Substance Abuse
&
Hazard Recognition in the Home:

A Special Presentation to
Sacramento County Social Services

Presented By:
Jackie Long, MSET
In Conjunction With:
University of California, Davis
Northern California Training Academy

IN MEMORIUM

I would like to express my sincere condolence to Dr. S. Alex Stalcup in the untimely passing of his wife and best friend, Janice Stalcup, Rn. PhD.. Their relentless and unselfish work in the field of drug addiction treatment and recovery made it possible for this manual to exist. Janice, you are deeply missed my friend.

PREFACE

Society has come to a crossroads regarding drug abuse. It is rampant in our communities, places of work, schools, and in our lives. Never before has our society been faced with the most technologically advanced substances that cause pleasure to the human brain. These substances have become so readily available to such a wide cross-section of the population that within twenty-four hours drugs can be delivered to your door step. There are not enough drug treatment centers to help the hundreds of thousands of people who want help, but there are even more who don't want help.

This manual takes no political stand on the illegality of drugs. It is meant to give factual documented evidence on how drugs work, their inherent dangers, and how to recognize persons who are under the influence of a drug.

I hope by providing the tools to recognize drug and alcohol influence, early intervention can be achieved. I have interviewed over a thousand drug addicts in the 32 years of my law enforcement career. I found none of the addicts I talked to started abusing drugs in an effort to become an addict.

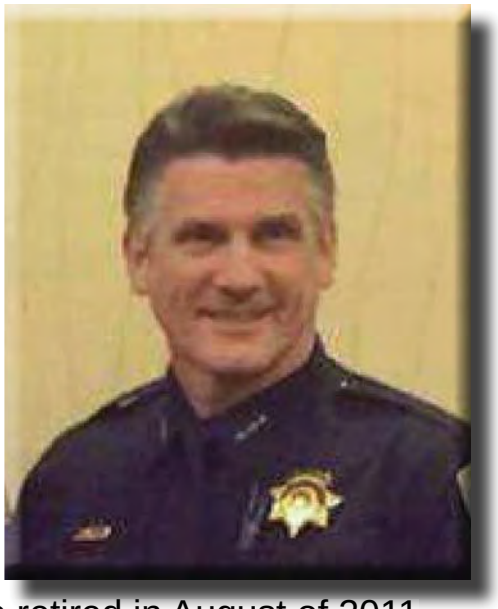
Addicts leave silent clues of their addiction to their loved ones. The addict may have tried to hide their use of the drug from their loved ones, but the length of the drugs presence in their system could have been detected if someone knew the physical signs of drug and alcohol influence. For most of these addicts, their support systems failed to recognize the symptoms of use and hold the them accountable for their choices and actions.

The human brain does not mature until it is in the mid 20's. Intervention of substance abuse involving our children is key to allowing the healthy development of their brains. Not everyone will become an addict. But for every person who can function in society as a drug abuser/addict, there are many who cannot. These are the people who are destined to become lost souls if they cannot stop abusing drugs and alcohol

INSTRUCTOR BIO:

CHIEF JACKIE LONG

DIRECTOR OF PUBLIC SAFETY, UNIVERSITY OF THE PACIFIC, SACRAMENTO CAMPUS



Chief Jackie Long became the Director of Public Safety for the University of the Pacific, Sacramento Campus in November 2015. Prior to becoming Chief, he retired in August of 2011 as a Special Agent Supervisor with the California Department of Justice, Bureau of Narcotic Enforcement, after 32 years in California Law Enforcement. Chief Long worked six years in general street patrol at a mid-sized city police department in Central California and 26 years in narcotic enforcement at the state level. Of those 26 years, 10 years were involved in being assigned to the California Department of Justice, Advanced Training Center as an instructor, program coordinator, and supervisor of the Narcotic and Clandestine Laboratory Training Units, 3 years were involved as a Commander of a county–wide Drug Task Force of a rural Northern California county, 5 years were involved as the coordinator of the Department's state-wide Clandestine Laboratory Enforcement Program, and the remaining years were involved in conducting investigations (including working undercover) involving clandestine drug laboratories, cannabis cultivation, large scale drug trafficking, and under the influence of controlled substances and alcohol.

Chief Long has conducted training throughout all 58 counties of California and across the United States, Canada, and in Mexico involving multiple topics of narcotic enforcement and drug and alcohol interventions. Through Chief Long's consulting company; Influence Recognition and Identification Systems (IRIS), he has developed a drug and alcohol influence recognition/intervention program that has been utilized in 26 school districts in California and Alaska. The IRIS program is developed from a California law enforcement tool used to identify persons who are under the influence of alcohol and drugs; the Drug Abuse Recognition program (DAR). Chief Long has conducted DAR training for law enforcement, corrections, probation, and drug rehabilitation services in California, Canada, and Hawaii. Chief Long has developed and provided methamphetamine training courses in Indian Country for several California Indian Tribes and the Federal Bureau of Indian Affairs.

Chief Long is currently an adjunct instructor at U.C. Davis, Northern California Academy of Social Services, Fresno State University Bay Area Academy, a former instructor for the Federal Law Enforcement Training Center (FLETC) Rural Policing Institute, past President of the California State Juvenile Officers Association, and the former Director of Training for the New Leaf Treatment Center (NLTC), located in Lafayette, CA. NLTC is under the medical direction of Dr. S. Alex Stalcup, a recognized addiction medicine specialist in the United States. Chief Long was the Program Director for the Criminal Justice Program at Carrington College in Citrus Heights California.

Chief Long has obtained his Associates of Science Degree in the Administration of Justice, Bachelor of Arts Degree in Criminal Justice, and Masters of Science Degree in Education Technology. Chief Long would like to recognize Dr. Stalcup, Gary Shimabukuro of Laulima Hawaii, and retired Torrance Police Narcotics Detective, Sgt James Mock for their contributions in the development of this manual.

The Biochemistry of Drugs

WHAT IS A DRUG?

A DRUG IS A PLEASURE PRODUCING CHEMICAL.

“DRUGS” ACTIVATE OR IMITATE CHEMICAL PATHWAYS IN THE BRAIN ASSOCIATED WITH FEELINGS OF WELL - BEING, PLEASURE AND EUPHORIA.

AN ADDICTING DRUG IS A PLEASURE PRODUCING CHEMICAL. ALL DRUGS THAT CAN BE OVERUSED, TO QUALIFY AS DRUGS, THEY MUST MAKE YOU FEEL GOOD IN SOME WAY.

ALL ADDICTING DRUGS MAKE YOU FEEL GOOD BECAUSE THEY GET TO THE PLEASURE CENTERS AND TURN THEM ON. THAT IS WHAT A DRUG IS, A STIMULATOR OF THE PLEASURE CENTERS.

SOME DRUGS ACTIVATE THE PLEASURE SYSTEM A LITTLE BIT, LIKE TOBACCO, AND SOME MAXIMALLY LIKE METHAMPHETAMINE AND OXYCONTIN. BUT THEY ALL DO THE SAME THING IN TERMS OF ACTIVATING THE PLEASURE SYSTEM. THAT IS WHAT MAKES THEM A DRUG.

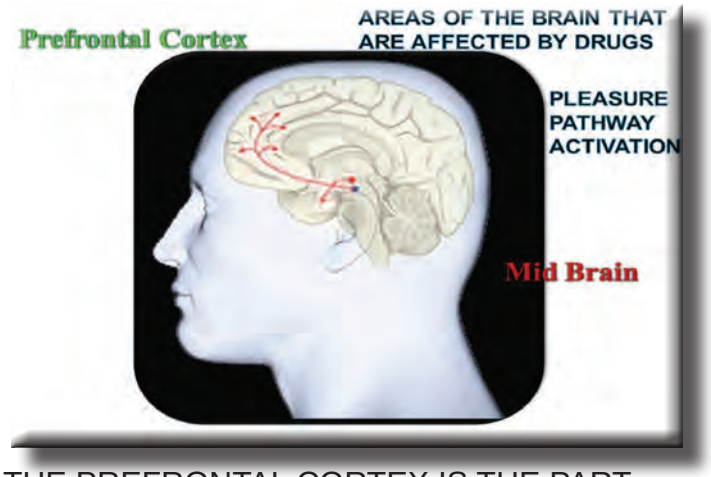
REWARD / PLEASURE CENTERS OF THE HUMAN BRAIN

SCIENCE HAS FOUND WHERE THE PLEASURE CENTERS IN THE BRAIN ARE LOCATED. DEEP IN THE MIDDLE OF THE BRAIN IS A STRUCTURE THAT CONSTANTLY MONITORS WHAT’S GOING ON IN THE BODY AND IN THE ENVIRONMENT, CALLED THE VTA.

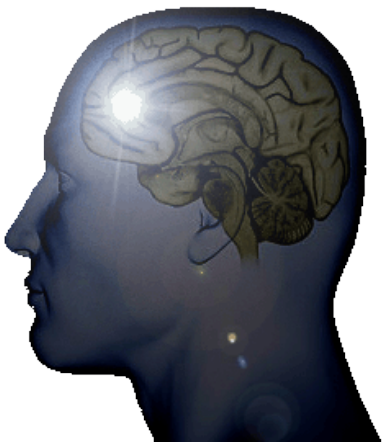
WHEN THERE IS SOMETHING THAT IS PLEASURABLE (OR COULD BECOME PLEASURABLE), THE MIDDLE SECTION OF THE BRAIN PICKS IT UP AND SENDS A SIGNAL TO THE PLEASURE CENTERS. THERE ARE TWO PLEASURE CENTERS WITHIN THE BRAIN:

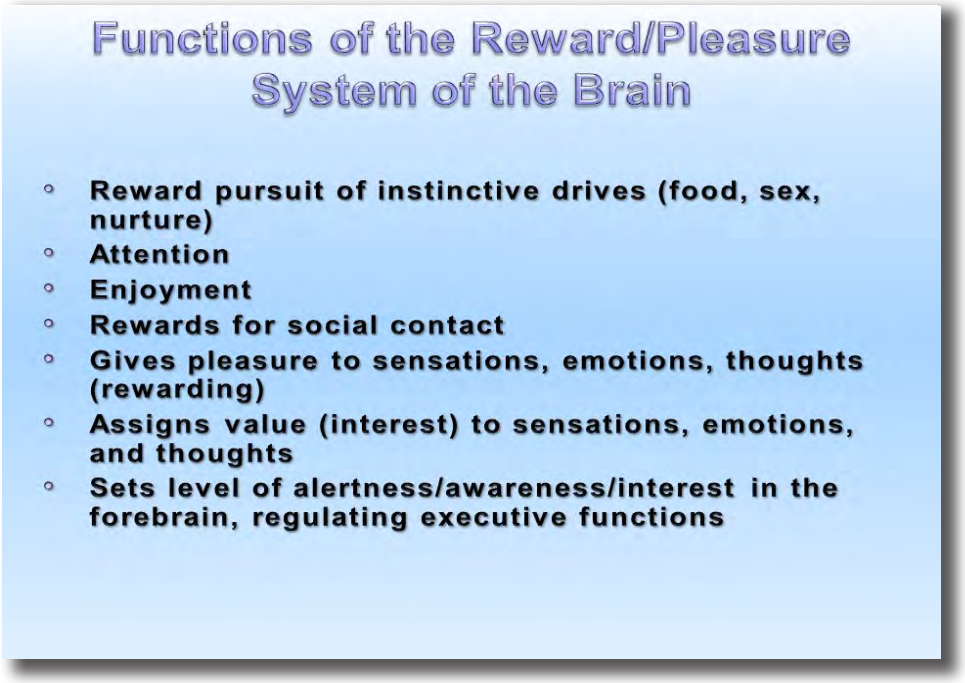
ONE IS IN THE MIDDLE OF THE BRAIN AND IF THIS BECOMES ACTIVE THE SENSATIONS OF PLEASURE ARE EXPERIENCED.

THE OTHER PLEASURE CENTER IS IN THE MOST FORWARD PORTION OF THE BRAIN, ***THE PREFRONTAL CORTEX.***



THE PREFRONTAL CORTEX IS THE PART OF THE BRAIN THAT MAKES DECISIONS ABOUT WHETHER YOU WILL OR WILL NOT DO SOMETHING. WHEN THAT PART OF THE PLEASURE SYSTEM BECOMES ACTIVATED, YOU PAY ATTENTION AND INCREASE YOUR INTEREST. THE PLEASURE SYSTEM IN THE FOREBRAIN IS LIKE THE LIGHT BULB THAT GOES OFF IN THE BRAIN.





DRIVE STATES

HIGHER ORGANISMS HAVE INHERENT "INSTINCTS" THAT DRIVE THEM TO:

SEEK / OBTAIN FOOD
SEEK / OBTAIN WATER
SEEK / HAVE SEX
SEEK / MAKE SHELTER
PROTECT YOUNG

EACH DRIVE / INSTINCT HAS TWO ASPECTS:

1. IF THE DRIVE IS FRUSTRATED OR CANNOT BE MET, THE ORGANISM EXPERIENCES DYSPHORIA, ANXIETY, IRRITABILITY AND ANGER.
2. IF THE DRIVE IS ACHIEVED, THE ORGANISM EXPERIENCES "REWARD," WHICH HUMANS RECOGNIZE AS PLEASURE, SATISFACTION AND A SENSE OF WELL-BEING.

EACH DRIVE STATE IS LOCATED IN A SPECIFIC PART OF THE BRAIN; ATTACHED TO EACH PART IS A CONNECTION TO THE REWARD / PLEASURE CENTERS OF THE BRAIN.

WHEN THE DRIVE IS ACHIEVED, THERE IS A COMPLEX INTERACTION OF NEUROTRANSMITTERS THAT LEADS TO THE RELEASE OF DOPAMINE AND ENDORPHIN IN THE REWARD / PLEASURE CENTERS EXPERIENCED AS PLEASURE, SATISFACTION AND A SENSE OF WELL-BEING.

HOW DRUGS WORK

DRUGS MODIFY THE NEUROCHEMISTRY OF PLEASURE.

PLEASURE SERVES TO REWARD COMPLETION OF THE INSTINCTIVE DRIVES AND TO DIRECT BEHAVIOR TOWARD POSITIVE GOALS.

"DRUGS" ACTIVATE OR IMITATE THE CHEMICAL MESSENGERS (NEUROTRANSMITTERS) IN THE BRAIN ASSOCIATED WITH FEELINGS OF WELL-BEING, PLEASURE AND EUPHORIA.

DRUGS BYPASS INSTINCTUAL DRIVES, BUT STIMULATE THE RELEASE OF SPECIFIC NEUROTRANSMITTERS, **DOPAMINE** AND **ENDORPHIN** IN THE REWARD-PLEASURE CENTERS OF THE BRAIN.

THE RELEASE OF NEUROTRANSMITTERS IS MUCH GREATER IN DRUG STIMULATED STATES THAN IN RESPONSE TO INSTINCT.

RELEASE OF **DOPAMINE** IS EXPERIENCED AS:

EXCITED EUPHORIA.

RELEASE OF **ENDORPHIN** IS EXPERIENCED AS:

CALM EUPHORIA.

THERE ARE THREE TERMS THAT ARE VERY IMPORTANT IN UNDERSTANDING ADDICTION AND DRUGS. THE FIRST TERM IS NEUROADAPTATION, THE SECOND TERM IS TOLERANCE AND THE THIRD TERM IS WITHDRAWAL. THOSE THREE WORDS DEFINE THE PROBLEM WITH DRUGS. IF SOMEONE COMES UP TO YOU AND ASKS "WHY ARE DRUGS BAD FOR YOU", THE ANSWERS ARE NEUROADAPTATION, TOLERANCE AND WITHDRAWAL.

NEUROADAPTATION

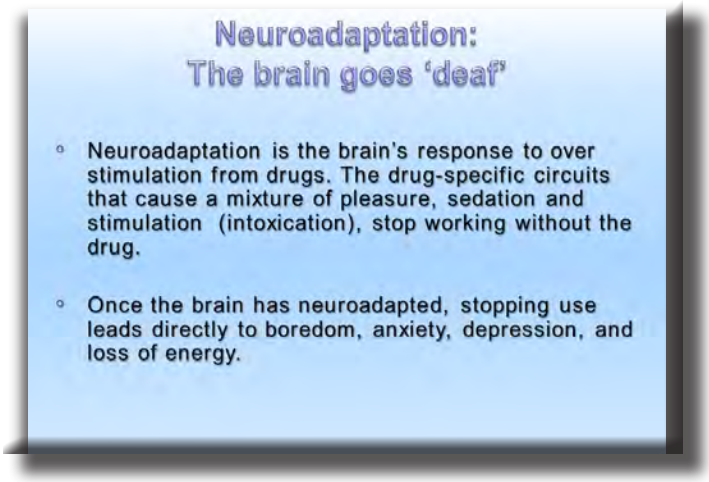
NEUROADAPTATION IS THE PROCESS BY WHICH RECEPTORS IN THE REWARD/ PLEASURE CENTERS OF THE BRAIN ADAPT TO THE HIGH CONCENTRATIONS OF NEUROTRANSMITTERS. THE RECEPTORS BECOME INSENSITIVE TO NORMAL LEVELS OF NEUROTRANSMITTERS.

UNDER UNSTIMULATED CONDITIONS, WITHOUT DRUGS, THERE IS PROFOUND INTERFERENCE IN THE ABILITY TO EXPERIENCE PLEASURE. THE USER INSTEAD FEELS AS IF HE / SHE WAS EXPERIENCING AN UNMET INSTINCTIVE DRIVE:

DYSPHORIA, ANXIETY, ANGER, FRUSTRATION AND CRAVING.

THE DAMAGE CAUSED BY NEUROTRANSMITTER INSENSITIVITY LEADS THE USER TO FEEL, WHEN SOBER, THE OPPOSITE OF FEELING HIGH. FOR THE USER, SOBRIETY BECOMES THE OPPOSITE OF EUPHORIA.

LENGTH OF USE AND INTENSITY OF THE DRUG ARE FACTORS PREDICTING THE EXTENT OF THE INJURY.



TOLERANCE

WHEN YOU HAVE TO KEEP USING MORE AND MORE TO GET HIGH, YOU ARE SAID TO BE "TOLERANT." IT IS THE SIGN THAT YOUR PLEASURE CENTERS ARE NOT WORKING AND THAT A DISEASE OF THE PLEASURE CENTERS HAS BEGUN. IN DRUG TERMS, THE AMOUNT THAT ONCE MADE YOU HIGH DOESN'T WORK ANYMORE. YOU HAVE TO GO TO A STRONGER AND STRONGER DOSE TO "HEAR" THE HIGH. WHEN YOU NEED A HIGHER DOSE TO GET HIGH, YOU HAVE "TOLERANCE." YOUR BRAIN IS NO LONGER NORMAL.

IF YOU WANT TO KNOW IF SOMEONE HAS A NORMAL OR DISEASED BRAIN, ASK THE SIMPLE QUESTION, "DOES THE AMOUNT THAT YOU FIRST USED TO GET HIGH STILL GET YOU AS HIGH?" IF THE ANSWER IS NO (MEANING IT TAKES MORE TO GET HIGH THAN IT USED TO) YOU NOW KNOW WITH MEDICAL CERTAINTY THAT THE BRAIN IS DEVELOPING A DISEASE.

ONCE THERE IS TOLERANCE, PEOPLE WHO NEED MORE TO GET HIGH DON'T FEEL NORMAL WHEN THEY STOP. THEY GO AS LOW AS THEY WERE HIGH.

MARIJUANA MAKES YOU GET HIGH AND GET INTERESTED. BUT ONCE YOU HAVE TO SMOKE MORE TO GET HIGH, YOU DON'T GO BACK TO NORMAL WHEN YOU STOP. YOU GO THE OPPOSITE DIRECTION FROM HOW YOU FELT WHEN YOU WERE HIGH.

FOR MARIJUANA USERS WHO HAVE DEVELOPED TOLERANCE, THE MAIN SYMPTOM THEY EXPERIENCE IS BOREDOM WHEN THEY ARE SOBER. MARIJUANA ADDICTS WHO HAVE BECOME TOLERANT COMPLAIN THAT NOTHING IS INTERESTING. THEY DON'T ENJOY THEMSELVES. THEY DON'T WANT TO DO ANYTHING. EVERYTHING IS BORING. IT'S LIKE THEY DON'T KNOW HOW TO ENJOY THEMSELVES WHEN THEY'RE NOT HIGH.

THEY HAVE DAMAGED THEIR PLEASURE CENTERS. THEY CAN'T HAVE FUN WITHOUT IT. THEY DEPEND ON IT TO FEEL NORMAL, AND THEY FEEL BAD WHEN THEY STOP. THE SOBER STATE OF SOMEONE WHO HAS DEVELOPED TOLERANCE TO DRUGS IS NOT NORMAL. IT'S THE OPPOSITE OF HOW THEY FELT WHEN THEY WERE HIGH.

