Human Behavior and Psychosocial Assessment

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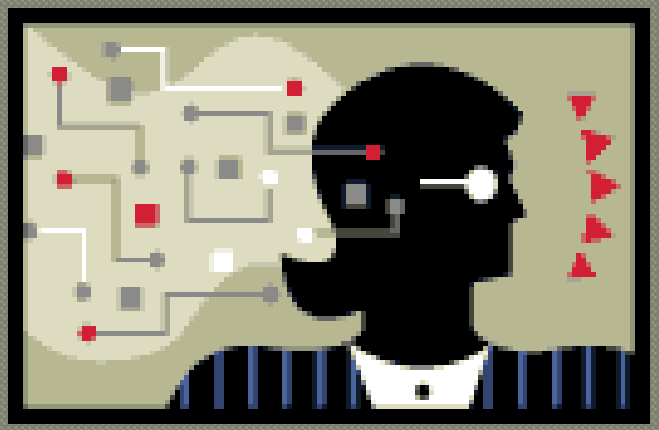
Presentation Outline

- Psychological Theories
- Application of Theories
- Understanding Variables that Influence Activity
- Counseling Tips
- Measuring Health and Behavior Change
- Common Psychological Issues

Psychological Theory



What is **Psychological Theory**?

- a set of assumptions that account for the relationships between certain variables and the particular behavior of interest
- **Explanatory theories** have been developed to help explain certain human behaviors
- **Other theories** have been developed to guide interventions, such as trying to create a change in personal behavior

Why are Physiological Theories used in Health and Fitness Settings?

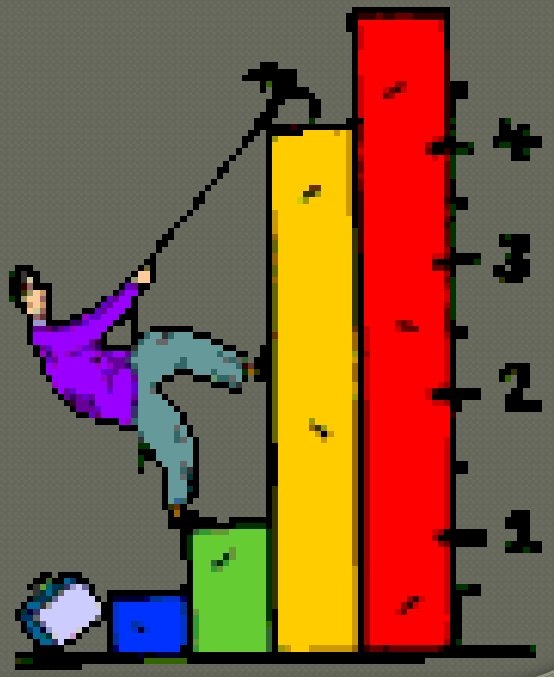
- Provide the foundation for effective use of the strategies and techniques of
  - Counseling
    - achievable goals at which success is relatively certain
  - Motivational skill-building
    - exercise adoption and maintenance.
- Provide a conceptual framework for
  - Assessments
  - Development of programs/interventions
  - Application of cognitive-behavioral principles
  - Evaluation of program effectiveness

Program Intervention Tips

- Build the skills of participants
- Correct misunderstandings
- Clarify relationships
- Negotiate and solve problems
- Establish a supportive relationship
- Provide a target date for follow-up

Cognitive-behavior principles

- Methods used within programs
  - Improve motivational skills as suggested by the assessment
    - Set several small, short-term goals to attain a long-term goal to increase self-confidence



Limitations of Theories

- Most psychological theories have been developed to explain the behaviors of individuals or small groups. They cannot always explain the behavior of larger groups
  - Communities
  - Groups of individuals with the same medical condition
- Psychological theories may leave out important elements that may influence behavior
  - Sociocultural elements
  - Age
  - Gender

Theories Used to Encourage Exercise Adoption & Maintenance & to Improve Adherence

