Toolbox Training: A Substance Abuse Educational Series for Mental Health Professionals

Module 1
The Addiction Complex Simplified

Unifying science, education and service to transform lives
Module 1 - The Addiction Complex Simplified

Goals and Objectives

Listed below are the goals and objectives of the module and the corresponding TAP 21 competencies.

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<tr>
<th>Module 1 Goals and Objectives</th>
<th>SAMHSA CSAT TAP Competencies</th>
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<tr>
<td><strong>The Addiction Complex Simplified</strong></td>
<td><strong>Transdisciplinary Foundations (TF)</strong></td>
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<tr>
<td><strong>Goal:</strong></td>
<td><strong>Understanding Addiction</strong></td>
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<tr>
<td>Discuss co-occurring theoretical models to include the science and recovery of addiction utilizing current research.</td>
<td>Understand a variety of models and theories of addiction and other problems related to substance use.</td>
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<tr>
<td><strong>Objectives:</strong></td>
<td>Recognize the social, political, economic, and cultural context within which addiction and substance abuse exist, including risk and resiliency factors that characterize individuals and groups and their living environments.</td>
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<tr>
<td>Provide a perspective on addiction as a disease, based upon research; Why knowing science matters: education, validation, and brain scan research; Identify key counseling theories: Psychoanalytic, Adlerian, Existential, Person-Centered, Gestalt, Reality, Behavioral, Cognitive-Behavioral, Family Systems; Theoretical preference implications.</td>
<td>Describe the behavioral, psychological, physical health, and social effects of psychoactive substances on the user and significant others.</td>
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Agenda

<table>
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<th>September 12, 2007</th>
<th>September 13, 2007</th>
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<tr>
<td><strong>Day One</strong></td>
<td><strong>Day Two</strong></td>
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<tr>
<td>8:30 am registration</td>
<td>8:30 am registration</td>
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<tr>
<td>9:00 am The Addiction Complex Simplified</td>
<td>9:00 am Basic Counseling Skills</td>
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<td>10:30 am break</td>
<td>11:00 am break</td>
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<tr>
<td>10:45 am The Addiction Complex Simplified</td>
<td>11:15 am Professional and Ethical Responsibilities</td>
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<td>Noon lunch (served)</td>
<td>Noon lunch (served)</td>
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<tr>
<td>1:00 pm The Addiction Complex Simplified</td>
<td>1:00 pm Professional and Ethical Responsibilities</td>
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<td>2:15 pm Basic Counseling Skills</td>
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<td>3:30 pm break</td>
<td>3:30 pm break</td>
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<tr>
<td>3:45 pm Basic Counseling Skills</td>
<td>3:45 pm Professional and Ethical Responsibilities</td>
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<td>4:30 pm close</td>
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Pre-session Assignments

Module 1 – The Addiction Complex Simplified


Elective articles:

Module 2 – Basic Counseling Skills


Elective article:

Module 3 – Professional and Ethical Responsibilities


Elective articles:
The Evidence- and Consensus- Based Process

What is Good Research?

