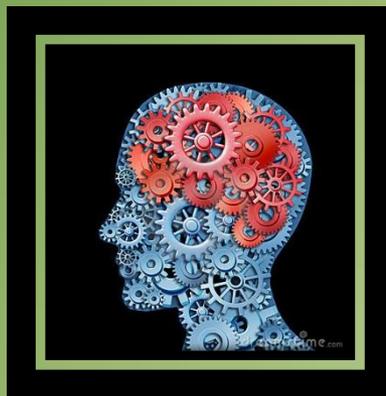


# Children's Justice Initiative

**Zealous Advocacy in CHIPS Cases:**

**What Parents' Attorneys Need to Know to Effectively  
Advocate for their Clients**

**Day 1 - May 15, 2013**



## Brain Chemistry of Addiction

**Presented by:**

**Carol Ackley LADC**

**River Ridge Treatment Center**

**(952) 894-7722**

# **AMA stated alcoholism was a disease in 1956**

- Equal opportunity disease
- No one is immune
- Some people are much more vulnerable

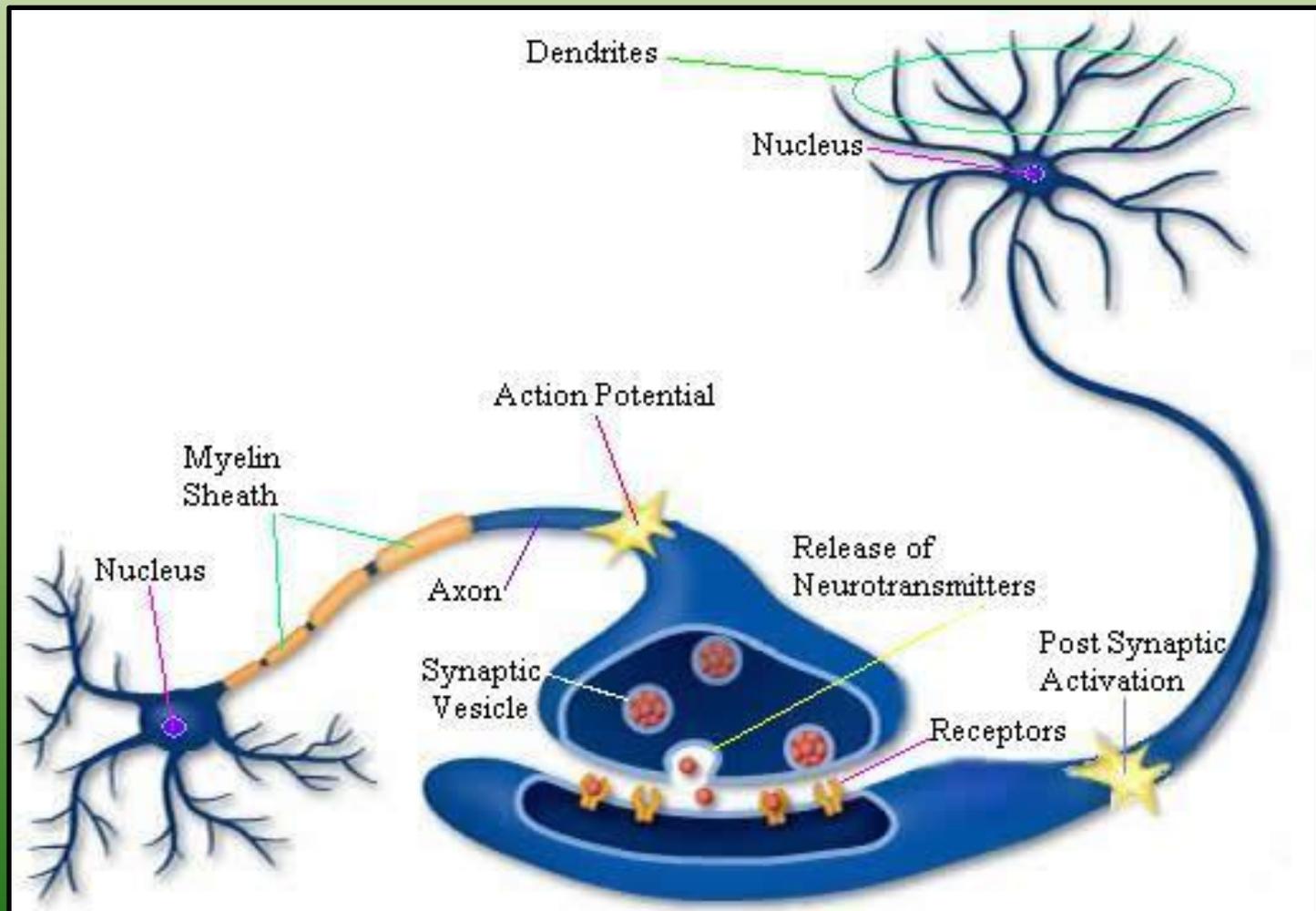
# **Drug and Alcohol use interfere with primary survival pathways in the brain**

