Eat Better and Move More: A community based program to improve health behaviors among older Americans

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PURPOSE:
EAT BETTER, MOVE MORE

• Encourage older Americans who currently participate in community-based programs to take simple steps for better health.

• Collect national data & monitor outcomes from diverse populations & program types.


Encourages older Americans to make healthier choices.

Funded by Administration on Aging, US Department of Health and Human Services (grants 90AM2390 and 90AM2768)
FORMAT OF THE PROGRAM

• 12 weekly sessions, with mini-lessons, participatory activities, goal setting, take home assignments, and incentives.

• Mini-Lessons geared toward
  – making healthier food choices
    • Increasing fruits and vegetables and calcium intake
    • Adding fiber to diet
    • Sensible portions
    • Food guide pyramid
  – increasing physical activity
    • Using pedometers
    • Behavior change strategies
    • Weekly targets to increase number of daily steps by 10% per week.
PROGRAM DEVELOPMENT

• Pilot programs –
  – First, to ensure that older adults would wear step counters and keep logs
    • Pilot study in Florida and Iowa
    • 80% success in a group of 115 people aged 61-90 with multiple impairments
  – Second, to compare groups that received a guidebook, participated in educational activities including a walking program to a group that only received step counters
    • Less active participants increased steps
    • Group that only had step counters increased steps, but not as much as group that participated in full program
Eat Better Mini-Talk:

FOOD GUIDE PYRAMID

The Food Guide Pyramid helps us put together what we learned so far to Eat Better. It outlines what we should try to eat everyday. It can help us create healthy meals and diets.

The base of the Pyramid shows foods that should be eaten in the greatest number of servings daily. Breads, cereals, rice, and pasta are in this group. Try to have about six or more servings each day. Concentrate on high fiber cereals, whole grain breads, and brown rice to help reach the fiber goal.

The next groups are vegetables and fruits. The Pyramid recommends 3-5 servings of vegetables and 2-4 of fruits. Try for at least 5-6 a day combined.

As you move up the Pyramid, milk, yogurt and cheese are on one side, and meats, poultry, fish, dry beans, eggs, and nuts are on the other. Choose three milk, yogurt and cheese servings and 2-3 servings (3-7 ounces total) from the meat and beans group per day.

At the top of the Food Guide Pyramid are foods that should be used sparingly; fats and sweets. They don’t add much nutritionally. These foods should not displace healthier foods.

This may look like a lot of food, but remember we are talking about standard serving sizes, measured the way we did last week. Two slices of bread for a sandwich = 2 servings; 1/2 cup of pasta = 1 serving; a cup of rice = 2 servings. It adds up fast.

Follow the Food Guide Pyramid to reach the daily goals for fruits and vegetables, calcium, and fiber as recommended to Eat Better. As we learned in previous sessions, staying hydrated is also very important for good health.

Activities

1. Analyze a meal that was served today. Get assistance in helping to measure the quantities if needed. Determine how many servings from each of the Food Guide Pyramid groups were in the meal. Then add the other servings of other foods you usually eat to see if your day’s intake measures up to the Food Guide Pyramid.

2. Create a Food Guide Pyramid day’s diet. Ask a participant to describe a usual breakfast and write everything down. Ask another participant to describe a lunch, and write that down, and then a dinner. Check the daily totals. Assuming that these are standard serving sizes, what is missing?

Move More Mini-Talk:

ACTIVITY AT HOME & AWAY

Our official program to Move More is almost over, but hopefully we will all continue keeping track of our steps. Continue to add steps gradually, increasing by about 10% a week. If you’ve been walking with a group, keep it up.

Along with eating better, moving more is a great way to improve health and reduce risk for diseases.

We have been working together to increase our activity by adding steps each day. Activities in addition to walking will register as steps on your counter. These include dancing,shopping, getting the mail, going on errands, and sports such as housework, ping pong, shuffleboard, bocce ball, croquet, and racquet sports.

Some activities done while standing still, such as some housework and gardening, will not register on step counters, but they are still good to do. Swimming and bicycling won’t register either, but can be added to your daily steps according to conversion charts.

