



# *ACE Personal Trainer Manual, 4<sup>th</sup> edition*

## **Chapter 4: Basics of Behavior Change and Health Psychology**

# Learning Objectives

- Based on Chapter 4 of the *ACE Personal Trainer Manual*, 4<sup>th</sup> ed., this session addresses the analysis of health behaviors and theories of behavior change.
- After completing this session, you will have a better understanding of:
  - Behavioral theory models, including the health belief model, self-efficacy, and the transtheoretical model of behavioral change
  - Principles of behavior change, including operant conditioning and shaping
  - How stimulus control can influence behavior change
  - The proper and effective use of written agreements and behavioral contracts

# Introduction

- Personal trainers spend a great deal of time designing creative exercise programs.
- Understanding the components of an exercise program is critical for all fitness professionals.
  - However, if this is a trainer's sole focus, he or she will have a difficult time establishing a solid client base.
- The ultimate success of a trainer is based on how well he or she understands each individual client.

# Health Psychology

- Traditionally, the health and medical communities focused primarily on the physiological components of disease.
- In the 1970s, health psychology emerged as a field.
  - Examines the causes of illnesses
  - Studies ways to maintain health and prevent and treat illness
  - Emphasizes the individual, resulting in a broader picture of the correlates of health and illness
- Personal trainers should understand the psychological and social components of behavior change.

# Behavioral Theory Models

- There is no simple formula to predict behavior.
- Explanations for behavior change include:
  - Examinations of people's beliefs about their health
  - Examinations of people's beliefs about their ability to change
  - A person's readiness to make a change
- Each of the following models has relevance for personal trainers.



# Health Belief Model

- The health belief model predicts that people engage in a health behavior based on the perceived threat they feel regarding a health problem.
- A perceived threat is influenced by several factors:
  - Perceived seriousness of the health problem
  - Perceived susceptibility to the health problem
  - Cues to action
    - The more people are reminded about a potential health problem, the more likely they are to take action and engage in a health behavior.

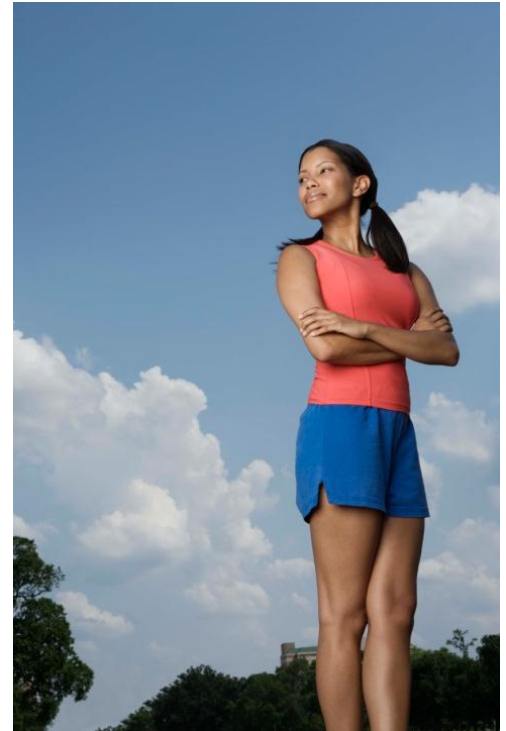


# Perception of Barriers

- According to the health belief model, a person who perceives more barriers than benefits will be unlikely to make a change.
- However, if the perceived benefits outweigh the perceived barriers, people are likely to take preventative action.
- If a person perceives little threat, successful behavior change is unlikely.
- Personal trainers should implement appropriate cues to action by:
  - Introducing health information
  - Educating
  - Focusing attention on physical symptoms

# Transtheoretical Model of Behavioral Change

- A person's readiness for change is the focus of the transtheoretical model of behavioral change (TTM).
- The TTM is separated into four components:
  - Stages of change
  - Processes of change
  - Self-efficacy
  - Decisional balance