- Automatic
- Semi – automatic
- Voluntary

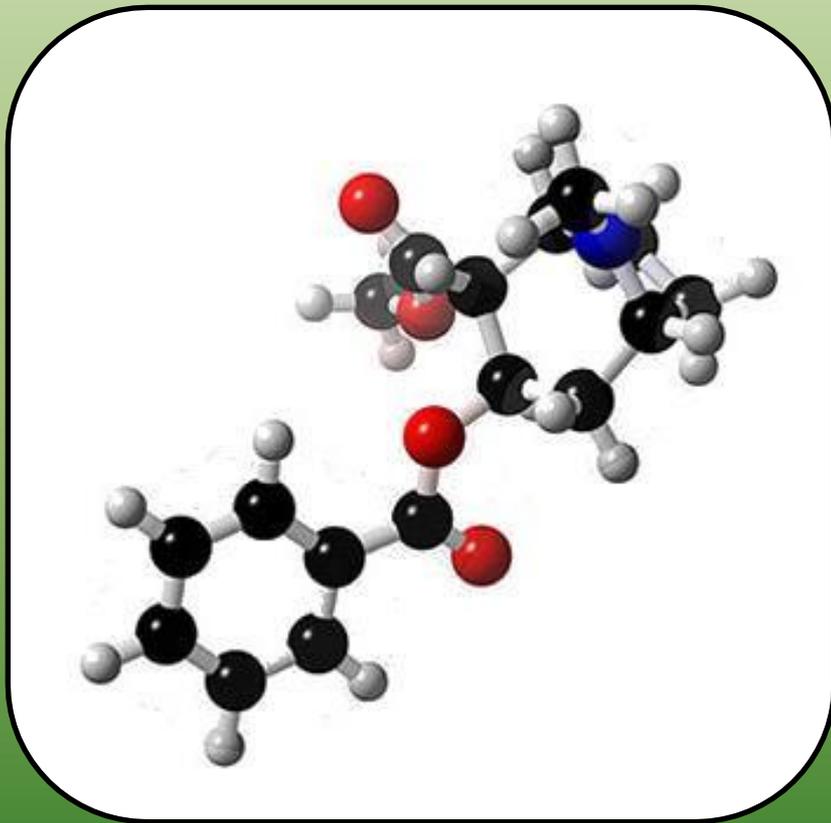
# Neural Pathways in the Brain



# Neurotransmission



# Molecular Structure



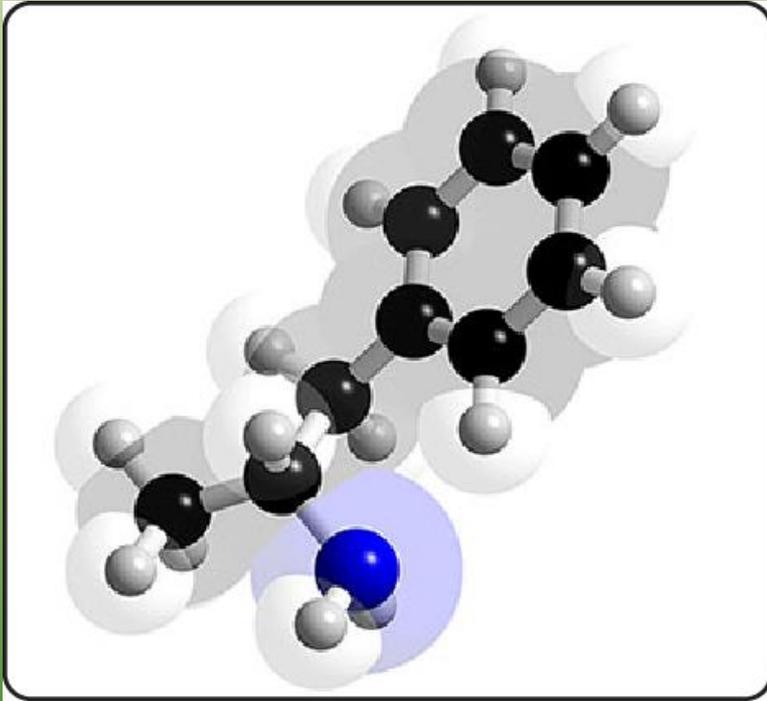
Cocaine



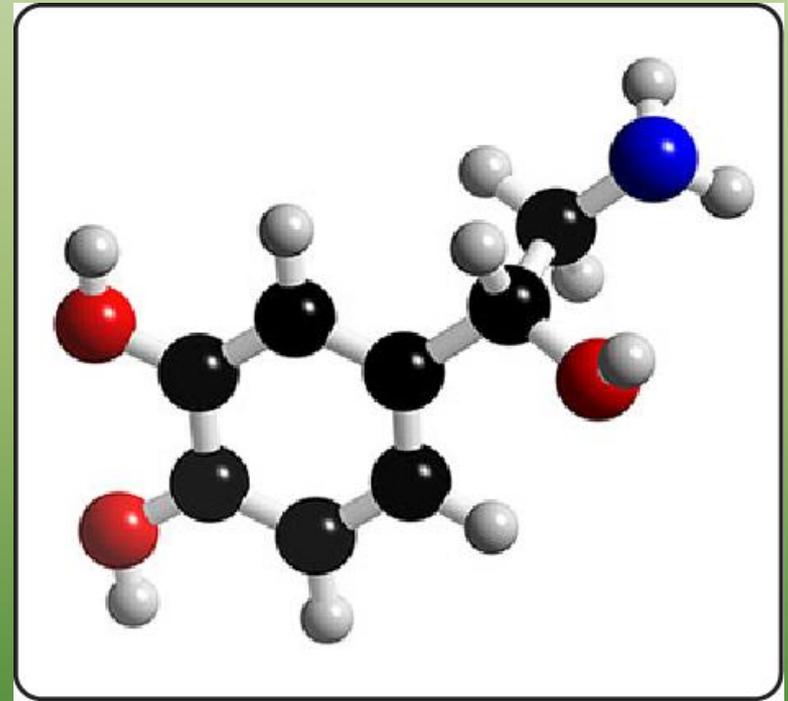
