

# Weight-Wise Intervention



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# Research Team & Partners

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- Carmen Samuel-Hodge, PhD, MS, RD
- Sara Lindsley (Interventionist)
- Kathy Bramble (Interventionist Assistant)
- Weight-Wise Volunteers
- Beverly Garcia, MPH
- Larry Johnston, MPH
- Agna, Allyson and other UNC Support Staff
- Trisha Hardy, MPH, RD
- Thomas Keyserling, MD, MPH
- Alice Ammerman, DrPH, RD
- New Hanover Community Health Center
- NC Department of Health & Human Services
- Grace United Methodist Church
- Centers for Disease Control and Prevention

# Today's Presentation

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- 1. Description of Weight-Wise**
  - Intervention
  - Study design
- 2. Women of Weight-Wise**
- 3. Main Outcomes**
  - Process Data
  - Weight Loss
  - Blood Pressure and Cholesterol
- 4. Next Steps**



**Weight-Wise**

# Weight-Wise Program



# Weight-Wise Eligibility

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## **Women who are:**

- 40-64 years of age**
- BMI of 25-45 inclusive**
- Under-insured or uninsured**
- Eligible for the Breast and Cervical Cancer Control Program (BCCCP)**
- Willing to participate in WISEWOMAN**

# Weight Loss Approach



- ❑ **Moderate reduction in calories** to promote 1 lb/week weight loss
- ❑ Increase in moderate intensity physical activity -- **150 minutes/week**
- ❑ Dietary approach based on the DASH (**Dietary Approaches to Stop Hypertension**) Eating Plan
- ❑ **Study Goal for weight loss phase = 10 lbs (4.5 kg)**

# Weight Loss Program

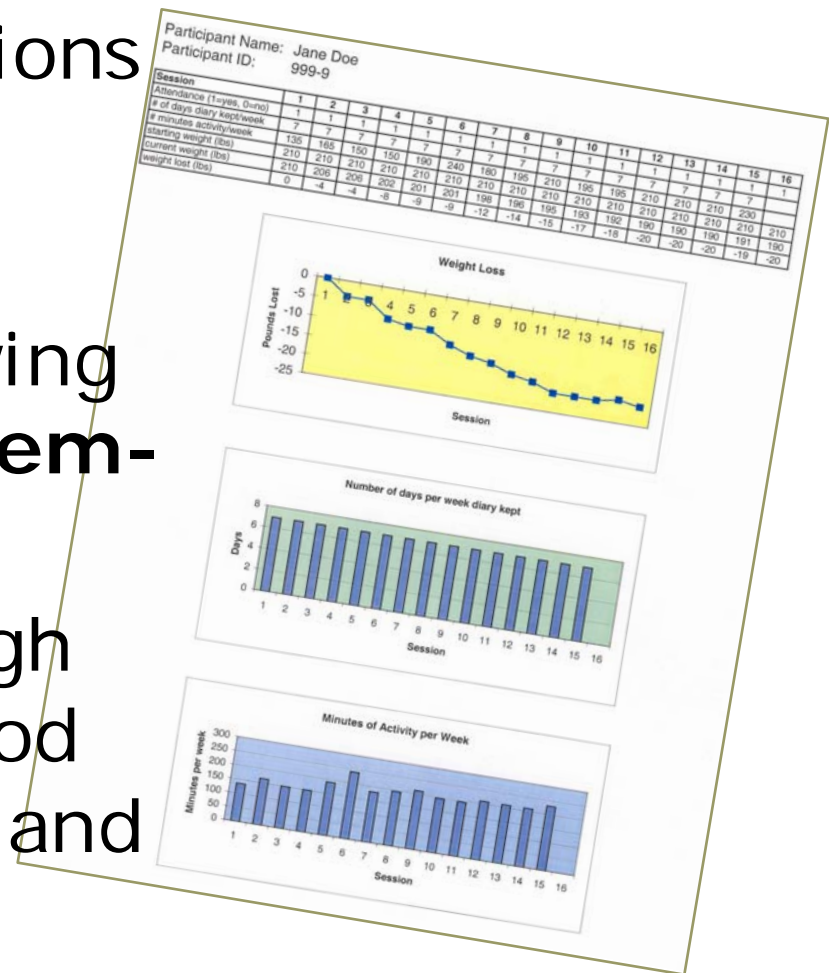
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- 16 weekly group sessions (**2 hours each**)
- Session Components:
  - Group **sharing and problem-solving**
  - **Weight control topic** – nutrition, physical activity, or behavior change
  - Demonstration and practice opportunities (PA and Nutrition)
    - **Move It** (even-numbered sessions)
    - **Taste It** (odd-numbered sessions)
- **New Leaf Manual** and group leader guides

