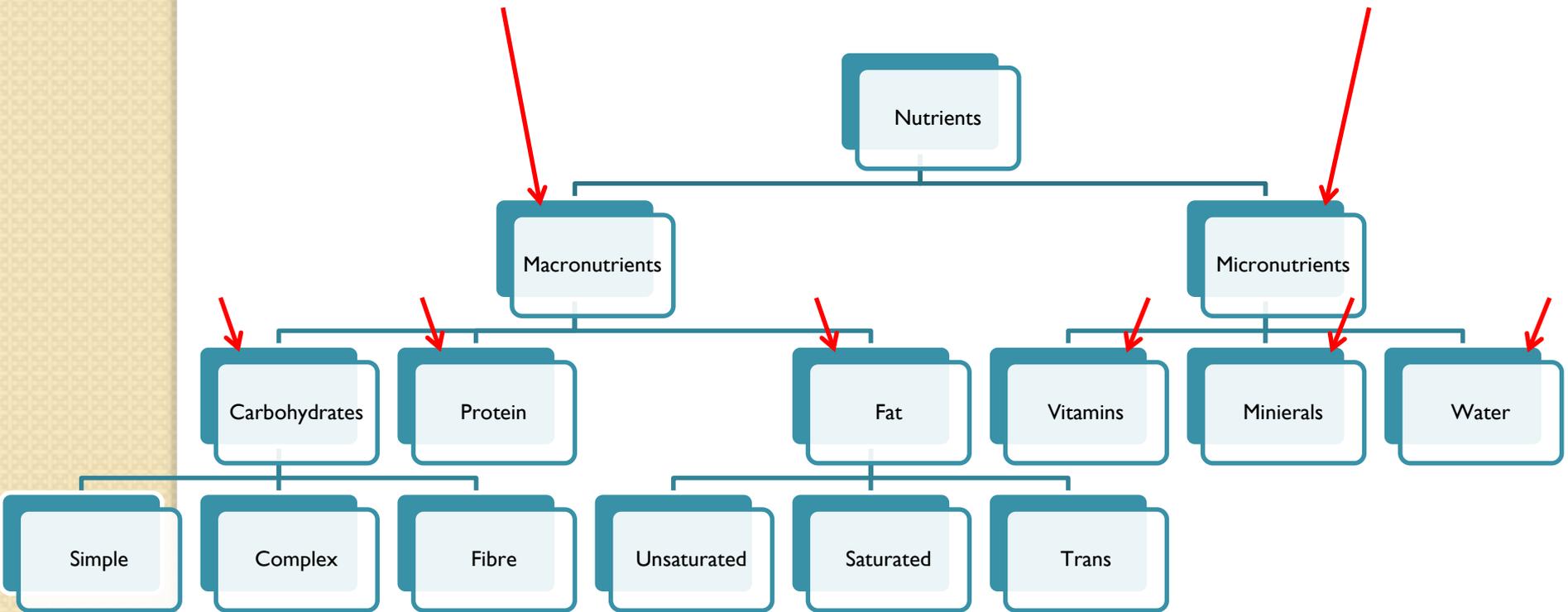
Calories chart
Number of calories per gram of fat, carbohydrate, and protein.

