Can The Obesity Curve Change?

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Physical Activity Prescription or Recommendation?
Physical Activity Prescription

- What do You Know?
- Physical Activity Range of Activities
  - Incidental/Workout
- Patient History
  - Dosage
  - Duration
  - Age
  - Gender
  - Behavioral
  - Risks
    - Cardiovascular
    - Muscular /Skeleton
Physical Activity Behavior

What is the attitude of the participants seen in the next slide?
Physical Activity Attitude and Behavior

• Your Thoughts?
Physical Activity Prescription?

Role Model

Patient observing YOU:

Message or the Messenger?

Look whose Talking?

Walk the walk?

Talk the Talk?
Guidelines For Training

- Train the way you want your body to change.
- Train regularly.
- Get in shape gradually.
- Warm up before exercising, and cool down afterward.
- Listen to your body.
- Try training with a partner.
- Train your mind.
- Keep your exercise program in perspective.
Putting Together Your Own Program

1. **Step 1.** Set goals.
2. **Step 2.** Select activities.
3. **Step 3.** Set targets for each activity:
   - intensity
   - duration
   - frequency
4. **Step 4.** Make a commitment.
5. **Step 5.** Begin and maintain your program.
6. **Step 6.** Record and assess your progress.
Principles of Physical Training

- Specificity-To develop a particular component, exercises must be performed that are specific.

- Progressive overload-When the amount of exercise (overload/stress) is progressively increased. The three dimensions of progressive overload are: frequency-how often intensity-how hard duration-how long.

- De Conditioning-The body adjusts to lower levels of physical activity the same way it adjusts to higher levels.
Achieving Progressive Overload

To achieve progressive overload, you must increase one or more of the following factors:

Intensity = How Hard
- Increase the resistance
- Increase the repetitions
- Increase the rate of speed

Duration = How Long
- Increase the time
- Increase the distance
- Increase the number of sets

Frequency = How Often
- Increase the number of workouts
Your fitness program must be specifically designed to meet your goals. For every fitness goal there are a variety of appropriate activities to choose from.

Select activities based on the principle of specificity: Only those body systems stressed by an exercise program will benefit from the training.
Choosing Activities

- Fun activity that will be interesting over time.
- Activity that will help you reach the goals you have set for yourself.
- Activity you can fit into your daily schedule.
- Plan for special requirements and costs (facilities, equipment, etc.).
- Activity conforms to your special needs and preferably one that enhances your ability to cope with your special health needs.
Assessment of Physical Activity and Fitness

- Direct Monitoring - requires behavioral observation or the use of mechanical or electronic devices, or physiologic measures such as calorimetry.
- Self-report techniques:
  - Diaries detail physical activity in a given period
  - Logs provide a record of specific activities
  - Recall surveys useful in large populations
  - Retrospective quantitative history
  - Global self-reports
Recommendations of 2007 NIH Consensus Conference

- All Americans should engage in regular physical activity at a level appropriate to their capacity, needs, and interests.
- Children and adults should set a goal of accumulating at least 30 min of moderate intensity physical activity on most and preferably all days of the week.
- For those with known cardiovascular disease, cardiac rehabilitation programs that combine physical activity with reduction in other risk factors should be more widely used.
Summary of Care: A Balancing ACT?
ABC's for Providers

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<td>B</td>
<td>Food Choices</td>
</tr>
<tr>
<td>C</td>
<td>Drug Therapy: IF lifestyle Change has not worked: (3 months of Treatment). Candidate for Surgery</td>
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Treatment of Obesity

- **Establish initial goal:** BMI below 85%tile
- **Improve diet:** Prescription for balanced hypocaloric diet or protein sparing modified fast, learn about food, cooking, label reading, tips for dining out
- **Increase exercise:** Prescription based on degree of obesity, strength training, flexibility exercises, motivation to increased activity
- **Behavioral modification:** Family behavior intervention, self monitoring, goal setting, positive role modeling, limit setting, cue elimination, relapse prevention
- **Caregivers:** Physician, Nurse, Dietitian, Exercise Physiologist, Psychologist
- **Research trials:** Medications, Surgery
Preparation for Life style Counseling

Ask Yourself:

• Are you a role model for healthy behavior?

• Do you discuss diet specifics with your patients?

• Do you discuss activity specifics with your patients?

• Do you know the contents of patient daily food plans?
Preparation for Lifestyle Counseling

Ask Yourself:

• Do you know what community resources are available to help families maintain a healthy lifestyle?

• Do you feel comfortable counseling the families on what dietary and activity modifications are safe for them to implement?
Counseling During Office Visits

![Bar chart showing counseling during office visits for physical activity, diet, and weight reduction for men and women.]