# Stages of Change

- Precontemplation stage
  - People are sedentary and are not considering an activity program.
- Contemplation stage
  - People are still sedentary. However, they are starting to consider activity as important.
- Preparation stage
  - Marked by some physical activity, as individuals are mentally and physically preparing to adopt activity programs
  - People are ready to adopt and live active lifestyles.
- Action stage
  - People engage in regular physical activity, but have been doing so for less than six months.
- Maintenance stage
  - Marked by regular physical-activity participation for longer than six months

# Processes of Change

- The second component of the TTM entails the processes that people use to get from one stage to the next.
- Each process is based on individual decisions and mental states.
- The most effective change strategies are stage-specific interventions that target these processes.
- The general goal of any intervention should be to advance the individual to the next stage of change, as described in the table on the following slide.

# Processes of Change (cont.)

Stage of Change	Goal	Interventions
<b>Precontemplation</b>	To make inactivity a relevant issue and to start thinking about becoming active	<ul style="list-style-type: none"> <li>• Provide information about the risks of being inactive/ benefits of being active</li> <li>• Provide information from multiple sources (e.g. news, posters, pamphlets, general health-promotion material)</li> <li>• Make inactivity a relevant issue.</li> </ul>
<b>Contemplation</b>	To get involved in some type of activity	<ul style="list-style-type: none"> <li>• Provide opportunities to ask a lot of questions and to express apprehensions.</li> <li>• Provide information about exercise in general, different types of activity options, fitness facilities, programs, and classes.</li> <li>• Provide cues for actions, such as passes to nearby facilities</li> </ul>
<b>Preparation</b>	Regular physical activity participation	<ul style="list-style-type: none"> <li>• Provide the opportunity to be active as well as support and reinforcement</li> <li>• Provide clients the opportunity to express their concerns and thoughts.</li> <li>• Introduce different types of exercise activities to find something they enjoy.</li> <li>• Help create support groups of people who are also adopting exercise programs</li> </ul>
<b>Action</b>	Maintain regular physical activity	<ul style="list-style-type: none"> <li>• Provide continued support and feedback.</li> <li>• Identify potential barriers to exercise.</li> <li>• Identify high-risk individuals and situations.</li> <li>• Educate clients about relapse and things that may trigger relapse.</li> <li>• Teach skills to deal with potential barriers.</li> <li>• Plan to maintain activity during vacations and through schedule changes.</li> </ul>
<b>Maintenance</b>	Prevent relapse and maintain continued activity	<ul style="list-style-type: none"> <li>• Maintain social support from family and friends</li> <li>• Provide continued education about barrier identification.</li> <li>• Keep the exercise environment enjoyable and switch it up to fight boredom.</li> <li>• Create reward systems for continued adherence.</li> <li>• Identify early signs of staleness to prevent burnout.</li> </ul>

# Self-efficacy

- Self-efficacy is the belief in one's own capabilities to successfully achieve a task.
- There is a circular relationship between self-efficacy and behavior change.
- Therefore, self-efficacy acts as both a determinant and an outcome of behavior change.



# Self-efficacy (cont.)

- To develop an understanding of a client's self-efficacy, a trainer should ask questions about the sources of self-efficacy information.
- Specifically, through conversation, a trainer should gain knowledge about a client's:
  - Previous experience with exercise
  - Feelings and emotions associated with starting a new program
  - Expectations and apprehensions related to program involvement
  - Potential barriers for program adherence
- Client self-efficacy will continually change.



# Sources of Self-efficacy Information

- Past performance experience is the most influential source of self-efficacy information.
- Vicarious experience is important for a client who is starting a new exercise program and who has little previous experience.
- Verbal persuasion typically occurs in the form of feedback from teaching or encouragement.
- Physiological state appraisals related to exercise participation are important because a client may perceive arousal, pain, or fatigue.
- Emotional state and mood appraisals of program participation can also influence self-efficacy.
- Imaginal experiences refer to the imagined experiences (positive or negative) of exercise participation.

