Know Your Mutrition





Managing Diabetes Is a Balancing Act

K XX

"It has been said that the way to have a long and healthy life is to get a chronic disease and learn how to control it" – Elliot Joslin

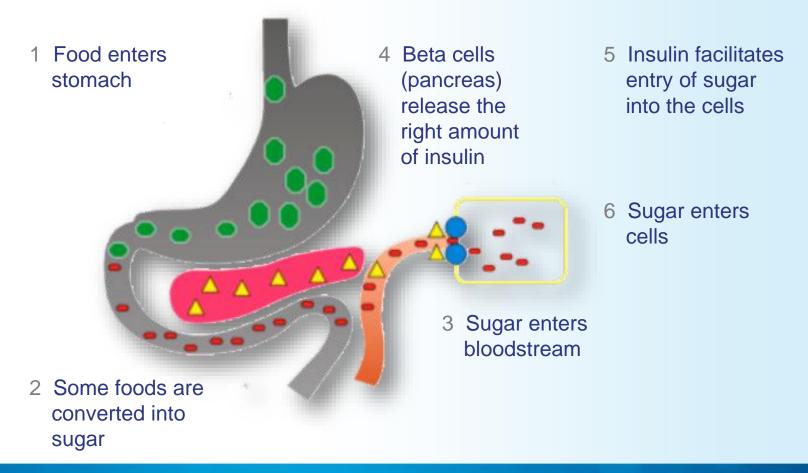
- Healthy eating
- Exercise
- Medication





How Does the Body Convert Food into Energy (a person without diabetes)

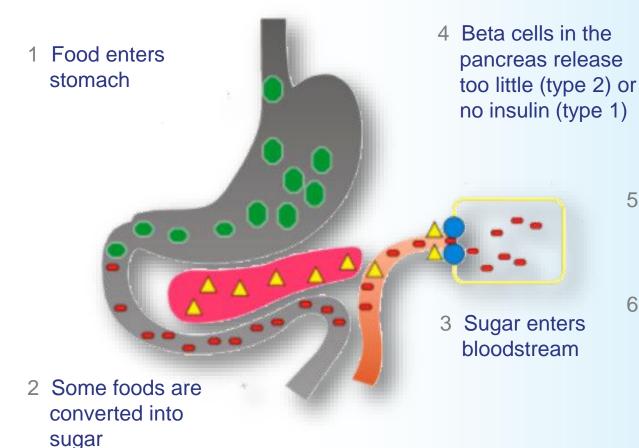






How Does the Body Convert Food into Energy (a person with diabetes)





5 Sugar can't enter cells

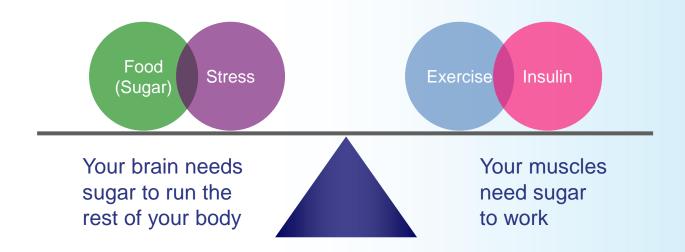
6 Sugar stays in the blood, and blood sugar levels rise



When Blood Sugar Is Balanced

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Food, insulin, exercise, and stress are balanced





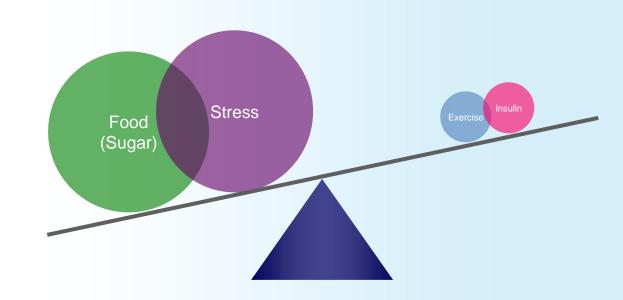


High Blood Sugar Levels (Hyperglycemia)

Hyper (High) + Glyc (Sugar) + Emia (Blood) = High Blood Sugar

Common causes may include:

- Too (+) much food
- Too (+) much stress
- Too (-) little insulin
- Too (-) little exercise







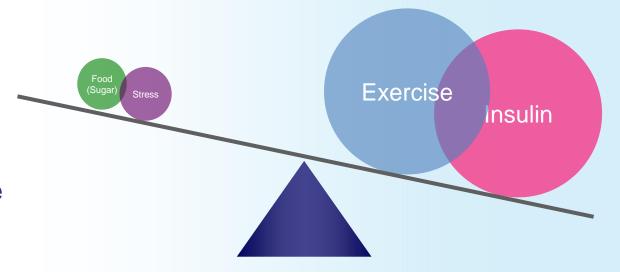
Low Blood Sugar Levels (Hypoglycemia)