Stage 1: Prevention Plus

• Once Overweight or obesity is diagnosed.
• **Focus** is on basic healthy lifestyle eating and activity habits.
• **Goal** is improved habits and as a result improved habitus (BMI Status).
• Frequent Monitoring.

Focus is on basic healthy lifestyle eating and activity habits

- Minimize Sugar-sweetened beverages with a goal of 0**.
- Increase meals prepared at home**.
- Education and modification of portion sizes**.
- Reduction of inactive time to < 2 hours/day and if less than 2 years old to 0 time**.
- Increasing active time for children and families to >=1 hour each day**.
- Involve the whole family in lifestyle changes.
- Cultural sensitivity

** = strong evidence

Farm Subsidies USA Obesity: Apples to Soda

1995-2010 Farm Subsidies $16.9 Billion to producers of Corn Syrup products.

Taxpayers given $7.36 to buy Corn Syrup products (Soda etc)

$11cts to buy APPLES !!!!
SODA

20 Years Ago

85 Calories
6.5 ounces

Today

How many calories are in today’s portion?
SODA

20 Years Ago

85 Calories
6.5 ounces

Today

250 Calories
20 ounces

Calorie Difference: 165 Calories
Soda

- Coke glass bottle (8 fl. oz.) = 100 kcals.
- Coke can (12 fl. oz) = 150 kcals.
- Coke plastic bottle (20 fl. oz.) = 250 kcals.
- Super Big Gulp (44 fl. oz.) = 550 kcals.
- ***1 big gulp a day = 57 pounds /year!!!!
- What does the future hold??
How long will you have to work in the garden to burn those extra calories?*

*Based on 160-pound person
If you work in the garden for 35 minutes, you will burn approximately **165 calories.**

*Based on 160-pound person
PRACTICAL SUGGESTIONS

- Encourage parents to limit contribution of calories from beverages (only milk required).

- Encourage 5 a day program.

- Suggest Stoplight Diet (Epstein)

- Stress Family Commitment - entire family needs to follow new eating habits.
ADA Nutritional Guidelines

- Patients with pre-diabetes should receive individualized Medical Nutrition Therapy (MNT)
- Weight loss recommended for all overweight or obese individuals who have or are at risk for diabetes
- Physical activity and behavior modification effective for weight loss and maintenance
- Fiber 14 g/1000 kcal intake
- Saturated fat 7% with minimal fat
Cultural Openness

• Strategies
  - Follow the ABCs of Counseling
    • Active listening
    • Body language (no barriers between you and patient)
    • Caring and open mind
  - Motivational Interviewing
    • “... method of communication rather than a set of techniques. It is a fundamental way of being with & for people - a facilitative approach to communication that evokes change.”

Cultural Openness

Motivational Interviewing

• Strong evidence provider style, the way they talk, influences outcomes (Miller & Rollnick 2002)

• When patients are motivated and express verbal commitments to change, they have better treatment outcomes (Armhein et al 2004)
Motivation - it’s complicated!

I want a fitness video. Do you deliver?
The Goal:
Empower families to integrate physical fitness and optimal nutrition into daily activities to reach optimal health and wellness.
Goals of Weight Management/Treatment

• Prevent further weight gain (minimum goal).
• Reduce body weight.
• Maintain a lower body weight over long term.
Behavioral Modification

- Multidisciplinary team to teach, monitor and praise

- Reduce access to high fat, low nutrient foods

- Shop differently

- Cook healthier foods

- Avoid situations that increase food consumption
Behavioral Modification (Cont)

- Increase access to physical activity
- Decrease access to behaviors that promote inactivity
- Don’t use food as a reinforcer or to alter moods
- Practice methods for dealing with peer pressure
Weight Loss Goals

Goal: Decrease body weight by 10 percent from baseline.

• If goal is achieved, further weight loss can be attempted if indicated.
• Reasonable timeline: 6 months of therapy.
  – Moderate caloric deficits
  – Weight loss 1 to 2 lb/week
Target Weight: Realistic Goals

- Substitute “healthier weight” for ideal or landmark weight.
- Accept slow, incremental progress to goal.
  - Short-term goal: 5 to 10 percent loss, 1 to 2 lb per week.
  - Interim goal: Maintenance.
  - Long-term goal: Additional weight loss, if desired, and long-term weight maintenance.
Weight Loss Goals

• Start weight maintenance efforts after 6 months.
  – May need to be continued indefinitely.

• If unable to lose weight, prevent further weight gain.
Adolescents and young adults, both male and female, benefit from physical activity.

Physical activity need not be strenuous to be beneficial.

Moderate amounts of daily physical activity are recommended for people of all ages. This amount can be obtained in longer sessions of moderately intense activities, such as brisk walking for 30 minutes, or in shorter sessions of more intense activities, such as jogging or playing basketball for 15-20 minutes.

