



It Starts With What We Eat...

The **Sugar Blues**

Sneha Patadia, MS, RD, LD

Identify the Sugar Blues



Sugar picks you up!



...and quickly brings you down,



resulting in the “sugar blues”



Agenda



How can we kick this habit?

- Identify sources of sugar in our diets
- Identify what to look for on Nutrition Facts Label
 - Pay attention to serving size
- Fight cravings with naturally occurring sugars
- What about artificial sweeteners?
- Mindful eating

Snacks

Brown Bag Lunches



Fact/Documentary



- Sugar is found in 80% of the foods we consume
- It can be lurking in foods that you may think are “healthy”
- Let’s take a look...

<https://www.youtube.com/watch?v=6uaWekLrily>

Types of Sugar



- Naturally Occurring (**COMPLEX SUGARS**)
 - Found in many foods: dairy (milk & yogurt), fruit, vegetables



Types of Sugar



- Added (**SIMPLE** SUGARS)
 - Added to foods/beverages when they are processed or prepared
 - Major source of *empty calories*



Sources of Added Sugars



- Regular soft drinks, energy drinks, sports drinks
- Candy
- Cakes, Cookies, Pies
- Sweet Rolls, Pastries, Donuts
- Fruity Drinks
- Ice Cream

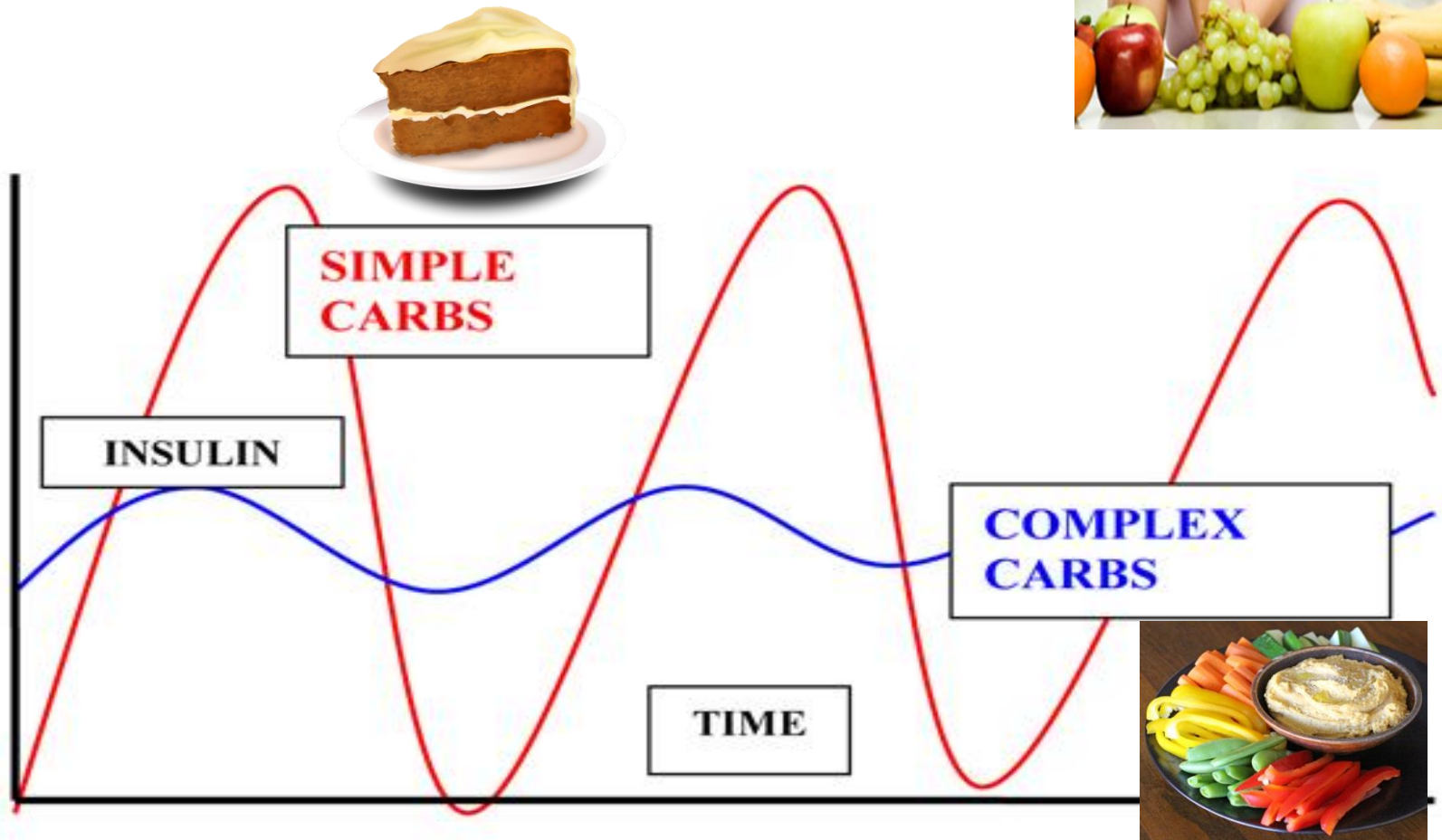


Sources of Added Sugars



Added Sugars	Few/No Added Sugars
$\frac{1}{2}$ cup Sweetened Applesauce (18g)	$\frac{1}{2}$ cup Unsweetened Applesauce (12g)
$\frac{3}{4}$ cup Honey Nut Cheerios (9g)	$\frac{3}{4}$ cup Cheerios (<1g)
$\frac{1}{2}$ cup Peaches in Heavy Syrup (25g)	$\frac{1}{2}$ cup Peaches in 100% Juice (13g)
$\frac{3}{4}$ cup Fruited Yogurt (26g)	$\frac{3}{4}$ cup Plain Yogurt (14g)

Beat the Afternoon Blues



How Much Are You Drinking?



4 grams of sugar = 1 teaspoon

How Much Sugar ?