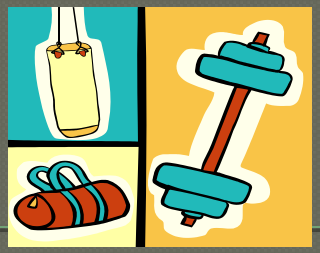
- Learning Theories
- Health Belief Model
- The Transtheoretical Model of Health Behavior Change
  - Stages of Change or Motivational Readiness
- The Relapse Prevention Model
- The Theory of Reasoned Action
  - and Its Later Extension, Theory of Planned Behavior
- Social Cognitive Theory

Learning Theory

- Proposes that an overall complex behavior arises from many small, simple behaviors.
- Possible to shape the desired behavior by reinforcing “partial behaviors” and modifying cues in the environment.

Learning Theory cont.

- **Reinforcement** is the positive or negative consequence for performing or not performing a behavior
  - 2 types of rewards
    - **Intrinsic rewards**-benefits gained because of the rewarding nature of the activity
    - **Extrinsic/External rewards**-positive outcomes received from others



Learning Theory cont.

- **External or Internal Cues** - Signal behaviors
  - Keeping gym clothes packed
- **Habitual Behaviors** – Coming home from work and watching t.v.
- **Environmental Cues** – Easy accessibility of escalator compared wit stairways
- **Internal Cues** – fatigue, boredom, “too tired” to exercise

Limitations of Learning Theory

- Reinforcements and modifying cues are more effective for adopting a behavior, not maintaining one
- Additional tools and strategies are needed for change

Health Belief Model

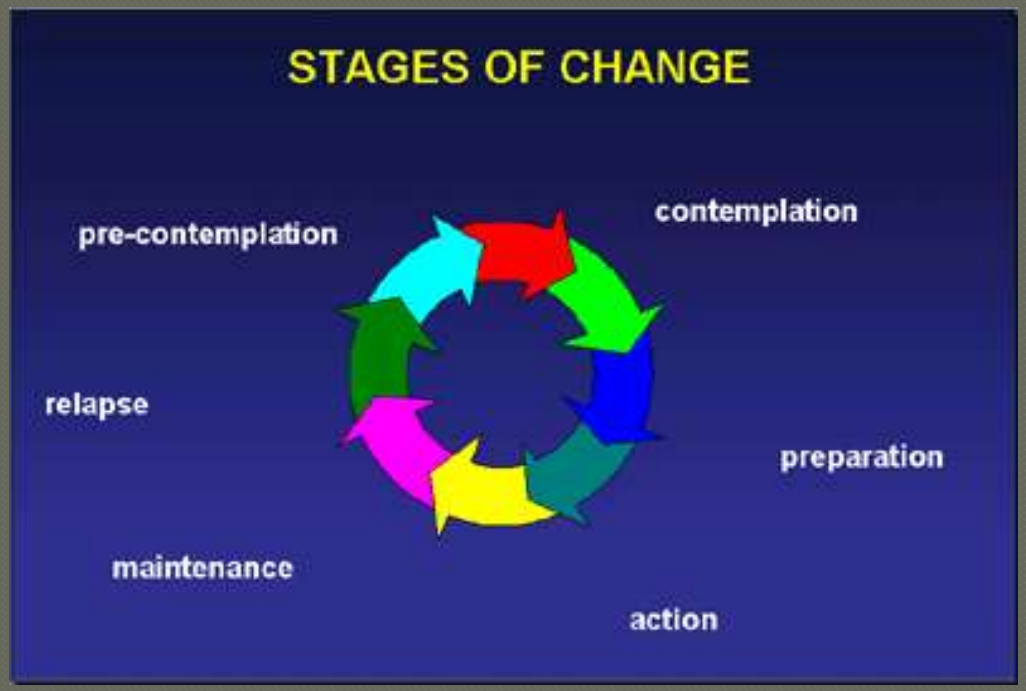
- Assumes that people will engage in exercise when:
  - They perceive threat of disease
  - They believe they are susceptible to disease
  - They believe the threat is severe
- Taking action depends on whether the benefits outweigh the barriers
- The concept of self-confidence is a major component of this model
- This model incorporates cues to action as being critical to adopting and maintaining a given behavior

