

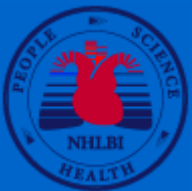
# Physical Activity: Rationale for Inclusion

- Increases energy expenditure
- Protects and builds lean body mass
- Improves psychological factors
- Reduces risk of morbidity and mortality



# Physical Activity: Impact on Comorbidities

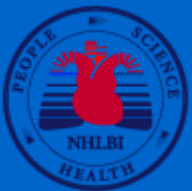
- Enhances cardiorespiratory fitness
- Improves lipid profile
- Reduces blood pressure
- Increases insulin sensitivity
- Improves blood glucose control



# Physical Activity

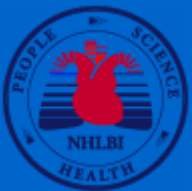
Recommended as part of a comprehensive weight loss therapy and maintenance program because it:

- Modestly contributes to weight loss  
*Evidence Category A.*
- May decrease abdominal fat  
*Evidence Category B.*
- Increases cardiorespiratory fitness  
*Evidence Category A.*



# Increase Physical Activity

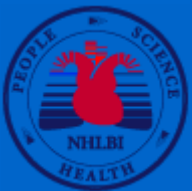
- Most important in preventing weight regain
- Health benefits independent of weight loss
- Start slowly and increase gradually
  - Can be single session or intermittent
  - Start with walking 30 minutes 3 days/week
  - Increase to 45 minutes 5 or more days/week
  - Encourage increased “lifestyle” activities



# Behavior Therapy

The routine use of behavior therapy strategies to promote diet and physical activity is recommended, as these strategies are helpful in achieving weight loss and weight maintenance.

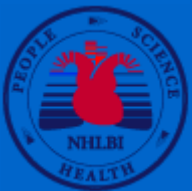
*Evidence Category B.*



# Behavior Therapy (continued)

Implementation of strategies, based on learning principles, that provide tools for overcoming barriers to compliance with diet or physical activity changes:

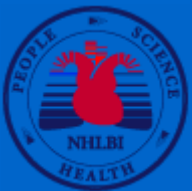
- Self-monitoring
- Stress management
- Stimulus control
- Problem-solving
- Contingency management
- Cognitive restructuring
- Social support



# Self-Monitoring

Keep records of:

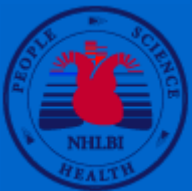
- Amount and types of foods eaten
- Frequency, intensity, and type of physical activity
- Time, place, and feelings



# Stress Management

Defuse situations that lead to overeating:

- Coping strategies
- Meditation
- Relaxation techniques

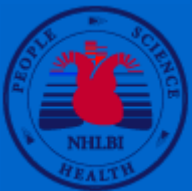




# Problem-Solving

The self-correction of problem areas related to eating and physical activity:

- Identify weight-related problems.
- Brainstorm solutions.
- Plan and implement healthier alternatives.
- Evaluate outcomes.
- Encourage patient reevaluation of “setbacks.”



# Stimulus Control

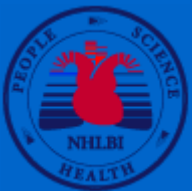
Behavior change techniques:

- Learn to shop for healthy foods.
- Keep high-calorie foods out of the home.
- Limit the times and places of eating.



# Contingency Management

Use of rewards for specific actions.



# Cognitive Restructuring

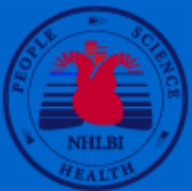
Rational thoughts designed to replace negative thoughts:

*Instead of . . .*

- “I blew my diet this morning by eating that doughnut.”

*Use . . .*

- “Well, I ate the doughnut, but I can still eat in a healthy manner the rest of the day.”



# Social Support

Maintain motivation and positive reinforcement:

- Family
- Friends
- Colleagues



## Physical Activity: Rationale for Inclusion

- Increases energy expenditure
- Protects and builds lean body mass
- Improves psychological factors
- Reduces risk of morbidity and mortality



Physical activity is an important part of weight loss treatment for the following reasons:

- It leads to increased expenditure of energy.
- It helps build lean body mass, which increases basal metabolism rate (BMR).
- It can improve an individual's psychological outlook.
- It reduces the risk of morbidity and mortality from a variety of diseases and conditions.

## Physical Activity: Impact on Comorbidities

- Enhances cardiorespiratory fitness
- Improves lipid profile
- Reduces blood pressure
- Increases insulin sensitivity
- Improves blood glucose control



## Physical Activity

Recommended as part of a comprehensive weight loss therapy and maintenance program because it:

- Modestly contributes to weight loss  
*Evidence Category A.*
- May decrease abdominal fat  
*Evidence Category B.*
- Increases cardiorespiratory fitness  
*Evidence Category A.*





There is strong A-level evidence that increased physical activity alone can create a calorie deficit and contribute modestly to weight loss.

- Efforts to achieve weight loss through physical activity alone generally produce an average of a 2 to 3 percent decrease in body weight or BMI.
- Physical activity may decrease abdominal fat.
- There is strong evidence that increased physical activity increases cardiorespiratory fitness, with or without weight loss.
- Improved cardiovascular fitness also improves the quality of life in overweight patients by improving mood, self-esteem, and physical function in daily activities.