Dopamine



# Molecular Structure

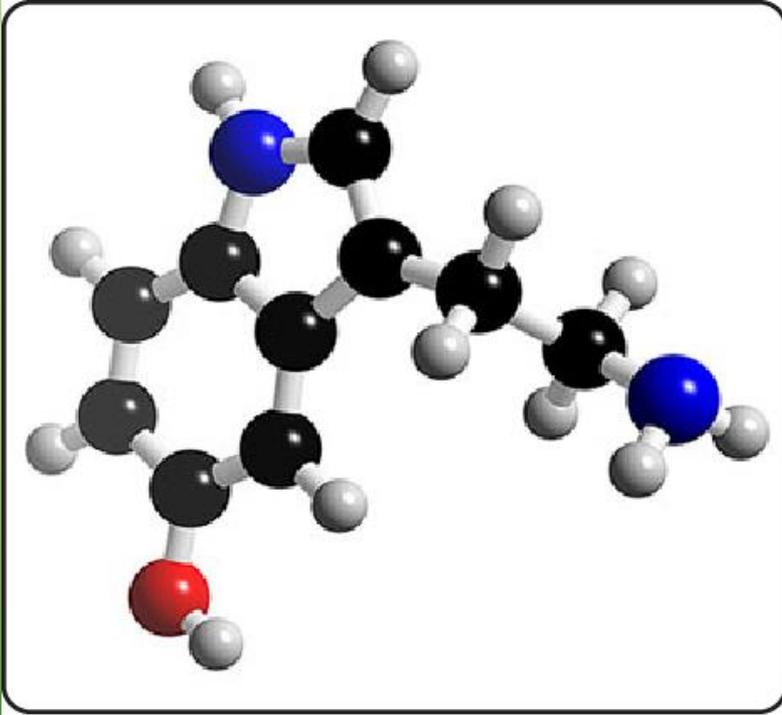


Norepinephrine

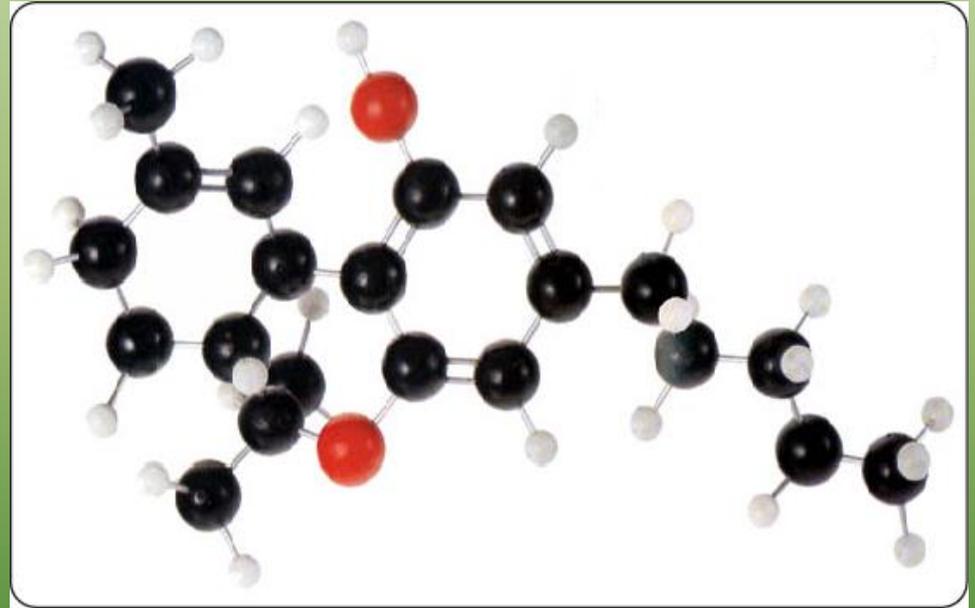


Amphetamine

# Molecular Structure

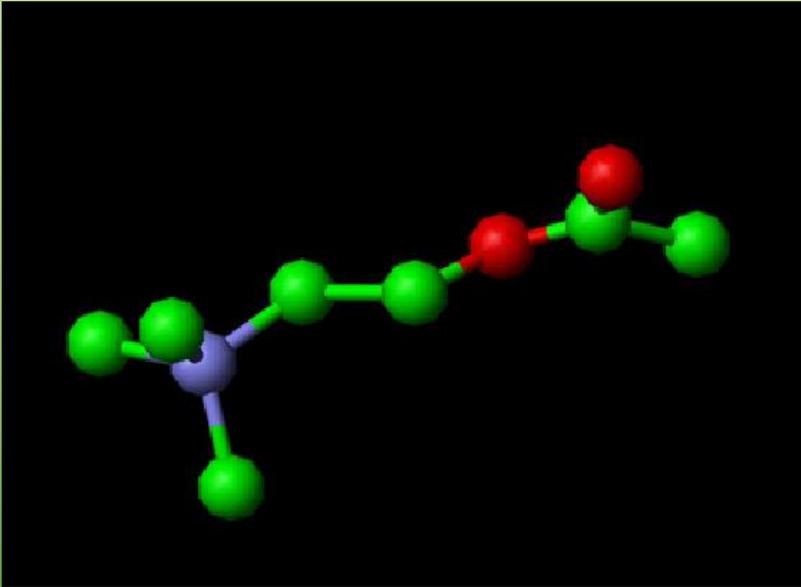


Serotonin