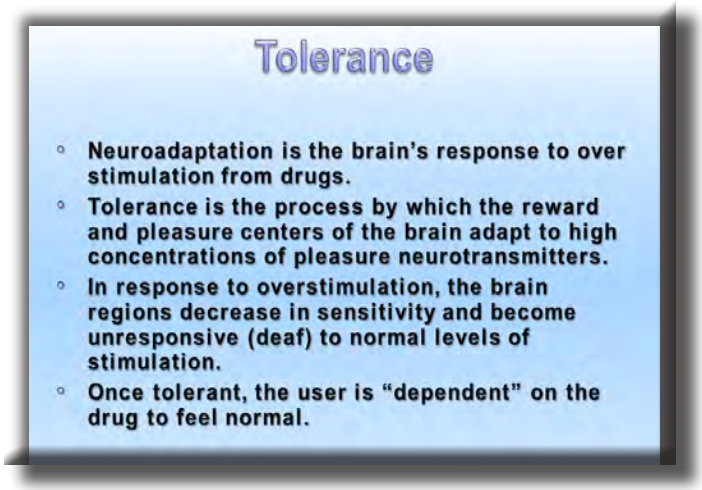
WITHDRAWAL

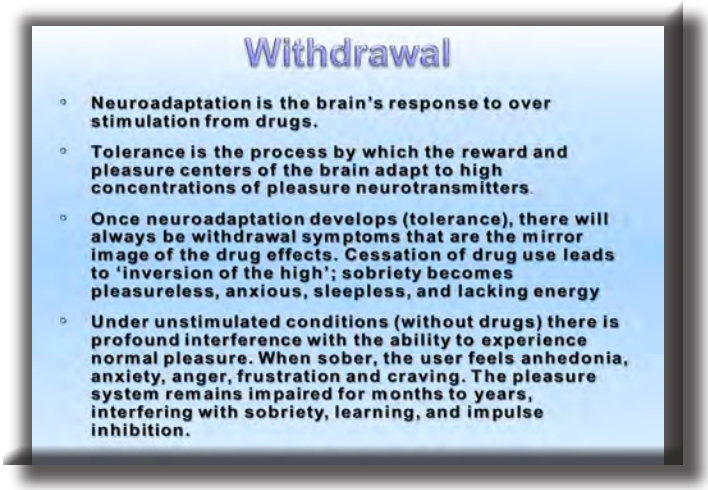
THE NAME FOR THESE ABNORMAL WAYS OF FEELING WHEN STOPPING DRUG USE IS CALLED WITHDRAWAL. ONCE YOU ARE TOLERANT AND STOP YOU WILL ALWAYS – 100% OF THE TIME – HAVE WITHDRAWAL SYMPTOMS AND THEY ARE THE EXACT OPPOSITE OF WHAT THE DRUG DOES.

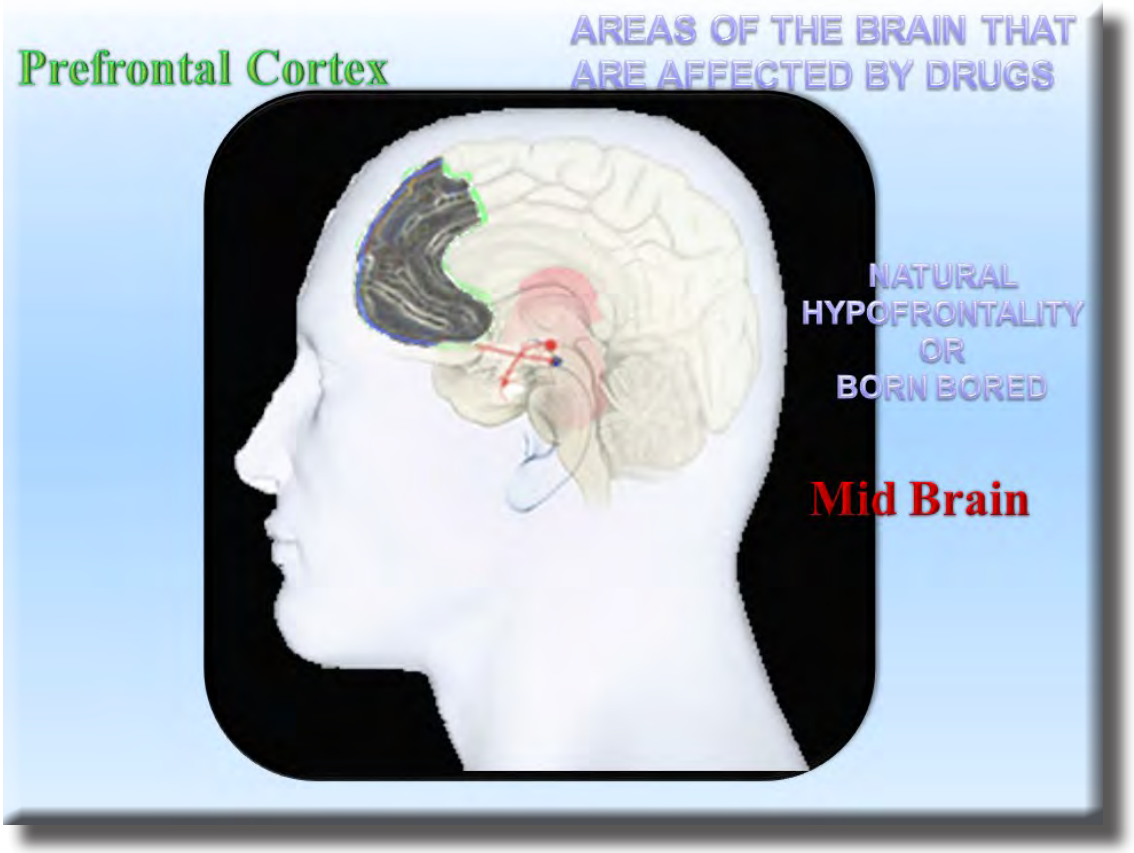
SO IF THE DRUG MAKES YOU INTERESTED, YOU CAN'T GET INTERESTED. IF THE DRUG MADE YOU ENJOY YOURSELF, YOU CAN'T ENJOY YOURSELF. IF THE DRUG MADE YOU LAUGH, YOU CAN'T LAUGH. IF THE DRUG MADE YOU SLEEPY, YOU CAN'T SLEEP. IF THE DRUG MADE YOU HIGH, YOU CAN'T BE HIGH WITHOUT USING MORE AND MORE.

THE DILEMMA FOR PEOPLE WHO HAVE DEVELOPED TOLERANCE TO ANY DRUG IS TOLERATING HOW THEY FEEL WHEN THEY ARE NOT HIGH.

ALTHOUGH THE DAMAGE CAN HEAL, IT LASTS A LONG TIME BEFORE A PERSON GETS BACK TO WHERE THEY CAN HAVE PLEASURE WITHOUT DRUGS. FOR THE "TOO LOUD" DRUGS IT TAKES A LONG, LONG, TIME TO HEAL.







ALL DRUGS, IN ADDITION TO MAKING YOU HIGH DO SOMETHING ELSE. PAINKILLERS ("OPIATE DRUGS") MAKE YOU HIGH, GIVE STRONG PLEASURE BUT THEY ALSO KEEP A PERSON FROM HAVING PAIN.

BECAUSE OF NEUROADAPTATION AND TOLERANCE, PAIN PILLS ARE SOMETIMES TAKEN IN LARGER AND LARGER AMOUNTS WITHOUT RELIEVING PAIN. IF MORE AND MORE IS NEEDED, THE TOLERANCE PROCESS HAS SET IN, THE DISEASE PROCESS HAS BEGUN.

EVERYONE WHO IS TOLERANT TO PAIN KILLERS (SUCH AS OXYCONTIN) FEELS INCREDIBLY BAD WHEN THEY STOP USING BECAUSE THE PLEASURE CENTERS ARE INJURED, SO BAD THEY PHYSICALLY CAN'T STAND IT.

IN ADDITION TO TERRIBLE PAIN, THEY FEEL DYSPHORIC AND HAVE INTENSE CRAVING. THEY CAN'T CALM DOWN. THEY CAN'T SLEEP. THEY ARE VERY, VERY ANXIOUS. THEY BECOME JITTERY AND KIND OF SLOW AND THEY STUTTER A LOT AND THEY DON'T REALLY KNOW WHAT'S GOING ON, SOMETIMES THEY DON'T EVEN CARE.

THEY ARE SICK. THEY ARE VOMITING AND THEY GET CRAMPS AND DIARRHEA. WHAT ARE THEY LOOKING TO DO? FINDING THE NEXT DOSE. THEY GET DESPERATE TO RELIEVE THE SEVERE PAIN AND DYSPHORIA THAT APPEAR WHEN THEY TRY AND STOP.

A SIMPLE ANALOGY IS FOR EVERYTHING A DRUG DOES TO A PERSON WHO IS UNDER THE INFLUENCE - "HIGH", AN EQUAL AND OFTEN TIMES GREATER OPPOSITE REACTION IS EXPERIENCED BY THE PERSON WHO IS IN WITHDRAWAL OF THE DRUG.

ADDICTION AND LOSS OF CONTROL

LOSING CONTROL

ADDICTION, AS A DISEASE, CAN BE DEFINED AS THE INABILITY TO STOP USING OR TO STAY STOPPED. IF SOMEONE HAS DAMAGED THEIR BRAIN PLEASURE CENTERS AND THEIR CALM OR PAIN CENTERS THEN THEY HAVE THE DISEASE.

DEFINITION OF ADDICTION

THE FOLLOWING ARE THE COMPONENTS OF ADDICTION:

1. COMPULSION:

LOSS OF CONTROL

THE USER CAN'T NOT DO IT; HE / SHE IS COMPELLED TO USE.

COMPULSION IS NOT RATIONAL. ONE DOES DO NOT PLAN TO BE COMPULSIVE.

THE WHOLE ISSUE IN ADDICTION ISN'T WHAT A PERSON USES OR HOW OFTEN THEY USE; IT'S WHETHER THEY CANNOT USE. THE CRITICAL CHANGE IN ADDICTION IS THE LOSS OF THE ABILITY TO CONTROL DRUG USE. EACH TOLERANT DRUG USER HAS CROSSED THE LINE SO THAT THEY CAN'T CONTROL THEMSELVES.

WHEN A PERSON GETS ADDICTED, IT'S LIKE A PARASITE GETS INTO THE PLEASURE CENTERS OF THEIR BRAIN. WE WILL CALL IT THE "CRAVING MONSTER." IT SITS IN THE PLEASURE CENTERS AND TELLS THE PERSON WHAT TO DO. IT SAYS, "YOU DON'T LIKE THE WAY YOU FEEL RIGHT NOW. GO GET ME SOME DOPE." AND WHAT IS THE PERSON GOING TO DO? THEY GO SCORE SOME DOPE.

2. CONTINUED USE DESPITE ADVERSE CONSEQUENCES (C-U-D-A-C):

AN ADDICT IS A PERSON WHO USES EVEN THOUGH HE OR SHE KNOWS IT IS CAUSING PROBLEMS, BUT THEY CAN'T NOT DO IT.

CUDAC IS HOW WE KNOW HOW ADDICTED SOMEONE IS. THE STAGES OF ADDICTION (EARLY, MIDDLE, AND LATE STAGE) ARE NOT DETERMINED BY HOW MUCH IS USED OR HOW OFTEN THERE IS USE, BUT RATHER BY HOW MUCH TROUBLE DRUG USE HAS CAUSED.

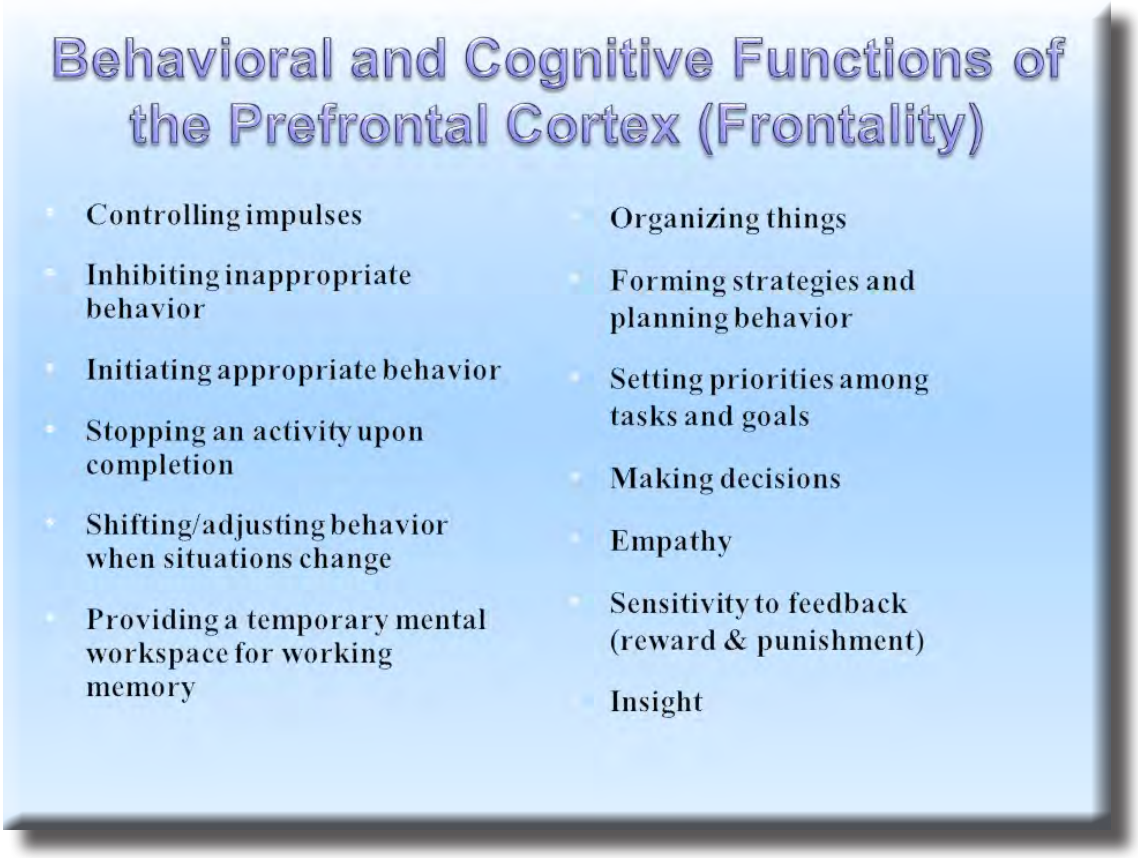
3. CRAVING:

THE DAILY SYMPTOM OF THE DISEASE.

THE USER EXPERIENCES INTENSE PSYCHOLOGICAL PREOCCUPATION WITH GETTING / USING THE DRUG.

CRAVING IS DYSPHORIC, AGITATING, ***AND IT FEELS VERY BAD***.

CRAVING IS WHAT ADDICTS EXPERIENCE ON A DAILY BASIS. ONCE SOMEONE CROSSES THE LINE INTO ADDICTION AND THE DRUG IS NOT AVAILABLE, INTENSE HUNGER FOR THE DRUG WILL APPEAR. THAT HUNGER IS CALLED CRAVING. SCIENTIFIC STUDIES HAVE DESCRIBED THE CONDITIONS THAT MAKE YOU REALLY HAVE STRONG CRAVINGS. THESE CONDITIONS MAKE YOU CRAVE SO MUCH THAT YOU MIGHT DO THINGS THAT YOU WOULD NEVER OTHERWISE DO IF YOU BECAME DESPERATE BECAUSE OF HIGH CRAVING.



4. DENIAL / HYPOFRONTALITY:

A TRUE DISTORTION OF PERCEPTION CAUSED BY CRAVING.

UNDER THE PRESSURE OF INTENSE CRAVING, IS TEMPORARILY BLINDED TO THE RISKS AND CONSEQUENCES OF USING.

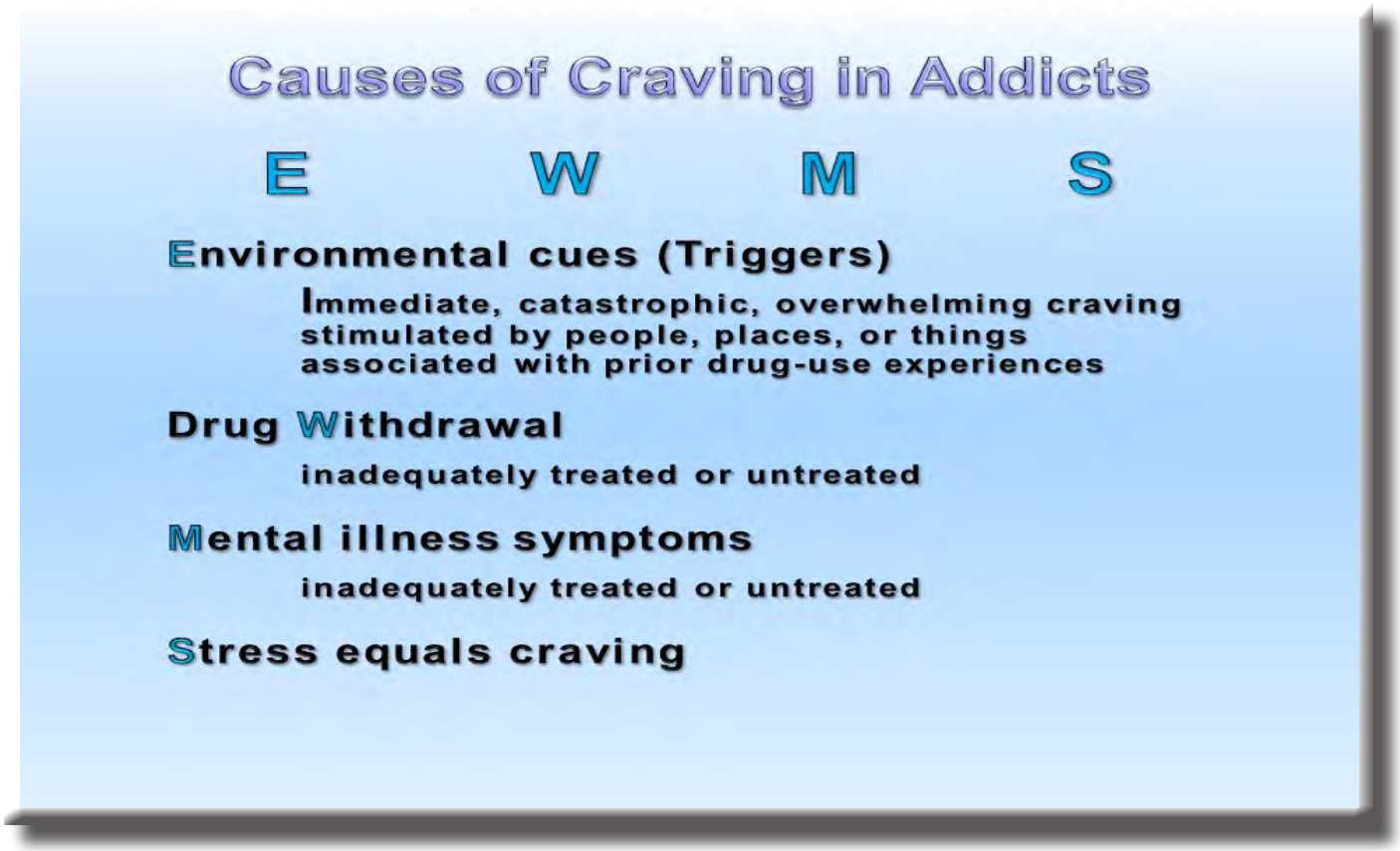
THE TERM DENIAL NO LONGER MEANS "I DON'T HAVE A PROBLEM." MOST COMMONLY, WHAT WAS FORMERLY VIEWED AS DENIAL IS NOW MORE PROPERLY CALLED TREATMENT RESISTANCE.

MOST ADDICTED PEOPLE HAVE BEEN THROUGH BAD AND HURTFUL EPISODES OF WITHDRAWAL AND ARE FRIGHTENED ABOUT HAVING TO GO THROUGH THEM AGAIN. SOME HAVE ACHIEVED SOBRIETY AND FIND IT IS AN UNHAPPY, NEGATIVE PLACE. FOR THEM, THE DRIVE TO USE IS LESS CAUSED BY A DESIRE TO GET HIGH, BUT RATHER A STRONG NEED NOT TO BE SOBER.

THE MODERN TERM FOR DENIAL IS HYPOFRONTALITY. IN A HYPOFRONTAL PERSON, THE PART OF THE BRAIN THAT CONTROLS BEHAVIOR WENT TO SLEEP; IT IS UNDERACTIVE. ONE OF THE HE BIGGEST PROBLEMS FOR A DRUG ADDICT IS THAT WHEN CRAVING BUILDS UP, THINKING GOES DOWN. THE LOSS OF REASONING CAUSED BY CRAVING IS TERMED HYPO-(LOW)-FRONTALITY (THE COMBINED FUNCTIONS OF THE PREFRONTAL CORTEX WHICH IS THE PART OF THE BRAIN THAT CONTROLS BEHAVIOR).

MANY ADDICTS SAY, "YOUR MIND GOES BLANK. YOU JUST DON'T REMEMBER THE TROUBLE, YOU DON'T REMEMBER WHY YOU'RE NOT SUPPOSED TO DO IT AND YOU DON'T REMEMBER WHAT'S GOING TO HAPPEN. "

ADDICTED PEOPLE CANNOT SEE WHAT THEY ARE DOING, AND DON'T REALIZE THE TROUBLE THAT THEY ARE IN.



CAUSES OF CRAVING

THE FOUR MOST POWERFUL TRIGGERS OF CRAVING ARE **EWMS**:

ENVIRONMENT
WITHDRAWAL
MENTAL HEALTH SYMPTOMS
STRESS

IT IS IMPORTANT TO KEEP IN MIND THE DEFINITION OF ADDICTION (COMPULSION, CUDAC, CRAVING AND HYPOFRONTALITY) WHEN THINKING ABOUT THE CAUSES OF CRAVING. TO PUT IT SIMPLY, ONCE SOMEONE NEUROADAPTS AND BECOMES TOLERANT TO A DRUG, IT IS THE EWMS FACTORS THAT KEEPS PEOPLE ADDICTED.

ENVIRONMENTALLY CUED (TRIGGERS)

OF THESE FOUR, THE MOST POWERFUL IS ENVIRONMENTAL CUEING. ENVIRONMENTAL CUES ARE THE MOST COMMON CAUSE OF RELAPSE. HALF OF THE TIME THAT SOMEBODY TRIES TO STOP THEY GO BACK TO USING BECAUSE THE DRUG IS AROUND THEM.

