This product was developed by the Advancing Diabetes Self Management Program at Community Health Center, Inc. in Middleton, CT. Support for this product was provided by a grant from the Robert Wood Johnson Foundation® in Princeton, New Jersey.
Session 2
Introduction to Nutrition

Hypo/Hyperglycemia
The Role of Nutrition in the Therapy of Diabetes
Portion Control
Self Management
Hypoglycemia (Low blood sugar/glucose)

**Causes:** too little food, too much insulin or diabetes medicine or extra activity

**Symptoms:** shaking, fast heartbeat, sweating, dizziness, hunger, weakness, headache

**What to do?** (choose 1)
- Drink 1/2 cup juice
- Drink a glass of skim milk
- Have 3-5 pieces of hard candy
- Have 3 teaspoons of honey or sugar
- Have 2-3 glucose tablets
Hypoglycemia (Low blood sugar)

- Shaking
- Fast heartbeat
- Sweating
- Dizziness
- Hunger
- Weakness
- Headache
Hypoglycemia
(Low blood sugar)

What to do? (choose 1)

- Drink 1/2 cup juice
- Drink a glass of skim milk
- Have 3-5 pieces of hard candy
- Have 3 teaspoons of honey or sugar
- Have 2-3 glucose tablets
Hyperglycemia: High Blood Sugar/Glucose

- **Causes:** too much food, too little insulin or diabetes medicine, illness or stress

- **Symptoms:** extreme thirst, have to go to the bathroom a lot, dry skin, hunger, blurred vision, drowsiness, cuts don’t heal well

- **What to do?** If your blood sugar is over 200 mg.dL for several days, call your doctor.
Hyperglycemia
High Blood Sugar

- Extreme thirst
- Have to go to the bathroom a lot
- Dry skin
- Hunger
- Blurred vision
- Drowsiness
- Cuts don’t heal well
Hyperglycemia: High Blood Sugar/Glucose

What to do?
If your blood sugar is over 200 for several days, call your doctor.
Sources of Carbohydrates

- Bread, cereal, rice, pasta
- Fruit & juice
- Milk & yogurt
- Starchy vegetables – corn, peas, potatoes, plantains, winter squash
- Sweets
Sources of Protein

- Meat, chicken, turkey,
- Fish, shrimp, lobster
- Eggs
- Cheese
- Peanut butter
Sources of Fat

- Oils
- Margarine and butter
- Nuts, olives, bacon
- Cream
Your mother was right!

Eat Your Vegetables

Would you like some homemade vegetable soup?
Portion Control

Healthy blood glucose is helped by moderate portion sizes. You may think the portions seem small.
Cooking & Eating Tips

- Grill or bake, don’t fry
- White meats more than red
- Olive or canola oil
- Not butter, lard or Crisco
I’ll Never Enjoy Eating Again!
Oh yes, you will!
Many good things in life are free!
Friends, family, nature

And lots of good food!

**Most vegetables:** Artichokes, asparagus, green or wax beans, bean sprouts, beets, broccoli, brussel sprouts, cabbage, carrots, cauliflower, celery, eggplant, greens, mushrooms, okra, onions, peppers, spinach, lettuce, summer squash, tomatoes, zucchini, garlic

**Drinks:** coffee, tea, diet soda, club soda or seltzer water, ½ cup tomato or V-8 juice

**Spices & herbs:** mustard, 1 tbsp. ketchup, broth, butter buds, Pam, sugar substitutes

**Sugar-free jello**
Make a Breakfast

Carbohydrates
Women pick 3
Men pick 4
from the list below

- 1/2 grapefruit
- 1 small banana
- 1 1/4 cup strawberries
- 1/3 small cantaloupe
- 3 prunes
- 2 tablespoons raisins
- 1 small orange
- 1 medium peach
- 1/2 canned fruit, no sugar
- 1/2 cup juice
- 1 slice whole wheat bread
- 1/2 English muffin or bagel
- 1/2 cup oatmeal or grits
- 3/4 cup no sugar cereal
- 1 slice French toast
- 1/2 cup potatoes
- 1 cup skim milk
- 6 oz. lowfat sugarfree yogurt

Fats and Proteins
Woman pick 1
Men pick 1-2
from the list below

- 1/4 cup Egg Beaters
- 1/4 cup low fat cottage cheese
- 1 tablespoon peanut butter
- 1 slice lean ham
- 1 slice lean turkey
- 1 slice Canadian bacon
- 1 egg (twice a week)