Calories

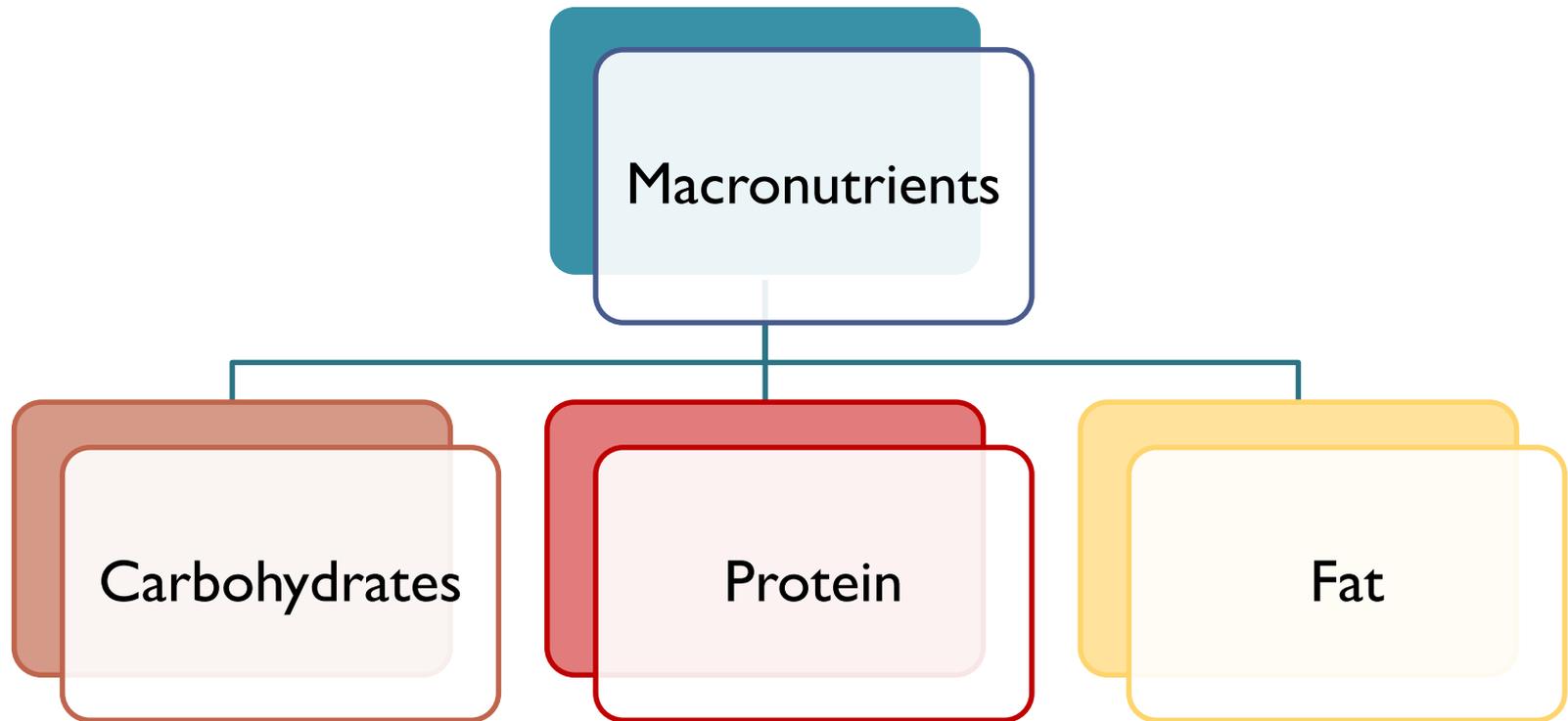
Macronutrients

Micronutrients

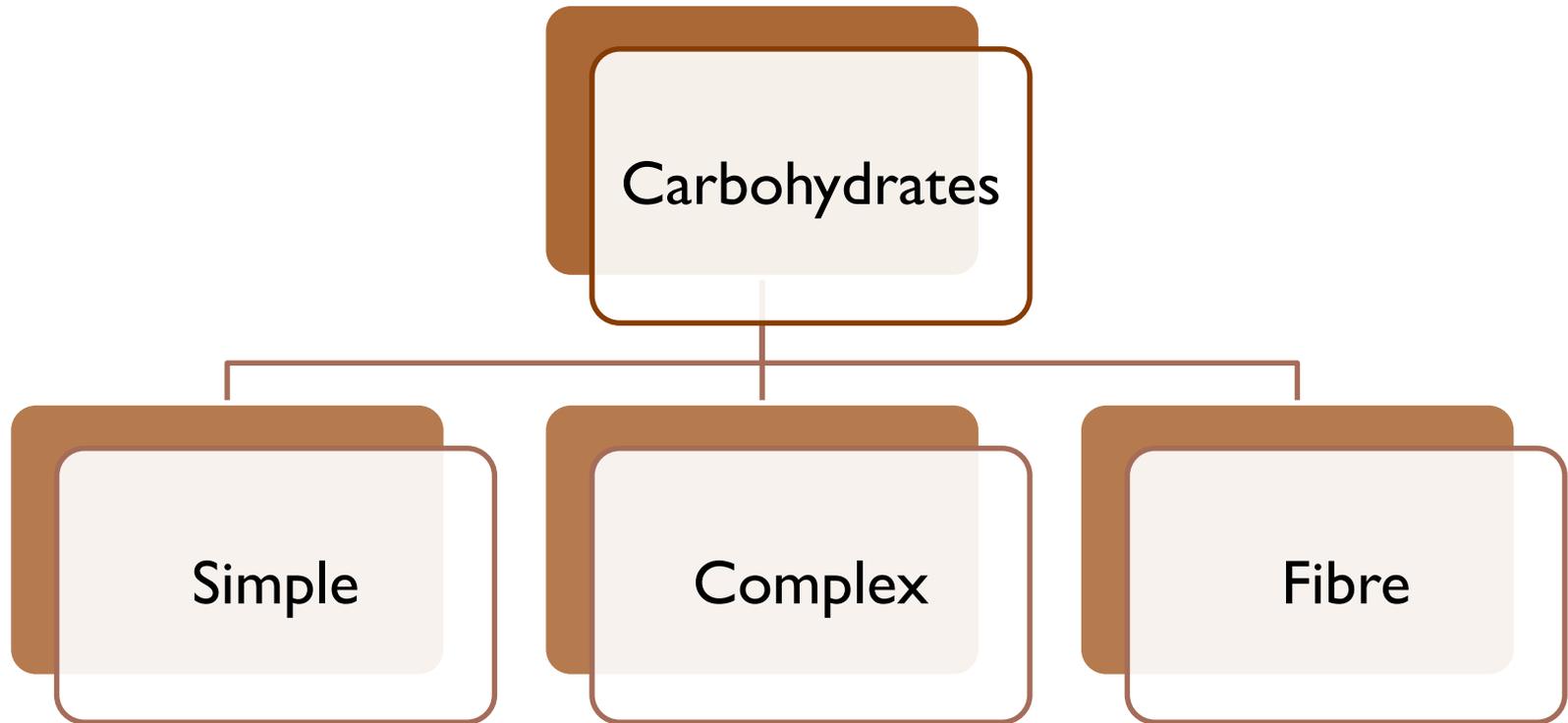
Nutrients



Macronutrients

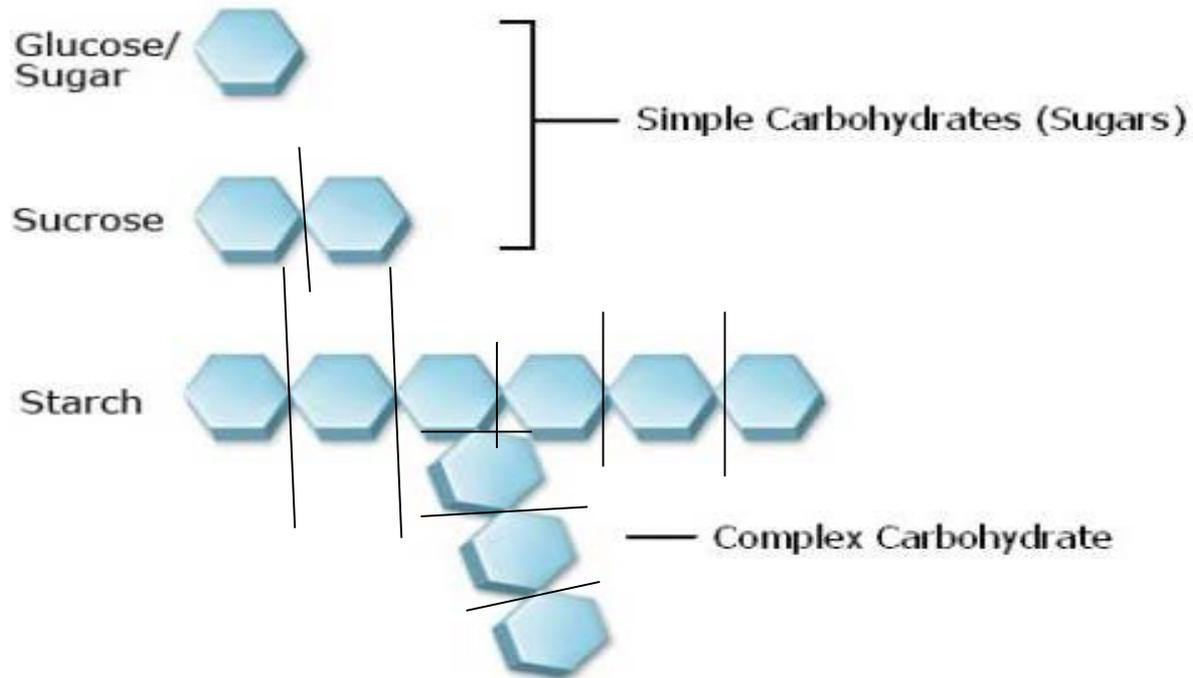


Carbohydrates



Carbs = Energy

- 45-65% of your calories
- Simple: quickly metabolized sugars
 - honey, syrup, fruit, candy
- Complex: chains of sugars that take time to be metabolized
 - bread, pasta, legumes



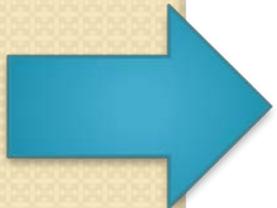
Glycemic Index

- A measure of how drastically foods increase blood glucose
- Generally, select **low Glycemic Index** foods and avoid **high Glycemic Index**

Low	High
	French fries
	White rice
	White flour
	“Corn Flakes”
	Crackers
	Ice cream

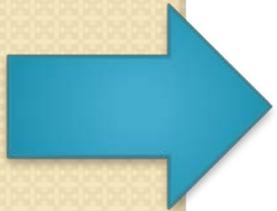
Fibre

- Indigestible carbohydrates from plants
 - Support digestion
 - Decreased heart disease, stroke, diabetes
 - More satiating
- 25-38 grams/day
- Everybody poops!
- Choose whole wheat, veggies, and real fruit