How much sugar is in your drink?

Based on the FDA standard of 4 grams of sugar per teaspoon.



Monster Energy 16 oz.
200 calories



vitaminwater 20 oz.
125 calories



Mountain Dew 20 oz.
290 calories



Snapple Lemon Tea 16 oz.
160 calories



Gatorade 20 oz.
130 calories



Nantucket Nectars Cranberry 17.5 oz.
280 calories

13.5
teaspoons

8
teaspoons

19.25
teaspoons

10.5
teaspoons

8.5
teaspoons

17.5
teaspoons

Consumption of sugar sweetened beverages may be the single largest driver of the obesity epidemic according to a 2009 study in the New England Journal of Medicine.

Average sugar sweetened beverage consumption by youth

BOYS	Ages 2-5:	47 gallons/year
	Ages 6-11:	65 gallons/year
GIRLS	Ages 2-5:	41 gallons/year
	Ages 6-11:	51 gallons/year
	Ages 12-19:	77 gallons/year

According to the 1989-2004 National Health & Nutrition Examination Survey of children who reported drinking at least one sugar-sweetened beverage on the survey day.

The extra calories from adding just one 20 oz Mountain Dew to your regular diet every day for a year would be enough calories to cause a 30 pound weight gain.

Based on the 280 calories in a 20 oz Mountain Dew and 3500 calories equaling 1 lb of weight gain.



Alliance for a
Healthier
Rhode Island

c/o Rhode Island Medical Society

This artwork was created by our colleagues from the Alliance for a Healthier Vermont. We thank them for sharing!

A recent study...



- A recent study from *AJCN* compared intake & weight changes in >800 men and women
- Research found those who cut **100 calories of liquids from their diets**, lost more weight than when they cut **100 calories from food!**
- An avg can of soda has ~150 calories
(mostly from sugar- ie. HFCS)