Let’s not forget to stretch for flexibility every day. Also remember to add other weight-bearing activities in addition to walking more.

Here are some other ideas for adding steps each day:

At home:

- Get up early and change the alarm clock instead of leaving it in the parking lot.
- Make several trips to the car to unload groceries.
- Use the stairs instead of the elevator at school.
- Encourage family and friends to walk with you to the market or stores.
- When waiting at a bus stop, walk up and down the sidewalk until the bus arrives.

Activities:

1. Ask for other ideas to add steps. Encourage a discussion about favorite new activities.

2. Calculate step goals for the next week. Write each person’s new daily step goal on the Week 11 Tips & Tasks sheet.
**Orientation to Step Counters**

**Tips & Tasks**

**What if the display is blank, black or showing irregular characters?**
- If it is blank, the battery should be replaced.
- Otherwise the LCD (liquid crystal display) is probably broken because it was dropped or directly hit. If so, you need a new step counter.

**Where should I wear my step counter?**
- It works best on your waist directly above your knees or directly below your armpit. Attach the safety leash to a belt loop or buttonhole or use a safety pin to secure the counter. Clip the counter on a belt or waistband. Make sure it is close and flat to your body. Wear the counter on the same side every day to ensure consistent measures.

**Where do I wear my step counter if I have no waistband?**
- Try attaching it to your undergarment, but make sure it is close and flat on your body.

**Will my step counter work properly in my pocket?**
- No.

**Can the step counter get wet?**
- No. It is not waterproof.

**When should I take off the step counter?**
- Take it off when bathing, swimming, and sleeping.

**I don’t think my step counter is working right. What should I do?**
- Be sure it is upright and you are wearing it as recommended. It must be vertical and closed for accurate counts. If it is still not working, ask your program facilitator for help.

**What is the display for “all day” if you wore your counter the entire day?**

At the start of each day, press the yellow reset button to set the counter to zero.

- Keep wearing your step counter everyday.
- Remember to write down your total steps each day.

### week 2

<table>
<thead>
<tr>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
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</table>
**EAT BETTER**

Use the information below to guide your food choices.

- Stick to the serving sizes:
  - 2-3 oz of cooked fish, meat or poultry
  - 1/2 cup of raw or cooked vegetables
  - 1 cup of leafy green vegetables
  - 1/2 cup of yogurt or milk
  - 1/2 cup of canned or cut up fruit
  - 1 medium size piece of fruit
  - 1 slice of bread
  - 1/2 cup of pasta or rice
- Write down how many servings of each Pyramid group you eat each day for a week.

**MOVE MORE**

- Get up... don’t use the TV remote!
- Walk to look out the window during commercials.
- Walk to places near home if it is safe.
- Return your shopping cart to the store instead of leaving it in the parking lot.
- Use the stairs instead of the elevator.
- Keep wearing your step counter everyday.
- Remember to write down your total steps each day.

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Your new step goal is __________________________

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### Week > 11

<table>
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<th>Days of the Week</th>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
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<td>Fruits, Cereals</td>
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</tr>
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</table>

### Steps

- All day
- All day
- All day
- All day
- All day
- All day
- All day

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**SAY BETTER & MOVE MORE**
Recruitment

• Announcements on websites
  – National Resource Center
  – US AoA website

• Through five Aging Network listservs

• Distributed through State Unit on Aging nutritionists and administrators to local area agencies on aging

• Targeting OAA Nutrition Program Sites
SUBJECT RECRUITMENT

• 106 applications from programs across the U.S.
• 10 chosen based on selection criteria
  – Program size
  – Participants served
  – No existing PA program
  – Geographic location
  – Ability to report data
• $10,000 grants awarded
10 COMMUNITY GRANTEEES
Older Americans Act Nutrition Programs

- Active Aging
  Meadville, PA
- Alameda County AAA
  Oakland, CA
- Citizen Potawatomi Nation,
  Shawnee, OK
- Detroit AAA
  Detroit, MI
- Township Senior Citizens Activity Center,
  E St Louis, IL