The Transtheoretical Model of Health Behavior Change

- Incorporates constructs from other theories, including intention to change and processes of change
- Four basic constructs:
  1. 5 stages of change
  2. Flux along the stage continuum
  3. People use different cognitive and behavioral strategies
  4. Pros and Cons looked at with “cost-benefit analysis” to make choices

5 Stages of Change

1. Pre-contemplation
2. Contemplation
3. Preparation
4. Action
5. Maintenance



Stage I: Precontemplation

- No physical activity or exercise is occurring and the person has no intention to start within the next 6 months.
- The goal for this stage is for the client to begin thinking about physical activity.
  - Pros and Cons
  - Barriers to physical activity

Stage II: Contemplation

- No physical activity or exercise is occurring, however, there is an intention to start within 6 months.
- The goal for this stage is for the individual to begin taking steps to become more physically active.
  - Materials regarding physical activity
  - Types of activity
  - Pros and Cons
  - Barriers

Stage III: Preparation

- Participation is occurring in some physical activity, but not at the CDC/ACSM recommended levels.
- The goal for this stage is to increase physical activity to the recommended levels.
  - Moderate intensity, most days of the week, at least 30 minutes per session
  - Identifying and overcoming barriers

Stage IV: Action

- During this stage the individual is participating in physical activity that meet the CDC and ACSM recommendations but the person has not yet maintained this activity for 6 months +
- Goal of this stage is to continue to make physical activity a regular part of the client's life
  - Self Monitoring/Journal
  - Short term goals
  - Suggestions of new activity
  - Begin discussion of relapse prevention (discussed later)

Stage V: Maintenance

- Exercise or activity meets ACSM/CDC guidelines and has been occurring for 6 months +
- Goals for this stage are:
  - Prepare for future setbacks
  - Continue to increase enjoyment of activity
  - May want to include social support
    - Walking with a neighbor
    - Group activities
- May be helpful to reflect on benefits already achieved

Processes of Behavior Change

- Skills or strategies that are applied during different stages of change
- The model has numerous applications, depending on stage of readiness
- Cognitive-most efficient strategies for early stages
- Behavioral-most efficient strategies for later stages

5 Cognitive Processes

- Consciousness raising
  - Increasing knowledge
- Dramatic relief
  - Warning of risks
- Environmental reevaluation
  - Caring about consequences to oneself and to others
- Self-reevaluation
  - Comprehending benefits
- Social Liberation
  - Increasing healthy opportunities

5 Behavioral Processes

- Counter-conditioning
  - Substituting alternatives
- Helping relationships
  - Enlisting social support
- Reinforcement management
  - Rewarding yourself
- Self-liberation
  - Committing yourself
- Stimulus control
  - Reminding yourself

Using Stages of Change to adherence

- Pre-contemplation
  - Discuss benefits and what can be learned from previous attempts
  - Weigh pros and cons
  - Clients may not be aware of the risks associated with a sedentary life style or have become discouraged
  - Counseling should center on achievable goals
    - 5-10 minute walk during the work day

Using Stages of Change to adherence

- Contemplation
  - Discuss benefits
  - Help client problem solve
  - Encourage setting specific short term goals
    - Exercise for 10 minutes on one to seven specific days
- Preparation
  - Further reductions of barriers and continue building self efficacy
  - Monitor gains and rewarding achievements
  - Shaping by reinforcement