**Pyramid of Research Evidence**

- **Gold Standard:**
  Multiple randomized clinical trials

- **Second Tier:**
  Consensus reviews of available science

- **Third Tier:**
  Expert opinion based on clinical observation

## Table of Evidence- & Consensus-Based Practices for Co-Occurring Disorders

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<th>Consensus-Based</th>
<th>Evidence-Based</th>
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<td>Practice Guidelines</td>
<td>Essential Program Components</td>
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<td>Techniques for Working with Clients with COD*</td>
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<td>Evidence-Based Practices for Persons with Serious Mental Illnesses</td>
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<td>Evidence-Based Practices for Persons with COD</td>
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<td>Employ a Recovery Perspective</td>
<td>Screening, Assessment, and Referral</td>
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<td>Motivational Enhancement</td>
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<td>Medical Management Approaches in Psychiatry</td>
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<td>Assertive Community Treatment</td>
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<td>Adopt a Multi-Problem Viewpoint</td>
<td>Psychiatric and Mental Health Consultation</td>
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<td>Contingency Management Techniques</td>
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<td>Family Psychoeducation</td>
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<td>Modified Therapeutic Community</td>
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<td>Develop a Phased Approach to Treatment</td>
<td>Intensive Case Management</td>
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<td>Cognitive-Behavioral Therapeutic Techniques</td>
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<td>Supported Employment</td>
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<td>Integrated Dual Disorder Treatment</td>
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<td>Address Specific Real-Life Problems Early in Treatment</td>
<td>Prescribing Onsite Psychiatrist</td>
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<td>Relapse Prevention</td>
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<td>Illness Management and Recovery Skills</td>
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<td>Plan for the Client’s Cognitive and Functional Impairments</td>
<td>Medication and Medication Monitoring</td>
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<td>Repetition and Skills-Building</td>
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<td>Assertive Community Treatment</td>
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<tr>
<td>Use Support Systems to Maintain and Extend Treatment Effectiveness</td>
<td>Psychoeducational Classes</td>
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<td>Client Participation in Mutual Self-Help Groups</td>
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<td>Integrated Dual Disorder Treatment (Substance Use and Mental Illness)</td>
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<td>Double Recovery Groups (Onsite)</td>
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<td>Mutual Self-Help Groups (Offsite)</td>
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* (with evidence base in substance abuse treatment)
Module 1 - Handout 4

Module 1 - Handout 4 (continued)

Module One

The Addiction Complex Simplified

Goal and Objectives

Discuss co-occurring theoretical models to include the science and recovery of addiction utilizing current research.

Objectives:

1. Provide a perspective on addiction as a disease, based upon research
2. Why knowing science matters: education, validation, and brain scan research
3. Identify key counseling theories: Psychoanalytic, Adlerian, Existential, Person-Centered, Gestalt, Reality, Behavioral, Cognitive-Behavioral, Family Systems; Theoretical preference implications
4. Theoretical preference implications

When science and recovery work together the results can be life-saving!

Carlton Erickson, PhD
March 11, 2003
Evidence- and Consensus-Based “Best” Practices

- What are evidence-based practices?
  - Interventions that show consistent scientific evidence of being related to preferred client outcomes.
  - The use of current and best research evidence in making clinical and programmatic decisions about the care of the client.

Consensus-Based “Best” Practices

- What are consensus-based practices?
  - Agreement regarding treatment practice achieved through the general concurrence of treatment practitioners, researchers, clients, and other experts.
  - Example—Practice Guidelines in Treating Clients with Co-Ocurring Disorders; TIP Manuals
- Consensus process is used to:
  - Determine the strength of available research evidence
  - Integrate clinician expertise and patient values in development of recommendations
The Evidence- and Consensus- Based Process

See Module 1 – Handout 1

What is Good Research?

See Module 1 – Handout 2

How are Evidence-Based Practices documented?

Gold Standard
- Multiple randomized clinical trials
Second Tier
- Consensus reviews of available science
Third Tier
- Expert opinion based on clinical observation


Table of Evidence- & Consensus-Based Practices for Co-Occurring Disorders

See Module 1 – Handout 3
Consensus-Based Practices with Evidence Based in Substance Abuse

- Motivational Enhancement Therapy
- Contingency Management
- Cognitive Behavioral Therapy
- Relapse Prevention
- Repetition and Skills Building
- Participation in Mutual Self-Help Groups
- Modified Therapeutic Communities (MTCs)

Psychoanalytic Perspective

- consists largely of using methods to bring out unconscious material that can be worked through
- working through the past – transference relationships
- focus on childhood experiences
  - techniques
    - analytic framework
    - free association
    - interpretation
    - dream analysis
    - analysis of resistance
    - analysis of transference

  training is required beyond the scope of most counselors
Psychoanalytic Perspective