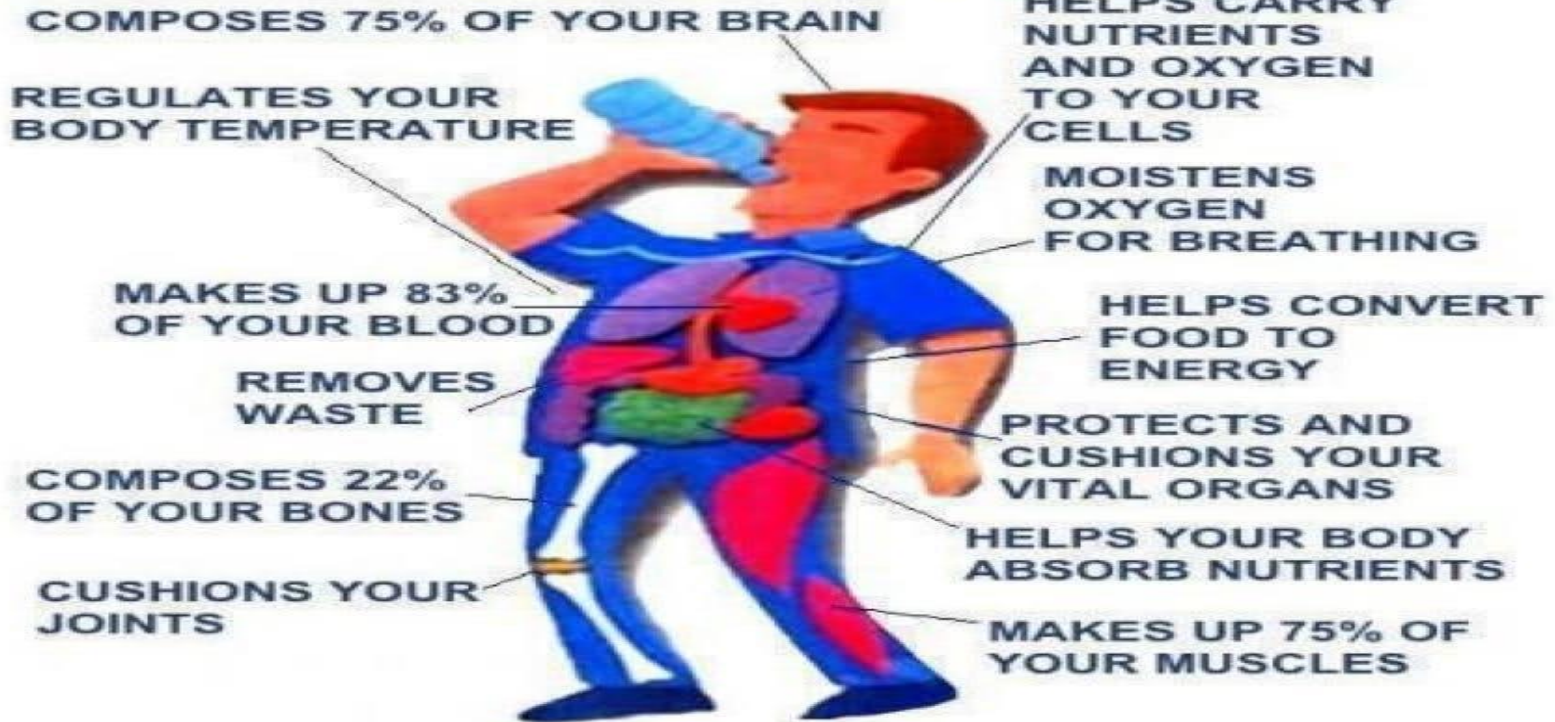
This is ~ 10 tsp of table sugar.

1 per day= 5#/yr OR 20 oz per day= 30#/yr!

Drink More Water!



WATER



Daily Added Sugar Limits



Age	Males	Females
14-18 years	33g	20g
19-30 years	41g	33g
31-50 years	33g	20g
51+ years	33g	15g

American Heart Association and MyPlate

Daily Added Sugar Recommendation (tsp)



American Heart Association

Sweet Surprises



= 78
TEASPOONS
OF SUGAR

divabetic

Sweet Surprises



SWEET SURPRISES: 6 ways to instantly slash your added-sugar intake:



2 Tbsp. honey-mustard dressing: **5g**

VS.

2 Tbsp. ranch dressing: **1g**



1 piece BBQ chicken: **5g**

VS.

1 piece Buffalo chicken: **0g**



1 Tbsp. ketchup: **3g**

VS.

1 Tbsp. yellow mustard: **0g**



1 medium mocha latte: **18g**

VS.

1 medium latte: **0g**



1 chocolate chip muffin: **43g**

VS.

1 chocolate glazed donut: **16g**



1 cup tomato soup: **8g**

VS.

1 cup chicken noodle soup: **0g**

On the Nutrition Facts Label



First check the number of servings in the can or bottle

Then multiply the amount of sugar per serving by the number of servings to get the total amount of sugar.