Hypo (Low) + Glyc (Sugar) + Emia (Blood) = Low Blood Sugar

Common causes may include:

- Too (-) little food
- Too (+) much insulin
- Too (+) much exercise



Hypoglycemia is the most common complication of insulin therapy





Testing Blood Sugar is Also a Key Building Block of Good Diabetes Management

Recommendations for blood sugar control [†]				
	AACE ^{10‡}	ADA ^{7§}		
Fasting/before-meal blood sugar	<110 mg/dL	70-130 mg/dL		
After-meal blood sugar (2 hours after start of meal)	<140 mg/dL	<180 mg/dL		
A1C	≤6.5%	<7%		



- †For non-pregnant adults.
- ‡ American Association of Clinical Endocrinologists.
- § American Diabetes Association.





Testing Your Blood Sugar

Testing at different times of the day is an important part of managing diabetes

- Testing tells you if you are in target, above, or below your target
- Testing can aid in diabetes control by:
 - Helping patients make appropriate diet and exercise choices
 - Improving recognition of hypo- and hyperglycemia
 - Improving the understanding of lifestyle choices and treatment decisions on overall control









Testing Your A1C

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- A1C test is an average blood sugar number over the past several (3) months
- As sugar levels rise more sugar attached to the red blood cells (hemoglobin)
- Shown either as a percentage or as eAG (Estimated Average Blood Glucose)

Matching A1C with eAG ²			
A1C (%)	Blood sugar (mg/dL)		
6	126		
7	154		
8	183		
9	212		
10	240		
11	269		
12	298		



High Blood Sugar

Sugar

Red Blood Cell

Simplified conceptual diagram





Tips for Healthy Nutrition

- The ADA recommends nutrition therapy for all patients with diabetes
- Consult with a qualified HCP or RDN to develop your meal plan
- Nutrition therapy should be tailored to your needs

In the following slides, you will learn about about Nutrition Therapy.









Some Healthy Choices to Consider:

- Eat a variety of foods
- Replace bad fats in your diet with good fats
- Watch portion sizes





MyPlate

MyPlate was developed by the U.S. Department of Agriculture (USDA's)

- Personalized approach focused on enjoying food and portion control:
 - Fill half your plate with fruit and vegetable
 - Fill the other half grains and protein
 - Include dairy
- Cut back on food which are high in sodium, fat and added sugar

For more information visit www.ChooseMyPlate.gov





Adapted from ChooseMyPlate.gov





What About Protein and Fat?

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- Does not increase blood sugar
- Rule of thumb: protein portion = size of a deck of cards or palm of your hand

Protein

Choose lean sources of protein:

- Fish
- Poultry (turkey and chicken)
- Lean cuts of red meat

Fat

Choose low-fat, or fat-free dairy products

- Milk
- Yogurt
- Cheese





Choose "good fats": monounsatured and poyunsaturated (i.e.: olive oil, salmon, avocado, nuts)





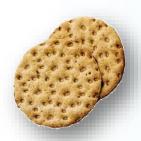
Know Your Carbohydrates (Carbs)

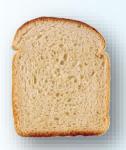


Understanding the importance of carbs

- Carbs are food such as beans, grains, starchy vegetables, fruit, dairy products, sweets and snacks
- Since carbs raise blood sugar you may be asked to count them
- Some carbs may healthier than others i.e. those with more fiber and whole grain







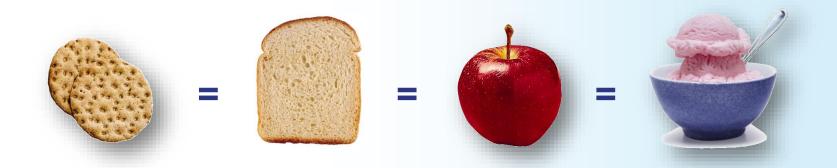












- 4-6 crackers = 1 slice of bread = 1 small piece of fresh fruit (4 oz)
 = 1/2 cup ice cream
- All of these foods contain equal amounts of carbohydrate!
- All raise blood sugar!



Which Foods Contain Carbohydrates?

Scrambled eggs

Rice Peas

Skim milk

Diet cola Fat-free yogurt

Baked chicken Peanuts

Sugar-free pudding Banana

Turkey sandwich Baked potatoes

Cottage cheese Corn

Watermelon Tortilla chips

Spaghetti Tuna

Mayonnaise Pizza

Cookies Jelly beans

Ice cream Pork chops





Which Foods Contain Carbohydrates?