Using Stages of Change to ⇧ adherence

- Action: greatest moment of relapse
  - Avoid injury, boredom and burnout
  - Social support
    - Ask how things are going
    - Praise
  - Plan high risk relapse situations
    - Vacation, weather, sickness, increased demands on time
  - Emphasize that a short lapse can be a learning opportunity and is not failure
  - Eliminate all or none thinking

Using Stages of Change to adherence

- Maintenance: still a risk for dropping out
  - Schedule check-in appointments.
  - Continued feedback
  - Plan for high risk situations
    - Alternate activities
    - Plans to restart exercise after a lapse
    - Finding someone to exercise with
    - Lowering exercise goals after a lapse
  - Revisit benefits
    - Show how they have progressed since the beginning
  - Reassess/set new goals
  - Avoid boredom

Relapse Prevention Model

- Incorporates the identification of high-risk situations and the development of plans for coping with high-risk situations
- Important to learn how to restructure thinking to distinguish between a lapse and a relapse and to develop flexibility in the approach for attaining exercise and physical activity goals.
  - Ex: exercise routines tend to get disrupted during the holiday seasons, but reminder phone calls from a friend may encourage continued participation

Theory of Reasoned Action

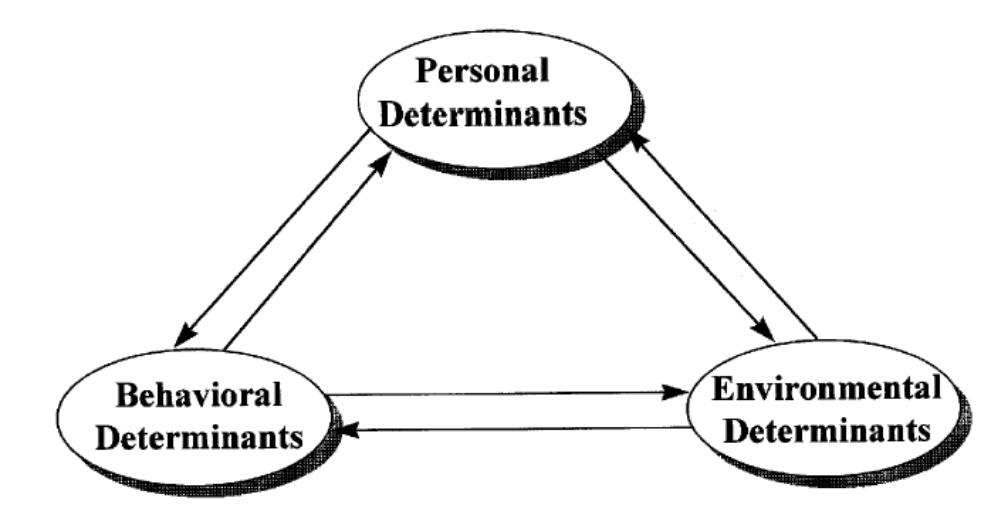
- Intention is the most important determinant of behavior
- Attitudes and subjective norms influence intention
  - Attitudes are determined by positive and negative beliefs about the outcome or the process of performing the behavior
  - Subjective norms influenced by perceptions about what others think or believe

Social Cognitive Theory

- One of the most widely used and comprehensive theories of behavioral change
- 3 major interacting influences
  - Behavioral
  - Personal
  - Environmental
- Contains several different concepts that are implicated in the adoption and maintenance of healthy behaviors and increasing and maintaining physical activity or exercise

Major Interacting Influences

- Behavior
  - Level of enjoyment
  - Intensity level of activity
  - Attainment of Benefits
- Personal
  - Family Health History
  - Current Fitness Level
  - Past experiences
- Environmental
  - Safe place to be active
  - Walking Partner
  - Enjoyable scenery



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Social Cognitive Theory

- Observational Learning
  - Implies that people can learn by watching others model a behavior and by perceiving the rewards that another person receives for engaging in that behavior
    - Vicarious Reward
- Behavioral Capability
  - The person has both the knowledge and the skill to perform the behavior
- Outcome expectations and outcome expectancies are the anticipated benefits from engaging in the behavior
  - Outcome expectations
    - What the person anticipates the outcome will be for performing the behavior
  - Outcome expectancies
    - The values of that outcome