- **Sigmund Freud**
  - Struggle between the life and death instincts at the heart of human nature
  - Dynamics of the unconscious and its influence on behavior
  - The role of anxiety: motivates us to do something
  - Personality structure is divided into components
    - **Id**: biological, ruled by pleasure
    - **Ego**: psychological, governs/controls/regulates
    - **Superego**: social, moral code, good/bad/right/wrong
  - The development of personality at various life periods
    - **Oral**: first year of life, basic needs—oral fixation; mistrust, rejection
    - **Anal**: 1-3yrs, learning independence, personal power, expression
    - **Phallic**: 3-6yrs, unconscious sexual desires
    - **Latency**: 6-12yrs, interest in school, sports, etc.; socialization
    - **Genital**: 12-18yrs; sexual energy revived; friendships, preparing career

- **Erick Erickson**
  - broadened the developmental perspective beyond early childhood
  - establishing balance between ourselves and our social world – biosocial approach
  - crisis is equivalent to a turning point (forward or regression)
  - focus on the ego and developing strength and ways to deal with life tasks
  - personality stages (oral, anal, phallic, latency, genital) are social based
## Psychoanalytic Perspective

**Carl Jung**  
- Focuses on the psychological aspect of personality development during midlife  
- Views humans positively  
- Focuses on individuation  
- Spiritually focused on meaning of life  
- Constant development, growth and moving toward a balanced and complete level of development

**Limitations**  
- Lack of ego strength needed for change; biological predisposition  
- Great responsibility placed on parenting (mothers)  
- Cost—time and money devoted to five plus years of therapy

**Contributions:**  
- Conceptual framework for looking at behavior  
- Useful to understand and work with the past as it pertains to the current life  
- Value and role of transference  
- Overuse of ego defenses can keep clients from functioning effectively  
- Understanding role of early childhood development  
- Understanding resistances  
- Unfinished business can be worked through  
- Understanding the major tasks and crises of each stage of development
Adlerian Perspective

- **Alfred Adler**
  - Basic goal is to help clients identify and change their mistaken beliefs about life and thus participate more fully in a social world.
  - Assumes that people are:
    - motivated by social factors
    - responsible for their own thoughts, feelings, and actions
    - impelled by purposes and goals
  - looking more toward the future than the past
  - People need to understand and comfort basic mistakes
  - The role in the family is an important factor
  - Cooperative therapy between clinician and client
  - The therapeutic relationship

Adlerian Perspective

- **Limitations**
  - Difficult to empirically validate the basic hypotheses
  - Detailed exploration of early childhood, early memories, and dynamics within the family

- **Contributions:**
  - Working out an action plan to make changes in life
  - People are social, goal-seeking decision makers
  - Subjectively understanding the unique world of an individual
  - Sensitive to cultural and gender issues
  - Clinicians have a great deal of freedom in working with their clients and they are not bound to specific procedures (clinical judgment, cognitive and action-oriented techniques—client’s are individuals first).
  - The Therapeutic Relationship
Existential Perspective

- **Viktor Frankl, Rollo May**
  - Philosophical approach that influences the counselor/client therapeutic process
  - We are not the victim of circumstances because to a large extent we are what we choose to be
  - Therapy: encourage clients to reflect on life, recognize the range of alternatives and decide among them (self-awareness)
  - A process of searching for the value and meaning in life
  - Focuses on individual world view
  - People are faced with the anxiety of choosing to create and identify in a world that lacks meaning.