FREE FOODS
Coffee, tea, sugar substitute, Pam spray, sugar free jelly or jam, sugar free pancake syrup
Use margarine in small amounts as needed
Make a Lunch

Carbohydrates

Women pick 3
Men pick 4

From the list below

1 slice whole wheat bread
1/2 English muffin
1/2 small bagel
1/2 small hard roll
1 small square cornbread
6 unsalted saltines
1/2 cup bean, pea or lentil soup
1 cup broth soup and 6 crackers
1/3 cup cooked pasta
1/2 cup potatoes
1 small apple, orange, pear or peach
17 grapes
2 small plums or tangerines
1 1/4 cup watermelon cubes
4 oz. (1/2 cup) juice
6 oz. lowfat sugarfree yogurt
8 oz. skim milk
1/2 cup sugar-free pudding
1 cup sugar-free cocoa

Protein

Pick 1 item from the list below

2 slices turkey, chicken, ham, roast beef or low fat cheese
1 oz sliced meat and 1 oz. low fat cheese
1/2 cup tuna, egg or chicken salad made with mayonnaise, low fat sour cream or olive oil
1/2 cup cottage cheese
2 tablespoons peanut butter

FREE FOODS

Most vegetables
Coffee, tea, diet soda, club soda and sugar substitutes
Sugar free jello
Mustard, herbs, spices; 1 tbsp ketchup
Clear broth
# Make a Dinner

## Carbohydrates

**Women pick 3**  
**Men pick 4**  
from the list below

- 1/2 cup mashed potato
- 1/2 cup corn, peas
- 1 cup winter squash
- 1/3 cup cooked stuffing, pasta or rice
- 1 small baked potato
- 1/3 cup baked beans
- 1 slice whole wheat bread
- 1 small apple, orange, pear, or peach
- 1 1/4 cup whole strawberries
- 1 small banana
- 17 grapes
- 1/2 cup canned fruit in own juice
- 4 oz. fruit juice
- 8 oz. skim milk
- 6 oz. sugar free yogurt
- 1/2 cup sugar free pudding
- 3 small gingersnaps or 5 vanilla wafers
- 1/2 cup frozen yogurt

## Meats and Proteins

**Women pick 1**  
**Men pick 1-2**

- 3 oz. chicken, no skin
- 3 oz. turkey, no skin
- 3 oz. fish
- 3 oz. seafood
- 3 oz. lean beef
- 3 oz. lean pork
- 3 oz. lean lamb
- 3 oz. veal
- 3 oz. lean hamburger
- 3/4 cup low fat cottage cheese

### FREE FOODS

- Vegetables, spices,
- Coffee, tea, diet soda
- Clear broth, sugar free jello

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*Note: The image contains additional illustrations and decorative elements that are not transcribed here.*
Self Management

Help Yourself!

- Using your self management goal sheet, make a goal related to eating

- Bring the sheet to the next session

- If you forget one day (or give into temptation) don’t give up!
Session 3
Nutrition Continued

Effects of Foods on BG
Critique Meals
Healthy/Unhealthy Fats
Make a Meal
Fast Foods and Self Management Goals
Carbohydrates have the greatest effect on blood glucose. Remember: fruit, rice, bread, milk, desserts, sugary drinks & regular soda are carbs.

- **Portion control**
  2-3 small servings per meal for women or 1 larger serving
  3-4 small servings per meal for men or 2 larger servings

- Can’t skip carbs at one meal and add to the next
Carbohydrates affect blood sugar the most. Fruit, rice, bread, milk, desserts, sugary drinks & regular soda are carbs.

- Remember portion control
- Can’t skip carbs at one meal and add to the next
Breakfast: OK or how can it be better? (Find the carbs!)
Lunch – OK or How Can It Be Better?  *(Find the carbs!)*
Dinner - One Smart Cat!
(Find the Carbs!)
Some fats are actually Heart Healthy Fats

- Canola and olive oil
- Peanut Butter
- Nuts
- Avocados
- Fats in some fish – albacore tuna, salmon

But be careful. Fats make us fatter!
Unhealthy Fats

- Butter or stick margarine
- Lard or Crisco
- Whole Milk
- Cream
- Fatty meat or chicken skin
Snack Choices

Count Carbs! They aren’t free.