# Key Program Components



1. 16 weekly group sessions
2. Monitoring of weight **(weekly)**
3. Motivational interviewing techniques and **problem-solving** focus
4. Self-awareness through **self-monitoring** (food and physical activity) and **feedback**





# Key Program Components



5. Social support **through group interaction**
6. Goal-setting **and** action planning
7. Incentives **for attendance and self-monitoring**



# Weight-Wise Incentives






## Weight-Wise Rewards:

- 💰 Your rewards are in “Wise Bucks” not real dollars!!!
- 💰 Earn 10 Wise Bucks(\$) each session
  - Showing up (Attendance) = \$2
  - Completing your FPAD (food record) = \$1-4
    - 5-7 days = \$4
    - 3-4 days = \$2
    - 1-2 days = \$1
  - Recording your physical activity minutes = \$1-4
    - 5-7 days = \$4
    - 3-4 days = \$2
    - 1-2 days = \$1
- 💰 Earn \$10 in **Bonus Points!**
  - Completing food records for 6-7 days with calories counted = \$5
  - Getting 150+ minutes/week of physical activity = \$5
- 💰 Spend your Wise Bucks at the 6<sup>th</sup>, 11<sup>th</sup>, or 16<sup>th</sup> group session. See list of Rewards (and ‘prices’) on back.



# Weight-Wise Incentives

## Rewards

 \$25	<ul style="list-style-type: none"> <li>▪ Folding brush with mirror</li> <li>▪ 4-way measuring spoon</li> <li>▪ Light-up whistle with key chain</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lip dip</li> <li>▪ Magnetic clip</li> <li>▪ Shoe caddy</li> </ul>
 \$50	<ul style="list-style-type: none"> <li>▪ Measuring cup</li> <li>▪ Food storage container</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mesh backpack</li> <li>▪ T-shirt</li> </ul>
 \$75	<ul style="list-style-type: none"> <li>▪ Hand weights</li> <li>▪ Stick blender</li> </ul>	<ul style="list-style-type: none"> <li>▪ Apron</li> </ul>
 \$100	<ul style="list-style-type: none"> <li>▪ Cookbook (2 choices)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Physical Activity videotape</li> </ul>
 \$200	<ul style="list-style-type: none"> <li>▪ George Foreman Grill</li> <li>▪ Bathroom scale</li> </ul>	



# Participants Walking Away the Pounds!

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**A Move It Activity**

# Hip-Hop Dancing at My Age?

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A Move It Activity

# Taste It Recipes

## Black Bean and Corn Salsa

2 ears fresh corn  
 2 medium tomatoes, peel, seed and chop  
 1 15 oz can black beans, drain and rinse  
 1 jalapeno pepper, seed and mince  
 ½ cup fresh parsley or cilantro  
 3 Tbsp lime juice  
 ¼ tsp salt  
 ¼ tsp black pepper  
 1 firm avocado, peel and chop




1. Cut corn from cob. Cook in saucepan with ½ cup water for about 5 minutes- until done but still crunchy. Drain and place in mixing bowl.
2. Add tomatoes, beans, pepper, cilantro, lime juice, salt and pepper.
3. Stir to combine, chill.
4. Stir in avocado just before serving.

**Nutrition Information Per Serving:**

Calories 126	Carbohydrates 21g	Cholesterol 0 mg
Protein 5g	Total fat 4g	Sodium 274mg