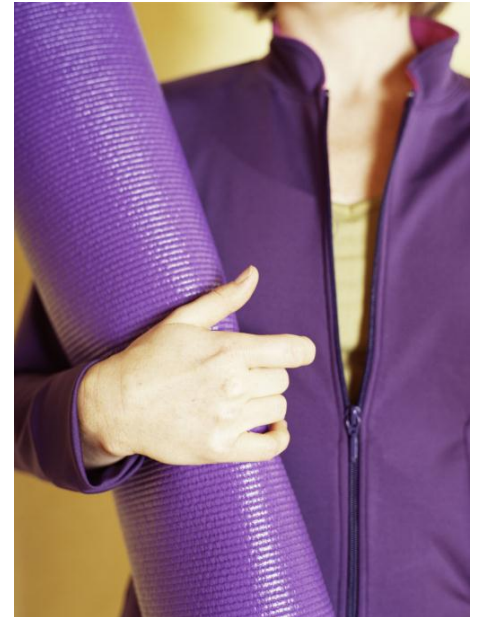
# Self-efficacy and Task Selection

- People with high self-efficacy will:
  - Choose challenging tasks
  - Set goals
  - Display a commitment to master those tasks
- In general, individuals with high self-efficacy are much more likely to adhere to a program.
- People with low self-efficacy are more likely to choose non-challenging tasks that are easy to accomplish.
  - They will display minimal effort and, if faced with too many setbacks, are likely to give up and drop out of the program.



# Self-efficacy and Stage of Change

- Precontemplators and contemplators
  - Have significantly lower levels of self-efficacy than people in the action and maintenance stages
  - This is logical, since they are not exercising or are doing so very infrequently.
  
- Action and maintenance stages
  - Are engaged in regular activity programs, thus demonstrating a belief in the ability to be active





# Developing Self-efficacy

- The most important and powerful predictor of self-efficacy is past performance experience.
- Individuals with no exercise experience will have much lower self-efficacy regarding their abilities to engage in an exercise program.
- Initial encounters with exercise are critical for promoting change.
- By influencing self-efficacy, a person may progress through the stages of change more efficiently.

# Decisional Balance

- Decisional balance is the number of pros and cons perceived about adopting and/or maintaining an activity program.
- Precontemplators and contemplators
  - Perceive more cons related to being regularly active than pros
- As people progress through the stages of change, the balance of pros and cons shifts.
- People in the action and maintenance stages
  - Perceive more pros about being active than cons
  - Their active behavior reflects a change in decisional balance.
- The worksheet presented on the following slide can be used to identify a client's decisional balance.

# Decisional Balance Worksheet

Instructions:

- Work with the client to document the gains and potential losses that he or she might experience when making a lifestyle change.
- Identify and list the recommended implementation strategies needed to achieve the gains and list coping strategies that can be used to deal with the potential losses or obstacles associated with the change.

## DECISIONAL BALANCE WORKSHEET

**Perceived gains associated with adopting desired behaviors**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

**Perceived losses associated with adopting desired behaviors**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

**Strategies to maximize potential for achieving gains**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

**Strategies to minimize potential of perceived losses**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

# Shifting Decisional Balance

- Influencing a person's perceptions about being active may help encourage activity participation.
- When working with precontemplators or contemplators:
  - Emphasize a wide variety of benefits of being physically active
  - Avoid arguing about the cons they perceive about exercise
  - Discuss benefits that are both short- and long-term
- Relapse can occur during any stage, including the maintenance stage.
- The commitment of long-term exercisers should not be taken for granted.

# Principles of Behavior Change

- Fitness professionals should never assume that starting and sticking with an activity program is easy.
- The adoption of physical activity is a complicated process.
  - Requires replacing sedentary behaviors with active behaviors
- It is the personal trainer's job to provide guidance and support to clients by influencing their attitudes, motives, emotions, and performance.