- Hillsborough County
  Tampa, FL
- Kit Clark Senior Services
  Dorchester, MA
- SE Wisconsin AAA
  Brookfield, WI
- Valley Program for Aging Services,
  Waynesboro, VA
- Senior Services of Snohomish County,
  Mukilteo, WA
TRAIN THE TRAINER METHOD

• Lead person at each site was identified
• Attendance at a 1.5 day workshop on protocol implementation and measuring outcomes
• Feedback was elicited at that time
• Biweekly conference calls and a dedicated listserv enhanced communication and follow-up
DATA COLLECTED

• Demographics
• Health conditions
• Nutrition Screening Initiative checklist
• Adaptation of Performance Outcomes Measures Project
• Food groups checklist
• Physical Activity Questionnaire
• ADL dependence
• Timed up and go test
• Health Behavior stages of change
PARTICIPANTS

- 999 Older Adults
  - ≥60 yr + Native Americans
    - 57% Caucasian
    - 25% African American
    - 5% Hispanic
    - 8% Asian
    - 5% Native American
- 81% Women; 19% Men
- Age: 74.3±7.6 yr; Oldest: 101
# NUTRITION RISK SCORES

<table>
<thead>
<tr>
<th>Risk Score</th>
<th>Low (≤2)</th>
<th>Mod (3-5)</th>
<th>High (6-20)</th>
<th>High (6-10)</th>
<th>V High (11-19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>249</td>
<td>185</td>
<td>99</td>
<td>87</td>
<td>12</td>
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<tr>
<td>n=533</td>
<td>47%</td>
<td>35%</td>
<td>18%</td>
<td>16%</td>
<td>2%</td>
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</table>

*Nutrition Screening Initiative Checklist*
# CHRONIC CONDITIONS

<table>
<thead>
<tr>
<th>Condition</th>
<th>Participants</th>
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<tbody>
<tr>
<td>High Blood Pressure</td>
<td>47%</td>
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<tr>
<td>Diabetes</td>
<td>19%</td>
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<tr>
<td>Heart Disease</td>
<td>14%</td>
</tr>
<tr>
<td>Asthma</td>
<td>6%</td>
</tr>
<tr>
<td>Impaired Hearing</td>
<td>12%</td>
</tr>
<tr>
<td>Impaired Eyesight</td>
<td>15%</td>
</tr>
<tr>
<td>Arthritis</td>
<td>39%</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>11%</td>
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</tbody>
</table>

*Older Americans 2004: Key indicators of Well-Being

**NHANES III – bolded numbers in higher proportion than NHANES population**
PHYSICAL FUNCTION / ACTIVITY LIMITATION

- 9% difficulty with basic ADLs
- 17% difficulty with instrumental ADLs
- 12% fallers (fallen in last 3 months)
- 12% use canes
- 8% knee replacement
- 4% use walkers
- 3% hip replacement
PARTICIPANT COMPLETERS

• 620/999 = 62% completed either the physical activity or nutrition component
  - 59% Caucasian
  - 25% African American
  - 4% Hispanic
  - 7% Asian
  - 6% Native American

• 82% Women; 18% Men

• Age: 74.6±7.5 yr; Oldest: 101

• Completion rates varied by site and ranged from 35-85%.
FACTORS RELATED TO ADHERENCE

• Adherence rate for walking component of program was poorer than that of nutrition component.

• There were only modest differences between completers and non-completers in the proportion of people with chronic problems such as diabetes, arthritis, heart problems, and visual problems.