## Vegetable Lasagna



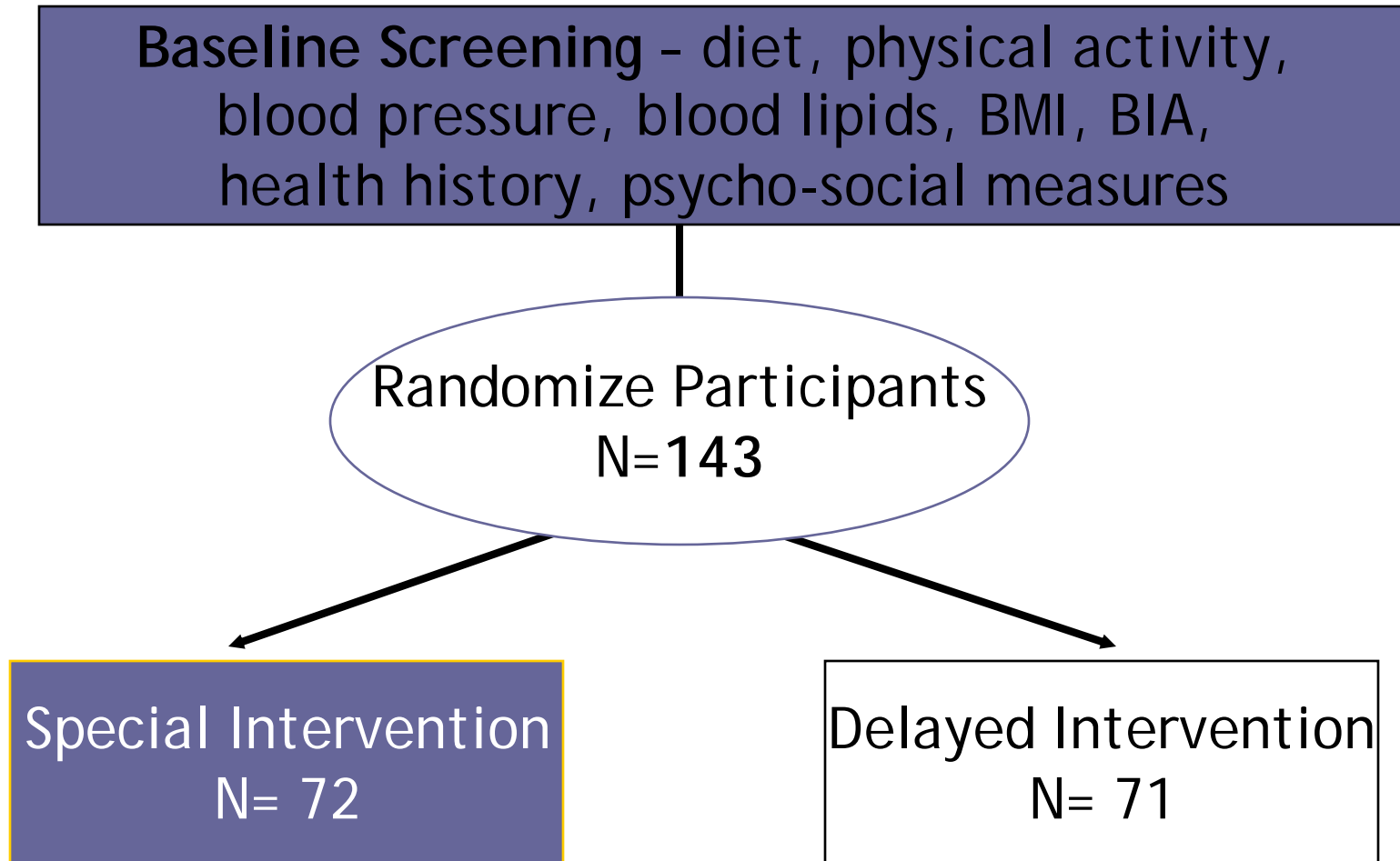
3 c. grated zucchini  
 3 c. grated carrots  
 1 T. olive oil  
 3 large eggs  
 1 c. grated Parmesan  
 2 10-oz packages frozen spinach, chopped, thawed and drained  
 2 10-oz spaghetti sauce  
 1 16-oz jar of Barilla mozzarella cheese

...nder and crisp. Then do the same thing with the carrots.  
 ...ake 1/3 of the egg mixture and add it to the zucchini, then add 1/3 to  
 ...ning 1/3 to the spinach. You will have three separate bowls of  
 ...3 pan. Place half of the noodles over the sauce. Spread with the  
 ... 1/3 of the mozzarella, the carrots, 2/3 c. of sauce, 1/3 mozzarella,  
 ...les and sauce, and cover pan with foil. Bake at 350 for 30 minutes.  
 ...e with remaining mozzarella. Bake 10 more minutes. Cool 10 minutes