In this example →

$$\begin{array}{r} 26 \text{ g of sugar} \\ \times 2.5 \text{ servings} \\ \hline = 65 \text{ grams of sugar} \end{array}$$

Nutrition Facts

Serving Size 8 oz.

Servings Per Container 2.5

Amount
Per Serving

Calories 90

% Daily Value*

Total Fat 0 g 0%

Saturated Fat 0 g 0%

Trans Fat 0 g

Cholesterol 0 mg 0%

Sodium 35 mg 0%

Total Carbohydrate 26 g 9%

Dietary Fiber 0 g 0%

Sugars 26 g

Protein 0 g 0%

“Sweet Math”



??? Tsp sugar = grams of sugar divided by 4

Example:

12 oz serving of cola has...

39 grams sugar/4 = **10 tsp sugar**

The average American consumes over **22 tsp** added sugar per day!!

Think About It...



In the Ingredients List



- Anhydrous Dextrose
- Brown Sugar
- Confectioner's Powdered Sugar
- Corn Syrup
- Dextrose/Glucose
- Fructose
- **High-Fructose Corn Syrup**
- Honey
- Invert Sugar
- Lactose
- Malt Syrup
- Maltose
- Maple Syrup
- Molasses
- Nectar
- Sorbitol, Mannitol, Malitol, Xylitol
- Sucrose
- Sugar
- Turbinado Sugar
- White Granulated Sugar

High Fructose Corn Syrup

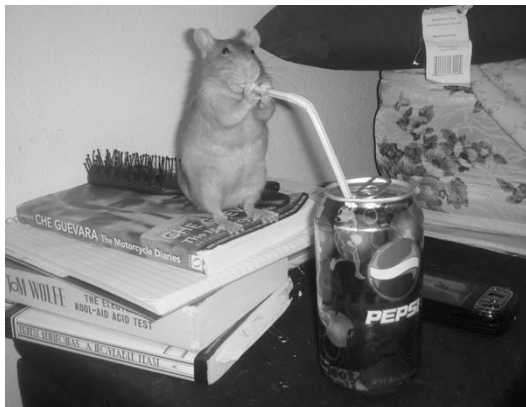


- Combination of fructose (55%) & glucose (42%)
- Table sugar is a combination of fructose (50%) & glucose (50%)
- Glucose & fructose are absorbed directly into the bloodstream
- Fructose in table sugar requires one extra metabolic step to unbind from the glucose molecule, while the fructose in HFCS is "free" and is immediately available for absorption

High Fructose Corn Syrup



- 2010 study at Princeton University
 - Found that rats drinking water sweetened with HFCS gained dramatically more weight, abdominal fat, and triglycerides than rats fed water sweetened with table sugar, even when their overall caloric intake from both food and drinks was equal



High Fructose Corn Syrup



- 2011 study at University of California, Davis
 - Compared effects of feeding healthy young volunteers the equivalent of 25% of their daily energy requirement in glucose, fructose, or HFCS sweetened beverages
 - After only two weeks, they found that consumption of fructose and HFCS increased the risk factors for cardiovascular disease: higher LDL cholesterol, triglycerides, and apolipoprotein B, which is involved in plaque formation in blood vessels
 - These risk factors did not increase in study participants who consumed glucose

The Roller Coaster



Excess Carbohydrate Consumption: Affects Health, Weight and Energy



Weight Gain Over Time



- 1g of Sugar = 4 Calories
- Extra Calories → Weight Gain
- 3,500 Calories = 1 Pound
- 12 oz Mountain Dew = (46g)
184 Calories
- 12 oz Mountain Dew/Day →
67,160 calories/year
÷ 3,500 = **19 Pounds/Year!!**



Overweight/Obesity



- Being overweight or obese puts you at higher risk for:
 - Type 2 Diabetes
 - Heart Disease
 - High Blood Pressure
 - Gallstones
 - Breathing Problems
 - Certain Cancers



Overweight/Obesity



**\$190 BILLION dollars are
spent on obesity-related
diseases per year!**

Prevention is key!



Cancer Prevention



According to the *Expert Report: Food, Nutrition, Physical Activity & the Prevention of Cancer ...*

Maintaining a healthy BMI “may be one of the most important ways to protect against cancer.”