Social Cognitive Theory

- Self efficacy
  - Confidence about performing a specific behavior
- Self-control of performance
  - Self regulatory skills when directed toward a specific goal
- Management of emotional arousal
  - Cognitive restructuring – thinking about a problem in a more constructive manor
  - Stress management techniques – controlling symptoms of emotional distress
  - Learning methods of effective problem solving

Social Cognitive Theory

- Reinforcement
  - Derived from operant learning theories
- 3 Types
  - Direct
    - Operant conditioning – verbal, i.e. “Good Job!”
  - Vicarious
    - Observational learning
  - Self-Reinforcement
    - Applied in a self-control technique

Review Book Question #1

- The cognitive theory of behavioral change includes all of the following concepts EXCEPT:
  - A: Dramatic relief (warning of risks)
  - B: Reinforcement Management (rewarding yourself)
  - C: Helping relationships (enlisting social support)
  - D: Counter-conditioning (substituting alternatives)

Referrals to Experts

Recommended Professionals

- Clinical Social Worker
- Physician
- Psychologist
- Psychiatric Nurse
- Psychiatrist
- Chaplain

Reasons for Referrals

- Existing health problems or perceived health limitations
- Psychological Issues
  - Poor coping abilities
  - Difficulty managing stress
  - Constantly overwhelmed
- Substance abuse or eating disorders
- Life crises
  - Marital difficulty or divorce
  - Financial problems or unemployment
- Symptoms for depression or anxiety

Measuring Health and Behavior Change

Psychosocial Assessment

- Establish baseline measures
- Help determine required areas of assistance
- Focus on intervention strategies
- Vital to success of cardiac or pulmonary rehab
- Compared to normative data for benchmarking
- Limited by length and complex scoring

Evaluation of Assessment Tools

- Validity
  - Face: measures what it intends to measure
  - Content: captures meaningful aspects of patient care
  - Construct: correlates with other measures of same aspects of patient care
- Reliability
- Feasibility

Health-Related Quality of Life

- Definition: the value assigned to duration of life as modified by impairments, functional states, perceptions, and social opportunities that are influenced by disease, injury, treatment or policy.
- Objective considerations
  - How important a given domain is to person
  - How satisfied person is with that domain

QOL Purpose and Objectives

- Evaluate changes over time of group or individual related to an intervention, disease progression, or other change
- Judge level of QOL over time at specific intervals to determine positive or negative change
- Cost-utility analysis
- Present summary outcome data

Generic QOL Surveys

- Benefits
  - Heterogeneous population
  - Cross-population comparisons
  - Address multiple limitations
  - Useful cost-utility analysis
- Limitations
  - Certain topics are irrelevant to individuals
  - Less responsive to disease-specific issues
  - Require numerous respondents for accurate comparisons

Examples of Generic QOL Surveys

- Nottingham Health Profile
- DUKE Health Profile
- Medical Outcomes Study Short Form (SF-36)
- Quality of Life Systemic Inventory
- Sickness Impact Profile

Disease-Specific QOL Surveys

- Benefits
  - Responsive to specific population with disease or condition
  - Focus on relevant topics
  - Address clinical manifestations
  - Measures small changes
  - Small cohort comparisons
- Limitations
  - Not sensitive to combined effects of conditions
  - Cannot compare across populations
  - Not well accepted by hospital administrators
  - Insufficient for economic evaluations

Measuring Depression, Hostility, and Anxiety

- Beck Depression Inventory II (BDI-II)
- Cook Medley Hostility
- Herridge Cardiopulmonary Questionnaire (HCQ)
- Cardiac Depression Scale
- Center for Epidemiological Studies-Depression Mode Scale (CES-D)
- Jenkins Activity Survey