## Increase Physical Activity

- Most important in preventing weight regain
- Health benefits independent of weight loss
- Start slowly and increase gradually
  - Can be single session or intermittent
  - Start with walking 30 minutes 3 days/week
  - Increase to 45 minutes 5 or more days/week
  - Encourage increased “lifestyle” activities



In addition to playing a role in weight loss, physical activity is most important in helping to prevent weight regain. In addition, sustained physical activity has the benefit of reducing overall CHD risk beyond that produced by weight reduction alone.

For most obese patients, physical activity should be initiated slowly, and the intensity should be increased gradually. Initial activities may be walking or swimming at a slow pace. With time, depending on progress, the amount of weight lost, and functional capacity, the patient may engage in more strenuous activities.

A regimen of daily walking is attractive.

- Patients can start by walking 30 minutes, 3 days a week, and can build to 30 to 45 minutes of more intense walking at least 5 days a week and preferably most, if not all, days.
- With this regimen, an additional 100 to 200 calories per day of physical activity can be expended. Calorie expenditure will vary depending on the individual’s body weight and intensity of activity.
- People can select lifestyle activities that they enjoy and that fit into their daily lives.

## Behavior Therapy

The routine use of behavior therapy strategies to promote diet and physical activity is recommended, as these strategies are helpful in achieving weight loss and weight maintenance.

*Evidence Category B.*



## Behavior Therapy (continued)

Implementation of strategies, based on learning principles, that provide tools for overcoming barriers to compliance with diet or physical activity changes:

- Self-monitoring
- Stress management
- Stimulus control
- Problem-solving
- Contingency management
- Cognitive restructuring
- Social support



Behavioral strategies to reinforce changes in diet and physical activity can produce weight loss in obese adults in the range of 10 percent of baseline weight over 4 months to 1 year. Unless a patient acquires a new set of eating and physical activity habits, long-term weight reduction is unlikely to succeed.

Various strategies can be used by the practitioner to modify patient behavior:

- Self-monitoring of both eating habits and physical activity.
- Stress management.
- Stimulus control.
- Problem-solving.
- Contingency management.
- Cognitive restructuring.
- Social support.

## Self-Monitoring

Keep records of:

- Amount and types of foods eaten
- Frequency, intensity, and type of physical activity
- Time, place, and feelings



The self-monitoring of eating habits and physical activity is the first of the various strategies discussed in the guidelines. With self-monitoring, observation and record-keeping are key to “objectifying” an individual’s behavior.

Patients should keep records of:

- The amount and types of foods eaten.
- The patterns of physical activity.
- The feelings, as well as the time and place associated with eating and activity events.

## Stress Management

Defuse situations that lead to overeating:

- Coping strategies
- Meditation
- Relaxation techniques



Stress management can defuse situations that lead to overeating. Some of these strategies include:

- Coping mechanisms.
- Meditation.
- Relaxation techniques.

## Problem-Solving

The self-correction of problem areas related to eating and physical activity:

- Identify weight-related problems.
- Brainstorm solutions.
- Plan and implement healthier alternatives.
- Evaluate outcomes.
- Encourage patient reevaluation of “setbacks.”



Problem-solving refers to the self-correction of problem areas related to eating and physical activity. Some of the methods that can be used are:

- Identifying weight-related problems.
- Brainstorming solutions.
- Planning and implementing healthier alternatives.
- Evaluating outcomes.
- Encouraging patients to reevaluate “setbacks.”

## Stimulus Control

Behavior change techniques:

- Learn to shop for healthy foods.
- Keep high-calorie foods out of the home.
- Limit the times and places of eating.



Another type of behavior therapy strategy is stimulus control, which is the identification of stimuli that may encourage eating. This technique may help individuals limit their exposure to high-risk situations.

Examples of these types of control mechanisms are:

- Learning to shop for healthy foods.
- Keeping high calorie foods out of the home.
- Limiting the times and places of eating.

## Contingency Management

Use of rewards for specific actions.



Contingency management is the process by which behaviors can be changed through the use of rewards for specific actions. Rewards can come from the professionals who work with patients or from the patients themselves.



## Cognitive Restructuring

Rational thoughts designed to replace negative thoughts:

*Instead of. . .*

- “I blew my diet this morning by eating that doughnut.”

*Use. . .*

- “Well, I ate the doughnut, but I can still eat in a healthy manner the rest of the day.”



Cognitive restructuring requires people to modify unrealistic goals and inaccurate beliefs about weight loss and body image to help change self-defeating thoughts and feelings that undermine weight loss efforts.

One way of doing this is to help the patient replace negative thoughts with more rationale thoughts. So, instead of a person thinking “*I blew my diet this morning by eating that doughnut,*” the person could use “*Well, I ate the doughnut, but I can still eat healthy the rest of the day.*”

## Social Support

Maintain motivation and positive reinforcement:

- Family
- Friends
- Colleagues



The last type of behavior therapy technique is the use of social support systems. A strong system of social support can facilitate weight reduction. The important thing here is to involve family, friends, or colleagues in maintaining motivation and providing positive reinforcement.