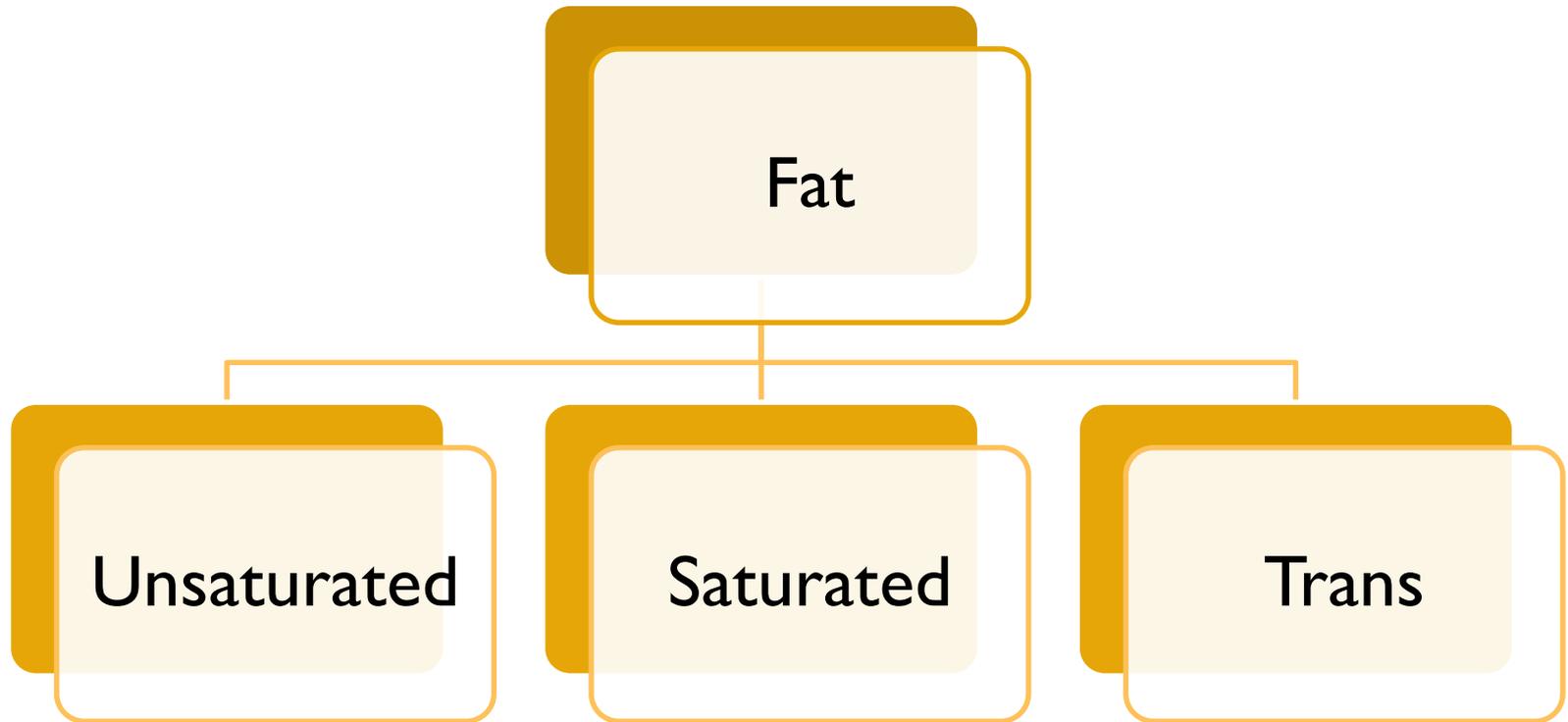


Protein

- 10-35% of calories
- Proteins are chains of Amino Acids
- Amino Acids: the body's building blocks
 - Muscles, ligaments, skin, hair, nails
- Found in meat, eggs, dairy, nuts, beans
 - Choose lean sources of protein
- Include protein with each meal and snack



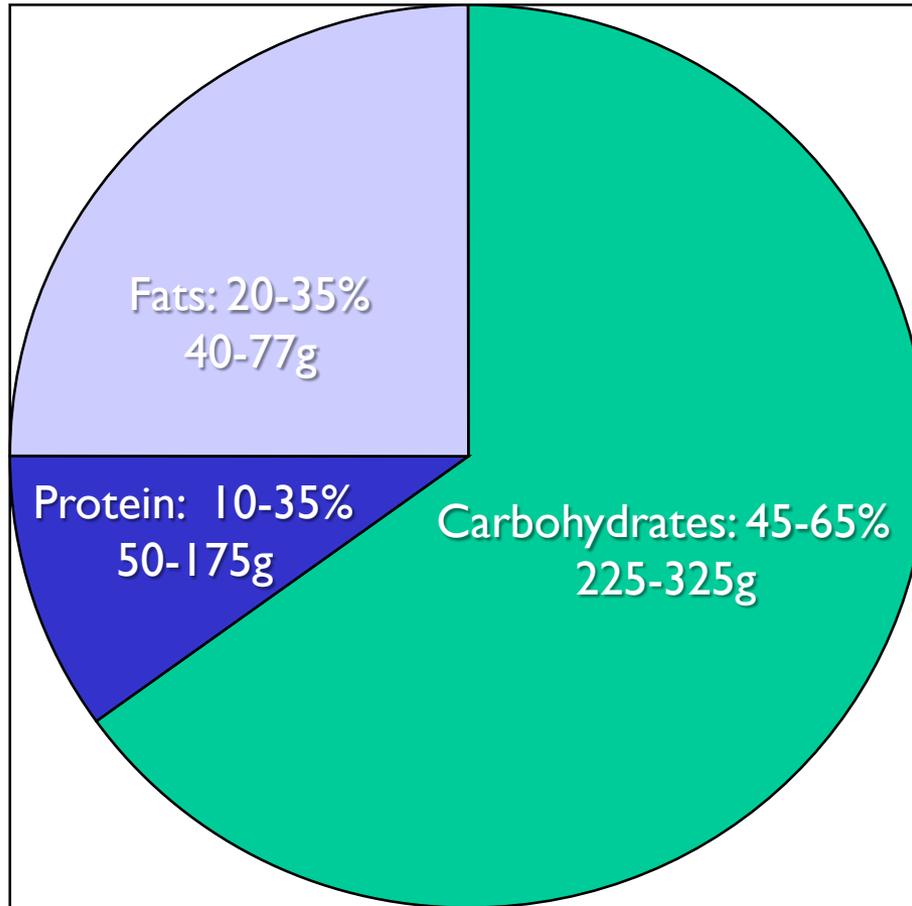
Fat



What's the skinny on fat?