*Other snacks are free and unlimited*

- a small piece of fruit
- 3 gingersnaps or 5 vanilla wafers with tea/coffee
- 6 unsalted saltines with thin slices of hard cheese or peanut butter
- 6 oz. low fat, sugar-free yogurt
- Celery or carrot sticks (for a treat put on a little peanut butter)
- Sugar-free jello
- Diet soda
- Some nuts

*Did someone say nuts?*
Snack Choices

Free snacks
- Sugar free jello
- Tea, coffee, sugar free soda
- Celery and carrot sticks

Carb snacks (must count)
- Small piece of fruit
- Sugar free, low fat yogurt
- Gingersnaps or vanilla wafers
- Nuts

Did somebody say nuts?
Fast Foods
Buyers Beware

Super sizing produces super sizes and other problems
Fast Food Restaurants

- They are easy
- They are fast
- They are cheap
- Kids love them

BUT

- They help set kids up for diabetes
- They may increase the risk of heart attack, stroke and diabetes complications.

WHAT CAN YOU DO?
### McDonald’s

<table>
<thead>
<tr>
<th>Food</th>
<th>Carbs (grams)</th>
<th>Calories</th>
<th>Fat</th>
<th>Sodium</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men: 45-60/meal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hamburger</td>
<td>34 sm 45 BigMac</td>
<td>270/570</td>
<td>10/31</td>
<td>580/1070</td>
</tr>
<tr>
<td>French fries</td>
<td>26 sm. 57 lg.</td>
<td>210/450</td>
<td>10/22</td>
<td>135/290</td>
</tr>
<tr>
<td>Coca-cola</td>
<td>29 sm 40 lg</td>
<td>110/150</td>
<td>0/0</td>
<td>10 &amp; 15</td>
</tr>
<tr>
<td>Total</td>
<td>89 gms 142 gms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grilled chic. sandwich</td>
<td>38</td>
<td>440</td>
<td>20</td>
<td>1040</td>
</tr>
<tr>
<td>Food</td>
<td>Carbs (grams)</td>
<td>Calories</td>
<td>Fat</td>
<td>Sodium</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------</td>
<td>----------</td>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td>1 slice cheese</td>
<td>21</td>
<td>210</td>
<td>9</td>
<td>530</td>
</tr>
<tr>
<td>1 pepperoni</td>
<td>22</td>
<td>220</td>
<td>9</td>
<td>610</td>
</tr>
<tr>
<td>1 stuffed crust-cheese</td>
<td>49</td>
<td>380</td>
<td>11</td>
<td>1160</td>
</tr>
<tr>
<td>2 thin cheese</td>
<td>42</td>
<td>420</td>
<td>18</td>
<td>1060</td>
</tr>
<tr>
<td>Personal pan pizza-cheese</td>
<td>76</td>
<td>630</td>
<td>24</td>
<td>1160</td>
</tr>
<tr>
<td>Food</td>
<td>Carbs (grams)</td>
<td>Calories</td>
<td>Fat</td>
<td>Sodium</td>
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<tr>
<td>----------------------</td>
<td>---------------</td>
<td>----------</td>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td>Big bacon classic</td>
<td>46</td>
<td>580</td>
<td>30</td>
<td>1460</td>
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<tr>
<td>Grilled chicken sandwich</td>
<td>35</td>
<td>310</td>
<td>8</td>
<td>790</td>
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<tr>
<td>Baked potato</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(plain)</td>
<td>71</td>
<td>310</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>(cheese)</td>
<td>78</td>
<td>570</td>
<td>23</td>
<td>640</td>
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<tr>
<td>Chili</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>(small)</td>
<td>21</td>
<td>210</td>
<td>7</td>
<td>800</td>
</tr>
<tr>
<td>(large)</td>
<td>32</td>
<td>310</td>
<td>10</td>
<td>1190</td>
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Men: 45-60/meal
Women: 30-45
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<th>Food</th>
<th>Carbs (grams)</th>
<th>Calories</th>
<th>Fat</th>
<th>Sodium</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Men: 45-60/meal</td>
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<tr>
<td></td>
<td>Women: 30-45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 taco</td>
<td>12</td>
<td>180</td>
<td>10</td>
<td>330</td>
</tr>
<tr>
<td>1 soft taco</td>
<td>21</td>
<td>220</td>
<td>10</td>
<td>580</td>
</tr>
<tr>
<td>1 bean burrito</td>
<td>55</td>
<td>380</td>
<td>12</td>
<td>1100</td>
</tr>
<tr>
<td>Taco salad with salsa</td>
<td>65</td>
<td>850</td>
<td>52</td>
<td>1780</td>
</tr>
<tr>
<td>Quesadilla</td>
<td>32 plain 34 chick</td>
<td>350/410</td>
<td>50/90</td>
<td>860/1170</td>
</tr>
<tr>
<td>Fajitas</td>
<td>52-55</td>
<td>420/520</td>
<td>22/25</td>
<td>980/1300</td>
</tr>
<tr>
<td>Food</td>
<td>Carbs (grams)</td>
<td>Calories</td>
<td>Fat</td>
<td>Sodium</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------------------------</td>
<td>----------</td>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td>Breast</td>
<td>16 (original recipe)</td>
<td>400</td>
<td>24</td>
<td>1116</td>
</tr>
<tr>
<td></td>
<td>25 (extra crispy)</td>
<td>470</td>
<td>28</td>
<td>930</td>
</tr>
<tr>
<td>Original thigh</td>
<td>6</td>
<td>250</td>
<td>18</td>
<td>747</td>
</tr>
<tr>
<td>Roast breast</td>
<td>2</td>
<td>251</td>
<td>11</td>
<td>830</td>
</tr>
<tr>
<td>Mean greens</td>
<td>11</td>
<td>70</td>
<td>3</td>
<td>650</td>
</tr>
<tr>
<td>Biscuit</td>
<td>20</td>
<td>180</td>
<td>10</td>
<td>560</td>
</tr>
</tbody>
</table>
# Fast Food Places: Be Smart