WHAT THIS MEANS TO ANY ADDICT WHO WANTS TO STAY OFF DRUGS IS THAT THEY MUST GET AWAY FROM THE DRUG. NO ONE STAYS OFF DRUGS IF PEOPLE AROUND THEM ARE USING IT; IT IS THE FIRST THING YOU HAVE TO DO, GET AWAY FROM THE DRUG. CRAVING CAN APPEAR FROM THINGS LIKE THE SMELL OF A DRUG, GOING INTO THE ROOM WHERE IT WAS USED IT AND SIMPLY THINKING ABOUT IT. TRIGGERS CAUSE IMMEDIATE, CATASTROPHIC, OVERWHELMING CRAVING STIMULATED BY THE PEOPLE, PLACES, THINGS ASSOCIATED WITH PRIOR DRUG USING EXPERIENCES.

THIS CRAVING IS KNOWN AS “ENDOGENOUS”, OR “COMES FROM WITHIN”. THIS IS SECONDARY TO A CHEMICAL IMBALANCE CREATED BY PROLONGED DRUG USE.

WITHDRAWAL

EVERYONE WHO HAS USED A DRUG ENOUGH TO BECOME TOLERANT TO IT WILL GO THROUGH WITHDRAWAL WHEN THEY STOP USING. AND WHEN WITHDRAWAL GETS BAD IT CAUSES VERY HIGH LEVELS OF CRAVING. IF THE SYMPTOMS THAT APPEAR ON STOPPING INCLUDE FEELING SO BAD THAT DYSPHORIA IS PRODUCED, ADDICTS WILL TAKE DESPERATE MEASURES TO GET WELL. IN REALLY BAD CASES OF WITHDRAWAL, MORALS AND GOOD JUDGMENT ARE IGNORED WHEN AN ADDICT IS LOOKING FOR RELIEF. IT IS IMPORTANT TO REMEMBER THAT FOR SOME DRUGS, LIKE OXYCONTIN, THE WITHDRAWAL IS SO BAD THAT USERS WILL DO ANYTHING TO GET MORE DRUGS, INCLUDING STEALING FROM THEIR FAMILIES. THEY ARE NOT CHOOSING TO STEAL BUT ARE FORCED BY THE DESPERATE NEED TO NOT SUFFER.

MENTAL HEALTH

DRUGS DO MORE THAN MAKE YOU HIGH, THEY CAN IMPROVE THE SYMPTOMS OF MENTAL HEALTH DISORDERS. IF YOU ARE ANXIOUS, DON'T USE DRUGS. IT WILL TAKE AWAY THE ANXIETY. IT WILL DO MORE FOR YOU THAN JUST MAKE YOU HIGH. IF YOU ARE DEPRESSED, DON'T USE DRUGS. WHY? IT WILL TAKE AWAY THE DEPRESSION. IF YOU ARE BORED, DON'T DO DRUGS. WHY? IT WILL TAKE AWAY THE BOREDOM. FOR SOMEONE WITH THESE SYMPTOMS OF "DEPRESSED, ANXIOUS, BORED", THE USER DISCOVERS THAT THE DRUG TAKES AWAY THOSE THINGS.

IT WILL DO MORE FOR PEOPLE WITH THESE SYMPTOMS THAN FOR SOMEONE WHO DOESN'T. IT WILL WORK TOO WELL. AND IT IS TRUE; THEY REALLY DO FEEL BETTER. THEY THINK BETTER. IT REALLY WORKS FOR THEM AND THEY QUICKLY COME TO DEPEND ON THE DRUG TO FEEL LESS DEPRESSED OR ANXIOUS OR BORED.

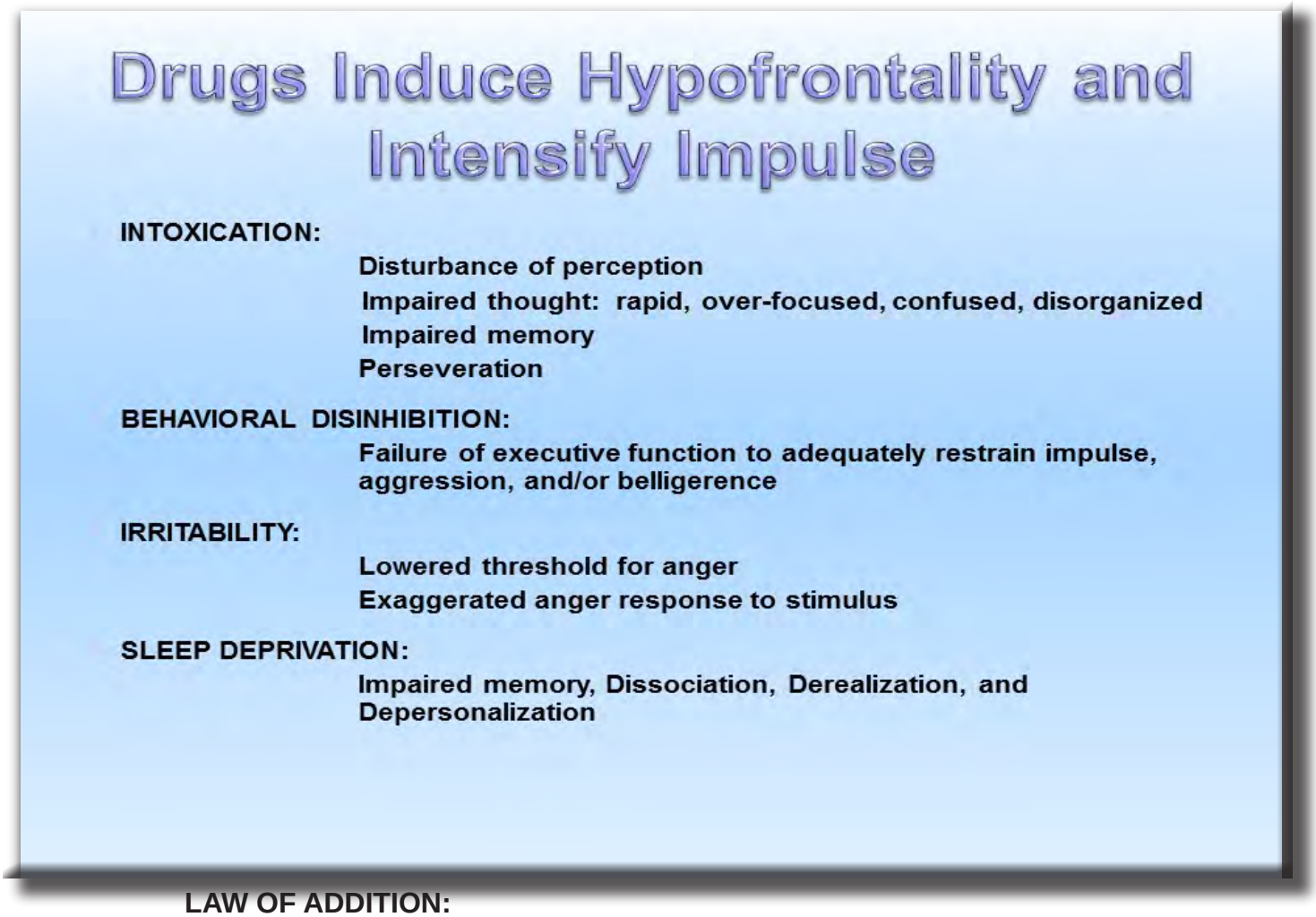
HOWEVER, IF THEY CONTINUE TO USE, THEY WILL DEVELOP TOLERANCE, MEANING THAT THEY NEED MORE AND MORE TO DRIVE AWAY THE BAD SYMPTOMS. WHEN THEY STOP USING, THEY FEEL WORSE THAN BEFORE THEY STARTED USING DRUGS. IT TRAPS THE USER IN A CYCLE IN WHICH THEY USE TO RELIEVE MENTAL HEALTH SYMPTOMS BUT NEED TO USE MORE AND MORE FOR THE DRUG TO WORK. WHEN THEY TRY TO STOP, THE MENTAL HEALTH SYMPTOMS COME BACK WORSE THAN BEFORE AND THEY DEVELOP VERY HIGH CRAVING TO USE.

STRESS

"STRESS" IS THE FOURTH CAUSE OF CRAVING. ONE OF THE MOST REMARKABLE THINGS ABOUT PEOPLE WHO GET ADDICTED IS THAT THEY ARE VERY SENSITIVE TO STRESS. IF THEY GOT UPSET, THEY NEED TO USE. IF THEY FEEL DOWN, THEY NEED TO USE. IF THEY GET ANGRY OR LONELY, THEY NEED TO USE. IF THEY GET OVERTIRED, THEY NEED TO USE.

ADDICTION IS ONE OF THE MOST STRESS SENSITIVE CONDITIONS KNOWN TO MEDICINE. IF YOU ARE AN ADDICT, YOU CAN'T BE STRESSED WITHOUT WANTING TO USE AND OFTEN THE FEELINGS OF STRESS CARRY WITH THEM A GREAT DEAL OF CRAVING TO USE DRUGS. ADDICTS EXPERIENCE STRESS AS CRAVING.

ONCE YOU ARE ADDICTED, TO BE STRESSED IS TO NEED TO USE. AS WITH MENTAL HEALTH SYMPTOMS, DRUGS RELIEVE STRESS. TOBACCO IS A GOOD EXAMPLE: IF A PERSON IS STRESSED, USING TOBACCO RELIEVES IT IMMEDIATELY, AND TOBACCO SMOKERS COME TO DEPEND ON TOBACCO TO RELIEVE STRESS.



LAW OF ADDITION:

STRESS EQUALS CRAVING (STRESSORS). STRESSORS ACTIVATE CRAVING THAT BUILDS OVER A PERIOD OF HOURS TO DAYS.

WHAT IS PHYSICAL DEPENDENCE?

PHYSICAL DEPENDENCE:

WHEN THE USER STOPS THE DRUG, PHYSICAL ILLNESS OCCURS.

ABSTINENCE SYNDROME:

THE NAME OF THE ILLNESS CAUSED BY WITHDRAWAL SYMPTOMS.

THE DRUG EVENT

THE ENVIRONMENT HELPS SHAPE THE DRUG EXPERIENCE.

SET:

THE INDIVIDUALS BELIEFS, ATTITUDES AND STATE OF MIND AT THE TIME OF USE.

SETTING:

THE PHYSICAL AND SOCIAL ENVIRONMENT WITHIN WHICH DRUG USE OCCURS.

USER SET AND SETTING ARE SHAPED BY BOTH PRESCRIPTIONS AND PROSCRIPTIONS OF AN INDIVIDUAL'S CULTURE AND SOCIAL GROUP. ONE'S VALUES AND THE RULES OF CONDUCT INFLUENCE THE RESPONSE ONE WILL HAVE TO THE USE OF ANY DRUG. (BECK, 1994, P 28)

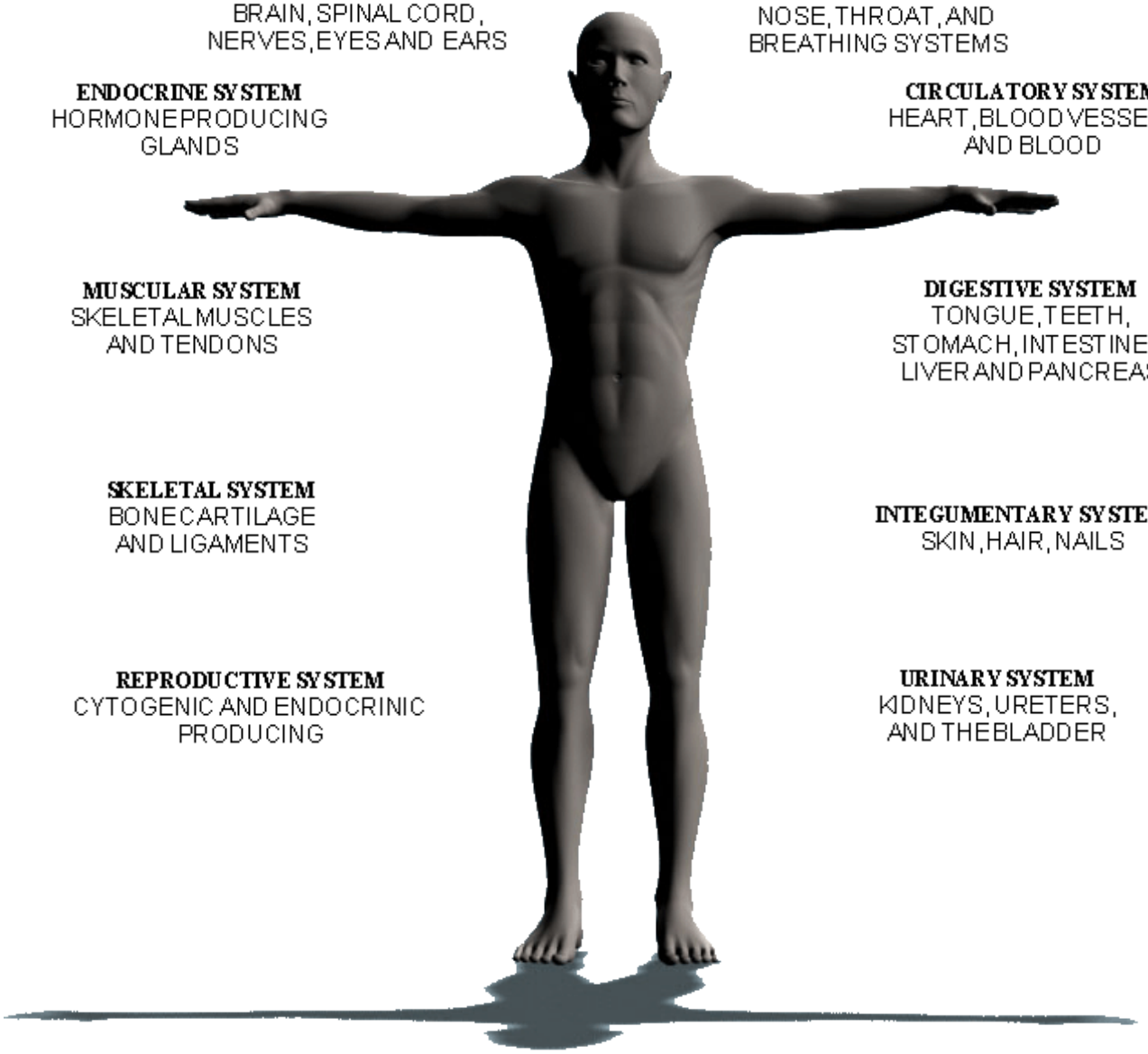
ADDITIONAL FACTORS:

IF THE INITIAL EXPERIENCE OF THE DRUG WAS POSITIVE OR NOT.

THE CHARACTERISTICS OF THE DRUG. CERTAIN DRUGS HAVE A HIGHER POTENTIAL FOR ADDICTION.

Neurotransmitters and the Human Brain

THE TEN SYSTEMS OF THE HUMAN BODY



ALL OF THESE SYSTEMS INTERACT TO MAINTAIN A DYNAMIC BALANCE INVOLVING THE LEVELS OF SALTS, WATER, SUGARS, AND OTHER MATERIALS IN THE BODY FLUIDS. EACH SYSTEM PLAYS AN IMPORTANT ROLE IN MAINTAINING THE INTRICATE BALANCES OF THE BODY. THIS BALANCE IS KNOWN AS HOMEOSTASIS.

THESE SYSTEMS ARE REGULATED BY THE BRAIN IN TWO WAYS:

1. RELEASE OF CHEMICAL MESSENGERS VIA THE BLOODSTREAM. (NEUROHORMONES).

2. RELEASE OF ELECTRICAL/CHEMICAL MESSENGERS IN THE NERVOUS SYSTEM. (NEUROTRANSMITTERS)

THE NERVOUS SYSTEM

THERE ARE TWO TYPES OF NERVES IN THE HUMAN BODY:

MOTOR NERVES:

CARRY MESSAGES AWAY FROM THE BRAIN.

SENSORY NERVES:

BRING MESSAGES TO THE BRAIN.

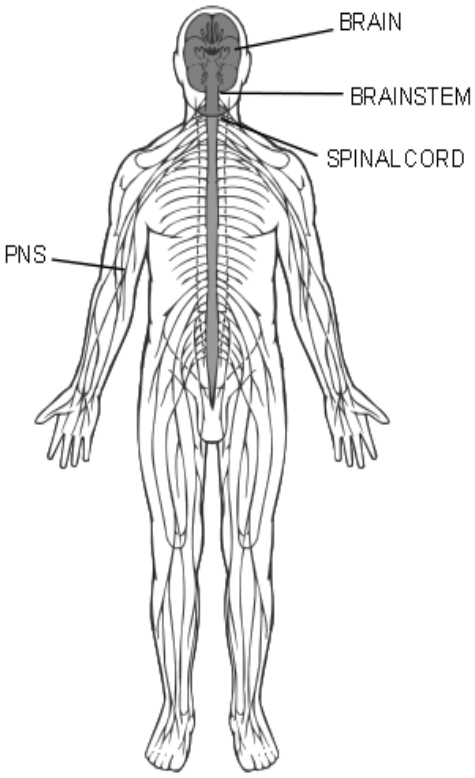
IN THE HUMAN BODY, THE NERVOUS SYSTEM IS IDENTIFIED IN TWO MAJOR SYSTEMS:

1. **THE CENTRAL NERVOUS SYSTEM (CNS) CONSISTS OF:**

A. THE BRAIN

B. BRAIN STEM

C. SPINAL CORD



THIS IS THE BODY'S CONTROL CENTER. IT RECEIVES AND TRANSMITS INFORMATION VIA THE PERIPHERAL NERVOUS SYSTEM.

2. **THE PERIPHERAL NERVOUS SYSTEM (PNS)**

THIS REFERS TO THE TWELVE PAIRS OF CRANIAL NERVES THAT PROJECT FROM THE BRAIN, AND THE 31 PAIRS OF NERVES THAT ARE ROOTED IN THE SPINAL CORD. THE PERIPHERAL NERVES ARE DIVIDED INTO TWO MAIN GROUPS:

SOMATIC AND AUTONOMIC

THE SOMATIC (BODILY) NERVOUS SYSTEM:

THE SOMATIC SYSTEM CONTAINS TWO KINDS OF NERVES, THE MOTOR AND SENSORY NERVES. THE MOTOR NERVES BRANCH FROM THE CENTRAL NERVOUS SYSTEM AND REGULATE THE MUSCLES ACTION BY ORDERS FROM THE BRAIN OR SPINAL CORD. THE SENSORY NERVES TAKE THE STIMULUS SIGNALS FROM THE SKIN, EYES, TONGUE, NOSTRILS, JOINTS AND MUSCLES TO THE CENTRAL NERVOUS SYSTEM.

THE AUTONOMIC (SELF REGULATING) NERVOUS SYSTEM:

THE AUTONOMIC SYSTEM AUTOMATICALLY CONTROLS THE GLANDS AND ORGANS LIKE THE LUNGS, HEART, BLOOD VESSELS AND PUPILS OF THE EYES. THIS SYSTEM IS CONNECTED TO THE CENTRAL NERVOUS SYSTEM AND CONSISTS OF TWO SUBSYSTEMS.

THESE TWO SYSTEMS WORK IN OPPOSITION OF EACH OTHER IN ORDER TO MAINTAIN HOMEOSTASIS. THESE SUBSYSTEMS ARE:

THE SYMPATHETIC NERVOUS SYSTEM:

THE SYMPATHETIC NERVOUS SYSTEM INCREASES THE BODIES INTERNAL ACTIVITY, INCREASING HEART RATE, DILATING PUPILS, AND CHANGING THE BLOOD FLOW FROM THE DIGESTIVE TRACTS TO THE BRAIN AND LARGE MUSCLE GROUPS. (FIGHT OR FLIGHT)

DRUGS THAT AFFECT THIS SYSTEM ARE KNOWN AS SYMPATHOMIMETIC. THEY CAUSE EXCITEMENT AND STIMULATION.

STIMULANTS, HALLUCINOGENS, CANNABIS, HALLUCINOGENIC STIMULANTS, DISSOCIATIVE ANESTHETICS, INHALANTS, AND MANY OF THE NEW DESIGNER DRUGS MEET THIS CLASSIFICATION.

THE PARASYMPATHETIC NERVOUS SYSTEM:

THE PARASYMPATHETIC NERVOUS SYSTEM REVERSES THE EFFECTS OF THE SYMPATHETIC SYSTEM IN THAT IT SLOWS HEART RATE, CONSTRICTS PUPILS, AND RETURNS THE BLOOD FLOW BACK TO THE INTESTINES.

DRUGS THAT AFFECT THIS SYSTEM ARE KNOWN AS PARASYMPATHOMIMETIC. THEY CAUSE DROWSINESS, MUSCLE RELAXATION, AND LOWER BLOOD PRESSURE.

OPIATES AND DEPRESSANTS MEET THIS CLASSIFICATION.

THE NEURON

THE METHOD IN WHICH THESE MESSAGES ARE TRANSMITTED THROUGH THE NERVOUS SYSTEM IS CONDUCTED VIA ELECTRICAL AND CHEMICAL IMPULSES THROUGH NEURONS.

EACH NEURON CONSISTS OF A SOMA (CELL BODY), DENDRITES (RECEIVE IMPULSES) AND AN AXIOM (TRANSMITS IMPULSES). BETWEEN THE AXIOM AND DENDRITE IS A GAP KNOWN AS A "**SYNAPSE**."

NEUROTRANSMITTERS ARE RELEASED VIA A ELECTRICAL IMPULSE FROM THE PRESYNAPTIC AXIOM (FIRING CELL) AND TRAVEL TO THE RECEPTOR SITE OF THE POST SYNAPTIC DENDRITE (CHEMICAL IMPULSE). FROM THERE THE ELECTRICAL IMPULSE IS CARRIED ON TO THE NEXT NEURON.