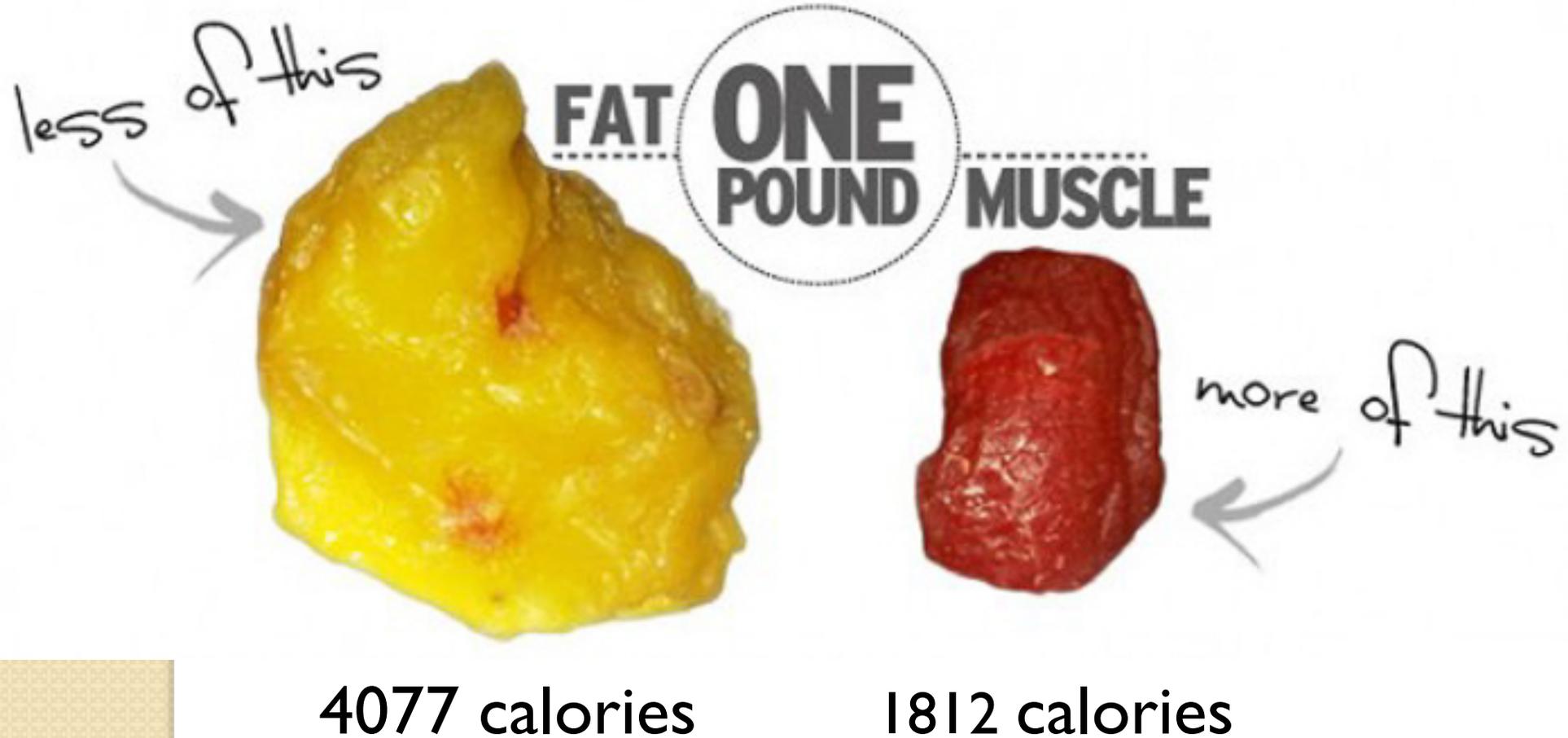
- 20-35% of calories
- Necessary for energy, vitamin absorption, metabolic processes in the body
- **CHOOSE** unsaturated fat
 - Liquid at room temperature
 - Fish, vegetable/seed/nut oil, nuts
- **AVOID** saturated fat
 - Solid at room temperature
 - Animal fat, dairy
- **NEVER** trans fat
 - Processed, deep fried, prepared foods