Scrambled eggs

Peas

Fat-free yogurt

Peanuts

Banana

Baked potatoes

Corn

Tortilla chips

Tuna

Pizza

Jelly beans

Pork chops

Skim milk

Rice

Diet cola

Baked chicken

Sugar-free pudding

Turkey sandwich

Cottage cheese

Watermelon

Spaghetti

Mayonnaise

Cookies

Ice cream





What Is Carbohydrate Counting?

- K XX
- A method of meal planning for managing your blood glucose levels
 - It is easy to learn and it allows for more flexibility in selecting foods you like to eat.
- Carb Counting involves:
 - Meeting with a qualified HCP in Nutrition Therapy
 - Identify amount and type of carbs in your diet
 - Consistency eating the same amount of carbs at about the same time each day
 - Monitor your blood sugar regularly

Some of the blood glucose meters from Bayer have carb-counting features.

For example, CONTOUR® NEXT USB has easy-to-log carbs, which makes it easier to collect more information.





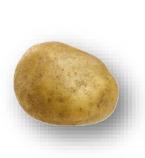


Two Methods of Carbohydrate Counting



- Carbohydrate Choices
- Carbohydrate Grams

When you count carbs – keep in mind that every 15 grams of carbs is 1 carb choice











How Many Carbs Do You Need?



Calorie Level	Carb Choices	Carb Grams
1,200	10	150
1,500	13	195
1,800	15	225
2,000	17	255
2,000	19	285
2,400	20	300











Reading a Food Label

This bag of trail mix contains 5 individual servings (1 oz per serving) that are 140 calories each.

Eating 1
serving is OK,
but if you eat the
entire package, that's
700 calories! So
be sure to watch
serving size.

Talk to your
HCP about
the amount of
cholesterol
you should have
per day.

Every
15 Grams Total
Carbohydrate
= 1 Carbohydrate
Serving

Trail Mix

Nutrition Facts

Serving Size 1 oz (28g/About 6 pieces) Servings Per Container About 5

Amount Per Serving	
Calories 140	Calories from Fat 80
	% Daily Value*
Total Fat 9g	14%
Saturated Fat 1.5	g 6%
Trans Fat 0g	
Cholesterol Omg	0%
Sodium 95mg	4%
/Total Carbohydrat	e <mark>12g 4%</mark>
Dietary Fiber 1g	6%
Sugars 7g	
Protein 3g	
5 (5)	

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

Vitamin C 0%

Iron 6%

Vitamin A 0%

Calcium 2%

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g
Calories per gram:			

Fat 9 • Carbohydrate 4 • Protein 4

No more than
30% of total calories
should come from
fat in a daily diet.
For example, no more than
600 calories for a
2000-calorie diet.

Try to avoid saturated and trans fats. Instead look for "monounsaturated" and "polyunsaturated" fats on the food label, as these fats are better for you.

Talk to your
HCP about
the total amount
of dietary fiber you should
have per day based
on the number of
calories you consume
each day.





SIZE Does Make a Difference!







Tracking Your Nutrition



Food record:

DayTuesday		Date	Date			
Time	Food/Beverage	Amounts (servings)	Carbs (grams)	Before-Meal Blood Sugar	After-Meal Blood Sugar (2 hours)	Medications and Physical Activity
8 A.M.	orange juice	4 ozs.	1	118	136	walked
	wheat toast	2	2			
	oat flakes	³¼ cup	1			
	2% milk	8 ozs.	1			
	coffee, black					
		8 A.M. orange juice wheat toast oat flakes 2% milk	(servings) 8 A.M. orange juice 4 ozs. wheat toast 2 oat flakes 3/4 cup 2% milk 8 ozs.	(servings) (grams) 8 A.M. orange juice 4 ozs. 1 wheat toast 2 2 oat flakes ¾ cup 1 2% milk 8 ozs. 1	(servings) (grams) Blood Sugar 8 A.M. orange juice 4 ozs. 1 118 wheat toast 2 2 oat flakes ¾ cup 1 2% milk 8 ozs. 1	(servings) (grams) Blood Sugar (2 hours) 8 A.M. orange juice 4 ozs. 1 118 136 wheat toast 2 2 0 oat flakes 3/4 cup 1 1 2% milk 8 ozs. 1





Know Your Nutrition – Summary



Some Healthy Choices to Consider:

- Eat a variety of foods be aware of the types and amounts of food you are eating – protein, fats, and carbohydrates
- Remember carbohydrates raise blood sugar the most
- Replace bad fats in your diet with good fats
- Watch portion sizes
- Avoid skipping meals space your food throughout the day
- Talk to your HCP to help you get on track to living a healthy lifestyle



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