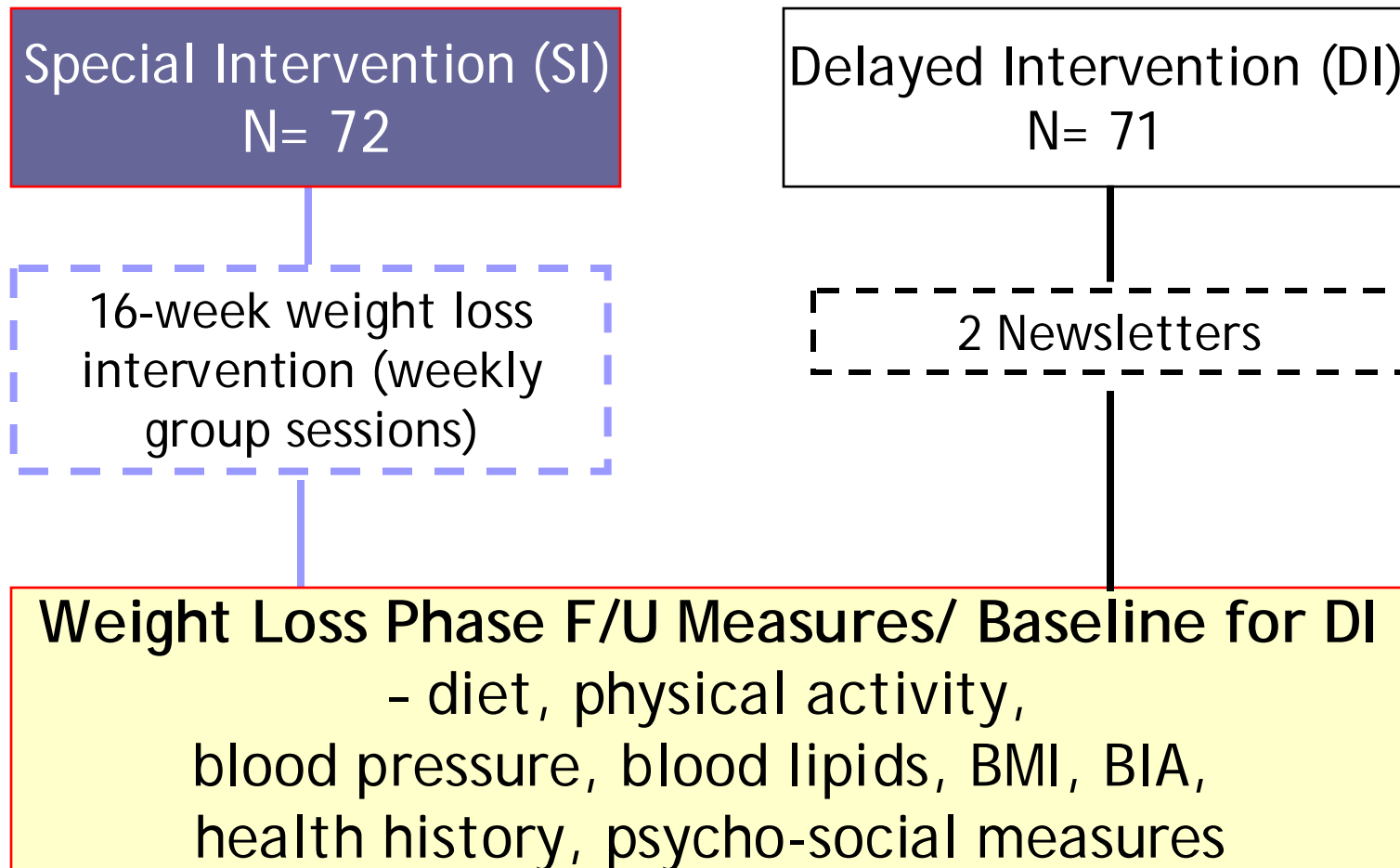
**Per Serving:**

Calories 290.5 kcal	Carbohydrates 32 g	Cholesterol 79.2mg
Protein 20.3 g	Total fat 11.5 g	Sodium 539 mg