• The group of people who dropped out of the walking component had higher proportions of people reporting dizziness.
FACTORS RELATED TO ADHERENCE

• Difficulty with at least 1 basic ADL or instrumental ADL
• Minority groups (Black/African-American and Hispanic/Latino)
• Living at or near poverty
• Nutritional risk
• Fear of falling
• Activity levels including
  – Baseline steps
  – Blocks walked per week.
Comparison of prevalence of BADL dependence between groups

Completed: 94
Dropped: 88

- Dependent in BADLs
- Independent in BADLs

$p=0.005$
Comparison of prevalence of IADL dependence between groups

- Completed: 88 dependent, 12 independent
- Dropped: 77 dependent, 23 independent

P < 0.0001
Comparison of having a safe place to walk between groups

![Bar chart showing comparison between groups with or without a safe place to walk.](chart.png)

- **Completed**
  - No safe place to walk: 9
  - Safe place to walk: 91

- **Dropped**
  - No safe place to walk: 15
  - Safe place to walk: 85

$p = 0.008$
comparison of prevalence of poverty between groups

completed
- poverty: 8
- not below poverty: 92

dropped
- poverty: 26
- not below poverty: 74

p<0.0001
Comparison of selected baseline factors between groups

- Nutrition risk: 2.88 (completed), 4.11 (dropped)
- Fear of falls: 1.5 (completed), 3.6 (dropped)
- Blocks walked: 10.1 (completed), 7.8 (dropped)
- Daily steps*1000: 3.17 (completed), 4.7 (dropped)
Nutrition outcomes

Percentage of participants increasing intake of food and water

![Bar chart showing the percentage of participants increasing intake of various food categories.]
PHYSICAL ACTIVITY OUTCOMES –
Results of physical activity questionnaire

• Increased blocks walked from 10 to 15 blocks per day
• Significant increase in
  – Number of stairs climbed daily
  – Overall vigorous activity
  – Weekend moderate activity
PHYSICAL ACTIVITY OUTCOMES

• Average number of steps
  – 3,110 to 4,190 Daily
  – Increased 35% from Week 2 to Week 11
  – Translates to about ½ mile daily

• Average days walked weekly
  – Increased 8 %
    • 5.7 Week 2
    • 6.2 Week 11
Number of steps walked weekly

Average Steps Walked Daily

<table>
<thead>
<tr>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
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Mean
Timed Up & Go


≤ 14 seconds = at ↓ Fall Risk
>14 seconds = at ↑ Fall Risk

Shumway-Cook A, Brauer S, Woollacott M. Predicting the probability for falls in community-dwelling older adults using the TUG test. *Phys Ther.* 2000: 80(9): 896-903
Timed Up & Go

• Of those in high fall risk category at baseline (n=113), 39% improved to low fall risk category, mean improvement was 3.65 seconds

• Average improvement = 1.38 seconds; significant (MCID unknown for this population)
Stages of change

- Not Ready Yet
- Preparing for Action
- Taking Action
- Maintaining a Good Thing for Life!
- Relapses or sliding backwards occasionally is not unusual
STAGES of CHANGE: Nutrition* Outcomes

- 56% increased >1 Stages
- 3-fold increase of those in Action stage
- 61% moved from Preparation to Action or Maintenance stages
- 6% increase in Maintenance stage

*Calcium-rich Foods
STAGES of CHANGE
Physical Activity OUTCOMES

Number of participants
• 67% increased by ≥1 Stages
• 34% increased by 2+ Stages
• 75% of those in Preparation moved to Action & Maintenance
• 21% of those in the Pre-Contemplation & Contemplation stages moved to a higher level
Eat Better & Move More

PART 2

A GUIDE BOOK for Community Programs

National Resource Center on Nutrition, Physical Activity & Aging
Florida International University

http://nutritionandaging.fiu.edu/
Eat Better and Move More Part 2

• Written in response to requests for more weekly modules
• Updated information for the revised Food Guide Pyramid and the 2005 Dietary Guidelines for Americans
  – Vitamin D, B12, and potassium
  – Limiting salt intake (DASH diet)
• Additional physical activity recommendations
  – Balance, stretching, and strengthening
  – Use of Theraband for exercise
  – Translated to Spanish
  – Continued use of pedometers
EBMM Part 2 pilot study

• 30 subjects consented, and 14 completed the 12 week intervention
  – Mean age 82±4 years
  – Increased Timed Up and Go by 2.3 seconds
  – Increased 6 minute walk test by 83 meters
  – Improved timed biceps curls by 4 repetitions
  – No change in balance tests
  – Difficult to assess changes in nutrition with such a small number of completers with little variability