RECEPTOR SITES:

THESE ARE AREAS IN THE BRAIN AND NERVOUS SYSTEM WHERE EITHER A NEUROTRANSMITTER OR NEUROHORMONE ATTACHES ITSELF TO A RECEPTOR SITE AND THE NERVE PERFORMS ITS INTENDED FUNCTION. SOME OF THESE SITES ARE KNOWN TO AFFECT:

- STIMULATION
- RELAXATION
- PAIN RELIEF
- STRESS CONTROL
- EUPHORIA
- MEMORY
- BREATH RATE

BIOCHEMICALS:

THE VARIOUS BIOCHEMICALS IN THE BODY HAVE FUNCTIONS INSIDE AND OUTSIDE OF THE NERVOUS SYSTEM.

NEUROHORMONES:

CHEMICALS THAT ARE PRODUCED IN A GLAND AND ACT ON NERVOUS TISSUE OR OTHER GLANDS. MANY ARE PRODUCED IN THE PITUITARY GLAND.

EXAMPLES OF NEUROHORMONES:

ENDORPHIN
ADRENALCORTICIOTROPIN (ACTH)
FOLLICLE STIMULATING (FSH)
LETEINING (LH)
PROLACTIN

NEUROCHEMICAL:

A BIOCHEMICAL THAT IS ACTIVE INSIDE THE NERVOUS SYSTEM.

NEUROTRANSMITTER:

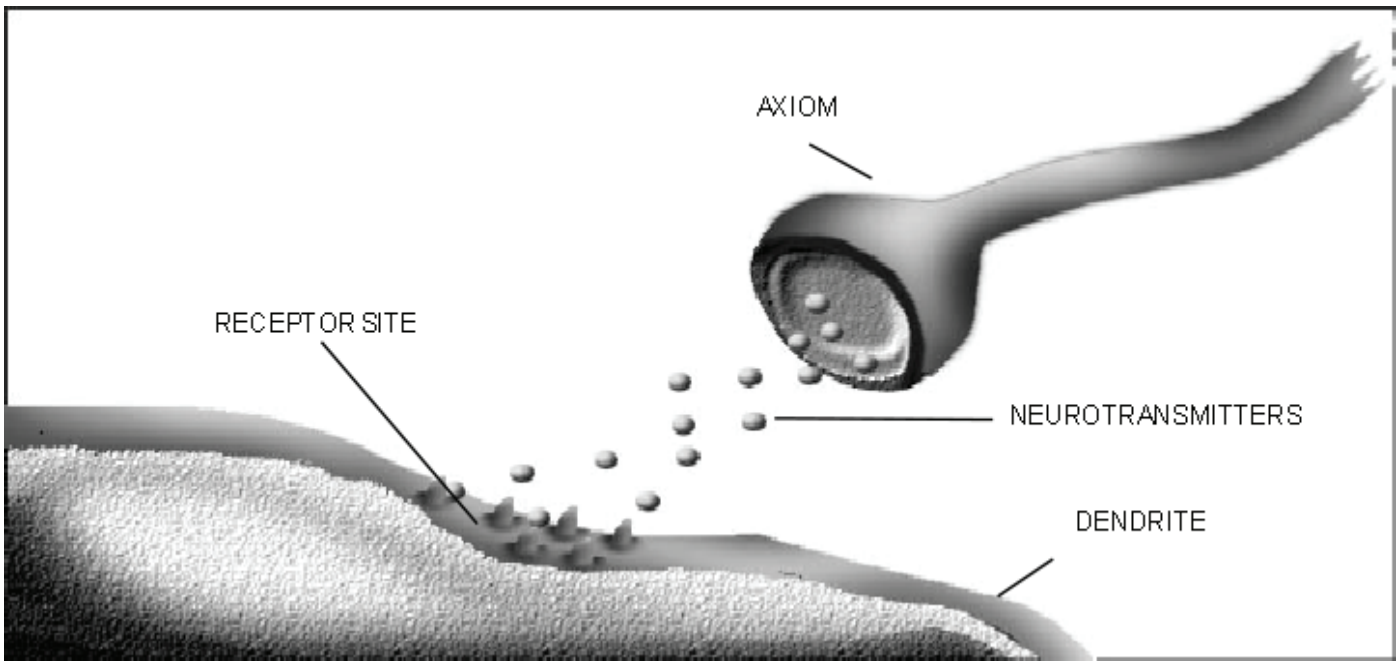
A BIOCHEMICAL WHICH TRANSMITS ACROSS THE SYNAPTIC GAP.

EXAMPLES OF NEUROTRANSMITTERS:

DOPAMINE
SEROTONIN
NOREPINEPHRINE
GAMMA AMINO BUTYRIC ACID (GABA)

LIGAND:

BIOCHEMICAL STORED IN THE BRAIN THAT ATTACHES TO A RECEPTOR.

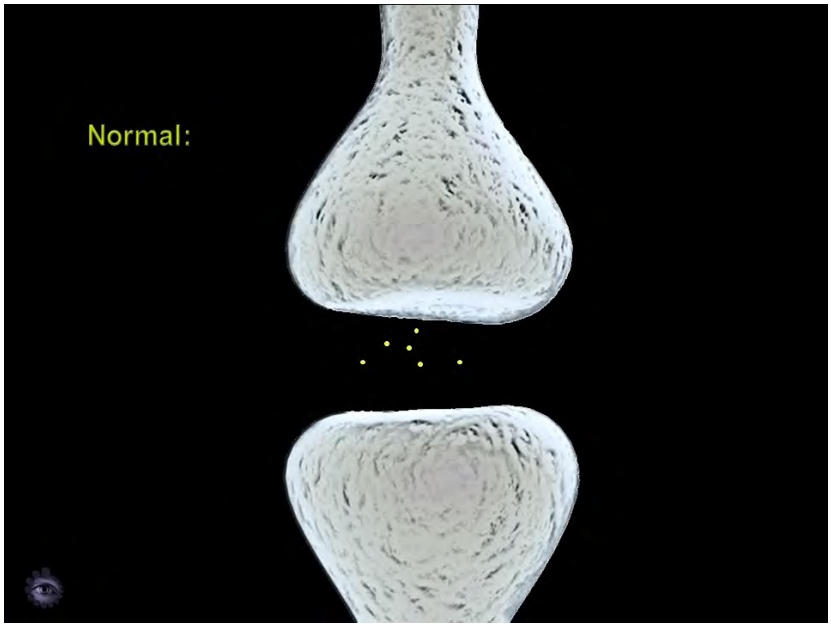


KEY CONCEPT:

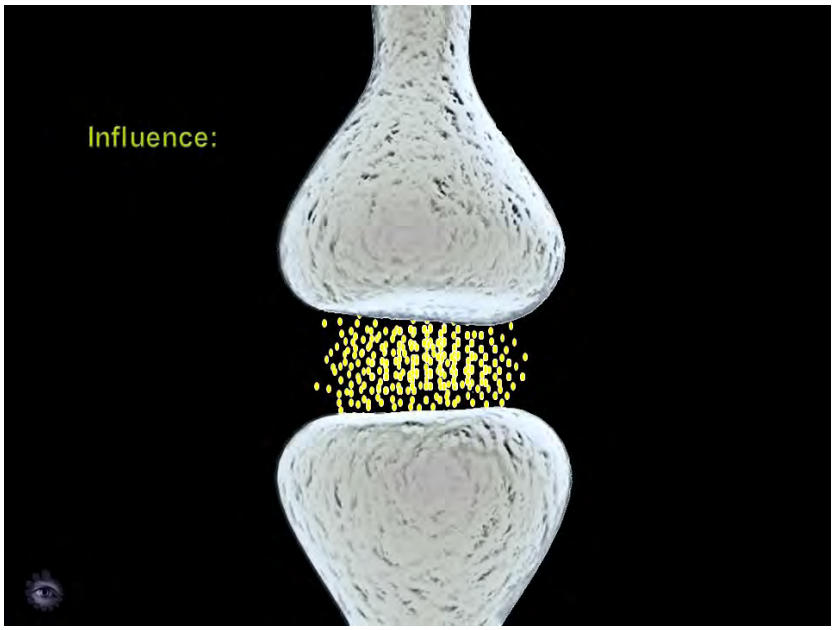
THE THREE FOLLOWING VIDEOS DEPICT THE NEUROCHEMICALS OF DOPAMINE BEING RELEASED AT THE SYNAPTIC CAP IN THREE MODELS; NORMAL TRANSMISSION, TRANSMISSION BY DRUG USE (UNDER THE INFLUENCE), AND TRANSMISSION DURING WITHDRAWAL OR AFTER NEUROADAPTATION HAS TAKEN PLACE.

CLICK ON EACH VIDEO TO WATCH THE DEMONSTRATION.

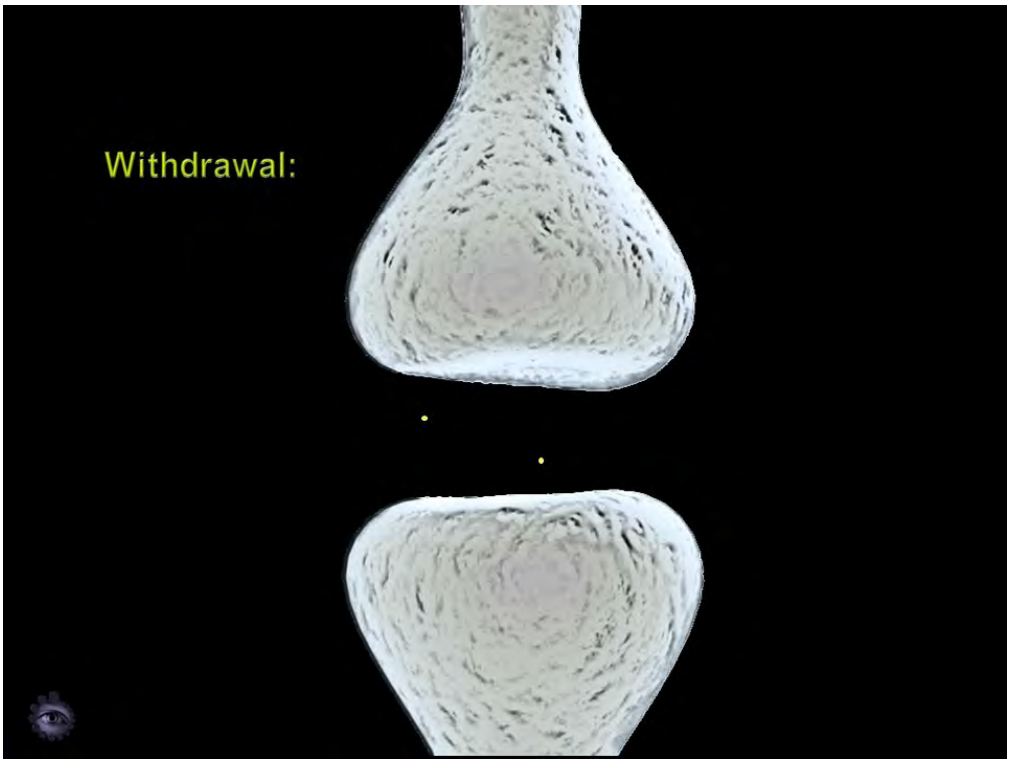
HOW WOULD THE PERSON IN THE THIRD MODEL VIDEO FEEL AS COMPARED TO THE PERSON IN EITHER OF THE MODELS ONE AND TWO?



VIDEO MODEL ONE: NORMAL TRANSMISSION



VIDEO MODEL TWO: INFLUENCE TRANSMISSION



VIDEO MODEL THREE: NEUROADAPTATION/WITHDRAWAL TRANSMISSION

Major Neurotransmitters Depleted By Drug Use

NEUROTRANSMITTER	MAJOR FUNCTIONS	DRUGS THAT DEPLETE
ENDORPHIN	PAIN RELIEF, ENDURANCE	HEROIN, CANNABIS, DISSOCIATIVE ANESTHETICS (D/A)
DOPAMINE	MUSCLE TONE, ENERGY	NICOTINE, CAFFEINE,
NOREPINEPHRINE	STIMULATION, EATING, MOTIVATION, PLEASURE, ATTENTION SPAN	COCAINE, METHAMPHETAMINE
SEROTONIN	MENTAL STABILITY, APPETITE, SLEEP CONTROL, SELF-ESTEEM	ALCOHOL, NICOTINE, COCAINE, D/A
GAMMA AMINO BUTYRIC ACID	MUSCLE RELAXANT, TRANQUILIZER	ALCOHOL, NICOTINE, CANNABIS, GHB
ACETYLCHOLINE	MEMORY, LEARNING, REFLEXES	CANNABIS, NICOTINE
CORTISONE, CORTICOTROPIN	IMMUNE SYSTEM, HEALING, STRESS	HEROIN, ANABOLIC STEROIDS, COCAINE

METHODS OF INGESTION

USABLE FORMS OF DRUGS:

"HCL" - HYDROCHLORIDE - WATER SOLUBLE

"BASE" - NON-WATER SOLUBLE, SMOKABLE FORM ONLY

PRIMARY INGESTION ROUTES:

ORAL (SWALLOW)

20 TO 40 MINUTES

NASAL (SNORT/INHALATION)

1 TO 5 MINUTES

INJECTION (KNOWN AS THE "**RUSH**")

INTRAVENOUS (I.V.)

4 TO 7 SECONDS

INTRAMUSCULAR (I.M.)

1 TO 5 MINUTES

SUBCUTANEOUS (S.C.)

1 TO 5 MINUTES

SMOKING (KNOWN AS THE "**BLAST**")

3 TO 6 SECONDS

THE PERSON USING A DRUG WANTS THE GREATEST EFFECT. THEREFORE, ORAL INGESTION IS THE LEAST PLEASURABLE METHOD. SMOKING IS THE METHOD THAT PRODUCES THE MOST PLEASURE TO THE BRAIN.

NOT ALL DRUGS CAN BE SMOKED. BUT FOR THE FIRST TIME IN THE HISTORY OF THE HUMAN RACE THE MOST ADDICTIVE DRUGS ARE IN A SMOKED FORM; HEROIN, COCAINE, METHAMPHETAMINE, AND CANNABIS/SYNTHETIC CANNABIS.

WEIGHTS AND MEASURES

KILOGRAM - 1000 GRAMS - 2.2 POUNDS

POUND - 454 GRAMS - 16 OUNCES

OUNCE - 28.5 GRAMS

"PIECE" - 22 TO 25 GRAMS

1/2 OUNCE - 14.25 GRAMS

1/4 OUNCE - 7 GRAMS

1/8 OUNCE - 3.5 GRAMS "EIGHT BALL"

1/16 OUNCE - 1.75 GRAMS "TEENA"

1 GRAM - (CONTENTS IN SWEET N LOW)

1/10 GRAM -KNOWN AS A "POINT"
THIS IS THE DOSAGE AMOUNT FOR MOST DRUGS

MILLIGRAM - 1/1000 TH OF A GRAM

MICROGRAM - 1/1,000,000 TH OF A GRAM

ONE GRAM QUANTITY

ONE GRAM = 1,000 MILLIGRAMS

(2) HALF GRAMS - 500 MILLIGRAMS

(4) QUARTER GRAMS - 250 MILLIGRAMS

(10) 100 MILLIGRAMS - EACH IS A STREET DOSE

(9) 100 MILLIGRAMS, (5) 20 MILLIGRAMS

100 MILLIGRAMS COMPARED TO 4 MILLIGRAMS

125 MICROGRAMS:
1 GRAM = 1,000,000 MICROGRAMS

(1) 80 MILLIGRAM PILL = (16) 5 MILLIGRAM PILLS

CLASSES OF DRUGS:

THERE ARE THOUSANDS OF COMPOUNDS THAT, WHEN TAKEN INTO THE BODY, PRODUCE CHANGES IN HOW THE BODY AND MIND FUNCTION. “PSYCHOACTIVE DRUGS” ARE THOSE FOR WHOM THE PRIMARY EFFECTS ARE ON BRAIN FUNCTION, ESPECIALLY THOSE THAT AFFECT THOUGHT PROCESSES, MOOD, ALERTNESS, PERCEPTIONS, AND BEHAVIOR. OF PSYCHOACTIVE DRUGS, SOME ARE KNOWN TO LEAD TO ADDICTION. NOT ALL DRUGS THAT WORK ON THE BRAIN ARE ADDICTING; FOR EXAMPLE, MEDICATIONS SUCH AS ANTIDEPRESSANTS WORK ON SEVERAL BRAIN FUNCTIONS AND DON’T PRODUCE INTOXICATION OR ADDICTION. HOWEVER, SOME MEDICATIONS WITH LEGITIMATE AND VALUABLE USES IN MEDICINE CAN READILY LEAD TO ADDICTION IF USED IMPROPERLY.

A PROPERTY THAT SEVERAL DRUGS HAVE IN COMMON IS THEIR ABILITY TO LEAD TO “**PHYSICAL DEPENDENCE**.” THIS MEANS THAT THE DRUG HAS BEEN TAKEN LONG ENOUGH FOR “TOLERANCE” TO DEVELOP, AND THESE USERS WILL BECOME SICK WHEN THEY STOP USING. PHYSICAL DEPENDENCE PRODUCING SERIOUS ILLNESS DEVELOPS WITH USE OF TRANQUILIZERS AND PAIN MEDICINE IF USED FOR A LONG ENOUGH TIME (AS SHORT AS WITHIN 2 WEEKS). PHYSICAL DEPENDENCE IS SHARED IN COMMON BETWEEN BOTH PAIN MANAGEMENT AND ADDICTION. OTHER WORDS FOR “PHYSICAL DEPENDENCE” ARE “HABIT FORMING” AND “PHYSICALLY ADDICTING.” BOTH TERMS REFLECT THESE DRUGS ABILITY TO CAUSE ILLNESS ON CESSATION OF USE BY TOLERANT INDIVIDUALS.

PSYCHEDELIC DRUGS:

PSYCHEDELICS CAN PRODUCE HIGH DEGREES OF INTOXICATION, BASED ON THEIR ABILITY TO REDUCE THE “FILTERING” PROPERTIES OF THE BRAIN, FLOODING CONSCIOUSNESS WITH HEIGHTENED SENSATION, EMOTION, AND INTENSE THOUGHT. THE QUALITY OF THE “TRIP” IS DEPENDENT ON THE MINDSET OF THE USER (GOOD MOOD OR BAD MOOD), AND THE SETTING IN WHICH THE DRUG IS TAKEN (A POSITIVE, HAPPY ENVIRONMENT INCREASES THE CHANCE THAT A “GOOD TRIP” WILL OCCUR). THE EXPECTATIONS AND PREVIOUS EXPERIENCES WITH THE DRUG STRONGLY INFLUENCE THE QUALITY OF PSYCHEDELIC INTOXICATION. IF THE USER EXPECTS A GOOD EXPERIENCE, THE CHANCES OF A GOOD EXPERIENCE INCREASE. IF THE USER HAS PREVIOUSLY HAD A BAD EXPERIENCE, OR HAS UNCERTAINTY AND APPREHENSION ABOUT WHAT TO EXPECT, A VERY BAD EXPERIENCE CAN RESULT.
INVARIABLY, IF THE MOOD CHANGES OR THREAT ENTERS THE SETTING, A CATASTROPHIC AND TERRIFYING “BAD TRIP” CAN READILY OCCUR. PLEASURE AND EUPHORIA THAT DEVELOP WITH USE IS INDIRECTLY PRODUCED, BY MAGNIFICATION OF WHATEVER PLEASURABLE EXPERIENCES ARE IN THE ENVIRONMENT. SIMILARLY, TERROR AND FRIGHTENING HALLUCINATIONS CAN APPEAR SUDDENLY IF THE ENVIRONMENT CHANGES DRASTICALLY. PSYCHEDELIC DRUGS ARE NOT “ADDICTING.” HOWEVER, “ECSTASY”, MDMA, IS A HYBRID DRUG WITH PROPERTIES OF BOTH A PSYCHEDELIC DRUG AND METHAMPHETAMINE; THOSE WHO USE IN A CONTINUOUS PATTERN (“ROLLING E”, “THIZZING”, AND “MOLLY”), CAN BECOME ADDICTED TO IT AND SUFFER FROM LOW SEROTONIN PRODUCTION WHICH CAN PRODUCE DEPRESSION AND WILL REQUIRE MEDICAL TREATMENT.

PSYCHEDELICS SAMPLE LIST	
ACID (LSD)	MUSHROOMS (PSILOCYBIN)
DMT	2CB
PEYOTE	MDMA

GLUTAMATE BLOCKERS:

SIMILAR TO PSYCHEDELICS IN THEIR ABILITY TO PRODUCE A PLEASURABLE “HIGH” ONLY BY INDIRECT MEANS IS A SMALL GROUP OF DRUGS SOMETIMES FOUND AMONG DRUG ABUSERS AND PARTY GOERS, INCLUDING PHENCYCLIDINE (PCP, ANGEL DUST), KETAMINE (A DISSOCIATIVE ANESTHETIC DRUG USED IN MEDICINE), AND DEXTROMETHORPHAN (DXM, COUGH SYRUP, IN VERY HIGH DOSES). MOST USERS DO NOT FIND INTOXICATION FROM THESE DRUGS PARTICULARLY ENJOYABLE, BUT THEY CAN PRODUCE TERRIFYING HALLUCINATIONS AND DEATH.

IN THIS CURRICULUM, THE WORD “DRUGS” REFERS TO DRUGS THAT INTERACT WITH THE BRAIN’S PLEASURE CHEMISTRY TO CAUSE THE SENSATION OF BEING “HIGH.” THESE ARE CALLED “ADDICTING DRUGS.” THESE DRUGS ARE CLASSIFIED INTO DIFFERENT GROUPS:

OPIATES:

PAIN MEDICATIONS ARE POWERFUL DRUGS THAT HAVE ESSENTIAL MEDICAL USES IN THE TREATMENT OF PAIN. ALL OPIATES WORK ON THE SAME BRAIN REGION, AND VARY PRIMARILY ON HOW STRONG AN EFFECT THEY PRODUCE (POTENCY), AND FAST OR SLOWLY THEY ENTER THE BRAIN AND PRODUCE THEIR EFFECTS.