Common Psychological Issues

Stress

- Level of tension people feel is placed on their minds and souls by the demands of life
- Stress response
  - Release of epinephrine and norepinephrine in preparation for fight or flight
- Physiological reactions to fight or flight
  - Increased HR, BP, VE, serum glucose, FFA mobilization, and sweating
  - Peripheral vasodilation
  - Shunting of blood to gut

Borysenko's Stress and Disease Dichotomy

AutonomicDysregulation	Immune Dysregulation
Migraines	Infection (virus)
Peptic ulcers	Allergies
Irritable Bowel Syndrome	AIDS
Hypertension	Cancer
Coronary Artery Disease	Lupus
Asthma	Arthritis

Stages of Grieving

- Denial
- Anger
- Bargaining
- Depression
- Acceptance

Significant Psychosocial Disturbance

- Inability to perform ADL's
- Significant disruption to participant's life or that of significant other
- Inability to work at normal job level
- Any symptoms of depression
- Admission to psychosocial dysfunction and reduction of social network
- Excessively high or low scores on psychometric testing, depending on survey
- Distorted perceptions of reality

Prevalence of Disorders

- Panic Disorder ~ 2.7%
- Phobias
  - Specific ~ 8.7%
  - Social ~ 6.8%
- Obsessive-Compulsive Disorder ~ 1%
- Posttraumatic Stress Disorder ~ 3.5%
- Depression ~ 6.7%
- Anorexia Nervosa ~ 0.6%
- Bulimia Nervosa ~ 0.3%

National Institute of Mental Health Statistics, 2008

Symptoms of Anxiety

- Panic attacks
- Rapid heart rate
- Sweaty palms
- Increased nervousness
- Feeling on edge
- Unable to relax
- Constant need to move body
- Rapid speech

Anxiety Disorders

- Panic Disorder
- Phobias
- Obsessive-Compulsive Disorder
- Posttraumatic Stress Disorder
- Acute Stress Disorder

Panic Disorder

- Unexpected panic attacks
- 1 month of continuous concern about recurrence of panic attacks
- Worry about implications/consequences of panic attacks
- Significant behavioral change
- Unrelated to substance or medical condition
- Sense of impending doom

Phobias

- Specific Phobia
  - Fear of clearly discernible situations such as blood, heights, or flying
  - Focus of fear tends to be possible harm
  - Involves concerns about losing control, panicking, or possibly fainting
  - Adults realize fear is excessive
- Social Phobia
  - Fear of social or performing situations
  - Adults realize fear is excessive
  - Situations tend to be avoided or endured with dread
  - Concerned with embarrassment or being judged as anxious, weak, “crazy”, or stupid
  - Elicits trembling hands and voice

Obsessive-Compulsive Disorder

- Criteria
  - Recurrent and persistent thoughts, impulses, or images causing marked anxiety
  - Thoughts, impulses, or images are not excessive worries about life problems
  - Person attempts to ignore or suppress compulsions
  - Person realizes obsessions are product of own mind
- Compulsions defined
  - Repetitive behaviors or mental acts that person feels driven to perform and applies rigidly
  - Behaviors or mental acts aimed at preventing or reducing distress

Posttraumatic Stress Disorder

- Develops after exposure to extreme traumatic stressor
  - Sexual assault, physical attack, robbery, mugging, combat, kidnapped, terrorist attack, torture, natural disaster, auto accident, diagnosed with life-threatening illness
- Response to event involves intense fear, helplessness, or horror
- Symptoms
  - Re-experiencing traumatic event
  - Sleep disturbances and nightmares
  - On edge
  - Present for > 1 month causing clinical significant distress

Acute Stress Disorder

- Development of characteristic anxiety within 1 month of exposure to stressor
- Experiences 3 of the following symptoms: subjective sense of numbing, detachment, or absence of emotional responsiveness, reduced awareness of surroundings, derealization, depersonalizatio n, or dissociative amnesia
- Re-experience trauma, avoidance of stimuli, marked anxiety, and increased arousal