Calories - FYI

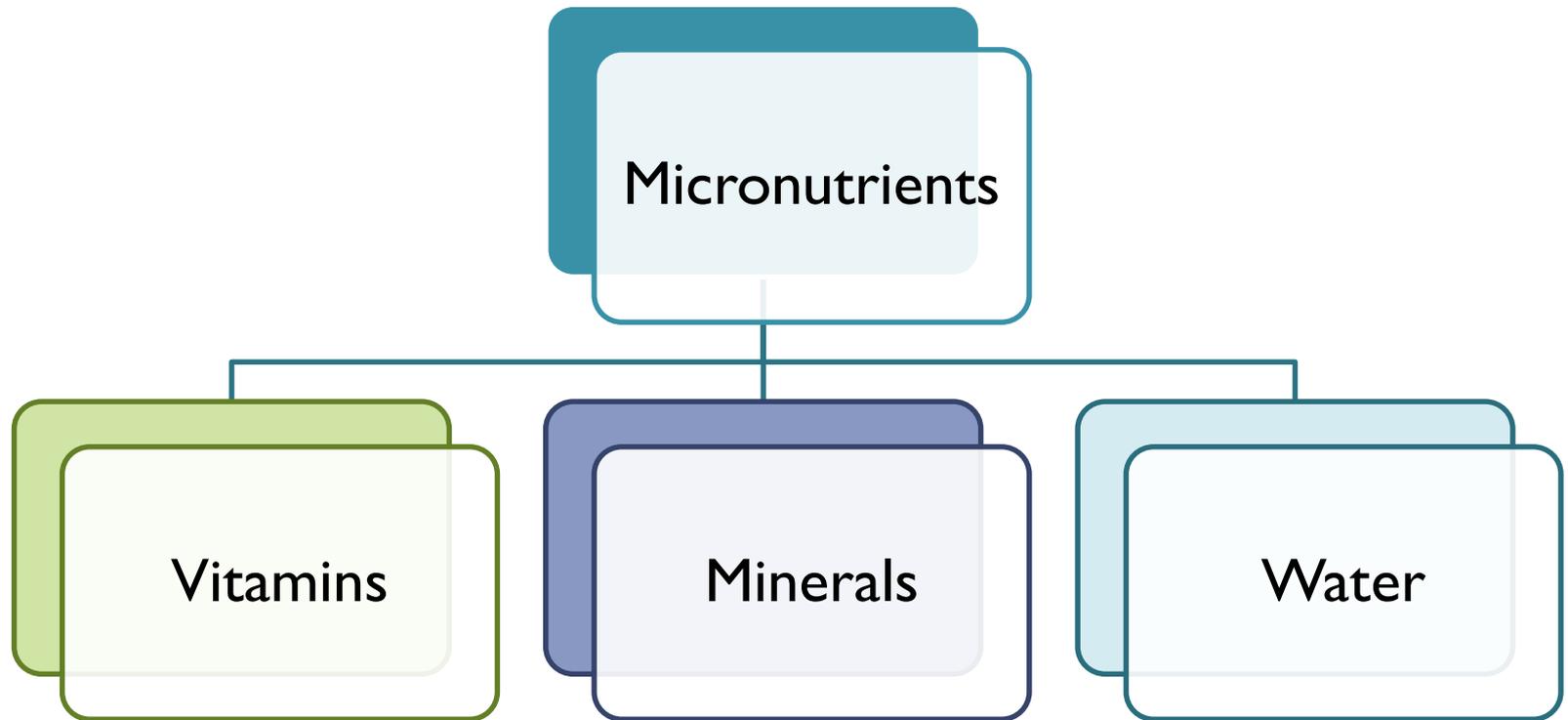


-  **Carbohydrates**
-  **Protein**
-  **Fats**

Calories - FYI



Micronutrients



Vitamins

- Many different small biological compounds
- Necessary for numerous metabolic functions
 - Vitamin D – bone health
 - Folate – in pregnancy
- Choose varied, real foods
 - Vitamins are needed in small amounts, but found in various foods
 - Choose dark green and orange fruits and vegetables

Minerals

- Many different elemental ions
- Necessary for metabolism
 - Iron – for producing hemoglobin
 - Sodium – contributes to high blood pressure
- Choose varied, real foods
 - Minerals are needed in small amounts, but found in various foods
 - Choose dark green and orange fruits and vegetables
- Avoid added salt (sodium) usually found in prepackaged foods

Water

- Necessary for... everything!
 - Moves nutrients and waste
 - Aids digestion, keeps your bowels regular
 - Regulates temperature
- No true answer for how much you'll need
 - “8 glasses a day” is false!
- Choose water, milk, low-sodium soup
- Drink when you're thirsty
- Drink when your urine is **dark**

Labels!

Cracker A

Nutrition Facts

Per 9 crackers (23 g)

Amount	% Daily Value
--------	---------------

Calories 90

Fat 4.5 g 7 %

Saturated 2.5 g 13 %
+ Trans 0 g

Cholesterol 0 mg

Sodium 275 mg 12 %

Carbohydrate 12 g 4 %

Fibre 1 g 4 %
Sugars 0 g

Protein 3 g

Vitamin A	0 %	Vitamin C	0 %
-----------	-----	-----------	-----

Calcium	2 %	Iron	8 %
---------	-----	------	-----

Cracker B

Nutrition Facts

Per 4 crackers (20 g)

Amount	% Daily Value
--------	---------------

Calories 85

Fat 2 g 3 %

Saturated 0.3 g 2 %
+ Trans 0 g

Cholesterol 0 mg

Sodium 90 mg 4 %

Carbohydrate 15 g 5 %

Fibre 3 g 12 %
Sugars 1 g

Protein 2 g

Vitamin A	0 %	Vitamin C	0 %
-----------	-----	-----------	-----

Calcium	2 %	Iron	7 %
---------	-----	------	-----

Serving size

Cracker A

Nutrition Facts

Per 9 crackers (23 g)

Amount	% Daily Value
--------	---------------

Calories 90

Fat 4.5 g 7 %

Saturated 2.5 g 13 %
+ Trans 0 g

Cholesterol 0 mg

Sodium 275 mg 12 %

Carbohydrate 12 g 4 %

Fibre 1 g 4 %
Sugars 0 g

Protein 3 g

Vitamin A	0 %	Vitamin C	0 %
-----------	-----	-----------	-----

Calcium	2 %	Iron	8 %
---------	-----	------	-----

Cracker B

Nutrition Facts

Per 4 crackers (20 g)

Amount	% Daily Value
--------	---------------

Calories 85

Fat 2 g 3 %

Saturated 0.3 g 2 %
+ Trans 0 g

Cholesterol 0 mg

Sodium 90 mg 4 %

Carbohydrate 15 g 5 %

Fibre 3 g 12 %
Sugars 1 g

Protein 2 g

Vitamin A	0 %	Vitamin C	0 %
-----------	-----	-----------	-----

Calcium	2 %	Iron	7 %
---------	-----	------	-----

Serving size

Oil

1 tsp
1 tbs

Cheese

1½ oz

Nuts and seeds

1/4 cup

Meat and Poultry

2½ oz

Pasta

1/2 cup

Leafy vegetables

1 cup (250 mL) = 1 fist



Calories

Cracker A

Nutrition Facts

Per 9 crackers (23 g)