BEGINNING IN THE EARLY 2000S, AN EPIDEMIC OF OPIATE DRUG MISUSE BEGAN, PRIMARILY AFFECTING TEENAGERS AND YOUNG ADULTS. ADDICTION TO OPIATES DEVELOPS QUICKLY AND ONCE ESTABLISHED, UP TO 20% WILL DIE. MANY YOUNG USERS, UNABLE TO AFFORD THE INCREASING COST OF THE DRUGS SWITCH TO USE OF HEROIN, THE MOST POTENT AND DEADLY OF ALL THE OPIATES.

METHADONE AND BUPRENORPHINE (SUBOXONE) WERE DEVELOPED TO TREAT OPIATE ADDICTION, AND BOTH ARE HIGHLY SUCCESSFUL IN REDUCING FATALITIES. BUPRENORPHINE DOES NOT PRODUCE A HIGH IN TOLERANT USERS, AND IS DIFFICULT TO ABUSE BECAUSE IT PRODUCES WITHDRAWAL SYMPTOMS IF THE DOSE TAKEN IS TOO HIGH. IT IS SAFE AND EFFECTIVE FOR LONG TERM USE, WHEREAS CESSATION OF SUBSTITUTION THERAPY WITH SUBOXONE LEADS TO HIGH RATES OF RELAPSE AND DEATH.

Opiate Effects	Opiate Withdrawal	Opiate Sample List
EFFECTS	WITHDRAWAL	• Opium
• Analgesia	• Pain	• Heroin
• Euphoria	• Dysphoria	• Oxycontin
• Anxiolytic- calming	• Anxiety	• Vicodin
• Sleep Inducing	• Insomnia	• Fentanyl
• Sensation of warmth	• Diarrhea	• Tramadol (Ultraam)
• Constipation	• Rhinorrhea (runny nose)	• Dilaudid
• Dry mucous membranes	• Chills	• Percodan
• Pupils constrict (pinpoint pupils)	• Pupils dilate	• Methadone
• Sedation/Sleepiness (nodding)	• Increases heart rate & blood pressure	
• Depresses respiration		

Prescription Opiates - Generic: Brand Names

- Codeine with acetaminophen
- Hydrocodone: Vicodin, Lortab, Norco
- Hydromorphone: Dilaudid
- Oxycodone: Percodan, OxyContin
- Morphine sulfate: MS Contin
- Fentanyl: Duragesic (transdermal), Actiq
- Methadone: Methadose
- Buprenorphine: Suboxone, Subutex

SEDATIVE-HYPNOTICS:

THESE ARE ALL CALMING DRUGS AND THEY INCLUDE ALCOHOL, TRANQUILIZERS, MUSCLE RELAXERS AND SOME SLEEPING MEDICINE. THERE ARE SIGNIFICANT MEDICAL USES FOR SEDATIVE-HYPNOTIC DRUGS, ESPECIALLY FOR THE SHORT TERM (LESS THAN 2 WEEKS) TREATMENT OF ANXIETY AND PANIC. THESE DRUGS PRODUCE DANGEROUS WITHDRAWAL SYNDROMES IN TOLERANT USERS.

Sedative-Hypnotic Effects	**Sedative-Hypnotic Withdrawal**	**Sedative-Hypnotic Sample List**
EFFECTS	WITHDRAWAL	• Alcohol
•Calm euphoria	• Dysphoria*	• Barbiturates
• Release of inhibitions	• Anxiety*	• Tranquilizers (xanax, ativan)
• Sleep inducing	• Insomnia*	• GHB
• Sedation / Sleepiness	• Sweating (Diaphoresis)*	• Somal
• Slurred Speech	• Tremor	• Ambien
• Unsteady gait (Ataxia)	• Tachycardia (↑heart rate)	
• Confusion	• Hypertension (↑blood pressure)	
• Forgetfulness	• Hyperventilation(↑breathing)	
• Slows heart rate	• Elevated temperature	
• Decreases blood pressure	• Hallucinations	
	• Seizures	
	• Delirium tremens	

STIMULANTS:

“UPPER” DRUGS THAT STIMULATE THE PARTS OF THE BRAIN THAT LEAD TO ALERTNESS, INCREASED ENERGY, AND PLEASURE. COCAINE AND AMPHETAMINE ARE COMMON EXAMPLES OF STIMULANTS AND THEY PRODUCE TOLERANCE AND SEVERE ADDICTION. IN THE PERIOD IMMEDIATELY AFTER CESSATION OF USE, PHYSIOLOGIC SYMPTOMS SUCH AS FATIGUE AND LOW BLOOD PRESSURE CAN APPEAR. ADDITIONALLY, PSYCHOLOGIC SYMPTOMS SUCH AS ANXIETY, DEPRESSION, CONFUSION, AND A STRONG NEED TO SLEEP ARE COMMON. ONCE A STIMULANT USER HAS FINALLY CAUGHT UP ON THEIR SLEEP, SERIOUS INSOMNIA APPEARS WHICH CAN PERSIST FOR MONTHS, AS CAN ALL OF THE OTHER PSYCHOLOGIC SYMPTOMS. STIMULANTS ARE SOMETIMES REFERRED TO “PSYCHOLOGICALLY ADDICTING”. HOWEVER, THE MECHANISMS THAT PRODUCE PHYSICAL DEPENDENCE ARE THE SAME AS THOSE THAT PRODUCE PSYCHOLOGIC DEPENDENCE; THEY ARE ON A CONTINUUM OF CHANGES IN THE FUNCTION OF BOTH THE BODY AND MIND.

METHAMPHETAMINE IS THE MOST POWERFUL IN THE STIMULANT CLASS, AND PRODUCES DANGEROUS LEVELS OF INTOXICATION AND ADDICTION. A CLOSE COUSIN TO IT IS ADDERALL, A MIXTURE OF AMPHETAMINES INTENDED TO TREAT ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD). IT IS EASILY ABUSED, AND SOME INDIVIDUALS HAVE PROGRESSED TO USING OVER 10 TIMES THE SAFE RECOMMENDED DOSE. STIMULANTS INCREASE IN THEIR PSYCHOACTIVE EFFECTS AND DANGER WHEN SMOKED OR INJECTED INTRAVENOUSLY.

CANNABIS:

CANNABIS IS IN A UNIQUE CLASS OF DRUGS WHICH WORKS THROUGH ITS OWN UNIQUE BRAIN RECEPTORS. THERE IS WIDESPREAD MISUNDERSTANDING ON WHETHER CANNABIS IS “HABIT FORMING” OR “ADDICTING.” IN FACT, CESSATION OF USE BY SOMEONE WHO IS TOLERANT TO IT WILL ALWAYS PRODUCE SYMPTOMS THAT IMPAIR BOTH BODY FUNCTION AND MIND FUNCTION. PROMINENT SYMPTOMS OF IRRITABILITY, IMPAIRED CONCENTRATION, MEMORY IMPAIRMENT, AND SLEEP DISORDER ARE COMMONLY SEEN. ADDICTION TO CANNABIS IS COMMON (INABILITY TO STOP USING OR STAY STOPPED), AND CAUSES SERIOUS IMPAIRMENT IN CONCENTRATION, MEMORY, MOOD AND SLEEP. THE UNCOMFORTABLE SYMPTOMS OF CANNABIS WITHDRAWAL CAN PERSIST FOR SEVERAL MONTHS AFTER CESSATION OF USE. APPEARANCE OF THESE SYMPTOMS INCREASES CRAVING FOR THE DRUG, AND ARE MAJOR BARRIERS TO STAYING SOBER.

Cannabis Effects	**Cannabis Withdrawal**
EFFECTS	WITHDRAWAL
• Sleep inducing	• Insomnia / nightmares
• Appetite stimulation	• Anorexia / weight loss
• Induces calm	• Restlessness, extreme irritability
• Induces "mellow" feelings	• Depressed mood, anger outbursts
• Elevates mood	• Shakiness / sweating
• Reduces muscle tone	• Stomach pain / physical discomfort
• Produces pleasure, interest	• Boredom

TOBACCO:

THIS DRUG CONTAINS NICOTINE WHICH ACTIVATES ONE OF THE MAIN REGULATING SYSTEMS OF THE BODY AND MIND, THE ACETYLCHOLINE RECEPTOR IN THE "PARASYMPATHETIC NERVOUS SYSTEM." THIS KEY REGULATORY SYSTEM COUNTERACTS THE "FLIGHT OR FIGHT" ACTIVITY OF THE "SYMPATHETIC NERVOUS SYSTEM". NICOTINE PRODUCES SLIGHT INCREASES IN PLEASURE, BUT IS USED FOR ITS CALMING AND ALERTING EFFECTS. BECAUSE THE DOSE CAN BE "FINE-TUNED" TO SUIT THE USER, IT IS ONE OF THE MOST ADDICTING SUBSTANCES IN THE WORLD.

INHALANTS:

THIS IS A CLASS OF DRUGS OFTEN ABUSED BY INHALING FUMES OR GASES THAT COME FROM A SOLID, A LIQUID OR ARE OTHERWISE EXPELLED FROM A CANISTER OR CONTAINER. THERE ARE NO KNOWN MEDICINAL USES FOR ANY SUBSTANCE THAT IS ABUSED IN THIS MANNER THAT LEADS TO ADDICTION. IT APPEARS THAT ANY "HIGH" THAT MAY COME FROM USING THESE SUBSTANCES CANNOT BE SEPARATED FROM THE DAMAGE THEY CAUSE THE BRAIN AND BODY. THE SENSATION PRODUCED BY INHALANTS IS SIMILAR TO THE GIDDINESS THAT IS EXPERIENCE AFTER A PERIOD OF TWIRLING AND SPINNING UNTIL FALLING.

IT IS OFTEN DIFFICULT TO FIND ACCURATE, UNBIASED INFORMATION ABOUT DRUGS. IN THE WEBLIOGRAPHY YOU CAN FIND MANY AUTHORITATIVE SOURCES FOR FINDING OUT ABOUT DRUGS AND HOW THEY WORK, AND HOW DRUG ABUSE LEADS TO HIGH COSTS TO THE INDIVIDUAL AND THE COMMUNITY. "EROWID.ORG" IS A COMPENDIUM OF DRUGS AND THEIR EFFECTS, WITH SCIENTIFIC INFORMATION AND USER EXPERIENCES LISTED FOR HUNDREDS OF DIFFERENT DRUGS.

Influence Recognition Identification System (IRIS)

INFLUENCE RECOGNITION IDENTIFICATION SYSTEM (IRIS) TECHNIQUES

(DISCLAIMER)

THIS SECTION INVOLVES THE TECHNIQUES TO IDENTIFY PERSON(S) WHO ARE UNDER THE INFLUENCE OF CONTROLLED SUBSTANCES AND/OR ALCOHOL USING THE DRUG ABUSE RECOGNITION PROCESS. THIS PROCESS (ALONG WITH THE DRUG RECOGNITION EXPERT - DRE) IS UTILIZED BY LAW ENFORCEMENT TO ACCURATELY IDENTIFY PERSONS WHO ARE UNDER THE INFLUENCE OF DRUGS AND/OR ALCOHOL.

THIS PROCESS IS ALSO USED IN MANY SCHOOL DISTRICTS IN CALIFORNIA AS AN INTERVENTION TOOL TO ENFORCE THE SCHOOLS DRUG AND ALCOHOL INFLUENCE POLICY. THE INTENT OF THIS MANUAL IS TO DEMONSTRATE HOW THE PROCESS IS CONDUCTED, BUT IT DOES NOT CERTIFY THE READER OF THIS MANUAL IN THE DAR, DRE, OR IRIS PROCESS. CERTIFICATION TRAINING IN THIS PROCESS IS AVAILABLE FOR ANYONE WHO DESIRES TO IDENTIFY DRUG AND ALCOHOL INFLUENCE BY CONTACTING THE AUTHOR.

THE EVALUATION PROCESS

THE IRIS EVALUATION PROCESS IS A SYSTEMATIC METHOD OF EXAMINING A SUBJECT TO DETERMINE WHETHER OR NOT THE SUBJECT IS UNDER THE INFLUENCE OF A SUBSTANCE (DRUG), AND IF SO, WHICH CATEGORY(S) OF DRUG THE SUBJECT IS UNDER THE INFLUENCE OF.

THE DAR PROGRAM IS USED AS AN ENFORCEMENT TOOL TO HELP IDENTIFY PERSONS WHO ARE UNDER THE INFLUENCE OF A CONTROLLED SUBSTANCE PURSUANT TO THE CALIFORNIA HEALTH & SAFETY CODE 11550, AND THE CALIFORNIA VEHICLE CODE OF 23152.

IRIS IS INTENDED TO BE USED AS AN INTERVENTION PROGRAM BY ADAPTING THE DAR SYSTEMATIC PROCESS WHICH IS BASED ON A VARIETY OF OBSERVABLE SIGNS AND SYMPTOMS THAT ARE KNOWN TO BE RELIABLE INDICATORS OF DRUG INFLUENCE.

A CONCLUSION OF INFLUENCE IS NEVER REACHED BASED ON ANY ONE ELEMENT OF THE EXAMINATION ALONE. THE CONCLUSION IS BASED ON THE "TOTALITY" OF THE ELEMENTS OF THE EXAMINATION

THE PROCESS IS STANDARDIZED IN THAT IT IS CONDUCTED IN EXACTLY THE SAME WAY, BY EVERY TRAINED EXAMINER, FOR EVERY SUBJECT. THE TRAINED EXAMINER NEVER LEAVES OUT ANY STEP OF THE EVALUATION PROCESS, EVEN IF IT IS NOT EXPECTED TO PROVIDE A POSITIVE INDICATOR OF THE TYPE OF DRUG(S) THAT THE EXAMINER MAY SUSPECT.

THE TRAINED EXAMINER NEVER MODIFIES THE EVALUATION PROCESS BY INCLUDING SOME UNPROVEN “INDICATORS” THAT EXAMINER THINKS MAY BE HELPFUL. STANDARDIZATION IS VERY IMPORTANT BECAUSE IT HELPS TO AVOID ERRORS OF OMISSION OR COMMISSION, PROMOTES PROFESSIONALISM, AND SECURES ACCEPTANCE BY THE PARTIES INVOLVED, AND THE COURT SYSTEM.

THE EVALUATION PROCESS CONSISTS OF THE FOLLOWING EIGHT STEPS;

PRELIMINARY OBSERVATIONS

PRELIMINARY OBSERVATIONS INVOLVE NOTING READILY OBSERVABLE SIGNS AND SYMPTOMS WHILE INQUIRING AS TO THE SUBJECTS MEDICAL BACKGROUND. EXAMPLES OF READILY OBSERVABLE SIGNS AND SYMPTOMS YOU SHOULD NOTE ARE:

FACE:

EXCESSIVE SWEATING
SLEEPY APPEARANCE
FLUSHED
PALE
ITCHING
TENSE APPEARANCE

BREATH:

CHEMICAL ODOR
ALCOHOLIC BEVERAGE ODOR

SPEECH:

SLOW / SLURRED SPEECH
RAPID SPEECH

EYES:

DROOPY EYELIDS
BLOODSHOT EYES
RETRACTED EYELIDS
SWOLLEN EYE LIDS
WATERY EYES
GLAZING
DILATED PUPILS (+6.5 MM)
PINPOINTED PUPILS (-3.0 MM)
RESTING NYSTAGMUS

COORDINATION:

RAPID REFLEXES
SLOW REFLEXES

GENERAL PHYSICAL OBSERVATIONS:

INCREASED / DECREASED RESPIRATORY RATE
PARANOIA
BODY TREMORS
EUPHORIA
MOOD SWINGS
ITCHING
DELUSIONS
HALLUCINATIONS
DISORIENTATION
CONFUSION
LOSS OF TIME PERCEPTION
INJECTION MARKS
DEBRIS IN NOSTRILS
BURNT THUMB/ INDEX FINGER
MUSCLE RIGIDITY

STEP 6: PUPILLARY COMPARISON

THE SECOND PHASE OF THE EYE EXAMINATION CONSISTS OF:

1. COMPARING THE PUPIL SIZE OF BOTH EYES TO A PUPILLOMETER IN:

    A. ROOM LIGHT
    B. NEAR TOTAL DARKNESS
    C. DIRECT LIGHT

2. EXAMINING THE REACTION OF THE PUPILS OF BOTH EYES TO THE LIGHT STIMULUS TO DETERMINE IF THE REACTION IS:

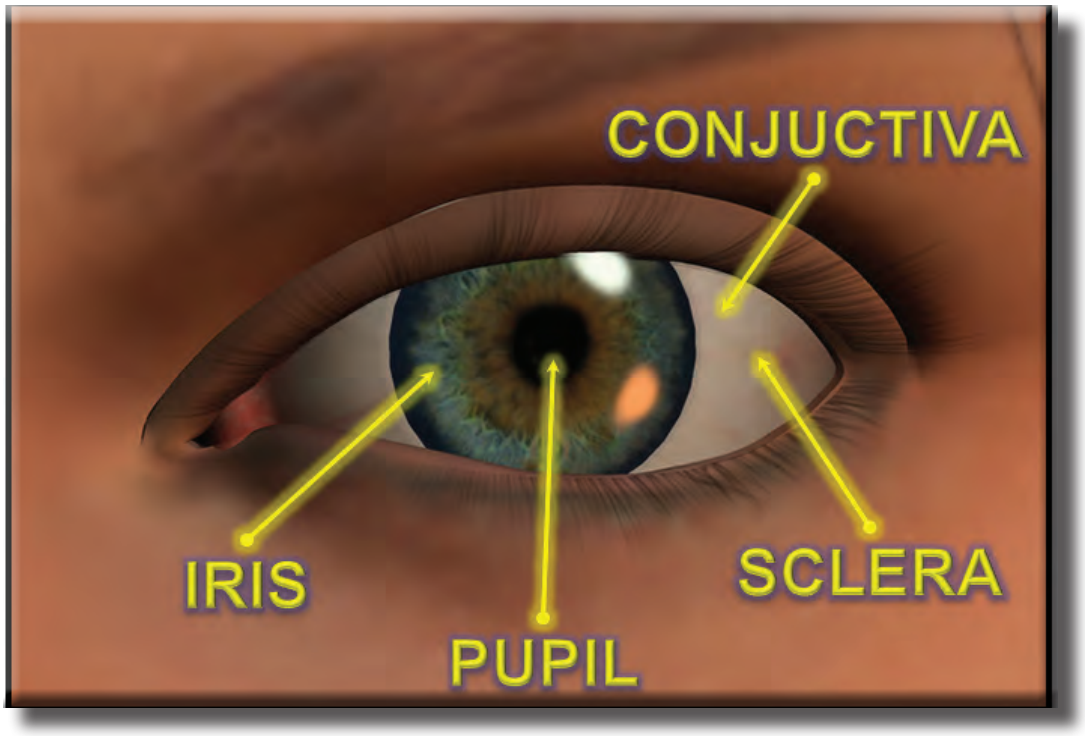
    A. NORMAL
    B. SLOW/SLUGGISH
    C. NONEXISTENT

3. EXAMINING THE PUPILS OF BOTH EYES FOR:

    A. HIPPUS
    B. REBOUND DILATION

NORMAL PUPIL SIZE IS CONSIDERED TO BE 3.0 MM TO 6.5 MM. IN DIRECT SUNLIGHT PUPILS WILL BE APPROXIMATELY 3.0 MM IN DARKNESS PUPILS WILL BE APPROXIMATELY 6.5 MM. CERTAIN DRUGS (I.E. OPIATES) CAN CAUSE THE PUPIL TO CONSTRICT BELOW 3.0 MM. THE DRUGS THAT CAUSE PUPIL CONSTRICTION WILL BE DISCUSSED FURTHER UNDER THE SPECIFIC DRUG CATEGORY.

THE FOLLOWING ILLUSTRATION IS OF THE EYE:



SUMMARY OF THE RAPID EYE TEST

TEST	INSTRUCTIONS
Observation	Look at eye in room light.

COMMON INTERPRETATION

REDNESS OF SCLERA:

Common with cannabis, alcohol, and PCP.

DROOPY EYE LID:

Upper lid touches pupil. Common with heroin, cannabis and PCP.

RETRACTED EYE LID:

Called “wall eye” or “bug eye”, you can see white sclera above the iris. Causes a “blank stare” appearance. Common with PCP.

GLAZING:

Has film over cornea. Common with cannabis, alcohol, PCP and heroin.

WATERING:

One or both eyes are tearing excessively.

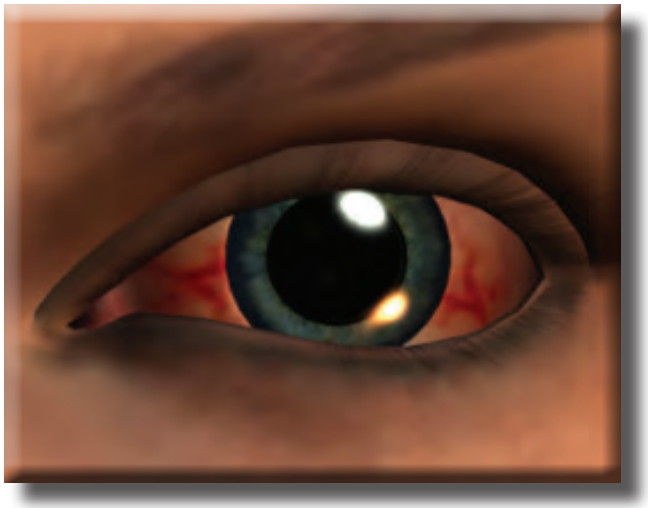
SWOLLEN EYE LIDS:

Upper and lower eye lids may swell. Common with cannabis, PCP and heroin.

TEST	INSTRUCTIONS
Pupil Size	In room light, hold pupillometer to side of eye. Determine If pupil size is wider or narrower than one side of the iris. Also, is the width less than 3.0 mm or greater than 6.5 mm?