Recommendation:

**Limit consumption of energy-dense foods;
Avoid sugary drinks**

Dental Issues



How a Good Tooth Goes Bad
A True Story

Sugar + **Bacteria from plaque** = **Makes Acid**

Acid Attacks The Healthy Tooth & **Makes A Cavity**

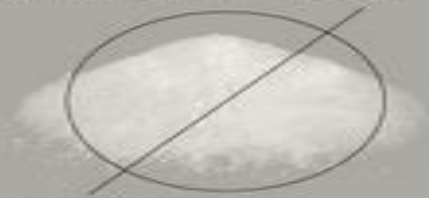
www.boyntonlaserdental.com

Be sure to brush twice a day, and floss nightly!

Sugar is ADDICTIVE!



REFINED SUGAR HAS NO
NUTRITIONAL VALUE.



0 VITAMINS
0 MINERALS
0 ENZYMES
0 FIBER

REFINED SUGAR IS LINKED TO:

OBESITY

HYPERTENSION

HIGH BLOOD PRESSURE

HYPOGLYCEMIA

DEPRESSION

HEADACHES

FATIGUE

NERVOUS TENSION

ACHING LIMBS

DIABETES

ACNE

SKIN IRRITATION

STIFFENING OF ARTERIES

VIOLENT BEHAVIOR

ACCORDING TO BRAIN SCANS,

Sugar



IS AS
ADDICTIVE
AS

Cocaine



ONLINENURSINGPROGRAMS.COM

Brain Scan: Sugar vs. Cocaine



<https://healthyplanet.us.org/sugar-blues/>

What Causes Cravings?



Thirst: Dehydration

Hormonal imbalance (PMS)

Lack of sleep

Physical Inactivity

Nutrient Deficiency

Nutrient Imbalance ie. salty→→sweet

Stress

Curb Your Sugar Cravings



With Real Foods!

Fruits:

- apples, berries
- banana, coconut, mango, pineapple, “cuties”

Vegetables:

- acorn squash, beets, carrots, sweet potatoes

Great Alternatives



Fruits- Fresh/Dried



Maple Syrup/ Honey



Stevia



Artificial Sweeteners



Are they safe?

Acceptable Daily Intake (ADI) of Common Sugar Substitutes

(Based on a 150 Pound Adult)

Sweetener	Number of 12 oz cans diet soda to reach the ADI	Number of artificial sweetener packets to reach the ADI
Acesulfame-K*	25.6	20.4
Aspartame	17	97.4
Saccharin	2.4	8.6
Sucralose	4.8	68.2
Stevia/Reb A	Product info not available...sodas containing stevia are not widely available.	30

These amounts of sweetener would need to be consumed over a person's lifetime! The ADI also includes a 100 fold safety factor, which means taking the minimum amount considered to be without adverse effects and then taking one one-hundredth of that amount to establish the ADI.

* Average amount as Acesulfame-K is usually mixed with 90 mg aspartame

Sources: *Guide to Medical Nutrition Therapy for Diabetes*. American Diabetes Association. Chicago, IL; 2005.

Rebiana. Recommended Intakes (ADI) and Metabolism. Coca-Cola Beverage Institute for Health and Wellness. Available at: www.thebeverageinstitute.org/articles/article-rebiana.htm. Accessed 29 Mar 2011.

Artificial Sweeteners



- Interactive Calculator:
<http://www.nafwa.org/sweetener.php>
- Who should avoid?
 - PKU (Aspartame)
 - Pregnancy (May neglect other nutrients)



Artificial Sweeteners

Be careful!



A 2008 animal study found that rats given artificial sweeteners ate more calories throughout the day and, as a result, gained weight.

❖ Result: the ingestion of artificial sweeteners essentially caused **confusion between the gut and the brain**

Mindful Eating



“It’s good that you’re eating more fresh fruit and vegetables, but be careful to chew more thoroughly.”

Mindful Eating Practices



- Eat slowly. Truly enjoy your foods by savoring them. You not only want to taste your foods, but experience each bite of your food by using all of your senses.
- Be sure to listen to crunch of your carrots, smell the aroma of fresh baked bread, and notice the creamy texture of hummus!
- Keep in mind that it takes about 20 minutes for your brain to get the message that your body is getting food, once the brain receives this message, you stop feeling hungry.
- So, fast eaters slow down and give your brain a chance to get the message!!



Think About Children...