# Weight-Wise Study Flow Diagram

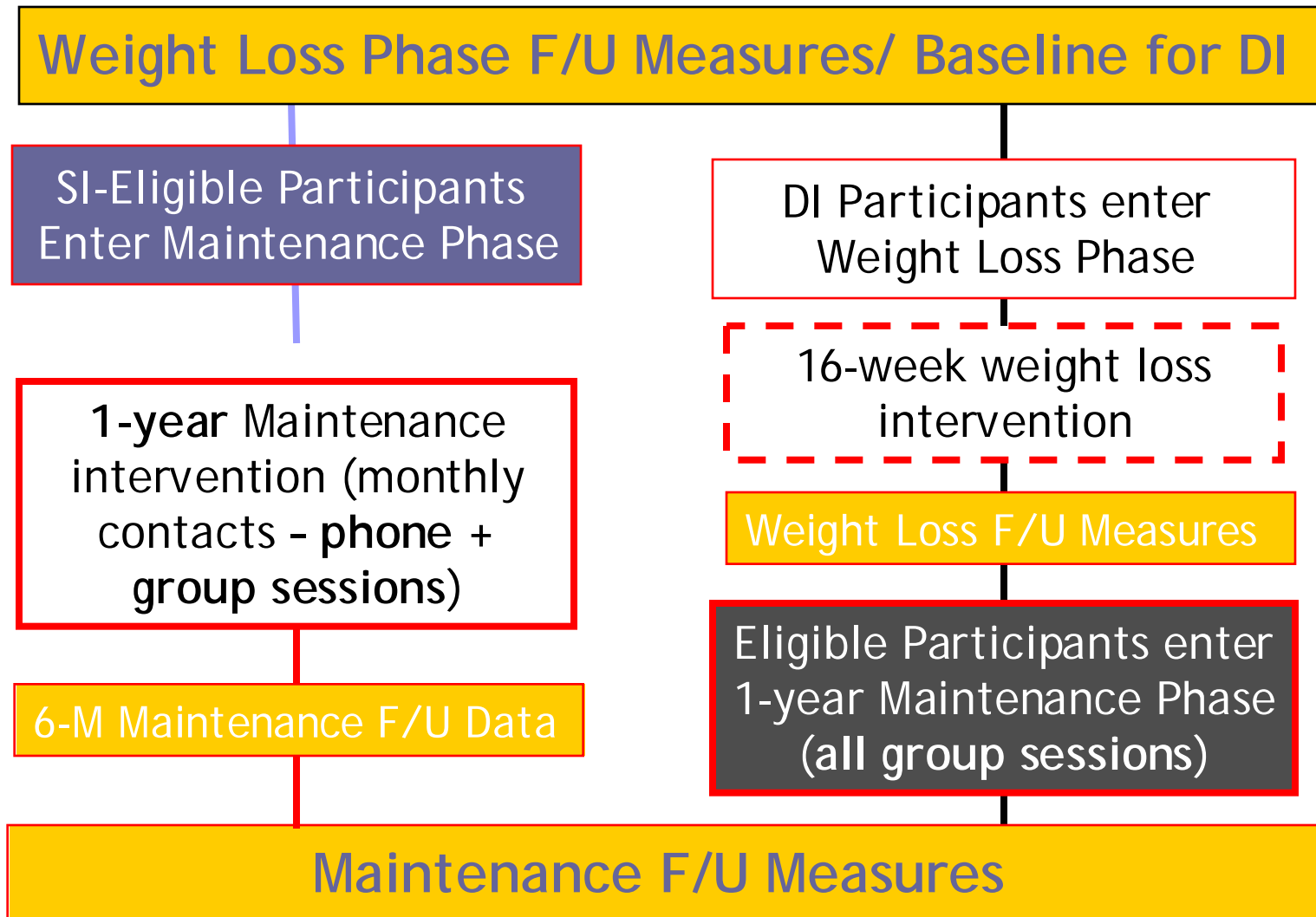


# Weight-Wise Study Flow Diagram





# Weight-Wise Study Flow Diagram



# Weight-Wise Women (N=143)

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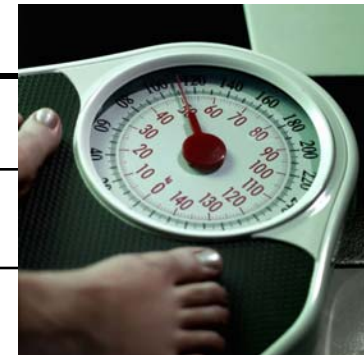
Age, y	<b>53</b>
Ethnicity, %	
Non-Hispanic Black	<b>39 %</b>
Non-Hispanic White	<b>60 %</b>
Educational attainment, y	<b>13</b>
Employed	<b>57%</b>
Annual income < \$10,000	<b>43%</b>
Uninsured (health)	<b>99%</b>