Existential Perspective

- **Limitations**
  - lacks a systematic statement of the principles and practices of psychotherapy
  - lacks rigorous methods
  - concepts are abstract and difficult to apply in practice
  - highly focused on the philosophical assumption of self-determination, which does not take into account social identities (ethnic minority)

- **Contributions**
  - the person is the central focus
  - emphasis on the human quality of the therapeutic relationship
  - individuals freedom to redesign his or her life by choosing awareness; assuming personal responsibility
Person-Centered Perspective

- **Carl Rogers** (branch of existential)
  - vast potential for understanding self, resolving own problems without therapist's direct intervention, and are trustworthy
  - Capability of self-directed growth; can understand what causes unhappiness and can construct change
  - Therapist role is to be, rather than to do something:
    - genuine/realness/congruence
    - unconditional positive regard (acceptant and caring)
    - accurate empathetic understanding
  - Focuses on the person, rather than methods or the person's problem;
    - assists person with personal growth to deal with problem
  - Each of us has within us by nature a potential that we can actualize and through which we can find meaning.
  - Innate striving for self-actualization

Limitations
- Therapists tend to be supportive of clients without being challenging diminishing the value of power distribution
- Limited techniques: attending and reflecting
- Therapist training: more emphasis on the attitudes of the counselor
- all individuals may not have within them a growth potential or ability to trust their own inner directions

Contributions:
- Stated concepts as testable hypotheses and was submitted to research
- nondirective counseling
**Gestalt Perspective**

- **Fritz Perls** (existential/phenomenological approach)
  - Based on the premise that people must find their own way in life and accept personal responsibility if they hope to achieve maturity
  - Therapist do not aim to change their clients, rather assist in:
    - experiencing all feelings
    - Avoid interpretations and focus on clients behavior
    - Technique based
    - Client self-awareness
    - stresses the “here and now”
    - Role of unfinished business or unexpressed feelings (rage, pain, anxiety, guilt, abandonment)

- **Limitations**
  - De-emphasis of the cognitions (thinking)
  - not for all clients (abuse history)
  - dangerous as a result of the therapists power to manipulate the client through techniques

- **Contributions:**
  - action approach which brings conflicts and struggles to life
  - pays attention to verbal and non-verbals
  - compassionate confrontation
  - perspective on growth and enhancement, not merely a system of techniques
  - working in the “here and now”
  - creative

- **Contributions:**
  - pays attention to verbal and non-verbals
  - compassionate confrontation
  - perspective on growth and enhancement, not merely a system of techniques
  - working in the “here and now”
  - creative
Control/Reality Perspective

- William Glasser
  - rejects the medical model; illness does not happen to us rather it is a behavior we choose to control our world
  - clients live in an external and internal world
  - counselors function is a teacher or model
    - What clients are able and willing to do in the present to change behavior
    - focus on personal responsibility and gaining control
    - total behavior
      - Doing; active behavior
      - Thinking; generating thoughts and self statements
      - Feeling; such as anger, joy, pain, anxiety
      - Physiology; real or psychosomatic
  - clients have psychological needs for belonging, power, freedom and fun

Limitations

- de-emphasis on the counseling process, the unconscious, the power of the past and the effect of traumatic experiences
- Does not take into account the unconscious
- Vulnerable to the counselor who assumes the role of an expert in deciding for others; therefore counselors unaware of their own need to “fix people” can cause harm by influencing clients to accept their view as reality.

Contributions:

- Short-term focus dealing with conscious behavior
- Contract approach; punishment and blaming is a basic reality
- Psychosis can be related to unfulfilled needs
  - an inability to figure out satisfying behavior and therefore turn to living with distortions.
Behavior Perspective

- **Arnold Lazarus**
  - Interplay between individual and environment
  - Emphasis on specific goals at the onset of the therapy
  - Based on scientific method
  - Deals with clients' current problems
  - Clients are expected to engage in specific actions to deal with problems
  - Therapist uses: summarization, reflection, clarification, and open-ended questioning; they systematically attempt to get information about the dimensions and consequences of the problem
  - Role model
  - Therapy is a collaborative partnership: clients are informed, clients are trained to initiate, conduct, and evaluate their own treatment
  - Three major areas of development:
    - Classical conditioning: respondent behavior are elicited (Pavlov's)
    - Operant conditioning: actions that operate on the environment to produce consequences (most responses we have throughout the day)
    - Cognitions; increasing attention to the thoughts which influence behavior
Behavior Perspective