THC

# Molecular Structure



Acetylcholine

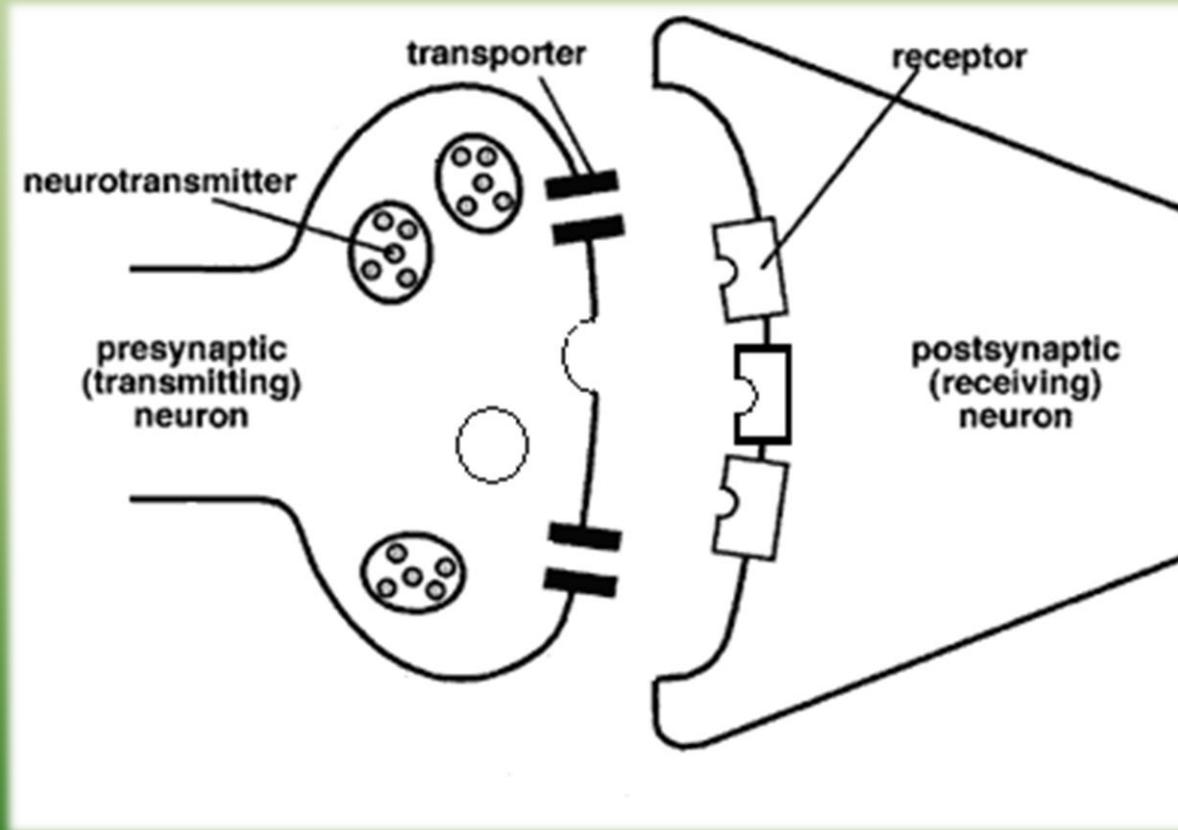


Nicotine

# Neurotransmitters

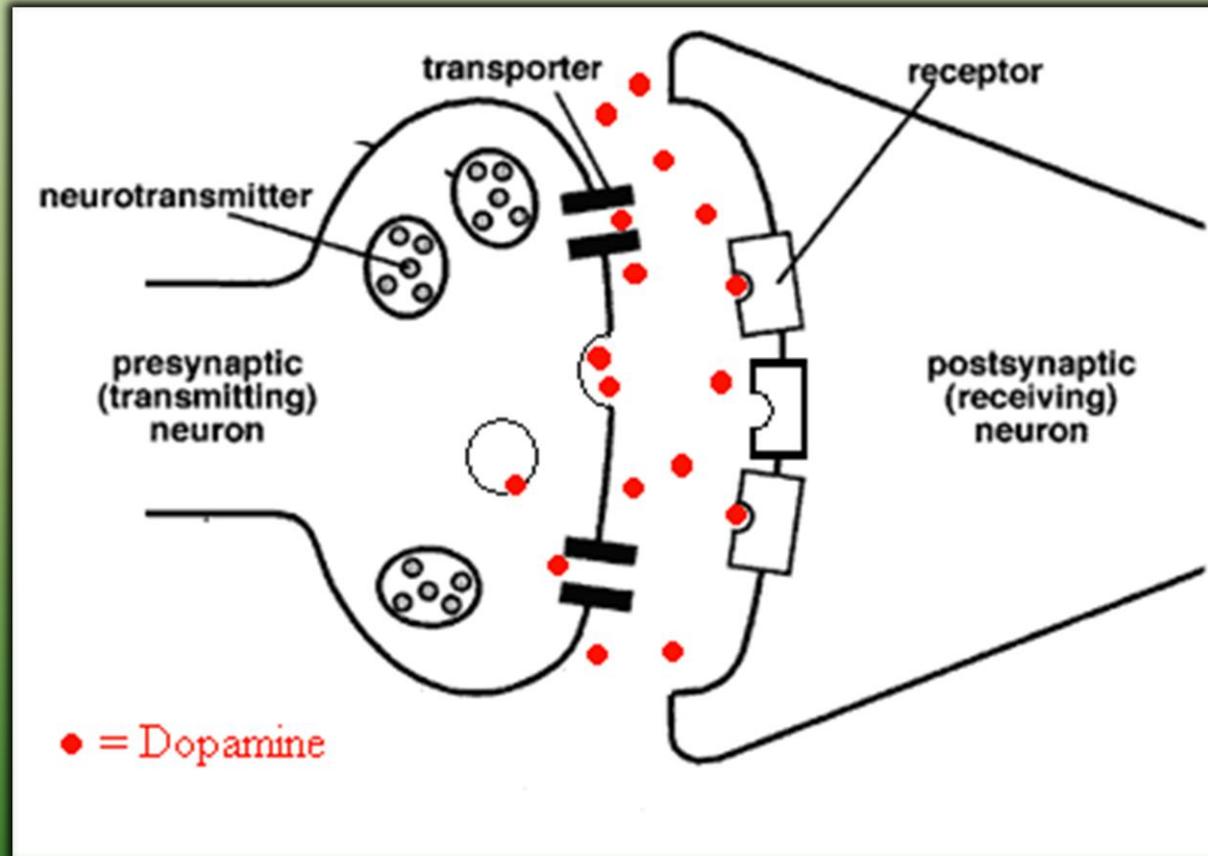
- Endorphins/ Enkephalins
- Serotonin
- Norepinephrine
- Dopamine
- Acetylcholine