Values are means unless otherwise indicated

# Weight, Blood Cholesterol & Blood Pressure

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Weight in lbs	<b>201</b>
BMI	<b>35</b>
Blood Cholesterol, mg/dL	
Total	<b>206</b>
HDL	<b>53</b>
Systolic Blood Pressure	<b>126</b>
Diastolic Blood Pressure	<b>83</b>



N= 143; Values are means unless otherwise indicated

# Risk Factors for CVD (N=143)

Cigarette Smoker	<b>22 %</b>
Diagnosed High Blood Pressure	<b>50 %</b>
Diagnosed with Diabetes	<b>13 %</b>
High Blood Cholesterol	<b>36 %</b>
Known Coronary Heart Disease	<b>9 %</b>





# Weight-Wise Main Outcomes

# Weight Loss Findings 1

- Assuming no change from baseline for participants who were missing a follow-up weight (intention-to-treat analysis): **N=143**

Group	Mean Weight Loss (lb)	95% CI
Group 1 (SI)	8.2	6.4 – 9.9
Group 2 (DI)	+1.4	+3.2 – 0.4
Difference P < .0001	9.6	7.0 – 12.0

# Weight Loss Findings 2

- If only participants with a follow-up weight are included: **N=126**

Group	Mean Weight Loss (lb)	95% CI
Group 1 (SI)	9.4	7.4 – 11.2
Group 2 (DI)	+1.7	+3.5 – 0.3
Difference P < .0001	11.1	8.2 – 13.6

# Blood Pressure & Cholesterol\*

	Treatment (SI)	Control (DI)	Difference	P-Value
<b>Systolic BP</b>	-7.52	-0.73	<b>-6.79</b>	<b>0.008</b>
<b>Diastolic BP</b>	-4.92	-1.54	<b>-3.38</b>	<b>0.031</b>
<b>HDL-cholesterol</b>	1.11	-1.42	<b>2.53</b>	<b>0.043</b>
Total Cholesterol	-1.49	-4.90	3.42	0.516

\* N=122; adjusted for baseline values and treatment group





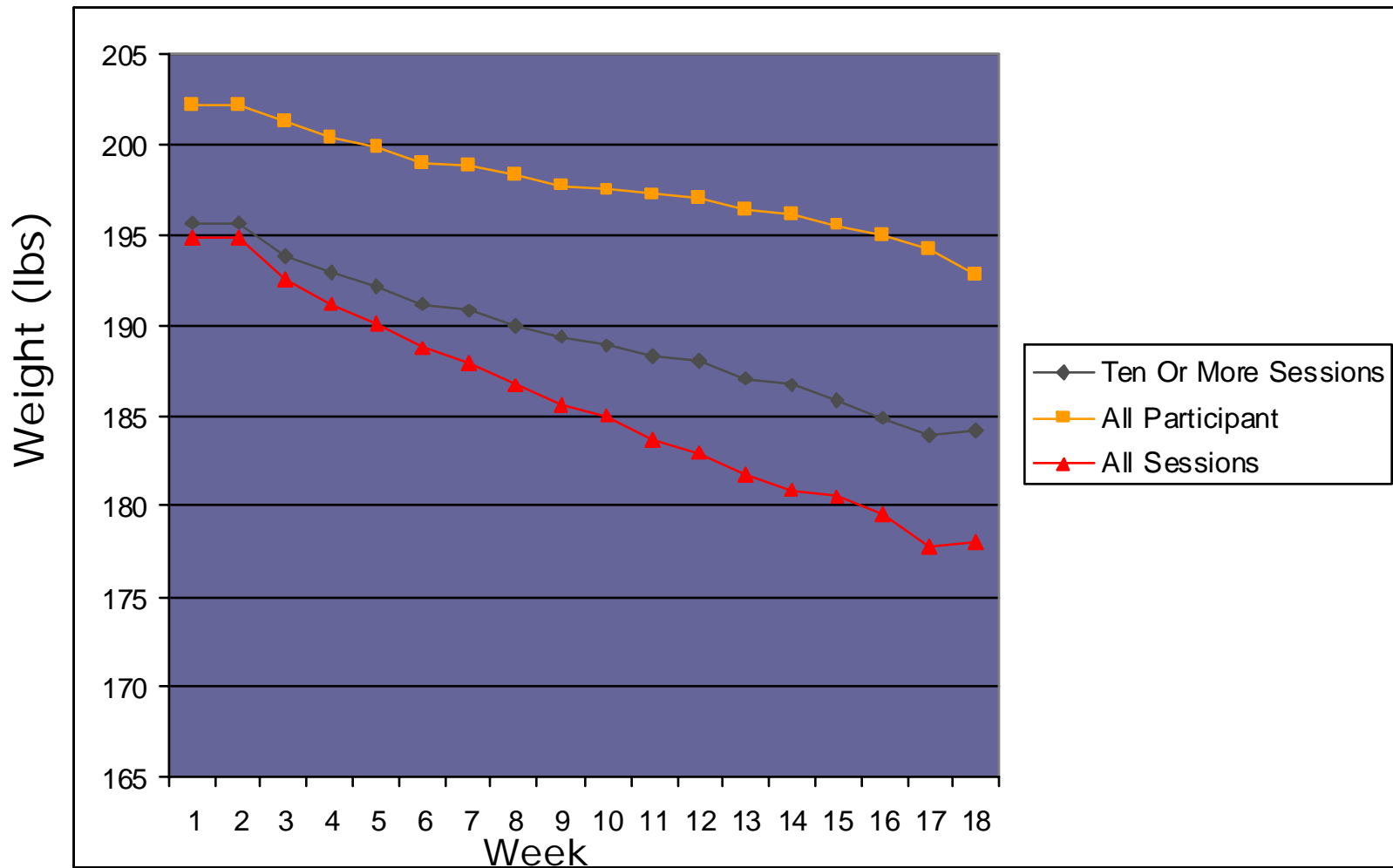
# Process Data – Attendance, Physical Activity & Food Diaries