Drink water, diet soda, or coffee. Small sizes, never supersize.

- **Taco Bell**: 2 Tacos
  - **Food**: Avoid soft taco, burrito, fajita
  - **Carbs**: 24

- **McDonald’s**: small hamburger & sm. fries
  - **Food**: No cheese
  - **Food**: Pull off top of bun
  - **Food**: Mustard/ketchup, no sauce
  - **Carbs**: 27

- **Burger King**: 6 chicken nuggets
  - **Food**: Get tender roast chicken or pull skin off fried chicken
  - **Carbs**: 15

- **Kentucky Fried Chick**: Chicken
  - **Food**: 5-10

- **Pizza Hut**: Pizza
  - **Food**: 2 pieces thin crust
  - **Carbs**: 42
Fast Food Restaurants
How to be Smart!

- Diet soda or water
- No special sauces
- Hold the cheese
- No super-sizing
- Be really good, pull off the top bun
- Let’s discuss your favorites
Self Management

Help Yourself!

- Using your self management goal sheet, make a goal related to eating in fast food restaurants
- Bring the goal sheet to the next session
- If you make a bad choice one day, make a good choice the next time
Make a Meal

Using the “make a meal” or “snack” sheets from last session, make a menu for your favorite meal of the day OR make a good snack.
Session 4
Medications and Complications

Disease Progression
Types of Medications
Side Effects
Complications
Self Management
Your Diabetes Will Probably Change Over Time

Ways to treat diabetes:
1) Food and exercise
2) Food, exercise and pills
3) Food, exercise, pills and insulin
4) Food, exercise and insulin
Sulfonylureas

Sulfonylureas are like electricians. They stimulate. They stimulate the pancreas to make more insulin.

Examples are:
- Glyburide
- Glimepiride (Amaryl)
- Glucotrol

Sulfonylureas stimulate
Biguanides

Biguanides are like plumbers. They help leaky livers.

Examples

- Metformin
  (Glucophage)

*Biguanides help stop leaks*
Glitazones (TZDs)

Glitazones are locksmiths. They open the cell so glucose can get in.

Examples:
- Actos
- Avandia

Glitazones open cells
Glitazones (TZDs)

Glitazones are locksmiths. They open the cell so glucose can get in.

Examples:
- Actos
- Avandia

Glitazones open cells
Other Medications

Starlix and Prandin are like **fast acting** electricians. They stimulate the pancreas to produce insulin.

Precose and Glyset slow down digestion. Sugar isn’t released as quickly.
Combination Medications

- Avandamet (avadia and metformin). This is a combination of a locksmith and a plumber. It opens the cell so glucose can enter and controls the leaky liver.

- Glucovance (glyburide and metformin). This is a combination of a plumber and an electrician. It helps the liver from leaking glucose and stimulates the pancreas to produce insulin.
Each Medication Has Its Own Job

- Do you call an electrician for a leaky toilet?
- Do you call a plumber to fix a lock?
- Do you call a locksmith for a broken light?

Like people, medicines do different jobs.