Amount	% Daily Value
--------	---------------

Calories 90	
--------------------	--

Fat 4.5 g	7 %
------------------	-----

Saturated 2.5 g	13 %
+ Trans 0 g	

Cholesterol 0 mg	
-------------------------	--

Sodium 275 mg	12 %
----------------------	------

Carbohydrate 12 g	4 %
--------------------------	-----

Fibre 1 g	4 %
-----------	-----

Sugars 0 g	
------------	--

Protein 3 g	
--------------------	--

Vitamin A 0 %	Vitamin C 0 %
---------------	---------------

Calcium 2 %	Iron 8 %
-------------	----------

Cracker B

Nutrition Facts

Per 4 crackers (20 g)

Amount	% Daily Value
--------	---------------

Calories 85	
--------------------	--

Fat 2 g	3 %
----------------	-----

Saturated 0.3 g	2 %
+ Trans 0 g	

Cholesterol 0 mg	
-------------------------	--

Sodium 90 mg	4 %
---------------------	-----

Carbohydrate 15 g	5 %
--------------------------	-----

Fibre 3 g	12 %
-----------	------

Sugars 1 g	
------------	--

Protein 2 g	
--------------------	--

Vitamin A 0 %	Vitamin C 0 %
---------------	---------------

Calcium 2 %	Iron 7 %
-------------	----------

The Good, the Bad, and the DV%

- Less than 5% is considered “A LITTLE”
- More than 15% is considered “A LOT”

Cracker A				Cracker B			
Nutrition Facts				Nutrition Facts			
Per 9 crackers (23 g)				Per 4 crackers (20 g)			
Amount	% Daily Value			Amount	% Daily Value		
Calories 90				Calories 85			
Fat 4.5 g	→	7 %		Fat 2 g	→	3 %	
Saturated 2.5 g	→	13 %		Saturated 0.3 g	→	2 %	
+ Trans 0 g	→			+ Trans 0 g	→		
Cholesterol 0 mg				Cholesterol 0 mg			
Sodium 275 mg	→	12 %		Sodium 90 mg	→	4 %	
Carbohydrate 12 g		4 %		Carbohydrate 15 g		5 %	
Fibre 1 g	→	4 %		Fibre 3 g	→	12 %	
Sugars 0 g				Sugars 1 g			
Protein 3 g				Protein 2 g			
Vitamin A 0 %	Vitamin C 0 %			Vitamin A 0 %	Vitamin C 0 %		
Calcium 2 %	Iron 8 %			Calcium 2 %	Iron 7 %		

Let's try that again

Nutrition Facts	
Per 1 burger (130 g)	
Amount	% Daily Value
Calories 340	
Fat 27 g	42 %
Saturated Fat 12 g + Trans Fat 2 g	70 %
Cholesterol 70 mg	
Sodium 330 mg	14 %
Carbohydrate 3 g	1 %
Fibre 0 g	0 %
Sugars 3 g	
Protein 24 g	
Vitamin A 0 %	Vitamin C 0 %
Calcium 2 %	Iron 30 %

Nutrition Facts	
Per 1 burger (130 g)	
Amount	% Daily Value
Calories 200	
Fat 9 g	14 %
Saturated Fat 2 g + Trans Fat 1 g	15 %
Cholesterol 70 mg	
Sodium 800 mg	33 %
Carbohydrate 4 g	1 %
Fibre 0 g	0 %
Sugars 0 g	
Protein 25 g	
Vitamin A 0 %	Vitamin C 0 %
Calcium 4 %	Iron 2 %



Specific Diets

- Heart health
- Diabetes
- Osteoporosis
- Vegetarian
- Pregnancy

Heart health

- “Mediterranean diet”
 - High in fruit, vegetables, beans, nuts, seeds
 - Olive oil
 - Moderate dairy, fish, poultry
 - Little red meat
 - Eggs up to 4x/week
 - Moderate wine!
- “NNT”: 61
 - NNT for blood pressure medication: 100
- Minimize sodium
 - No added salt – use herbs or spices instead
 - Avoid prepared foods

Diabetes

- Choose low Glycemic Index carbs
 - Reduce the risk of developing diabetes
- Maximize fibre
- Fruits are fine
- Add protein and fat to meals and snacks
 - Nuts, cheese, seeds, boiled egg

Osteoporosis

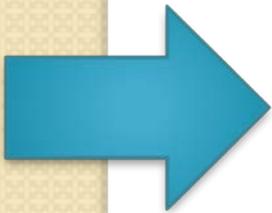
- Translates to “soft bones”
- Risks include age, menopause, low weight
- Vitamin D
 - Fish, milk, fortified orange juice
- Calcium
 - Dairy, fortified orange juice
- If you're at risk, you can supplement both

Vegetarian

- May be low in:
- Iron – “non-heme” from plant sources
 - Dark green foods, beans, lentils, dried fruit
- Protein – dairy, eggs, beans, nuts
- B12 – eggs, dairy

Pregnancy

- Folate taken 2-3 months preconception to decrease risk of neural tube defects
 - Enriched grains, lentils, green vegetables
- Iron to decrease risk of low birth weight, premature delivery
 - Meat – heme source of iron
 - Enriched grains, green vegetables, lentils
 - Also a good idea for all menstruating women
- Prenatal vitamins have both!