# Neurotransmission & Addiction



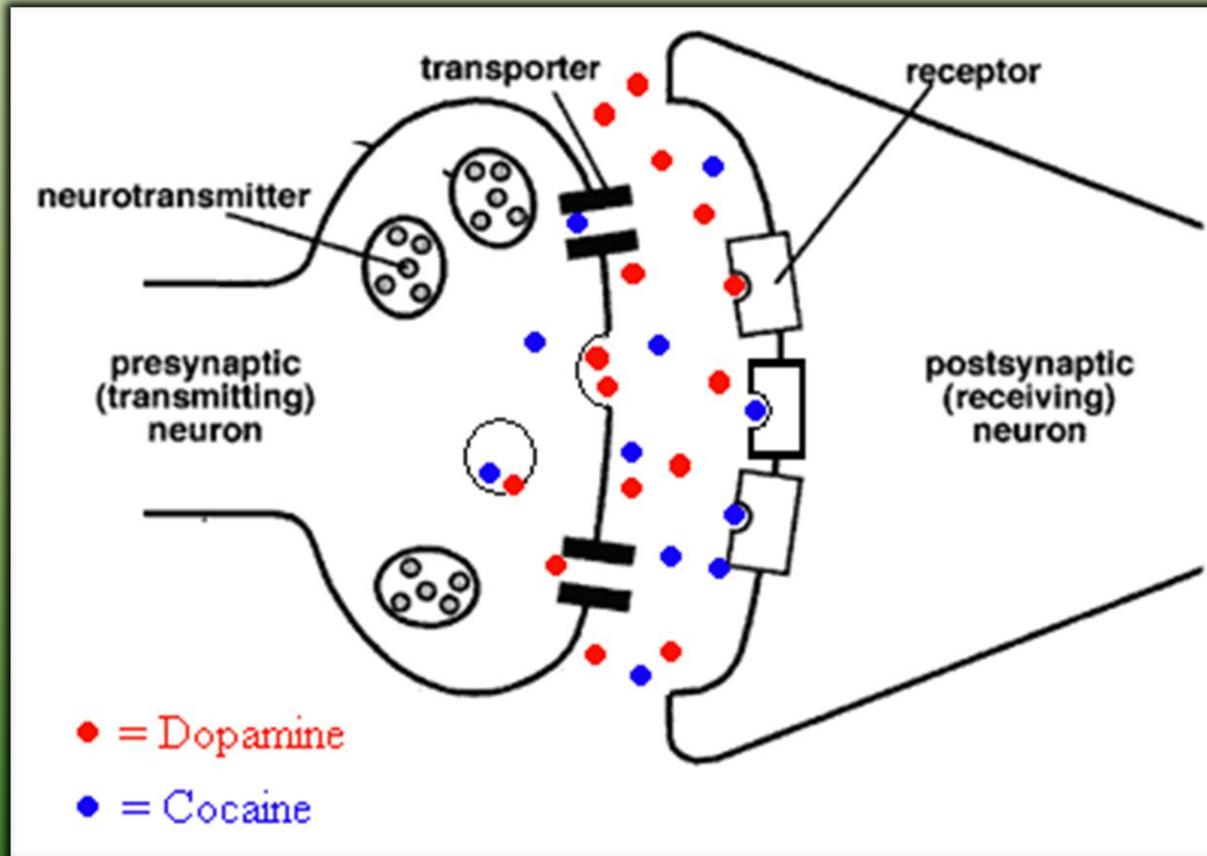
Site of Neurotransmission between 2 cells