# Process Data Summary

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- **Mean number of sessions attended**  
= 10 (SD = 6)
- **Median** = 14 sessions attended
- Average attendance of 65%
- 67% attended 8 or more sessions
- **79% of participants kept food records (4.7 days per week) and recorded PA minutes (173.6 minutes per week)**

# Attendance and Weight Loss



# Study Summary

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- ❑ Program participants lost on **average 9.4 lbs** (8.2 lbs. with imputation of missing weight data) or **4.8%** of their body weight.
- ❑ Program participants also significantly reduced their BP, and increased HDL-cholesterol.
- ❑ **54%** of intervention participants succeeded in losing at least 8 lbs. and were enrolled in a 12-month maintenance program.
- ❑ There were no significant differences in weight loss by ethnicity
- ❑ Session **attendance and family support for physical activity** were independent predictors of weight loss.
- ❑ Follow-up rates were good (**88%**)

# Did Women of Weight-Wise Keep the Weight Off?



**Weight-Wise**

# Early Maintenance Results

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- Of the 39 women in Group 1 who lost 8+ lbs ...
  - **36 completed the 1-year maintenance program and half (18)** kept at least 10 pounds (or 5% initial body weight) off
- Of the 21 women in Group 2 who lost 8+ lbs ...
  - **18 completed the 1-year maintenance program and half (9)** kept at least 10 pounds off
- Among the 126 women who completed Weight-Wise, **29% (n=36) kept 10+ pounds off after 1 year.**

# Next Steps ...

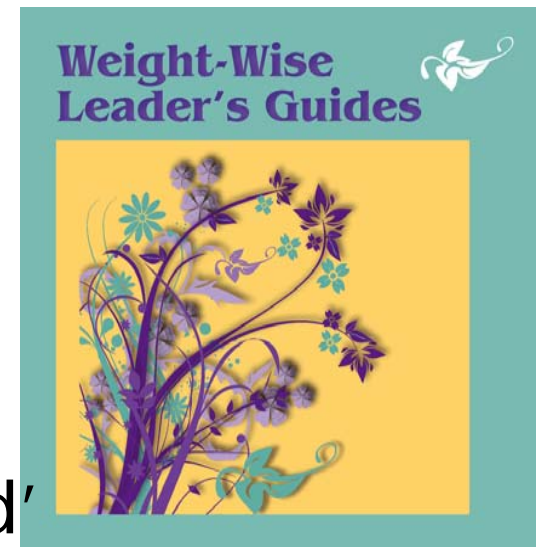
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## UNC-Center for Health Promotion

- Post **electronic version of the Leader's Guides** on website

## Translational Research

- CDC R-18 grant (2007-10)
- Weight-Wise in the 'real world'



# Questions?



Thank You!