# Operant Conditioning

- Operant conditioning is the process by which behaviors are influenced by their consequences.
- It examines the relationship between:
  - Antecedents
  - Behaviors
  - Consequences
- It also examines the behavior chains that lead to certain behaviors and the avoidance of others.

# Antecedents

- Part of the learning experience is realizing the consequences of specific behaviors under certain conditions.
- Antecedents
  - Stimuli that precede a behavior and often signal the likely consequences of the behavior
  - Can be manipulated in the environment to maximize the likelihood of desirable behaviors
- This type of influence by antecedents on behavior is called stimulus control.

# Consequences

- The most important component of operant conditioning is what happens after a behavior is executed (consequence).
- Consequences fall under the categories of:
  - Presentation
  - Non-occurrence
  - Removal of a positive or aversive stimulus
- Positive reinforcement: The presentation of a positive stimulus that increases the likelihood that the behavior will reoccur in the future
- Negative reinforcement: The removal or avoidance of aversive stimuli following undesirable behavior. Increases the likelihood that the behavior will reoccur
- Extinction: Occurs when a positive stimulus that once followed a behavior is removed and the likelihood that the behavior will reoccur is decreased
- Punishment: Also decreases the likelihood of the behavior reoccurring. Consists of an aversive stimulus following an undesirable behavior. Increases fear and decreases enjoyment, so it must be used sparingly and only when appropriate.



# Shaping

- Shaping is the process of using reinforcements to gradually achieve a target behavior.
  - Begins with the performance of a basic skill the client is already capable of doing
  - Skill demands are then gradually raised and reinforcement is given as more is accomplished
- Shaping is effective because it starts with having the client execute a task at an appropriate skill level.
  - The effectiveness is based on the trainer's ability to identify the appropriate starting level.
  - If the starting point is too easy, the client will likely get bored.
  - If the starting point is too difficult, the client will likely feel discouraged.

# Observational Learning

- Environment plays a large role in a client's ability to make behavioral changes.
- Personal trainers should be aware of the exercise behaviors of the people closest to their clients.
- Trainers should encourage interactions with other people who are also physically active.



# Cognitions and Behavior

- Exercise behavior is influenced by a person's thoughts on exercise.
- Personal trainers should be aware of the types of thoughts clients have about lapses in program participation.



# Behavior-change Strategies

- Behavior-change strategies are important for both beginners and long-time exercise participants.
- A personal trainer can often identify undesirable, time-wasting behaviors that can be replaced by healthy, active habits.
- Adoption of an exercise program may potentially be triggered by emphasizing the benefits of exercise.
- However, the motives for *sustaining* a program are likely different and include increased well-being and enjoyment of activity participation.

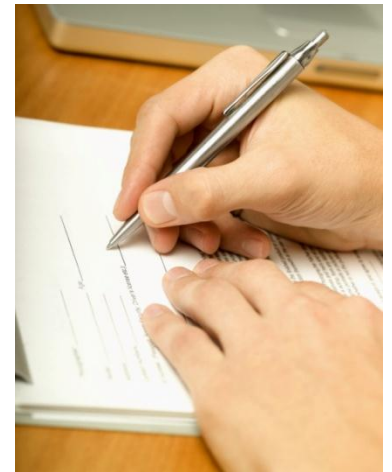
# Behavior Change Through Stimulus Control

- Stimulus control refers to making adjustments to the environment to increase the likelihood of healthy behaviors.
- Effective stimulus-control strategies include:
  - Choosing a gym that is in the direct route between home and work
  - Keeping a gym bag in the car that contains all the required items for a workout
  - Having workout clothes, socks, and shoes laid out for early morning workouts
  - Writing down workout times as part of a weekly schedule
- Another technique is to encourage clients to surround themselves with other people who have similar health and fitness goals.