Greater amounts of physical activity are even more beneficial, up to a point. Excessive amounts of physical activity can lead to injuries, menstrual abnormalities, and bone weakening.
CVD Lifestyle Management: Obesity / Physical Activity

- **Obesity / weight management:** low fat – high fiber diet resulting in 500-1000 calorie reduction per day to provide a 7-10% reduction on body weight over 6-12 mos, ideal goal BMI <25

- **Physical activity:** at least 30, pref. 60 min moderate intensity on most or all days of the week as appropriate to individual

# Comparison Between Exercise Therapy and Drug Therapy

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Physical Activity Counseling Recommendations

- What do You Know?
- Physical Activity Range of Activities
  - Incidental/Workout
- Patient History
  - Dosage
  - Duration
  - Age
  - Gender
  - Behavioral
  - Risks
    - Cardiovascular
    - Muscular/Skeleton Status
Putting Together Your Own Patient Program

• Step 1. Set goals WITH the Patient.
• Step 2. Select activities: Incidental and Treatment
• Step 3. Set targets for each activity
   – intensity
   – duration
   – frequency
• Step 4. Make a written commitment in Charts.
• Step 5. Begin program.
• Step 6. Patient Records returns log and assesses progress in next appointment.
Specificity

- Your fitness program must be specifically designed to meet your goals. For every fitness goal there are a variety of appropriate activities to choose from.

- Select activities based on the principle of specificity: Only those body systems stressed by an exercise program will benefit from the training.
Choosing Activities

• Choose a fun activity that will be interesting over time.
• Choose an activity that will help you reach the goals you have set for yourself.
• Choose an activity that your current level of fitness skills will allow you to participate in fully.
• Choose an activity you can fit into your daily schedule.
• Plan for special requirements and costs (facilities, equipment, etc.).
• If you have any special health concerns, choose an activity that conforms to your special needs and preferably one that enhances your ability to cope with your special health needs.
Life Style Treatment

- **Establish initial goal:** BMI below 85%tile
- **Improve diet:** Prescription for balanced hypocaloric diet or protein sparing modified fast, learn about food, cooking, label reading, tips for dining out
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- **Caregivers:** Physician, Nurse, Dietitian, Exercise Physiologist, Psychologist
Expectations

• Patient compliance critical end points:
  • 2 weeks
    1 month
    3 month
    6 months

Best Compliance with Lifestyle Changes is?
Physician Role Model
Patient observing YOU:

Message or the Messenger?

Look whose Talking?

Walk the walk?

Talk the Talk?
Physician Physical Activity Preparation

Ask Yourself:

• Do you know how active you are?

• Let’s Find Out.
  • Have some paper and something to write with.

• We Follow HIPPA Guidelines (Personal and Confidential).
Recommendations

• Decrease Television viewing
• Decrease consumption of high fat foods
• Increase fruit and vegetable intake
• Increase moderate and vigorous physical activity
Steps to Meet these recommendations
Activities:

• Develop, and implement the Lifestyle Log
• Launched the Reach out and Play Activity
• Community Fitness Directory to Family
Evaluation Results
Family Obesity Prevention

Legislation & Policy

Media

Urban Design & Transportation Systems

Food Supply & PA Opportunities

Healthcare System

Community

Schools

Home & Family

The Child

Environmental Change

Individual Change: Knowledge, Skills, Motivation

Source: UC Berkeley Center for Weight & Health
OC Obesity Prevention Plan

- **Schools**
  - Increase consumption of fruits and vegetables.
  - Increase physical activity.
  - Increase breastfeeding ...
  - Decrease consumption of sugar-sweetened beverages and high energy dense foods.
  - Decrease television viewing time.

- **Families**

- **Employers**

- **Healthcare Providers & Insurers**

**Sports & Entertainment**
OC Public Health Activities

FIT Cities

International Walk to School

Orange County Nutrition and Physical Activity Collaborative (NuPAC)
Move More, Eat Healthy OC

Orange County NuPAC (Nutrition and Physical Activity Collaborative) is a county-wide collaborative whose mission is to lead coordinated efforts and maximize resources to decrease obesity and improve healthy eating and physical activity among OC families and communities.

MOVE MORE, EAT HEALTHY OC

Congratulations on your commitment to the county-wide, multi-year NuPAC "Move More, Eat Healthy OC" campaign. Together we can help fight obesity within the communities we live, work, and play. NuPAC recognizes this unique opportunity for facilitating a toolkit for organizations to build a healthier community. As we all know, creating a healthy community is about creating physical and policy changes to our environment. Furthermore, in this toolkit we have identified several resources by sector to assist you in helping your organization find the right programs, policies and best practices. As new resources become available, we will update this toolkit. Remember, you can always count on NuPAC if you need technical assistance or further information or resources. Thank you for your commitment and good luck!