- **Limitations**
  - Changes behaviors but does not change feelings
  - Ignores importance of relational factors
  - Does not provide insight
  - Treats symptoms rather than causes
  - Involves control and manipulation by the therapist

- **Contributions:**
  - Cognitive factors and subjective reactions of people to the environment
  - Systematic behavioral techniques: relaxation, systematic desensitization, modeling, assertion, self-management programs, technical eclecticism
  - Ethical accountability: therapy does not dictate whose behavior or what behavior should change
Cognitive-Behavior Perspective

- Albert Ellis, Aaron Beck, Donald Meichenbaum
- REBT: thinking, judging, deciding, and doing
- emotions stem mainly from beliefs, evaluations, interpretations and reactions to life situations.
- therapeutic process allows clients to apply principles of change
- skill building
- active directed techniques: dispute beliefs, change language, humor, imagery, role playing, desensitization, self-talk, self-observation
- challenge belief system; self-awareness
- therapeutic relationship; collaborative relationship between client and therapist; teacher and role model
- the premise that psychological distress is largely a function of disturbances in cognitive processes
- a focus on changing cognitions in order to produce desired changes in affect and behavior
- time-limited and educational focusing on specific and structured target problems
- emphasize homework assignments
- responsibility is on the client to assume an active role
Cognitive-Behavior Perspective

- **Limitations**
  - Does not encourage clients to address unfinished business
  - Personal warmth, liking for the client, empathy, personal interest or caring are not essential ingredients for effective therapy
  - Transference: false connection between therapist and client
  - Less concerned with unconscious factors and ego defenses
  - Confrontational therapy (advantages and disadvantages)

- **Contributions:**
  - Self responsibility in maintaining self-destructive ideas and attitudes
  - Emphasis on putting newly acquired insights into action
  - Teaches clients to carry on their own therapy
  - Comprehensive and eclectic therapeutic practice
  - Encourages self-help

Family System Perspective

- Murray Bowen, Virginia Satir, Carl Whitaker, Salvador Minuchin, Jay Haley, Cloe Madanes, Tom Anderson, Michael White

  - Cause of problem understood by viewing the role of the family
  - Unresolved emotional fusion to one’s family
  - Emotionally detached therapist, teacher, model, coach
  - Here-and-now interactions between family members
  - Techniques: family mapping, enactments, reframing
Family System Perspective

- **Limitations**
  - Client may be lost in the system and language (dyads, triads, functional, dysfunctional, stuck, enmeshed, disengaged)
  - More research needed

- **Contributions**:
  - Neither the individual nor the family are blamed for a particular dysfunction
  - The family is empowered
  - Understanding the individual within a system

Integrative Perspective

- Creating an integrative stance is truly a challenge
- It does not simply mean picking bits and pieces from theories in a random and fragmented manner
- It is important to ask which theories provide a basis for understanding thoughts, feelings, and behavior
- Must have an accurate in-depth knowledge of each theory—you cannot integrate what you don’t know
- It is an art to when, where and why to use a particular intervention
- A long-term venture !!!
- **CAUTION – DO NO HARM**

Group Exercise:

Journal Article Review
Journal Article Review

**Required Reading:**

**Optional Reading:**

Biology

The Biology of Addiction / Dependence

Addiction is a disorder that involves complex interactions between a wide array of biological and environmental variables.

In some ways, addiction has been an overused term. (For example, “I am addicted to shoes.”) A more medically accurate term is **dependence**.