# Neurotransmission & Addiction



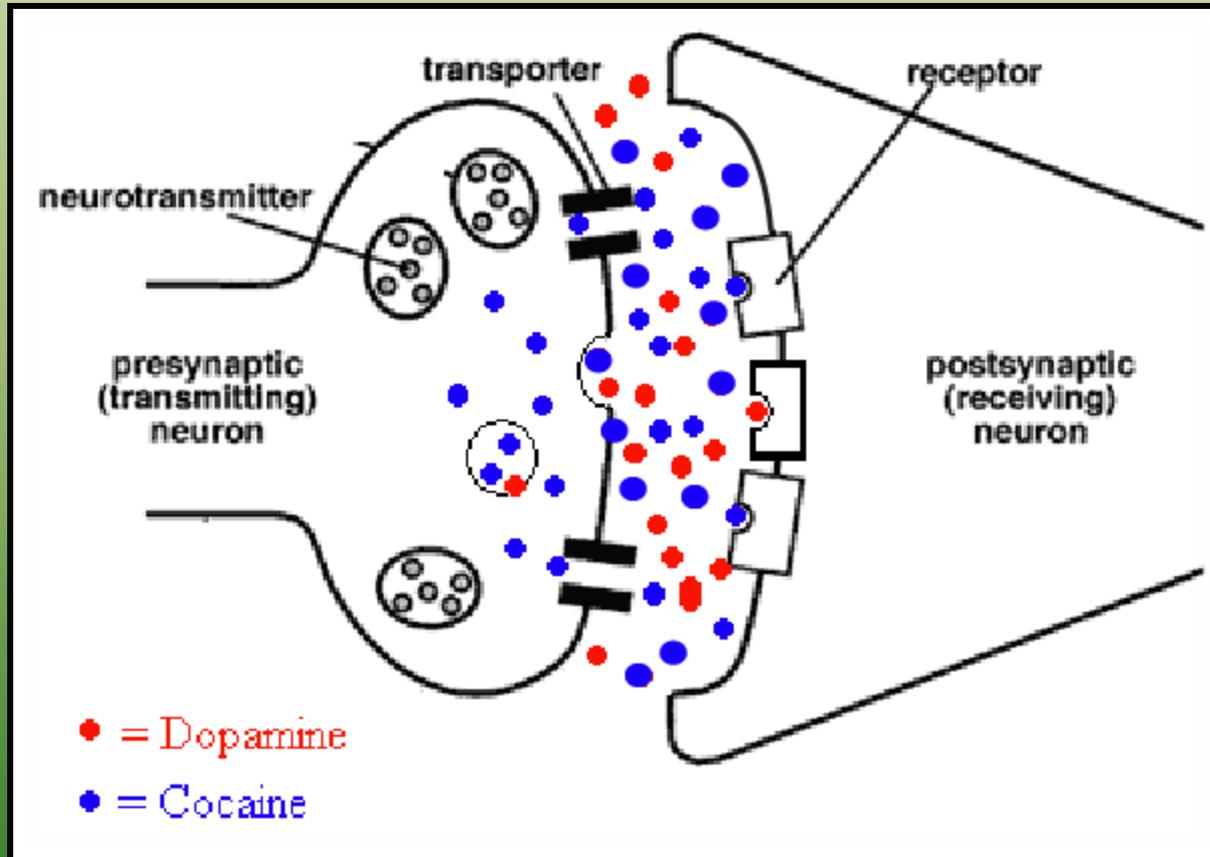
Normal Dopamine Activity

# Neurotransmission & Addiction



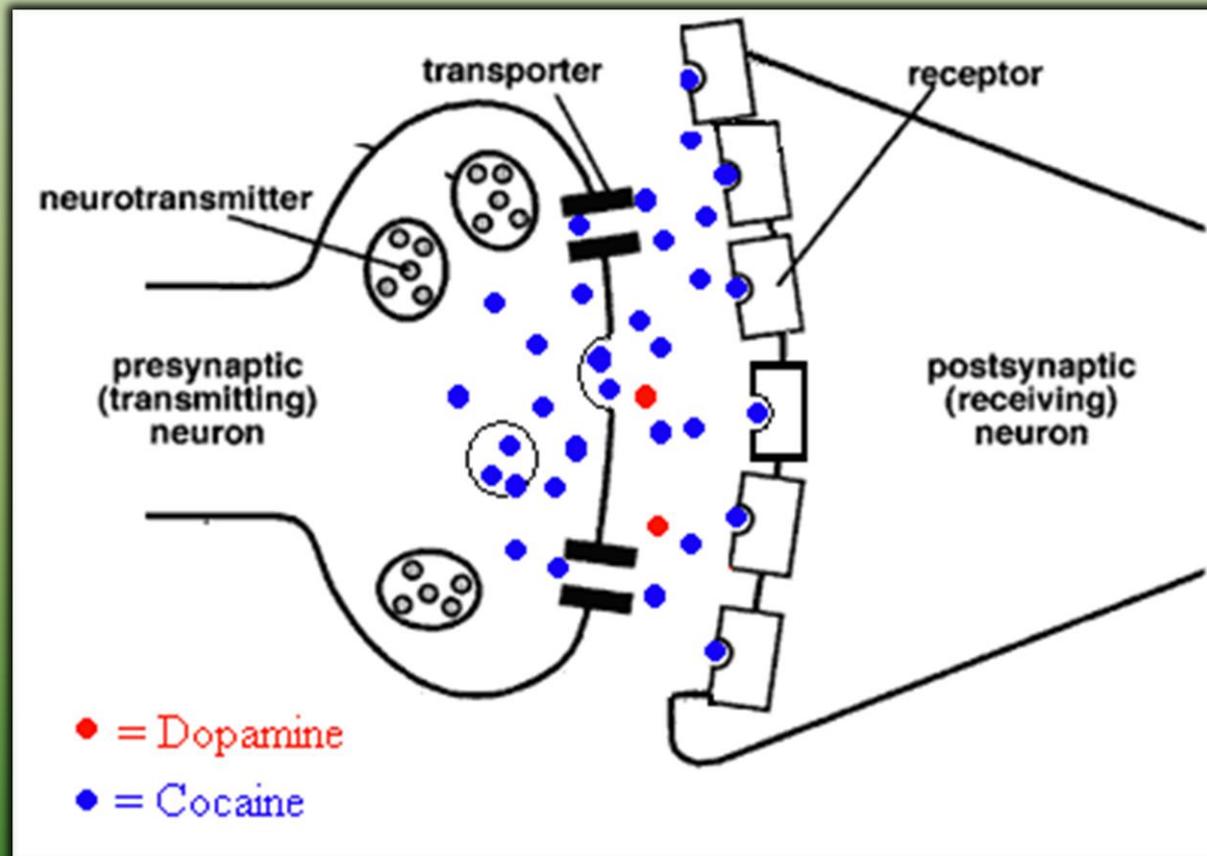
Introduction of Cocaine Use

# Neurotransmission & Addiction



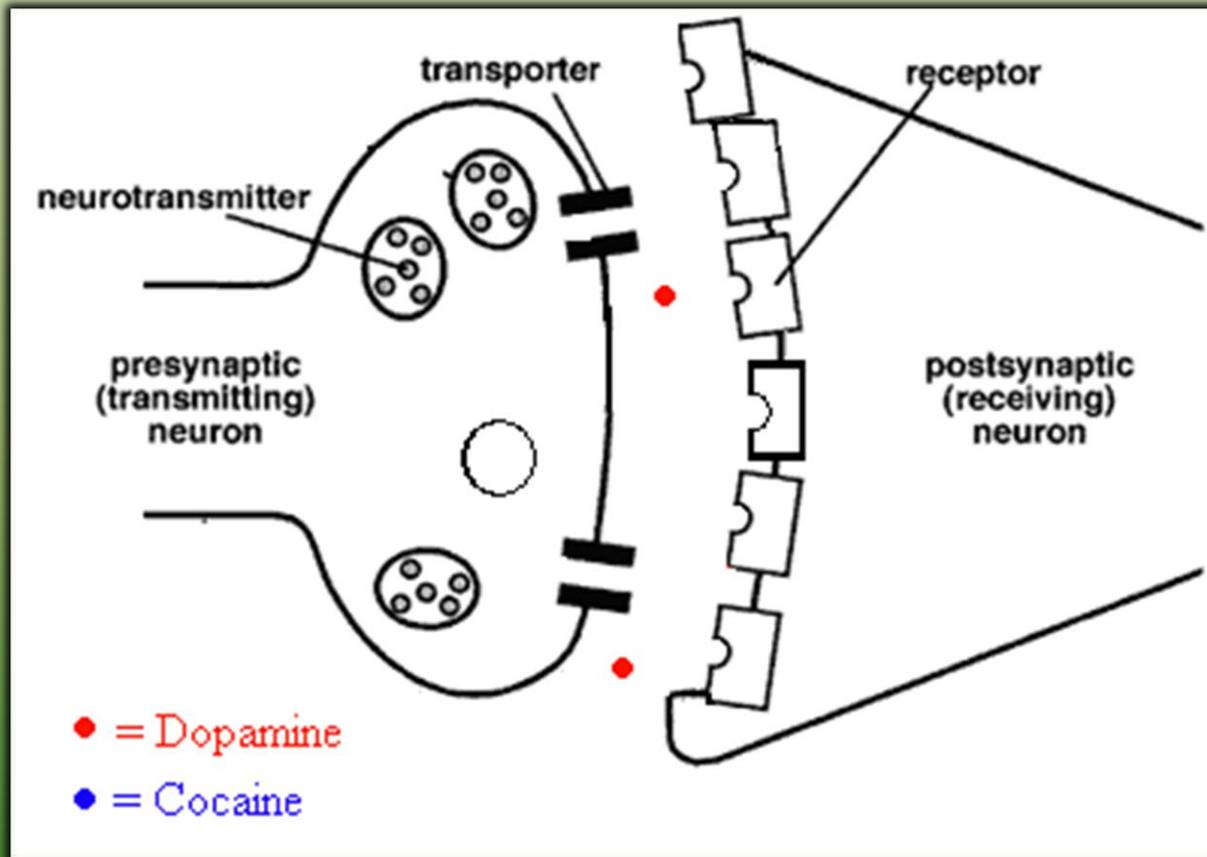
Increased Cocaine Use

# Neurotransmission & Addiction



Excessive and Continuous Cocaine Use

# Neurotransmission & Addiction



Cocaine use  
has stopped

Withdrawal  
begins

# ADDICTIVE DISEASE

Progressive

Chronic

Fatal

# ADDICTIVE DISEASE

Full Remission

Harm Reduction

Prevention

# RESTABILIZE BRAIN CHEMISTRY

Abstinence

Nutrition

Stress Prevention

# Four Critical and Interrelated Issues

- Substance Abuse
- Mental Health
- Trauma
- Physical Health

# **VULNERABILITY to ADDICTIVE DISEASE**

**50% - 60% GENETIC**

**40% - 50% ENVIRONMENTAL**

**Early Onset**

**Chemical Environment**

**Poor Nutrition**

**Increased Stress**

**Poor Coping Mechanisms**

**Chronic Illness**

**Grief & Loss**

# **The Six Assessment Dimensions**

## **American Society of Addiction Medicine (ASAM)**

- **Dimension 1: Acute Intoxication and/or Withdrawal Potential**
- **Dimension 2: Biomedical Conditions and Complications**
- **Dimension 3: Emotional/Behavioral Conditions and Complications**
- **Dimension 4: Treatment Acceptance/Resistance**
- **Dimension 5: Relapse/Continued Problem or Continued Use Potential**
- **Dimension 6: Recovery Environment**