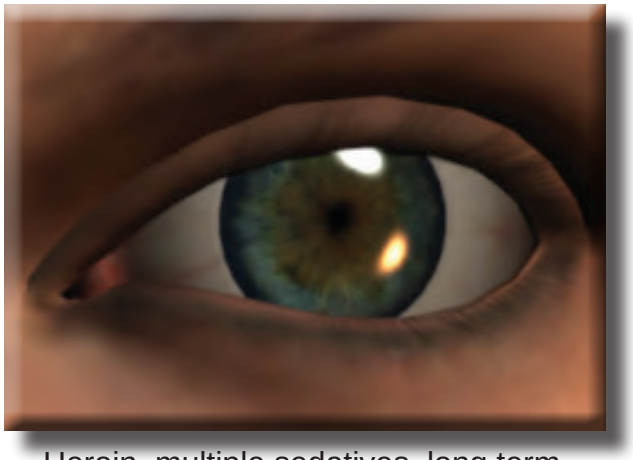
COMMON INTERPRETATION

DILATED:



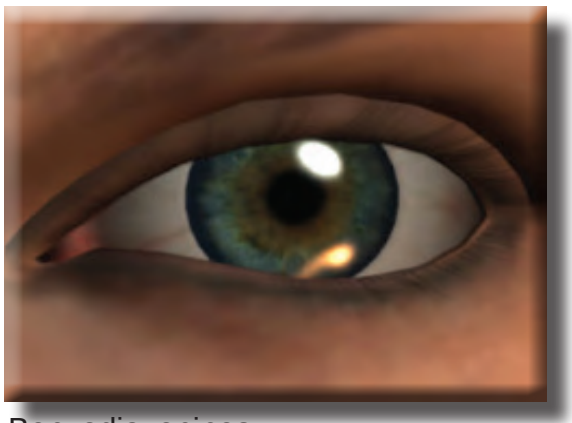
Stimulant influence, opioid withdrawal. (Mydriasis)

CONSTRICTED:



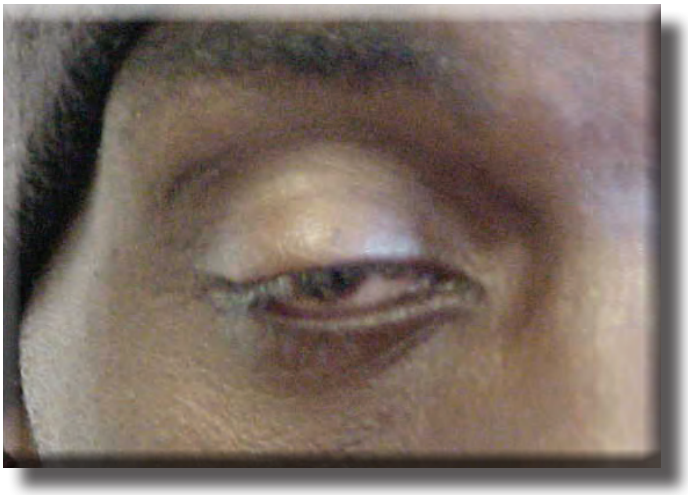
Heroin, multiple sedatives, long term stimulant abuse. (Myosis)

NORMAL:



Benzodiazepines.

DROOPY:



Opiates, depressants. (PTOSIS)

TEST	INSTRUCTIONS
Pupil Reaction	Shine light onto each pupil. Judge if normal,non-reactive, slow or sluggish. Look for hippus and rebound dilation.

COMMON INTERPRETATION

A non-reactive or slow light reflex suggests drug influence. Hippus suggests stimulant influence or opioid withdrawal. Rebound dilation suggests cannabis influence.

TEST	INSTRUCTIONS
Nystagmus	Hold your finger in a vertical position and have subject track to side, (horizontal) in a circle (rotation). Look for failure to hold horizontal or vertical gaze and fasciculation (twitching) of lower eye muscles.

COMMON INTERPRETATION

Vertical suggests DIP class drugs or high dose alcohol influence. Horizontal usually suggests ADID class drug.

TEST	INSTRUCTIONS
Non-Convergence	Hold your finger in a vertical position about a foot away from nose. Tell subject to track your finger to about 1/2 inch in to the bridge of their nose and hold this position for 5 seconds.

COMMON INTERPRETATION

Inability to track and hold the “cross eye” position for 3 to 5 seconds suggests CADID class drug influence.

DETERMINATION OF PUPILLARY DILATION OR CONSTRICTION

In normal room light, the pupil of an adult is usually between 3.0 and 6.5 mm in diameter after it has had about 5 minutes to adjust.

Teenagers and elderly persons may naturally have very small pupils under 3.0 in diameter or naturally large pupils above 6.5 in diameter. About 1 to 3% of the adult population may have a congenital dilation (Anisocoria) or constriction.

When a light about the brightness of a penlight is directly shown into the pupil of normal subjects, it constricts for a few minutes to an average of about 2.5 mm.

A rapid way to determine if dilation or constriction is present is to measure the pupil diameter against the width of one side of the iris.

If the width of the iris is smaller than the size of the pupil the pupil is larger. If the width of the iris is greater than the pupil the pupil is normal to small.

CURRENT USE SYMPTOMATOLOGY

A. NARCOTICS

1. "Flash" or "Rush". (not experienced by longtime addicts)
2. Euphoria.
3. Drowsiness - "Going on the Nod".
4. Constricted pupils and reduced vision.
5. Respiratory depression.
6. Nausea. (not usually experienced by longtime addicts)
7. Constipation.

B. BARBITURATES AND MINOR TRANQUILIZERS

1. Drunken behavior.
2. Slurred speech.
3. Disorientation.
4. Drowsiness.
5. Stupor.
6. Respiratory depression.

C. STIMULANTS

1. Possible aggression. (especially with methamphetamines)
2. Reduced fatigue and increased sense of strength.
3. Excited behavior and rapid speech.
4. Dilated pupil.
5. Elevated heart rate, blood pressure, body temperature.
6. Insomnia.
7. Loss of appetite.
8. Mood swings.

D. CANNABIS PRODUCTS

1. Relaxed inhibitions. (low doses)
2. Sleepiness.
3. Inability to concentrate.
4. Possible disorientation. (higher doses)
5. May also produce: "pink eyes"; dilated pupils; increased appetite. (sweets)
6. Psychosis and renal failure*

E. OTHER HALLUCINOGENS

1. Feelings of detachment from reality.
2. Poor perception of time and distance.
3. Illusions and hallucinations.
4. Incoherent speech.

*symptoms of abuse of synthetic cannabis products.

DRUG INFLUENCE TOXICOLOGY

When a blood or urine sample is submitted to the laboratory, only an initial screening test (or preliminary test) is performed on the sample. This screening test means it is more likely than not that the drug is in the sample. The screening test is usually used for case filing purposes. If the case is set for trial, a 'final' or confirmatory test may be required.

DRUG	BLOOD	URINE	CAN SCREEN	NOTES
Phencyclidine	Yes	Yes	Yes	Urine best
Opiates	Yes	Yes	Yes	Urine best
Amphetamine	No	Yes	Yes	Urine best
Methamphetamine	Yes	Yes	Yes	Urine best
Cocaine	Yes	Yes	Yes	Urine best
Methaqualone	Yes	Yes	Yes	Blood best
Barbiturates	Yes	Yes	Yes	
Benzodiazepines	Yes	Yes	No	Valium, Librium, Xanax
Methadone	No	Yes	Yes	
Cannabis	No	Yes	Yes	
LSD	No	No	No	No test

HOW LONG DRUGS STAY IN THE URINE

DRUG	APPROXIMATE LENGTH OF TIME IN THE URINE
AMPHETAMINES	48 TO 72 HOURS
BENZODIAZEPINES*	48 TO 96 HOURS
COCAINE	24 TO 36 HOURS
HEROIN	40 TO 72 HOURS
CANNABIS	10 TO 35 DAYS
NICOTINE	24 TO 48 HOURS
PHENCYCLIDINE (PCP)	48 TO 78 HOURS

* INCLUDES VALIUM, LIBRIUM, ATIVAN, DALMANE AND XANAX.

INTERPRETATIONS OF URINALYSIS RESULTS FOR DRUGS

POSITIVE RESULT:	**INDICATES:**
STIMULANTS	COMMON RESULTS:
AMPHETAMINE	AMPHETAMINE USE COULD BE PHARMACEUTICAL OR STREET METH BY USE OF PHENYLPROPANOLAMINE
COCAINE AND/OR COCAINE METABOLITE	COCAINE USE TOPICAL ANESTHETICS SUCH AS PROCAINE AND LIDOCAINE WILL NOT RESULT IN A POSITIVE COCAINE RESULT
(PSEUDO)EPHEDRINE	EPHEDRINE USE USED IN MANY OVER THE COUNTER DIET AND NASAL DECONGESTANTS USED TO MAKE METHAMPHETAMINE AND CAN BE A BY-PRODUCT IN THE STREET DRUG
METHAMPHETAMINE	METHAMPHETAMINE USE COMMONLY FOUND WITH STREET DRUG USE. VERY SELDOM USED AS PHARMACEUTICAL
PHENYLPROPANOLAMINE	PHENYLPROPANOLAMINE USE USED IN MANY OVER THE COUNTER DIET AND NASAL DECONGESTANTS. USED TO MAKE AMPHETAMINE AND CAN BE A BY-PRODUCT IN THE STREET DRUG
PROCAINE	PROCAINE (NOVACAINE) USE OFTEN USED TO ADULTERATE COCAINE

INTERPRETATIONS OF URINALYSIS RESULTS FOR DRUGS

OPIATES	COMMON RESULTS:
CODEINE	CODEINE USE ALONE
HYDROMORPHONE (DILAUDID)	HYDROMORPHONE USE ONLY
METHADONE	IN PATIENTS WITH NORMAL LIVER FUNCTION, THIS INDICATES THAT METHADONE WAS ADDED DIRECTLY TO THE URINE SAMPLE AND NOT INGESTED PREGNANCY MAY ALTER METABOLISM SO THAT METHADONE CONSUMPTION MAY SHOW THIS RESULT METHADONE IS GENERALLY GIVEN IN NARCOTIC TREATMENT PROGRAM ONLY (24 HOUR DOSE), BUT IS NOW PRESCRIBED FOR PALATIVE PAIN CARE (4 - 6 HOUR DOSE).
METHADONE METABOLITE	METHADONE USE
METHADONE & METABOLITE	METHADONE USE
MEPERIDINE (DEMEROL)	MEPERIDINE USE
MORPHINE	HEROIN, MORPHINE OR CODEINE USE POPPY SEEDS OFTEN CONTAIN MORPHINE METABOLITE AND CAN CAUSE A POSITIVE TEST (BUT POPPY SEEDS WILL NOT PRODUCE THE METOBLOITE OF OPIATES ON CONFIRMATION TESTS).
PHARMACEUTICAL MORPHINE & CODEINE	STREET HEROIN USE POSSIBLE CODEINE USE, THE BODY WILL PRODUCE MORPHINE FROM CODEINE INGESTION COMBINATIONS OF MORPHINE, CODEINE OR HEROIN
PENTAZOCINE (TALWIN)	PENTAZOCINE USE
PROPOXYPHENE (DARVON)	PROPOXYPHENE USE

INTERPRETATIONS OF URINALYSIS RESULTS FOR DRUGS

CANNABIS	**COMMON RESULTS:**
CANNABIS	CANNABIS OR OTHER CANNABIS PRODUCTS NO OTHER SUBSTANCES ARE KNOWN TO GIVE A POSITIVE FOR CANNABIS (THC AND OTHER METABOLITES)
SYNTHETIC CANNABINOIDS	ONLY A SMALL NUMBER OF THE OVER 400+ COMPOUNDS AND ANALOGS CAN BE IDENTIFIED AT THIS TIME.
ALCOHOL	**COMMON RESULTS:**
ALCOHOL	ALCOHOL USE
DEPRESSANTS	**COMMON RESULTS:**
BARBITURATES AMOBARBITAL BUTABARBITAL BUTALBITAL PENTOBARBITAL PHENOBARBITAL SECOBARBITAL	BARBITURATE USE MANY PRESCRIPTION DRUGS CONTAIN BARBITURATES
BENZODIAZEPINES	BENZODIAZEPINE USE BY PRESCRIPTION EXCEPT FOR ROHYPNOL
METHAQUALONE (QUAALUDE)	METHAQUALONE USE ONLY NO LONGER PRESCRIBED, STREET MANUFACTURED
PCP	**COMMON RESULTS:**
PCP	PCP USE

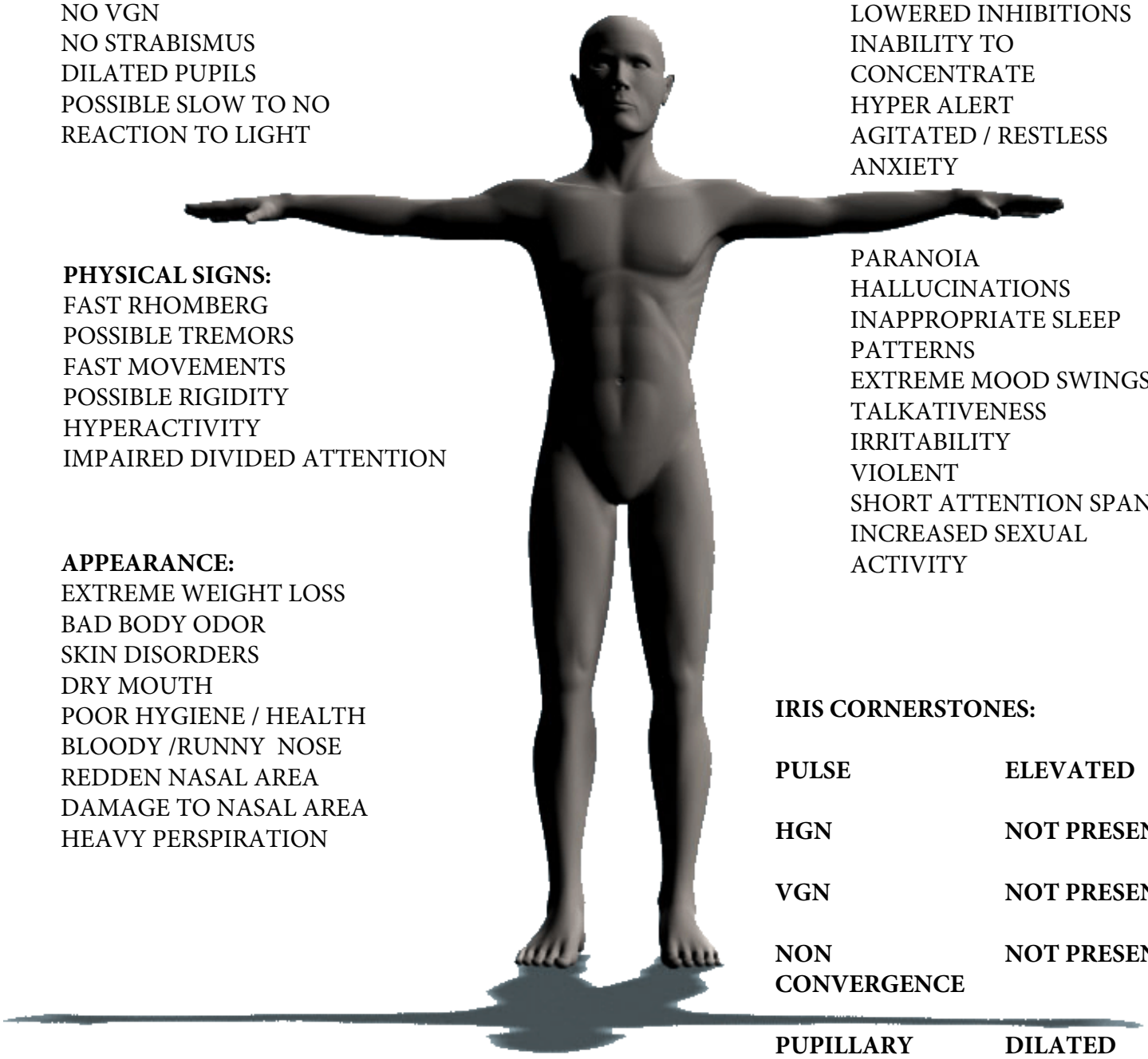
Stimulants

OBJECTIVE SIGNS AND SYMPTOMS OF STIMULANT INFLUENCE

EYES:
NO HGN
NO VGN
NO STRABISMUS
DILATED PUPILS
POSSIBLE SLOW TO NO REACTION TO LIGHT

PHYSICAL SIGNS:
FAST RHOMBERG
POSSIBLE TREMORS
FAST MOVEMENTS
POSSIBLE RIGIDITY
HYPERACTIVITY
IMPAIRED DIVIDED ATTENTION

APPEARANCE:
EXTREME WEIGHT LOSS
BAD BODY ODOR
SKIN DISORDERS
DRY MOUTH
POOR HYGIENE / HEALTH
BLOODY /RUNNY NOSE
REDDEN NASAL AREA
DAMAGE TO NASAL AREA
HEAVY PERSPIRATION



OTHER SIGNS:
EUPHORIA
LOWERED INHIBITIONS
INABILITY TO CONCENTRATE
HYPER ALERT
AGITATED / RESTLESS
ANXIETY

PARANOIA
HALLUCINATIONS
INAPPROPRIATE SLEEP PATTERNS
EXTREME MOOD SWINGS
TALKATIVENESS
IRRITABILITY
VIOLENT
SHORT ATTENTION SPAN
INCREASED SEXUAL ACTIVITY

IRIS CORNERSTONES:

PULSE	**ELEVATED**
HGN	**NOT PRESENT**
VGN	**NOT PRESENT**
NON CONVERGENCE	**NOT PRESENT**
PUPILLARY SIZE	**DILATED**
PUPILLARY REACTION	**SLOWED- HIPPUS**
RHOMBERG	**FAST**

STIMULANTS

DRUG NAME	TRADE NAME	STREET NAME
COCAINE (FROM COCA LEAF)		
COCAINE HCL (HYDROCHLORIDE)	NONE	COKE, BLOW, TOOT, FLAKE, GIRL, LADY, SNOW
FREEBASE COCAINE (BASE)	NONE	CRACK, BASE, ROCK, BASAY, BOULYA, HUBBA, BAZOOKO, PESTILLOS, PASTA
AMPHETAMINES (SYNTHETIC)		
D/L AMPHETAMINE	BENZEDRINE, OBETROL	CROSSTOPS, BLACK BEAUTIES, WHITES, BIPHETAMINE, PPA PROCESS, BENNIES, CARTWHEELS
D METHAMPHETAMINE	METHADRINE, DESOXYN, DEXEDRINE, ESKATROL	CRANK, METH, CRYSTAL, DEXIES DEXIES, DEXTRO AMPHETAMINE CHRISTMAS TREES, BEANS
D METHAMPHETAMINE	EPHEDRINE PROCESS	ICE, GLASS, BATU, SHABU, YELLOW ROCK
L METHAMPHETAMINE	VICK'S INHALER	
D,L METHAMPHETAMINE	P2P PROCESS	CRANK, SPEED, BIKER DOPE
METHAMPHETAMINE BASE		SNOT
AMPHETAMINE CONGENERS	(DIET PILLS)	
METHYLPHENIDATE	RITALIN	PELLETS
PHENMETRAZINE	PRELUDIN	PINK HEARTS
PEMOLINE	CYLERT	POPCORN COKE
PHENTERMINE HCL	FASTIN, ADIPEX,	ROBIN'S EGGS, BLACK AND WHITE
PHENTERMINE RESIN	PHENAZINE, BONTRIL, PLEGINE,TRIMTABS, MELFIAT, PENDIET, STATOBEX	
DIETHYLPROPION	TENUATE, TEPANIL	
METHCATHINONE	NONE	CAT, KHAT, CHAT, MIRAA

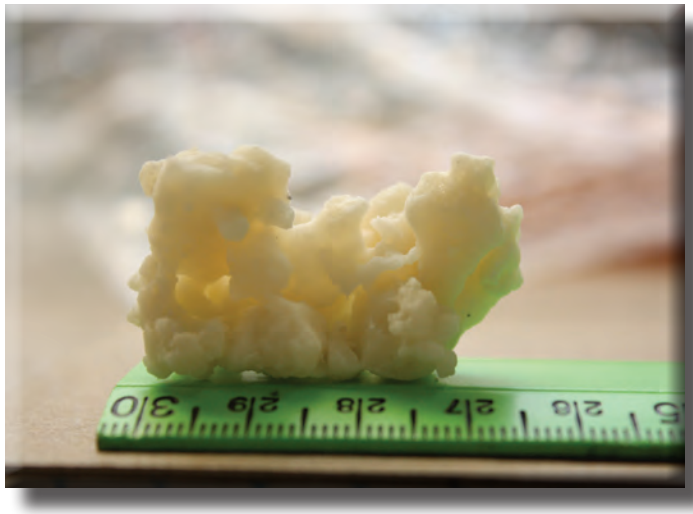
MULTIPLE “KILOS” OF COCAINE

UNWRAPPED KILO OF COCAINE

COCAINE HCL FROM KILO

POWDERED COCAINE HCL

STRAWBERRY POWDERED COCAINE HCL



BASE COCAINE

BASE COCAINE

BASE COCAINE

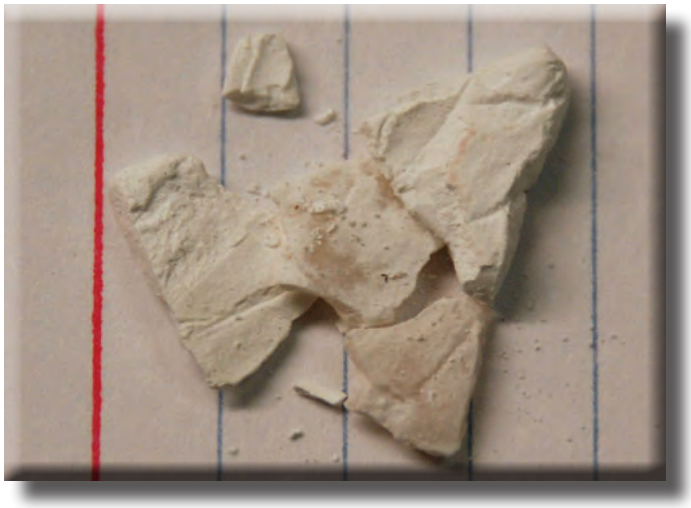
BASE COCAINE PIPES

BASE FOIL PIPE WITH BASE

BASE PIPE WITH BRILLO PAD

DRUG STORE FAKE ROSE IN GLASS TUBE, TUBE USED AS CRACK PIPE

METHAMPHETAMINE



METHAMPHETAMINE

METHAMPHETAMINE

“ICE” METHAMPHETAMINE

“ICE”