*If your doctor gives you different medications, take them all!*
Diabetes: A Progressive Disease

Over time, most patients will need insulin to reach their targets. This is NOT a failure.

Many new devices greatly reduce the discomfort.
Complications of Diabetes

- Eye Problems
- Kidney Problems
- Erectile Dysfunction
- Nerve Damage & Foot Problems
- Heart and Blood Vessel Problems
### Lifetime Risks of 20 people with different A1C levels

<table>
<thead>
<tr>
<th>Problem</th>
<th>A1C of 10.0</th>
<th>A1C of 7.2</th>
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<tbody>
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<td>Blindness</td>
<td><img src="image1.png" alt="Illustration" /></td>
<td><img src="image2.png" alt="Illustration" /></td>
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<tr>
<td>Amputation</td>
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<td><img src="image4.png" alt="Illustration" /></td>
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<tr>
<td>Kidney Failure</td>
<td><img src="image5.png" alt="Illustration" /></td>
<td><img src="image6.png" alt="Illustration" /></td>
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</tbody>
</table>
Self Management

Help Yourself!

- Review goals of the past 3 sessions
- Look at the goal from Session 1. It might be about medication or monitoring
- Establish new goal or re-commit to existing goal
- Bring goal sheet to next session
Session 5
Everyday Tips for Staying Healthy

Foot Care
Dental Care
Vitamins
Exercise
Self Management
Foot Care

- Wash and check your feet everyday. Be sure to dry between toes. Look for cracks, blisters and cuts.
- Trim nails along the toe’s natural curve. Don’t cut corns. For trouble with your nails or corns, see a foot doctor.
- Rub lotion on tops and bottoms but **not between toes**.
- Don’t go barefoot. *Always* wear socks, shoes or slippers.
- Ask your health provider to check your feet. Take off your socks as a reminder.
Foot Care

Check your feet everyday

Always wear shoes and socks
Dental Care

- Brush your teeth 2 or more times a day.
- Use a soft toothbrush.
- Floss your teeth everyday.
- Get a new toothbrush every 3 months.
- See a dentist 2 times a year.
- Call your doctor or dentist if your dentures don’t fit properly or you have:
  - loose or sore teeth
  - red, swollen or bleeding gums
  - problems chewing
  - a bad taste in your mouth.
Dental Care

- Brush
- Floss
- See a dentist every year
- Call if you have:
  - loose/sore teeth or dentures
  - red, swollen or bleeding gums
  - problems chewing
  - a bad taste in your mouth.
Vitamins

Take a multi-vitamin everyday
Exercise: don’t be a

- Take your kids or grandkids to a park
- Walk
- Garden
- Dance
- Other ideas?
Exercise: why to start

Exercise will

- give you energy
- lower cholesterol
- help control weight
- decrease stress
- help prevent heart disease and high blood pressure
Exercise: how to start

Ask your doctor:

- is it ok?

- do any of my medications hide the symptoms of low blood sugar? This is important because exercise lowers blood sugar.

- what time is best?

- do I need to adjust any medication?
Exercise and Blood Sugar

- Exercise lowers blood sugar.

- Check blood sugar **before and after** exercise.
  **If below 70 or you feel sick,** take 15 grams of fast acting carbohydrate. Examples:
    - 2-3 glucose tablets or 3-5 hard candies
    - 4 oz. of orange juice or regular soda
    - a small box of raisins

- Rest 15 minutes. Test again. **If still below 70,** take another 15 gram snack.
Exercise Tips

Don't give up if you miss a day

- Start slowly, maybe 5-10 min/day
- Drink water before and after
- Exercise with a partner or your children
- Listen to music or television
- Build exercise into your day
  - Walk in the mall
  - Use stairs
  - Park far from the store door
Exercise: the ideals

- 30 minutes a day is the ideal. You may never get to 30 minutes but, with your doctor’s advice, do your best.

- Start slowly and then go faster.

- Your breathing will increase a little but you won’t be gasping

- You will feel a little warm
Exercise
What’s right for you?

- Check with your doctor
- Join our exercise or walking group
- Let’s start

In 6 months, who in this room might be exercising like this?
Self Management Goals

Help yourself!

- Using your self management goal sheet, make a goal related to something discussed today.

- It may be as simple as always wearing shoes, or flossing your teeth everyday, or parking further from the door of the store.
Session 6
Grocery Store Tour

Meat and seafood area
Margarine and oil areas
Dietetic Food Section
Dairy Section
Deli
Fresh, frozen & canned fruit/vegetable areas