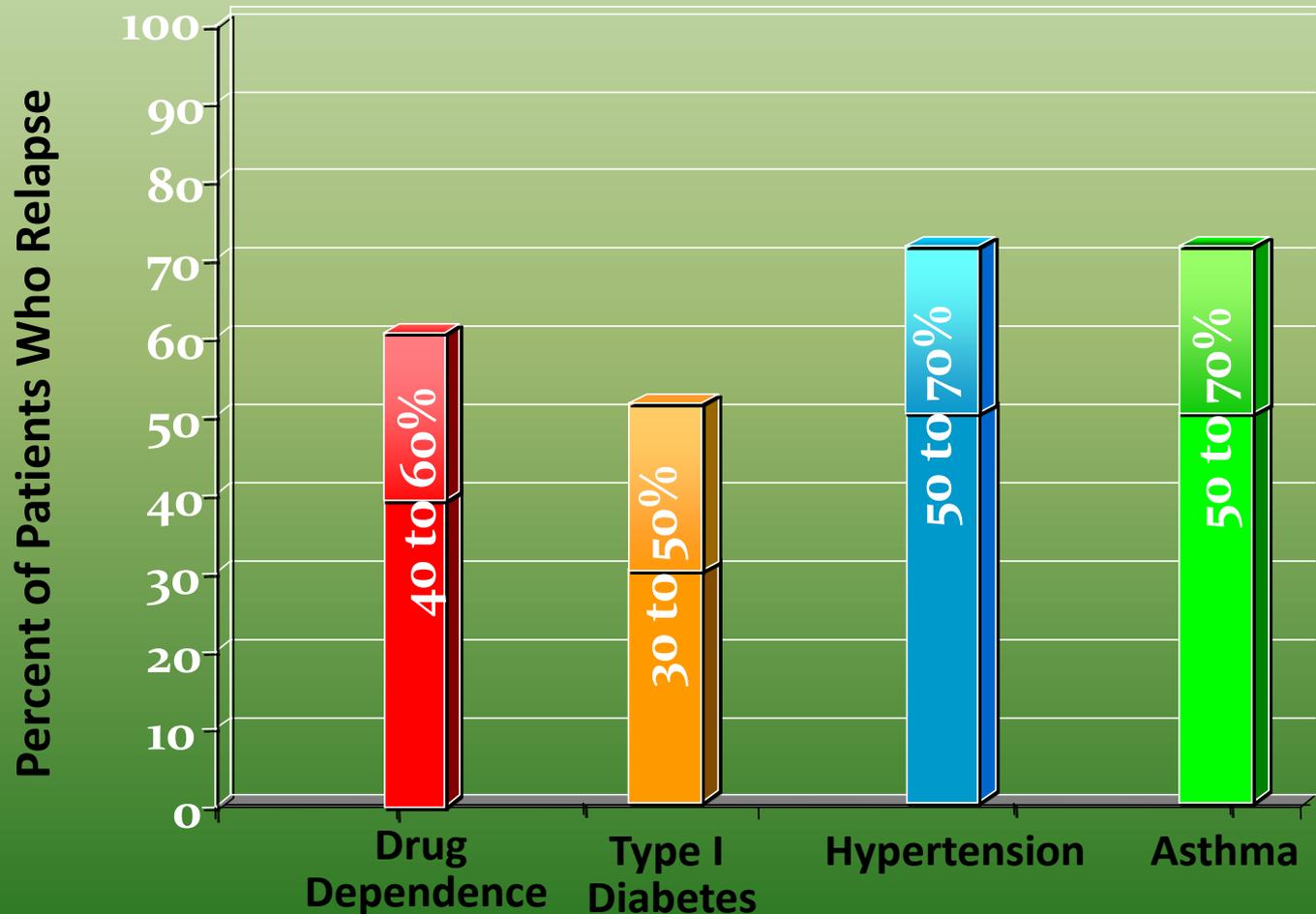
# TREATMENT

- Education
- Outpatient
- Intensive Outpatient
- Board & Lodging
- Residential
- Inpatient
- Detox

# TREATMENT COMPONENTS

- Ongoing Assessment / Planning
- AOD Education
- Concerned Person Involvement
- Stress Identification, Management & Prevention
- Crisis Management
- Relapse Prevention
- Ongoing Care/ Recommendations
- Screening referrals for co-morbid conditions
  - i.e. Mental Health, Gambling, Brain Injury, Cognitive Impairment, Neuro/Psyche Testing, Medications, Trauma, Chronic Pain.

# Relapse Rates Are Similar for Drug Dependence and Other Chronic Illnesses



# Marijuana and Hashish

**Signs of use and dependence can include:**

- **A heightened sense of visual, auditory and taste perception**
- **Poor memory**
- **Increased blood pressure and heart rate**
- **Red eyes**
- **Decreased coordination**
- **Difficulty concentrating**
- **Increased appetite**
- **Slowed reaction time**
- **Paranoid thinking**

# Barbiturates and Benzodiazepines

**Signs of use and dependence can include:**

- **Drowsiness**
- **Slurred speech**
- **Lack of coordination**
- **Memory problems**
- **Confusion**
- **Slowed breathing and decreased blood pressure**
- **Dizziness**
- **Depression**

# Methamphetamine, Cocaine and other Stimulants

Signs of use and dependence can include:

- Euphoria
- Decreased appetite
- Rapid speech
- Irritability
- Restlessness
- Depression as the drug wears off
- Nasal congestion and damage to the mucous membrane of the nose in users who snort drugs
- Insomnia
- Weight loss
- Increased heart rate, blood pressure and temperature
- Paranoia

# Club Drugs

**Signs of use and dependence can include:**

- **An exaggerated feeling of great happiness or well – being (euphoria)**
- **Reduced inhibitions**
- **A heightened or altered sense of sight, sound, and taste**
- **Decreased coordination**
- **Poor judgment**
- **Memory problems or loss of memory**
- **Increased or decreased heart rate and blood pressure**
- **Drowsiness and loss of consciousness (with GHB and Rohypnol)**

# Hallucinogens

**Signs of use and dependence can include:**

- **Hallucinations**
- **Greatly reduced perception of reality, for example, interpreting input from one of your senses as another, such as hearing colors**
- **Permanent mental changes in perception**
- **Rapid heart rate**
- **High blood pressure**
- **Tremors**
- **Flashbacks, a re-experience of the hallucinations – even years later**

# Narcotic Painkillers (Opioids)

**Signs of use and dependence can include:**

- **Reduced sense of pain**
- **Sedation**
- **Depression**
- **Confusion**
- **Constipation**
- **Slowed breathing**
- **Needle marks (if injecting drugs)**
- **Slurred speech**
- **Dizziness**
- **Loss of appetite**
- **Blurred vision**

# Spice

**Signs of use and dependence can include:**

- **An Increased respiration rate**
- **An intense, brief “high”**
- **Coma**
- **Elevated blood pressure**
- **Elevated heart rate**
- **Hallucinations**
- **Numbness and tingling**
- **Pale appearance**
- **Panic attacks**
- **Powerful muscle spasms**
- **Seizures**
- **Severe anxiety and agitation**
- **Unconsciousness**
- **Vomiting**

# **Brain Chemistry of Addiction**

- **Addiction is a disease, not a choice**
- **Progressive, Chronic and Fatal**
- **Young brains at risk due to unique stage of development**
- **Very treatable**
- **Prevention important**

# For More Information

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**Website: [www.riverridgetreatmentcenter.com](http://www.riverridgetreatmentcenter.com)**