BLUE “ICE”

“ICE”

ZIP BAG OF METH

SMOKING METH ON FOIL

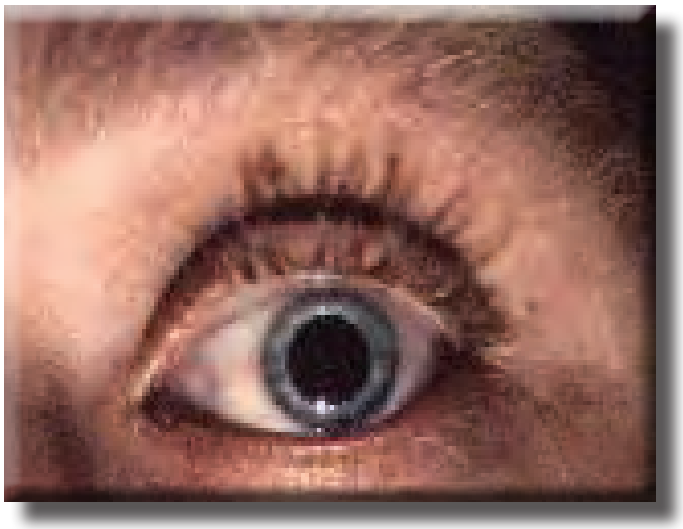
ICE PIPE

SMOKING METH IN A LIGHTBULB

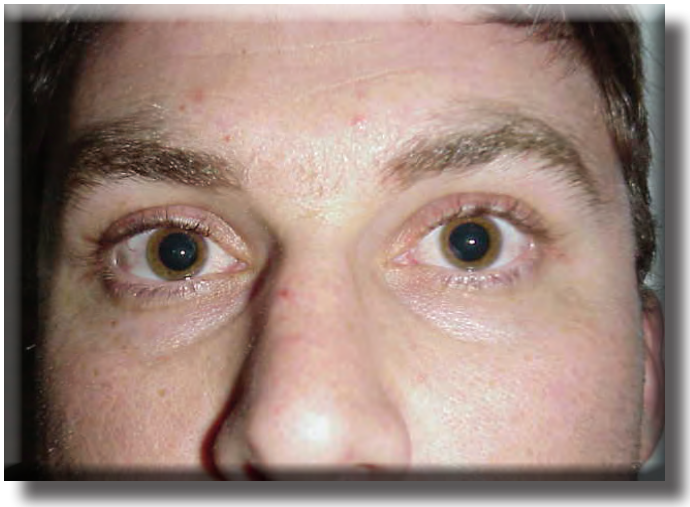
DRUG STORE FRAGRANCE IN GLASS TUBE, TUBE USED AS ICE PIPE

USER PARAPHERNALIA

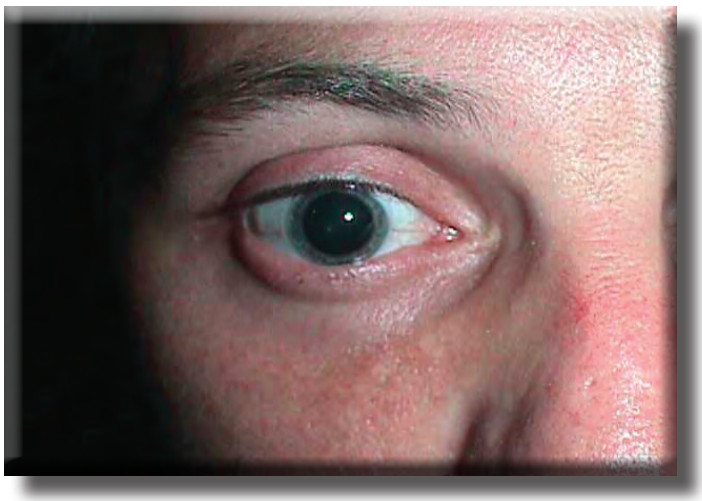
METH “YABA” PILLS



DILATED PUPIL



DILATED PUPILS



DILATED PUPIL

“METH” MOUTH

PACKAGING MATERIALS

SANDWICH BAG WITH CORNERS CUT OUT

TOP PORTION OF BAGGIE ABOVE KNOT USED TO PLACE DRUGS IN

BAGGIES CUT BELOW THE KNOT TO OPEN BAG TO OBTAIN DRUGS

SELLING AND USER PARAPHERNALIA WITH ICE

OVER THE COUNTER PRODUCTS WITH PSEUDOEPHEDRINE - DEEDED TO MAKE METH

KHAT WRAPPED IN BANANA LEAVES

KHAT LEAVES

DRIED KHAT LEAVES

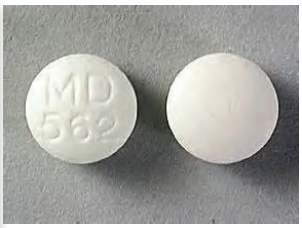
THE FOLLOWING IS A LIMITED LISTING OF THE MANY PHARMACEUTICAL STIMULANTS THAT ARE USED AND ABUSED. PLEASE CONSULT A POISON CONTROL CENTER OR OTHER MEDICAL SOURCE TO CONFIRM THE IDENTITY OF ANY PILLS THAT ARE FOUND.

ADDERALL

DEXTROAMPHETAMINE

CYLERT

METADATE



METHYLPHENIDATE

PHENMETRAMINE

RITALIN

VYVANSE

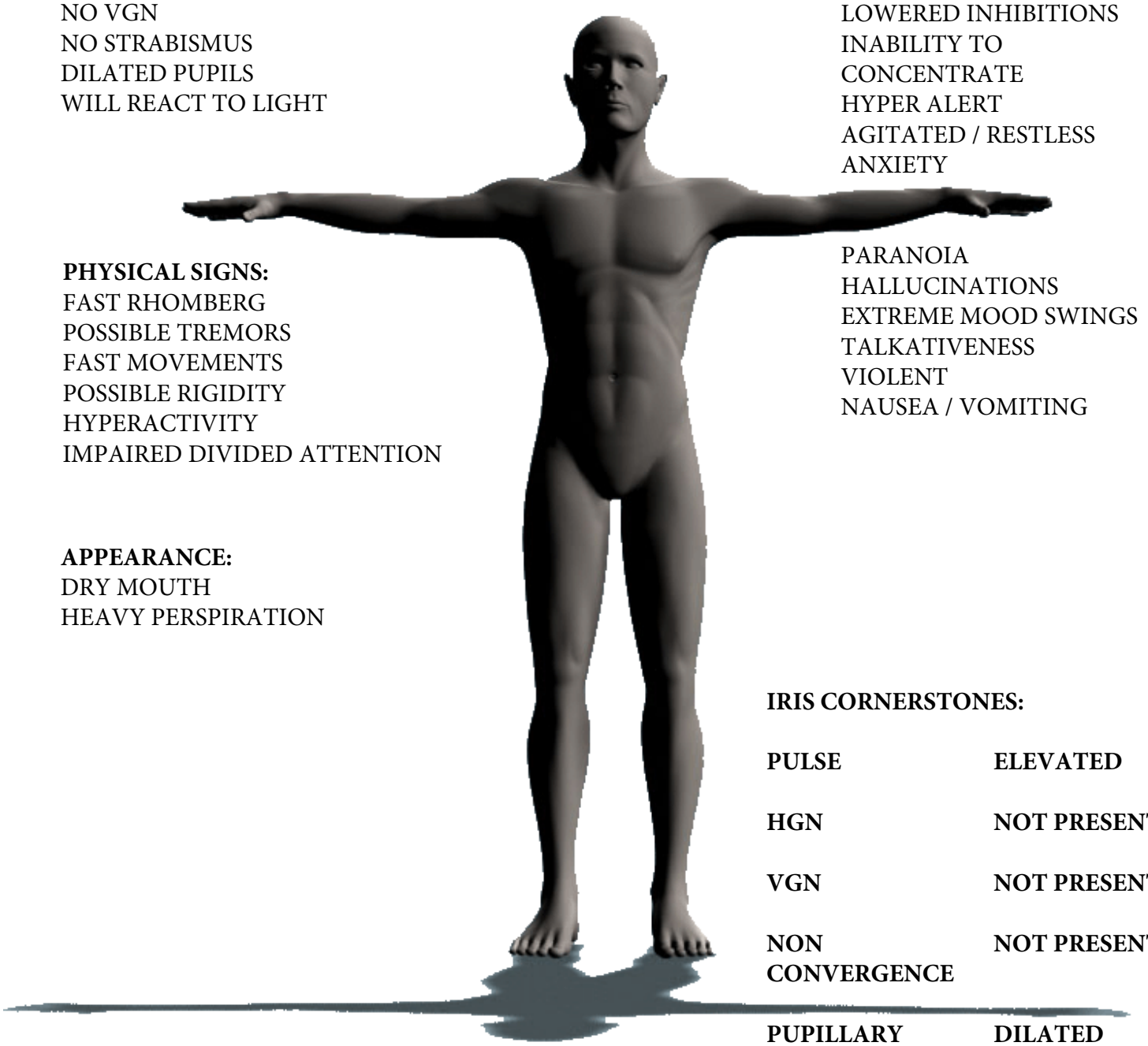
DAYTRANA PATCH

Hallucinogens

OBJECTIVE SIGNS AND SYMPTOMS OF HALLUCINOGENIC INFLUENCE

EYES:
NO HGN
NO VGN
NO STRABISMUS
DILATED PUPILS
WILL REACT TO LIGHT

OTHER SIGNS:
EUPHORIA
LOWERED INHIBITIONS
INABILITY TO CONCENTRATE
HYPER ALERT
AGITATED / RESTLESS
ANXIETY



PHYSICAL SIGNS:
FAST RHOMBERG
POSSIBLE TREMORS
FAST MOVEMENTS
POSSIBLE RIGIDITY
HYPERACTIVITY
IMPAIRED DIVIDED ATTENTION

PARANOIA
HALLUCINATIONS
EXTREME MOOD SWINGS
TALKATIVENESS
VIOLENT
NAUSEA / VOMITING

APPEARANCE:
DRY MOUTH
HEAVY PERSPIRATION

IRIS CORNERSTONES:

PULSE	**ELEVATED**
HGN	**NOT PRESENT**
VGN	**NOT PRESENT**
NON CONVERGENCE	**NOT PRESENT**
PUPILLARY SIZE	**DILATED**
PUPILLARY REACTION	**SLOWED-POSSIBLE REBOUND**
RHOMBERG	**FAST**

HALLUCINOGENS: MAGNIFIERS

PSYCHEDELICS: INDOLE PSYCHEDELICS

COMMON NAMES	ACTIVE INGREDIENTS	STREET NAMES
LSD (LSD 25 & 29)	LYSERGIC ACID DIETHYLAMIDE	ACID, SUGAR, WINDOW PAIN, BLOTTER, ILLUSION
MUSHROOMS	PSILOCYBIN	SHROOMS, MAGIC MUSHROOMS
TABERNANTHE IBOGA	IBOGAINE	AFRICAN LSD
MORNING GLORY SEEDS	LYSERGIC ACID AMIDE	HEAVENLY BLUE, PEARLY GATES, WEDDING BELLS
DMT SYNTHETIC OR FROM YOPO BEANS, EPENA OR SONORAN DESERT TOAD	DIMETHYLTRYPTAMINE	BUSINESSMAN'S SPECIAL, COHOBA SNUFF
YAGE, AYAHUASCA, CAAPI	HARMALINE	VISIONARY VINE, VINE OF THE SOUL

PSYCHEDELICS: PHENYLAKYLAMINE PSYCHEDELICS

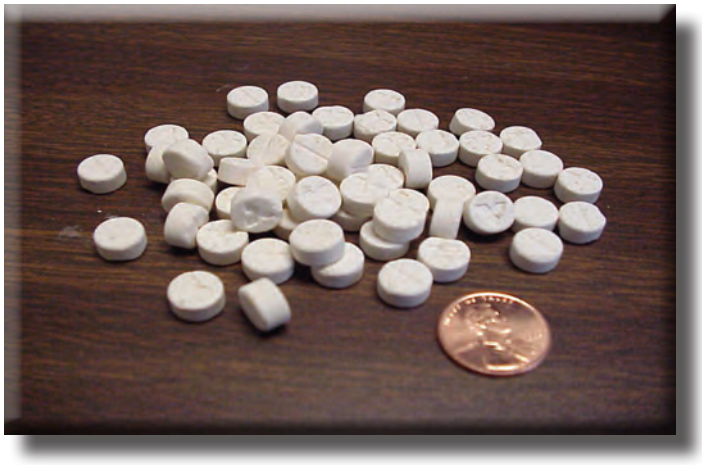
PEYOTE CACTUS	MESCALINE	MESC, PEYOTE, BUTTONS
STP (DOM)	4 METHYL2, 5 DIMETHOXY	SERENTITY, TRANQUILITY,
(SYNTHETIC)	AMPHETAMINE	PEACE PILL
STP-LSD COMBO	DIMETHOXY-AMPHETAMINE WITH LSD	WEDGE SERIES, ORANGE & PINK WEDGES
MDA, MDMA (MDM) MMDA, MDE	VARIATIONS OF METHYLENEDIOXY-AMPHETAMINE	ECSTASY, "E", LOVE DRUG, RAVE, ADAM, EVE, XTC, MOLLY, THIZ
2CB	4 BROMO 2, 5 DIMETHOXYPHENETHYLAMINE	
U4EUH	4 METHYL AMINOREX	EUPHORIA

DELIRIANTS: ANTICHOLINERGICS

BELLADONNA, MANDRAKE	ATROPINE, SCOPOLAMINE,	DEADLY NIGHT SHADE
HENBANE, DATURA WOLFBANE	HYOSCYAMINE	JIMSON WEED, THORNAPPLE
ARTANE	TRIHEXYPHENEIDYL	
COGENTIN ASMADOR CIGARETTES	BENZTROPINE BELLADONNA ALKALOIDS	

PSYCHEDELICS: CANNABINOLS (MARIJUANA, ETC)

COMMON NAMES	ACTIVE INGREDIENTS	STREET NAMES
MARIJUANA	THC-TETRAHYDROCANNABINOL	GRASS, POT, WEED, JOINT, REEFER, DUBIE, TREES, 420
SINSEMILLLA	HIGH POTENCY, SEEDLESS FLOWERING TOPS OF FEMALE MARIJUANA PLANT	SENS, SKUNK WEED, GANJA, BLUNT, CRONIC
HASHISH, HASH OIL	THC (REFINED FROM MARIJUANA)	BHANG, HONEY, OIL, BHO, DABS, WAX, 710



MDMA (ECSTASY)

MDMA (3, 4-Methylenedioxymethamphetamine) is a Schedule I synthetic, psychoactive drug possessing stimulant and hallucinogenic properties. MDMA possesses chemical variations of the stimulant amphetamine or methamphetamine and a hallucinogen, most often mescaline.

Commonly referred to as Ecstasy or XTC, MDMA was first synthesized in 1912 by a German company possibly to be used as an appetite suppressant. Chemically, it is an analogue of MDA, a drug that was popular in the 1960s. In the late 1970s, MDMA was used to facilitate psychotherapy by a small group of therapists in the United States. Illicit use of the drug did not become popular until the late 1980s and early 1990s. MDMA is frequently used in combination with other drugs.

However, it is rarely consumed with alcohol, as alcohol is believed to diminish its effects. It is most often distributed at late-night parties called “raves,” nightclubs, and rock concerts. As the rave and club scene expands to metropolitan and suburban areas across the country, MDMA use and distribution are increasing as well.

MDMA is abused by young adults who frequent these “rave” or “techno” parties. While these urban rave clubs may be the usual venue for the acquisition of MDMA, many suburban communities are experiencing an increased use of MDMA within smaller party environments. It has become increasingly available through high school drug networks through purchases made in rave clubs.

MDMA is taken orally, usually in tablet or capsule form in doses ranging from 50 to 150 mg, and its effects last approximately four to six hours.

Users of the drug say that it produces profoundly positive feelings, empathy for others, elimination of anxiety, and extreme relaxation. MDMA is also said to suppress the need to eat, drink, or sleep, enabling users to endure two- to three-day parties. Consequently, MDMA use sometimes results in severe dehydration or exhaustion. MDMA users may encounter problems similar to those experienced by aphetamine and cocaine users, including addiction. In addition to its rewarding effects, MDMA’s psychological effects can include confusion, depression, sleep problems, anxiety, and paranoia during, and sometimes weeks after, taking the drug. Physical effects can include muscle tension, involuntary teeth-clenching, nausea, blurred vision, faintness, and chills or sweating. Increases in heart rate and blood pressure are a special risk for people with circulatory or heart disease.

An MDMA overdose is characterized by high blood pressure, faintness, panic attacks, and, in more severe cases, loss of consciousness, seizures, and a drastic rise in body temperature. MDMA-related fatalities at raves have been reported. The stimulant effects of the drug, which enable the user to dance for extended periods, combined with the hot, crowded conditions usually found at raves can lead to dehydration, hyperthermia, and heart or kidney failure. Doses of MDMA are often “piggy-backed” on each other in a series over just a few hours leading to severe over-heating and cardiac emergencies which require medical intervention.

The effects of long-term MDMA use are just beginning to undergo scientific analysis. In 1998, the National Institute of Mental Health conducted a study of a small group of habitual MDMA users who were abstaining

from use. The study revealed that the abstinent users suffered damage to the neurons in the brain that transmit serotonin, an important biochemical involved in a variety of critical functions including learning, sleep, and integration of emotion. The results of the study indicate that recreational MDMA users may be at risk of developing permanent brain damage that may manifest itself in depression, anxiety, memory loss, and other neuropsychotic disorders.

Overseas MDMA trafficking organizations smuggle the drug in shipments of 10,000 or more tablets via express mail services, couriers aboard commercial airline flights, or, more recently, through air freight shipments from several major European cities to cities in the United States. The drug is sold in bulk quantity at the mid-wholesale level in the United States for approximately eight dollars per dosage unit. The retail price of MDMA sold in clubs in the United States remains steady at twenty to forty dollars per dosage unit. MDMA traffickers consistently use brand names and logos as marketing tools and to distinguish their product from that of competitors.

New Leaf Treatment Center

Press Information Release:

Designer Drugs From "Bath Salts" to "Spice"; What They Are, What They Look Like, And Why They Are Dangerous To Consume.

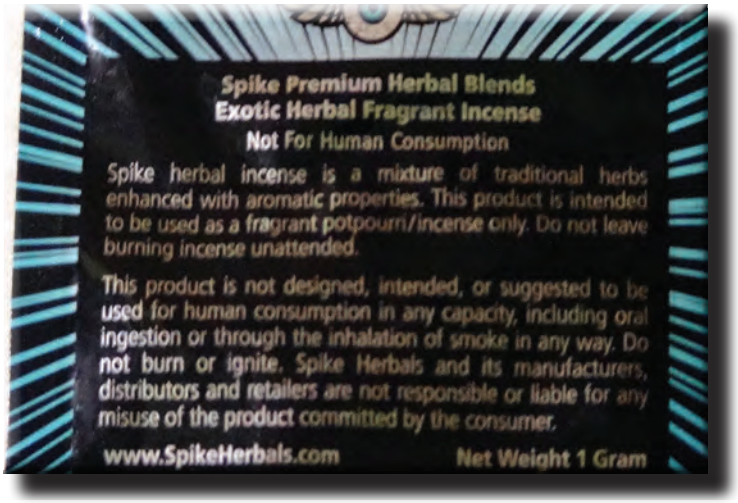
Editied and Released for Media by the Staff f New Leaf Treatment Center, Layfayette, CA
S.Alex Stalcup, M.D. and Jackie Long, Director of Training

The Staff f New Leaf Treatment Center have received several inquiries from parents regarding the use of substances that are being sold as "Legal Highs" (also known as "Bath Salts" and "Spice") by their children. Patients of New Leaf have also provided information regarding the prevalence and use of these compounds in the East Bay and Northern California area.

Th s press information release is being provided to dispel the myths of these "legal highs", and to provide factual information as to the dangers and illegal use of these classes of designer drugs.

Designer Drugs And How They Can Be Sold:

Designer drugs are compounds that are designed to be "outside" of the law. By the changing of a molecule, or the position of a molecule on the drugs structure, the new drug is designed to have the same or a stronger effect of the original drug that is "controlled". The new compound is not controlled as it has not been "codifi d" by a federal or state statute prohibiting it. The second factor that allows the compound to be sold is that any compound that is sold with the intent for human consumption it has to be approved by the FDA. The intent of the Federal Food, Drug and Cosmetic Act is to; "assure the consumer that foods are pure and wholesome, safe to eat, and produced under sanitary conditions; that drugs and devices are safe and effective for their intended uses; that cosmetics are safe and made from appropriate ingredients; and that all labeling and packaging is truthful, informative, and not deceptive" (1).