Addiction is a Brain Disease

- **Dependence is a Brain Disease** BECAUSE:
  - Using drugs over time changes brain structure and function
  - There are chemical malfunctions at a cellular level
- Long-lasting brain changes effect
  - Cognitive functioning
  - Emotional functioning
Addiction is a Brain Disease

- Addiction is a brain disease
  - addicted brain is different from the non-addicted brain
  - Prolonged drug use causes pervasive changes in brain function

Image from:

Addiction can be a Chronic Medical Illness

- Because there is a biological cause of addiction, researchers advocate, it should be:
  - Screened for by Primary Care Doctors &
  - Treated on a follow-up basis, similar to:
    - Diabetes
    - Hypertension
    - Heart Disease
    - Depression


The Brain

See Module 1 – Handout 4

Image from:

From NIDA – Pleasure Pathway

See Module 1 – Handout 4

From brain imaging, it is shown that addiction is related to the reward, or pleasure pathway, part of the brain.

Image from:
Parts of the Brain And What They Do

See Module 1 - Handout 4

Image From:

Neuron (nerve cell)

- Basic signaling unit of brain
- Precise connections allow for different actions
  - Neurons
  - Sensory receptors
  - Muscles

Image From:

Neuron

Neurons have specialized projections called dendrites and axons.

Dendrites bring information to the cell body and axons take information away from the cell body.

Information from one neuron flows to another neuron across a synapse.

For communication between neurons to occur, an electrical impulse must travel down an axon to the synaptic terminal.

Image From:
**Synaptic Transmission**

- Neurons communicate via electrical and chemical signals
  - Electrical signal converted to a chemical signal – neurotransmitter
  - Electrical signal within a neuron is an action potential
  - Wave-like flow of ions (electrical impulse) down axon
  - Transient depolarization of axon


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**Reward**

Functional neuroimaging can identify the brain regions that are activated during the execution of a task.


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**Research**

Research: PET and MRI scans
- Positron Emission Tomography (PET scan)
  - diagnostic examination that involves the acquisition of physiologic images based on the detection of radiation from the emission of positrons.
  - positrons are tiny particles emitted from a radioactive substance administered to the patient.
  - subsequent images of the human body developed with this technique are used to evaluate a variety of diseases.
- Magnetic Resonance Imaging (MRI scan)
  - uses magnetism to build up a picture of the inside of the body instead of X-rays.

PET and MRI scans are an important part in the diagnosis of cerebral disorders and also in understanding the causes of brain diseases and how they can be treated.


Nora D. Volkow, MD
Nora D. Volkow, MD is the director of the National Institute on Drug Abuse (NIDA). Prior to this she was associate director for life sciences at Brookhaven National Laboratory (BNL), director of nuclear medicine at BNL, and director of the NIDA-Department of Energy Regional Neuroimaging Center at BNL. She was also professor at the Department of Psychiatry and associate dean for the medical school at State University of New York at Stony Brook.

Her research investigates the mechanisms underlying the reinforcing, addictive, and toxic properties of drugs of abuse in the human brain. She was the first to use imaging to investigate the neurochemical changes that occur in the human brain during drug addiction. More recent studies have employed imaging to investigate the effects of stimulant drugs, and to examine changes that occur with aging in the dopamine system.
Research
- PET allows researchers to visualize in living human beings the damage to the brain that results from chronic excessive alcohol consumption.
- This technology has been used to analyze alcohol's effects on various neurotransmitter systems as well as on glucose metabolism and regional blood flow in the brain.
- Such analyses have detected deficits in alcoholics, particularly in the frontal lobes, which control numerous cognitive functions, and in the cerebellum, which controls voluntary movements.
- In addition, PET is a promising tool for monitoring the effects of alcoholism treatment and abstinence on damaged portions of the brain.
- Finally, PET may be able to help researchers develop new medications targeted at correcting the chemical deficits found in the brains of people with alcohol dependence and alcohol abuse.

Summary
- Must have an accurate in-depth knowledge of each theory—you cannot integrate what you don’t know
- Evidence- and Consensus-Based “Best” Practices
- Biology science and recovery must work together
- Clinicians’ validation through research demonstrates addiction is a brain disease and assists in treatment and continued funding.