The Move More, Eat Healthy OC Campaign was created to help OC organizations commit to specific actions that together would help address obesity in our community. The NuPAC Obesity Prevention Plan and the California Obesity Prevention Plan support six key strategies identified by the CDC that have been shown to produce positive results.

- Increase consumption of fruits and vegetables
- Increase physical activity
- Increase breastfeeding initiation, duration and exclusivity
- Decrease consumption of sugar-sweetened beverages
- Decrease consumption of high energy dense foods (foods that are high in calories but have low nutritional value)
- Decrease television viewing time

The strategies can be implemented in a variety of ways through multiple sectors. The Move More Eat Healthy OC commitment forms list activities that support these strategies.
Do you think TREATMENTS HAVE WORKED?

• **Establish initial goal:** BMI below 85%tile

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• **Caregivers:** Physician, Nurse, Dietitian, Exercise Physiologist, Psychologist

• **Research trials:** Medications, Surgery
High spirit of collaboration

- Clinician is not the “expert”
- Willing to negotiate with the patient
- Open to ideas from the patient
- Avoids persuasion
- Explores and support what the patient wants to do
- Patient is the “partner” (e.g., dancing)
High spirit of evocation

- Elicits the patients’s ideas about change
- “Curious and patient”
- Stays focused on whatever behavior change the patient is willing to do
High Autonomy/Self-efficacy

• Accepts the patients may not choose to change
• Are invested in behavior change but does not push it in order to maintain patient doctor alliance
• Reinforces ultimately any behavior change is within the realm of the patient
How is Spirit of MI different?

• Not sympathy
• No emphasis on expertise (on the part of the health provider)
• Education of the patient is not considered effective (not to be confused with Giving Information)
• Does not focus on skill-building
• Does not analyze unconscious motivations
• Not passive
Steps to Meet these recommendations
Motivational Interviewing is a method of exploring ambivalence, the dilemma of change (pros and cons) through:

✓ Open ended Questions
✓ Affirm (emphasize a strength, notice a positive action).
✓ Reflect (are statements not questions, making a guess about what the patient is meaning)
✓ Summarize
Evaluation of the Lifestyle Log and Reach out and Jump Intervention

• Utilized a time-series design with systematic chart reviews to collect information at six months prior to intervention, the point of first-intervention, and at one month, six months and 12 months post-intervention.

• Intervention was defined as the date when the lifestyle log was placed in the chart and utilized or a jump rope was first given.

• Conducted by Danielle Cameron, MPH for her MPH thesis and Wendy Slusser, MD as thesis advisor.
Evaluation of Physical Activity

• Direct Monitoring - requires behavioral observation or the use of mechanical or electronic devices, or physiologic measures such as calorimetry.

• Self-report techniques:
  – Diaries detail physical activity in a given period
  – Logs provide a record of specific activities
  – Recall surveys
  – Retrospective quantitative history
  – Global self-reports
Both male and female, benefit from physical activity. Moderate amounts of daily physical activity are recommended for people of all ages.

Amount can be obtained in longer sessions of moderately intense activities, such as brisk walking for 30 minutes, or in shorter sessions of more intense activities, such as jogging or playing basketball for 15-20 minutes.

Greater amounts of physical activity are even more beneficial, up to a point. Excessive amounts of physical activity can lead to injuries, menstrual abnormalities, and bone weakening.
Focus is on Basics:
Lifestyle and Physical Activity Habits

• Reduction of inactive time to < 2 hours

• Increasing active time for children and families to >=1 hour each day.

Counsel the Whole Family
Physical Activity Recommendations

Goal: 30 minutes 7 days/week, minimum 5 days/week

- Assess risk with a physical activity history and/or an exercise test, to guide recommendations.

- Encourage 30 to 60 minutes of moderate intensity aerobic activity such as brisk walking, on most, preferably all, days of the week, supplemented by an increase in daily lifestyle activities.

- Advise medically supervised programs for high-risk patients (e.g. recent acute coronary syndrome or revascularization, HF)
Counseling During Office Visits

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In Conclusion:
Our hope is to empower families to integrate physical fitness, optimal nutrition and emotional wellbeing into daily activities to reach optimal health and wellness.
Resources

• www.motivationalinterview.org
• http://casaa.unm.edu
  - Motivational Interviewing Treatment Integrity (coding for MI fidelity)
The shape of things to come

More to Come in Obesity Prevention

THANK YOU...
“All parts of the body which have a function, used in moderation and exercised in labours in which each is accustomed, become thereby healthy, well-developed and age more slowly, but if unused and left idle, they become liable to disease, defective in growth and age quickly.”

Hippocrates
Thank you