# Written Agreements and Behavioral Contracting

- Written agreements and behavioral contracting can be used together or on their own.
- Written agreements should be developed first and can be between the personal trainer and the client or just by the client on his or her own terms.
- Once a written agreement has been established, an effective behavior contract should be created.
- Both written agreements and behavioral contracts should be revised and updated as goals are met and programs are modified.



# Cognitive Behavioral Techniques

- Cognitive behavioral techniques target how people think and feel about being physically active.
- The first step is to identify problematic beliefs that are barriers to change.
- The next step is to change the obstructive thoughts.
- Effective techniques include:
  - Goal setting
  - Use of feedback
  - Decision making
  - Self-monitoring

# Goal Setting

- To be maximally effective, goal setting must be included as a regular part of the exercise program.
- Clients should always be aware of what they are working toward and what it will take to get there.
- Goals should be written following the SMART goal guidelines:
  - Specific
  - Measurable
  - Attainable
  - Relevant
  - Time-bound
- Personal trainers should guide clients through the goal-setting process.



# Feedback

- Feedback can be intrinsic or extrinsic.
- Extrinsic feedback
  - Includes the reinforcement and encouragement that personal trainers give to their clients
- Intrinsic feedback
  - Long-term program adherence is dependent on a client's ability to provide internal feedback
- Personal trainers should not give too much feedback.
  - Instead, as self-efficacy and ability build, trainers should taper off the amount of external feedback they provide.
  - Clients should be encouraged to start providing feedback for themselves.

# Decision Making

- Decision making is reflective of a client's ability to choose appropriately among alternative courses of action.
- Personal trainers can teach decision-making skills by giving clients control over their own program participation.
- Trainers must provide their clients the information needed to determine the outcome of their programs.



# Self-monitoring

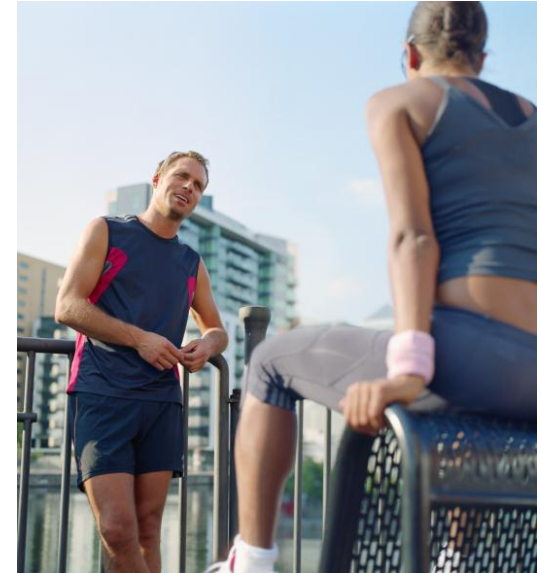
- Self-monitoring helps a client keep track of program participation and progress, or lack thereof.
- This process helps clients and trainers identify potential barriers.
- Only committed clients successfully self-monitor.
- Most effectively done in the form of journaling thoughts, experiences, and emotions related to program participation
  - The gathered information is helpful in developing an effective plan for long-term adherence.

# Implementing Basic Behavior-change Strategies

- All information that is gathered through effective communication and observation should be used in program design and implementation.
  - The client's attitudes, thoughts, and beliefs are an integral part of each training session.
- Minor adjustments and modifications should be made to training programs as needed.
- Feedback and communication should be used to make appropriate program adjustments that maximize adherence.

# Behavioral Interventions

- There are several pieces of information that trainers need from a new client.
  - Past activity experience and the client's feelings and perceptions about that experience
  - The client's social-support network
  - The clients' attitudes, opinions, and beliefs about physical activity
- Personal trainers need to establish an effective goal-setting program from the very beginning.



# Summary

- The psychological component of exercise programming is an ongoing process.
- Personal trainers should be respectful of how difficult it is to adopt and maintain an exercise program.
- This session covered:
  - Behavioral theory models
  - Principles of behavior change
  - Behavior-change strategies
  - Implementing basic behavior-change and health-psychology strategies