- The average child consumes 32 teaspoons of sugar a day.

School Snacks



- Allowing kids to snack and drink during class has been shown to result in higher cognitive ability in students (ie. SAT's)



- Healthy eating in childhood helps build a foundation for a lifetime of smart choices.



Importance of Snacking



- Snacking is important for children because they have smaller stomachs than adults and cannot necessarily eat enough to stay full in 1 meal or sitting
- They should be able to snack every 3-4 hrs. over the course of the day
- This not only ensures kids stay full, it also helps them learn healthy eating habits
 - ie. eating appropriate amounts & only when they're hungry
- Small, healthy snacks throughout the day prevent patterns of boredom eating, or eating based on emotional factors



Attack the Snacks



Smart Snacking

- **Fruits, veggies, whole grains and LF dairy products make good snacks**
- Healthy beverages include **LF milk, water, soy drinks and 100 % fruit juices**
- The majority of snacks should be F&V since most individuals do not meet the rec. daily servings, and the vitamins in F&V are crucial to preventing disease later in life

Smart Snacking



- Packing healthy, accessible snacks lessens the likelihood of children and adults turning to vending machines, if they're available
- Portion control is also important
 - A good size snack: ~250 calories or less



Snack Ideas



- Clementines
- Carrots & Hummus
- String Cheese and 6 Triscuits
- ½ PB& J on WG bread
- Trail Mix- Cheerios, Cranberries, Almonds
- Pretzels & Yogurt
- Baked Tortilla Chips & Salsa
- Grapes and Almonds
- Air-popped Popcorn
- Celery, PB, Raisins
- Small banana, PB
- Mini Raisin Box + Sunflower Seeds
- Cereal and LF milk
- Special K Snack Bar
- Fruit & Yogurt Parfait

2014-2015 New Standards



<http://www.fns.usda.gov/healthierschoolday/tools-schools-focusing-smart-snacks>

Tips for Brown Bagging It



Buy healthy foods you know is well-liked.
Separate the fruits, vegetables and healthy treats into three bowls.

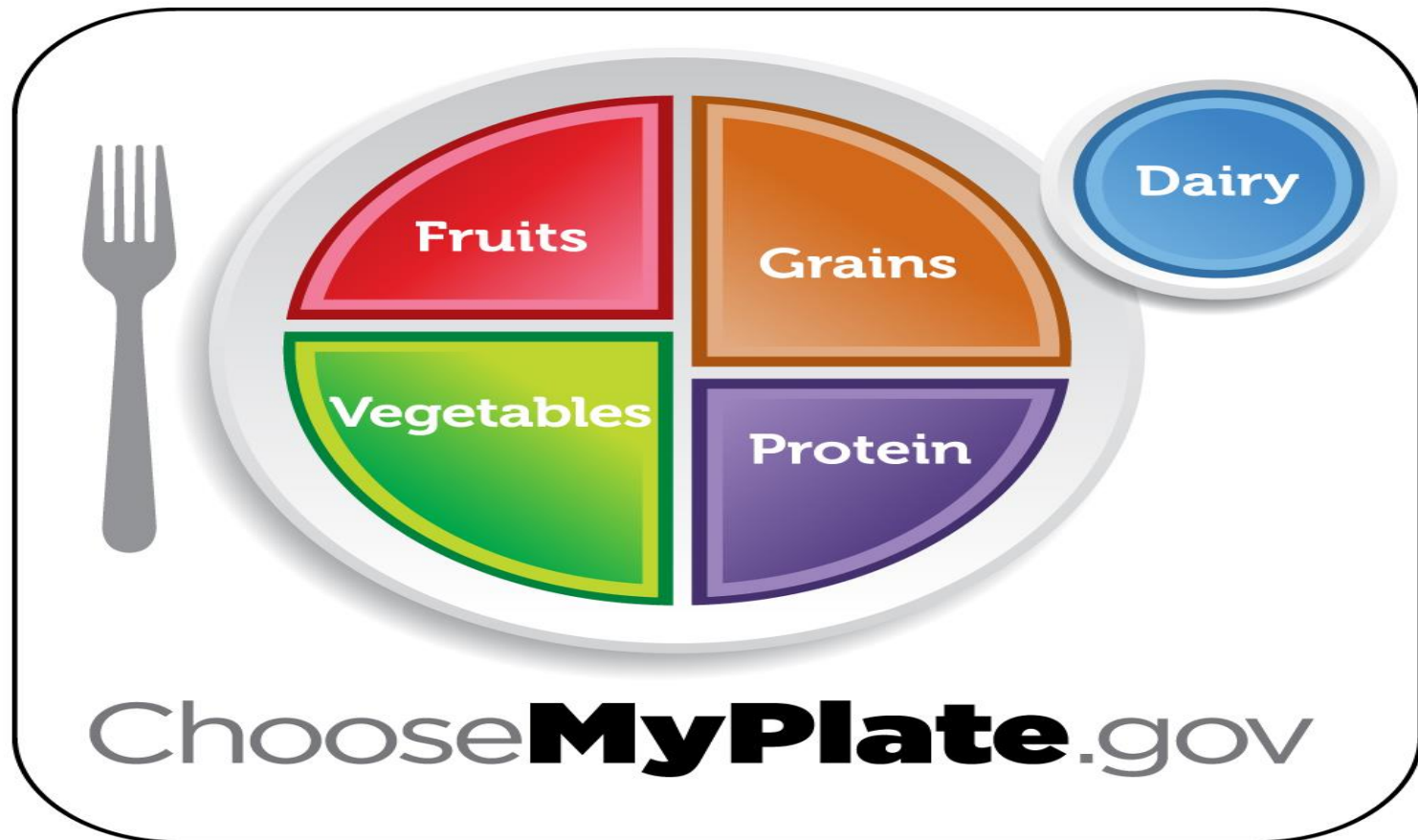
If you have kids, each day, let your child select one food from each bowl.