Treatments for Anxiety Disorders

- Medications:
  - Anti-depressants: (panic disorder, OCD, PTSD)
  - Benzodiazepines (panic disorder, social phobia, GAD)
    - Tolerance development, dependence common
  - Beta-blockers: Propranolol (Inderal)
- Psychotherapy:
  - Exposure Therapy: specific phobias, OCD, PTSD
  - Relaxation Training: breathing exercises and biofeedback
- Evaluation and treatment of comorbid mental conditions
  - Depression, substance abuse, other anxiety disorders

Sample Question

- Which of the following are symptoms of anxiety?

A) Panic attacks
B) Increased nervousness
C) Feelings of being “on edge”
D) All of the above

ACSM Certification Review: Chapter 5: Human Behavior and Psychology: Question 25

Correct Answer: D

- Symptoms of anxiety include panic attacks (sudden episodes of fear and physiologic arousal that occur for no apparent reason), increased nervousness associated with going into crowded places , feeling“on edge” most of the time.

Symptoms of Depression

- Feeling sad > 2 weeks
- Frequent crying or tearfulness
- Frequent discomforts or pains
- Depressed or irritable mood most days
- Loss of interest in activities
- Difficulty concentrating
- Sudden change in weight
- Inability to sleep or too much sleep
- Frequent feelings of worthlessness
- Inappropriate guilt
- Frequent thoughts of death and suicide
- Withdrawal from family and society

Treatments for Depression

- Medications:
  - Selective Serotonin reuptake inhibitors (SSRIs), tricyclic anti-depressants (TCAs), monoamine oxidase inhibitors (MAOIs)
  - Prozac, Paxil, Wellbutrin, and Zoloft
  - Possible side effects:
    - Weight change, sleep disturbances may be relevant to exercise
- Psychotherapy
  - Cognitive-behavioral and interpersonal
- Electroconvulsive Therapy
  - Severe cases of depression

Eating Disorders

- Anorexia Nervosa
  - Restricting Type
  - Binge-Eating/Purging Type
- Bulimia Nervosa
  - Purging Type
  - NonpurgingType

Anorexia Nervosa

- Criteria
  - Refuses to maintain minimally normal bodyweight
  - Intensely afraid of weight gain
  - Significant disturbance in perception of body
  - Females have amenorrhea
- Restricting Type
  - Weight loss achieved through dieting, fasting, or excessive exercise
- Binge Eating/Purging Type
  - Binge eating followed by self-induced vomiting or misuse of laxatives, diuretics, or enemas
  - Purge following small amounts of food

Bulimia Nervosa

- Criteria
  - Binge eating
  - Inappropriate methods to prevent weight gain
  - Excessively influenced by body shape and weight
  - Must occur twice per week for at least 3 months
- Purging Type
  - Regularly engages in self-induced vomiting or misuse of laxatives, diuretics, or enemas
- Nonpurging Type
  - Uses fasting or excessive exercise to prevent weight gain

Substance Abuse

- Criteria
  - Consistent substance use causing failure to fulfill life obligations
  - Substance use in physically hazardous situations
  - Recurrent legal issues related to substance use
  - Continuation of substance use despite social and personal issues caused by substance use
- Alcohol Abuse is the most common form

Sample Question

- Which of the following are NOT symptoms of depression?

A) Hearing voices

B) Change in sleep patterns

C) Irritability

D) All of the above

ACSM Certification Review: Chapter 5 Human Behavior and Psychology: Question 24

Correct Answer: A

- Symptoms of depression and anxiety are serious and should be referred by a physician or professional counselor. Symptoms of depression include feeling sad for *more than a few weeks,* tearfulness, withdrawal from social activities, excessive guilt, rapid weight loss or weight gain, feelings of fatigue, changing sleep patterns, or expressions of wanting to be dead or to die