Final tips! #1

- Go for whole grains!
 - At LEAST $\frac{1}{2}$ of your grain products
 - Whole grain wheat, oats, barley, lentils, beans
 - Cereal, bread, flour, pasta, brown rice

Final tips! #2

- Load up on fruits and vegetables!
 - Plan and fill HALF your plate with veggies
 - Try a new veg/fruit each week (Endives?!?!)
 - One “dark green” and “orange” each day
 - Sprinkle berries on oatmeal, yogurt, salad
 - Sneak a handful of spinach/kale into recipes
 - Fresh, frozen, or canned instead of juice

Final tips! #3

- Make your day with milk products!
 - Sneak milk into soups/casseroles
 - Greek yogurt for breakfast
 - Cheese as a snack or on salads
 - Milk and (whole grain) cereal as a snack

Final tips! #4

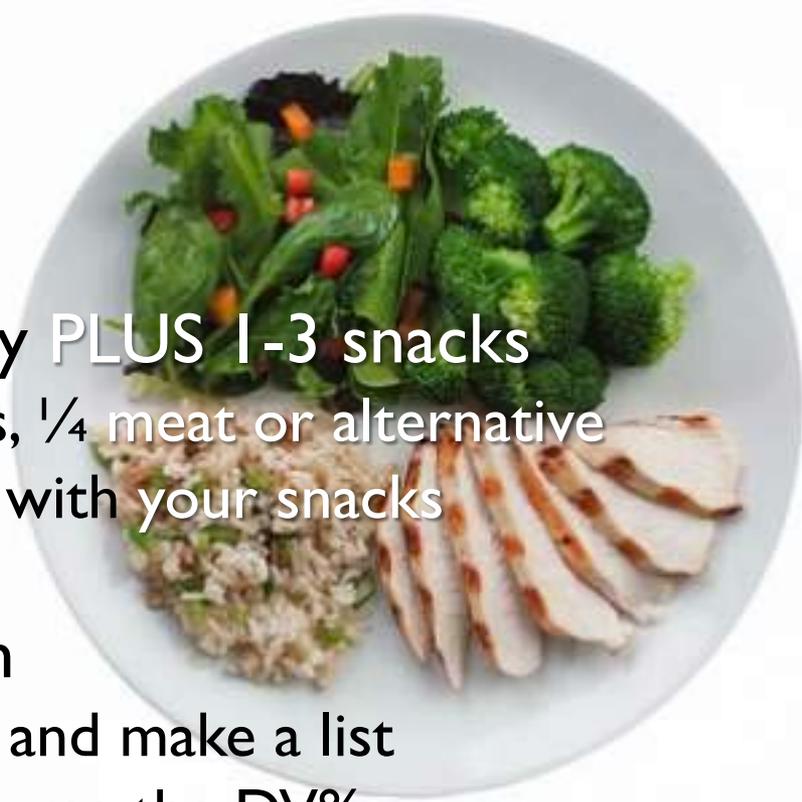
- Go lean and alternative!
 - Trim fat and skin then bake, roast, or poach
 - Try to eat fish 1-2x/week
 - Go meatless 2x/week
 - lentils, eggs, tofu (save some \$\$\$!)
 - Boiled eggs, seeds, or nuts for snacks or salads
 - Avoid cured meats (including bacon)

Final tips! #5

- Healthy fats are our friends!
 - Olive oil and a splash of citrus for salads
 - Mashed avocado instead of butter
 - Vegetable oil instead of butter for frying
 - Nuts – whole or butter
 - Herbs or spices instead of sauces or salt

Final tips! #icing

- Plan for 3 meals each day PLUS 1-3 snacks
 - Plate: $\frac{1}{2}$ veggies, $\frac{1}{4}$ carbs, $\frac{1}{4}$ meat or alternative
 - Include fibre and protein with your snacks
- Shopping for your health
 - Plan meals ahead of time and make a list
 - Compare nutrition labels, use the DV%
 - Ingredients are listed in order of abundance
- Healthy choices for eating out
 - Choose smaller portions
 - Ask for sauce or dressing on the side



Resources (...homework)

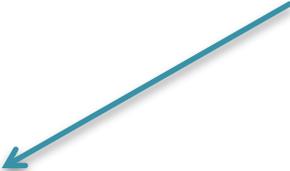
- Eat Right Ontario
- Dieticians Canada
- EATracker
- Eat Wise
- Canadian Nutrient File

Outline

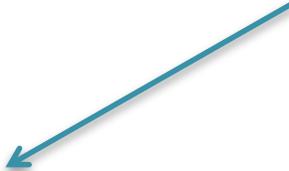
- Nutrition Labels - What does it all mean?!
 - Nutrients 101
 - Serving size
 - Calories
 - DV%
- Special Diets – Heart health and more!
- Getting started – Healthy eating habit tips
- Resources – Your homework (sorry!)

My goal – a reminder!

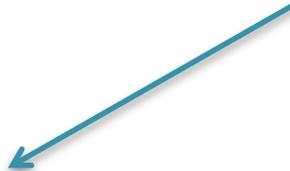
You are what you eat



Eating healthy is a habit



Habits are what we repeat



Repeatedly make healthy choices



Bon appétit!