Tips for Brown Bagging It



Use MyPlate as a guide



Tips for Brown Bagging It



Provide dips to make fruits and vegetables more appealing, whether it's salad dressing for dipping carrot sticks, a yogurt dip for strawberries, or peanut butter for apple slices.



Tips for Brown Bagging It



Pack favorite soups in a thermos, especially on cold winter days. Those that are loaded with vegetables or beans are the best for protein and fiber!



Tips for Brown Bagging It



- Think beyond a traditional sandwich.
- Fill a tortilla with LF cream cheese and turkey or veggies, roll up and cut into pinwheels.
- Lettuce wraps.
- Pack cubes of meat and cheese with whole grain crackers



Tips for Brown Bagging It



Make it **colorful!!!**

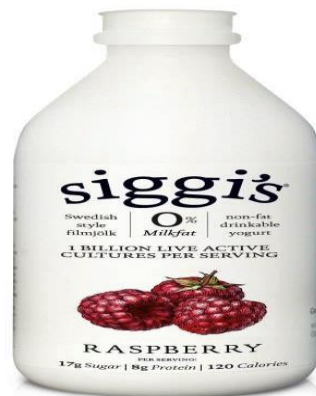
- Strive to add a variety of colors as well as textures and tastes to each lunch



Tips for Brown Bagging It



- Consider how much time your child will have for lunch and make sure items can be eaten fairly quickly



- For instance, drinkable yogurt is easier to eat than yogurt in a cup 😊

Resources



http://www.heart.org/HEARTORG/GettingHealthy/NutritionCenter/HealthyEating/Sugar-101_UCM_306024_Article.jsp

www.choosemyplate.gov

www.usda.gov

www.eatright.org

<https://www.youtube.com/watch?v=6uaWekLrIlY>

<http://ajcn.nutrition.org/content/79/4/537.full>

<http://www.fns.usda.gov/healthierschoolday/tools-schools-for>

<http://www.nafwa.org/sweetener.php>

<https://healthyplanet.us.org/sugar-blues/>

<http://www.cutyoursugar.org/what-is-really-in-sbs/>

http://www.eatingwell.com/nutrition_health/nutrition_news_information/6_swaps_to_replace_added_sugars_from_your_diet

<http://positivemed.com/2012/07/21/you-wouldnt-eat-22-packs-of-sugar/>

<http://www.mangosteen-natural-remedies.com/images/functions-of-water-in-the-body.jpg>



Questions?



Sneha Patadia, MS, RD, LD
Wellness Dietitian
Southeastern Med
(740) 439-8941
sdpatadia@seormc.org





Thank you!!!

Sneha Patadia, MS, RD, LD

Eat Less Sugar 😊