It is because of this requirement that illegal drug manufacturers place the term "Not for Human Consumption" on the packaging. Th s is a "Loop Hole" in the law that allows for a compound that is not "controlled" by federal law and not "intended" for "human" consumption to be legally sold. The compounds that we will be discussing are not "Bath

Salts, Plant Fertilizer, Cleaning Solvents, Scratch Remover, Spice, Potpourri, Herbal Blends, or Aromatics" they are intended for human use as these compounds are not used for any other purpose and are sold on the internet, in adult novelty stores, some local convenience stores, and many "head shops".

Bath Salts: What Are They And Are They Harmful:

These are synthetic compounds that are reported by the users to produce the similar effects of ; methamphetamine, cocaine, or MDMA (Ecstacy). The majority of these compounds are known as cathinone or methcathinone analogs. Some of the most common synthetic compounds that are found in these products are;

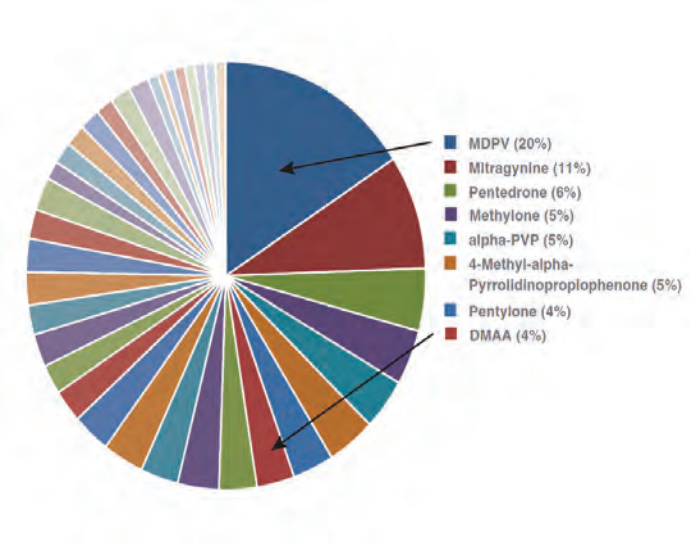
Methylenedioxypyrovalerone
(MDPV - Bath Salt, Super Coke),
Mephedrone
(4MMC - Plant Food, Bubbles),
Methylon
(Bk-MDMA),
Naphthylpyrovalerone
(Naphyrone, NRG-1,2,3, Plant Fertilizer)

Currently there are in excess of 78 cathinone analogs that are available on the market.

In August of 2012, NMS Laboratories located in Willow Grove, PA, released the report, *Designer Drug Testing at NMS Labs* (August 2012), in which it had identifi d new compounds that were being sold as bath salts to include;

Pentedrone
(a cathinone analog),
Alpha-PVP
(an analog of MDPV),
MPPP
(an analog of alpha-PVP),
Pentylone
(bk-MBDP, NRG-1),
Mitragynine
(an active chemical in the plant Krantom),
DMAA,
(a workout supplement that produces stimulant effects at a high dose)

A new trend of using hallucinogenic tryptamine compounds (serotonin agonists) and phenethylamine compounds in the "2C" class are also being marketed as these products. (2) These compounds activate the dopamine and serotonin pathways of the brain. As a result of overstimulation of these pathways a common withdrawal or "coming down" symptom is mild to severe depression by the user. Th s form of depression has been attributed to teens and adults who have committed suicide after taking these compounds.



Courtesy NMS Labs: Leading Bath Salt Compounds, June 2012

Additional dangers of consuming these compounds involve the unregulated dosage, purity, and combinations of other synthetic compounds that are contained in the package. It is very easy for a person to overdose on what they believe to be as a normal dosage, or one that they had used on several prior occasions. Documented physical overdose symptoms include:

Tachycardia
(heart rate over 100 beats per minute),
Hypertension
(high blood pressure),
Arrhythmias
(irregular heartbeat),
Hyperthermia
(elevated body temperature),
Rhabdomyolysis
(rapid destruction of skeletal tissue),
Renal failure
(kidney failure),
Seizures,
Stroke,
Cerebral edema
(water on the brain),
Cardiorespiratory collapse
(heart and respiratory collapse),
Myocardial infarction (heart attack),
Death

In addition to the physical effects the behavioral effects can include: panic attacks, anxiety, agitation, severe paranoia, hallucinations, psychosis, suicidal ideation, self-mutilation, and behavior that is aggressive, violent, and self-destructive. (3)(4)(5)

Internet Image

Th ough various reports in the national media, these designer drugs (including synthetic cannabinoids) are producing bizarre behaviors and are often referred to as “Zombie Drugs”. For First Responders there is evidence to believe that these synthetic compounds may produce a condition known as Excited Delirium, a medical emergency that if not treated immediately it can produce death of the patient.

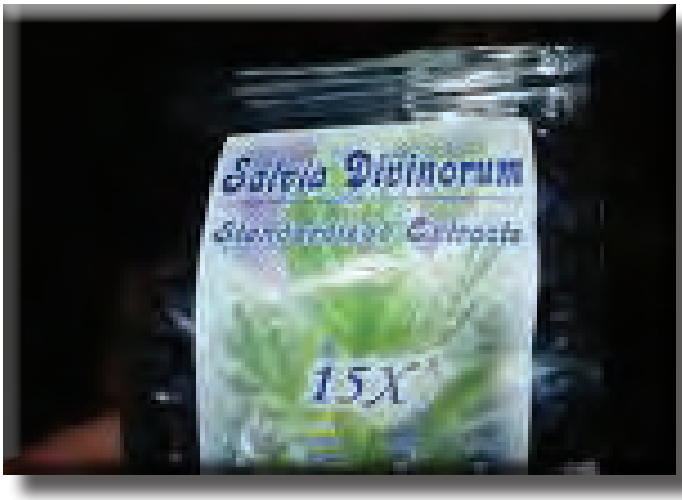
JIMSON PLANT AND FLOWERS

JIMSON SEED PODS

MORNING GLORY SEEDS

MORNING GLORY FLOWER

SALVIA LEAVES

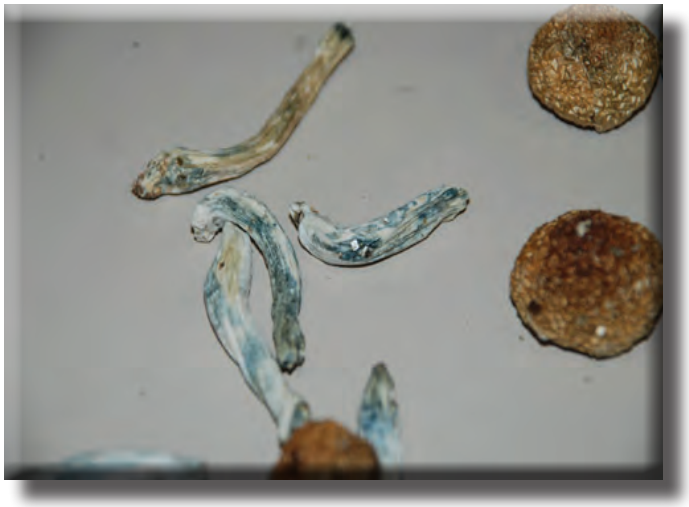


COMMERCIAL PACKAGE OF SALVIA

HOMISTILLAS BARK (DMT)

COLORADO RIVER TOAD (DMT)

PSILOCYBIN MUSHROOMS

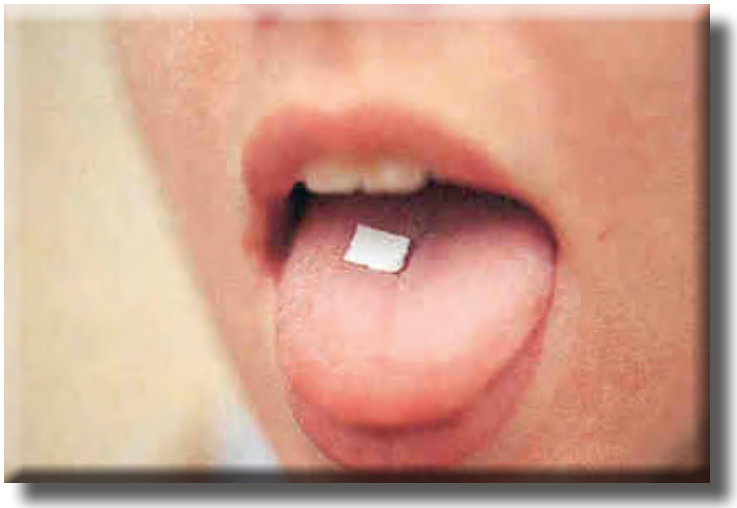


PSILOCYBIN MUSHROOMS

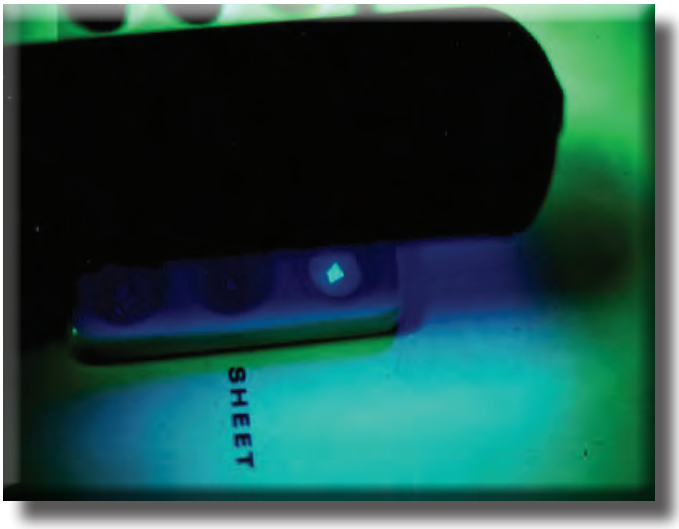
LIVE PEYOTE

DRIED PEYOTE “BUTTONS”

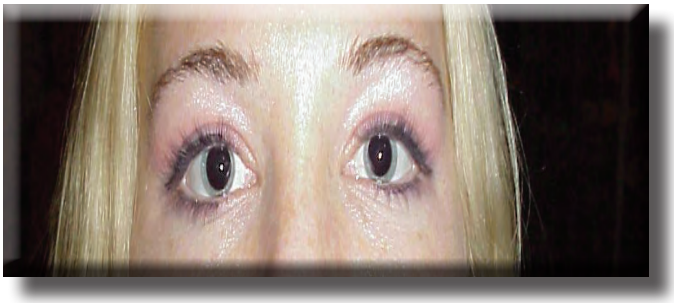
“BLOTTER” LSD



DISSOLVING TAB OF LSD ON TONGUE



LSD GLOWS UNDER UV LIGHT



MDMA INFLUENCE

SALES OF MDMA PILLS

DESIGNER DRUG SOLD AS MDMA

“BATHSALTS”

“BATHSALTS”

ITEMS USED AT RAVES

ITEMS USED AT RAVES

ITEMS USED AT RAVES

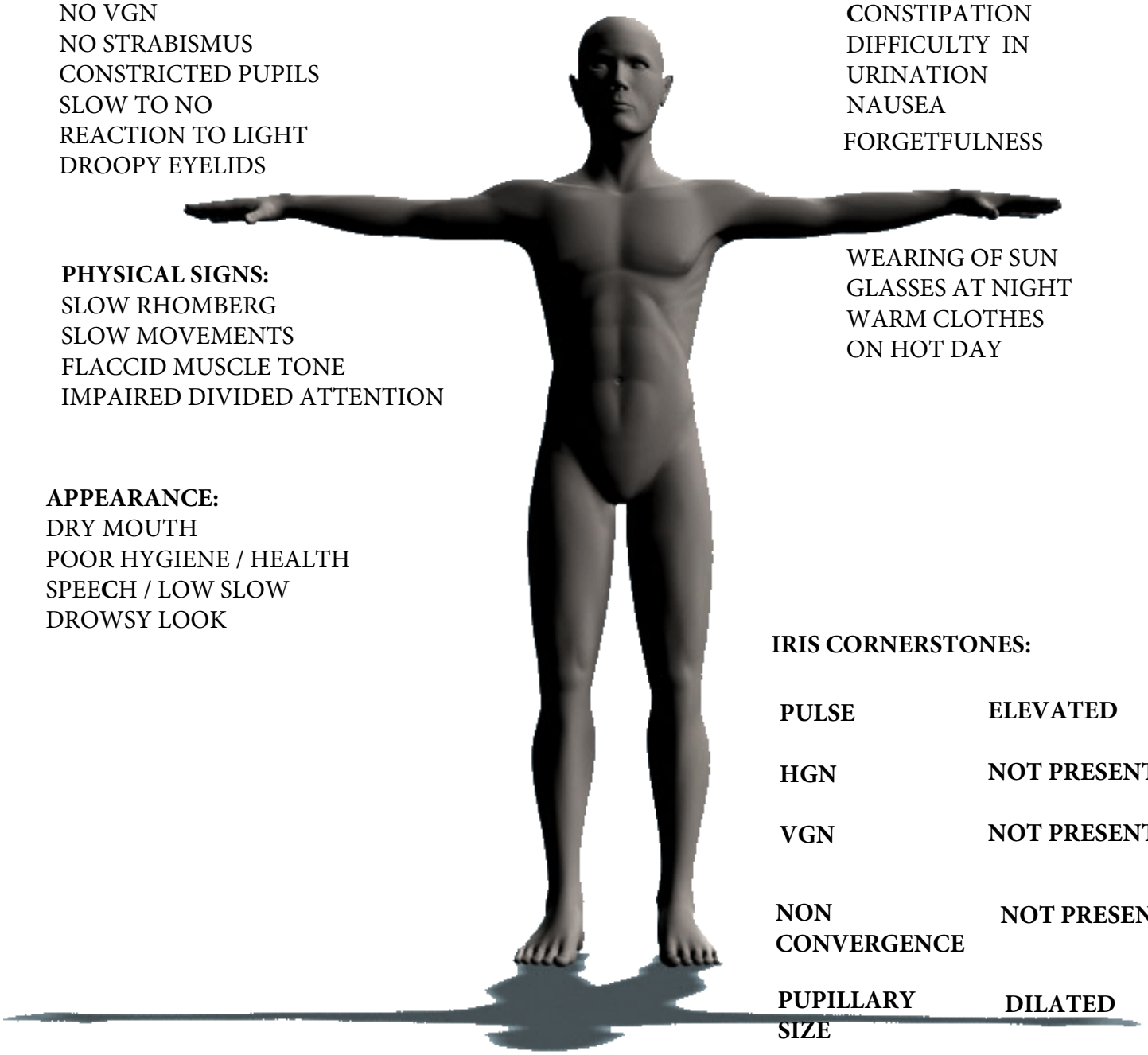
“BATHSALTS” SOLD AS STAIN REMOVER

Opiates

OBJECTIVE SIGNS AND SYMPTOMS OF OPIATE INFLUENCE

EYES:
NO HGN
NO VGN
NO STRABISMUS
CONSTRICTED PUPILS
SLOW TO NO
REACTION TO LIGHT
DROOPY EYELIDS

OTHER SIGNS:
EUPHORIA
CONSTIPATION
DIFFICULTY IN
URINATION
NAUSEA
FORGETFULNESS



PHYSICAL SIGNS:
SLOW RHOMBERG
SLOW MOVEMENTS
FLACCID MUSCLE TONE
IMPAIRED DIVIDED ATTENTION

WEARING OF SUN
GLASSES AT NIGHT
WARM CLOTHES
ON HOT DAY

APPEARANCE:
DRY MOUTH
POOR HYGIENE / HEALTH
SPEECH / LOW SLOW
DROWSY LOOK

IRIS CORNERSTONES:

PULSE	**ELEVATED**
HGN	**NOT PRESENT**
VGN	**NOT PRESENT**
NON CONVERGENCE	**NOT PRESENT**
PUPILLARY SIZE	**DILATED**
PUPILLARY REACTION	**SLOW TO NONE**
RHOMBERG	**SLOW**

CONFESSIONS OF A TEENAGE ADDICT

Yo, my name is _____ and I am a junior in high school and am currently 17 years old. I just wanted to talk a little bit about my drug use. I have abused a numerous amount of drugs. Including marijuana (smoked everyday for around 2 years), Ecstasy (MDMA), DXM, oxycodone, codeine, morphine, fentanyl, methadone, heroin, oxymorphone, and most likely a lot more opiates that I cannot remember at the moment, Gabapentin, loperamide, which is an opiate used to counteract diarrhea and it actually has a VERY strong effect in high doses. F**king surprised me because you can basically get this shit anywhere. Its an OTC medication. LSA, LSD, trazodone, salvia and I think that's about it but I dunno.

Well, opiates have always been the most euphoric and pleasant of drugs for me. And I have become extremely addicted to these things for around a year now. I have finally quit and its hard as f**k not to use. I first started using Oxycontin, for around 6 months. Then that started to have no effect cuz of tolerance. At the end of my oxycontin use I was using at least 300-400mg just to feel a mild effect. So I started to look for methadone. My favorite opiate that I have ever tried. Lasts FOREVER. At the beginning of my methadone use (always getting 10mg tabs) I was taking around 7-12 tabs a day. After about a month of that I was using around 20 tabs a day. Then I remember one night after JUST A MONTH of using methadone it TOTALLY stopped working. I remember I took 30 tabs one night. And felt nothing. I was crying so hard after that happened. I was scared as f**k. This drug didn't work but I was stuck with this huge f**king addiction on my back. If I stopped I would go into convulsions/seizures, hot cold sweats. couldn't move at all. Just laying there in the worst state of mind possible. I was shaking constantly I couldn't' eat, had the shits vomiting every 10-20 minutes. And there are so much more symptoms that just can not be put into words. And that was the 3rd night of me not having methadone.

I decided to try and use oxycontin to counteract my withdrawls. Well that worked for 3 days until the methadone was fully out of my system. I remember that night so well. I had snorted around 400mgs of oxycontin. And then. The withdrawls. I started shaking uncontrollably, got the worst headache of my life. Just started balling like hell. And stayed up all night just having the symptoms getting worse and worse. Then after around 24 hours I finally got my methadone. And was feeling a lot better. Well me being on methadone went on for around 5 more months just maintaining feeling normal but really it isn't' feeling normal. I can't even remember what normal feels like. Its just me not being sick. And having NO emotions. Which I really yearned for when I first started using opiates. And when I didn't have methadone I would go straight to the good ole' Heroin. That didn't' get me high at all and helped the symptoms some what. I would have to IV at least .5 of a gram every hour not feel a great amount of pain. Then when I got my methadone everything was fine. But horrible at the same time. I just could not go threw the withdrawls. I was really lucky I didn't' commit suicide that day when I didn't have my dones. If I did go threw withdrawls again I would most likely commit suicide.

So I was scare as f**k. Me and my mother were looking for a Buprenorphine doctor for months. And then finally after about the 6 or 7th month mark we FINALLY found a doctor. I went in there in horrible withdrawl to say the least. The doctor was a dick at first but was actually pretty cool. He gave me 4mg then another 4mg

and then another 4mg and i was still feeling horrible. I hate buprenorphine cuz i dont get good effects. I get every bad side effect possible from that damn opiate. I've tried a lotta opiates and have never ever had any bad side effects. Well, when i first started buprenorphine i was taking around 12mg a day for around a month. Then i just wanted to get off and slowly reduced my dose untill 2mg at the end of the month. I thought i wouldn't really have any bad withdrawls from it. But yeah just like any other opiate the withdrawls were the exact same but more like me comming off oxycontin. Really bad. Not even close to methadone but they are horrible.

i am still goin threw minor withdrawls. I just take loperamide to counteract the withdrawls and it works f**kin good. I take around 40mg at a time. And it lasts a very long time. I've just started using loperamide about a week ago. Before that i had relapsed 3 times. I slammed 60mg of OC when it was around the 6 or 7th day of me being off of bupe. The come down from that was pretty bad. Then a couple days after that i just couldn't get opiates off of my mind. So i bought methadone. took 5 then 10 minutes later popped another. I was feeling amazing. Best i've ever felt in a very long time. Then around 4 hours after popping 6 i popped my last three. And felt pretty damn good. then 2 days after that i got more methadone. And took 4. which did basically nothing exept get ride of my WDs. And that was my last time abusing an opiate. Its been around a week and a half since then And im feeling horrible. F**kin horrible. Aching all the time, thoughts racing

I, (THE AUTHOR) FOUND THIS ON THE COMPUTER OF A 17 YEAR OLD, WHO WAS DISCOVERED BY HIS MOTHER IN HIS BEDROOM WITH NO PULSE. HE HAD DIED OF AN OPIATE OVERDOSE. THE AUTOPSY REVEALED THAT HE HAD SEVEN DIFFERENT OPIATES IN HIS SYSTEM, WITH FOUR BEING A OVERDOSE LEVELS.

EMBARASSED BY HER SON’S ADDICTION, THE MOTHER CLEANED UP THE PHARMACEUTICAL OPIATES AND SYRINGES FROM THE ROOM BEFORE OUR TEAM ARRIVED AT THE SCENE. HE WAS A VERY POPULAR TEEN IN HIS SMALL HIGH SCHOOL AND HIS DEATH WAS THE SPARK FOR CREATING A SCHOOL WIDE PHARMACEUTICAL INFORMATION CAMPAIGN AND ENFORCEMENT ACTION THAT INVOLVED TREATMENT OF THE TEENAGE ADDICTS AND ABUSERS AT THE SCHOOL.

OPIATES (OPIUM POPPY EXTRACTS OR MODIFIED EXTRACTS)

DRUG NAME	TRADE NAME	STREET NAME
OPIUM	PANTOPON, PAREGORIC LAUDANUM	"O", OP, POPPY, DODA
CODEINE W/ASPIRIN OR TYLENOL	(EMPIRIN W/CODEINE) TYLENOL W/CODEINE CODEINE W/DORIDEN	NUMBER 4'S (1 GRAIN) NUMBER 3'S (½ GRAIN) LOADS, SETS, 4'S & DOORS
MORPHINE		MURPHY, MORPH, M, MISS EMMA
DIACETYL MORPHINE	HEROIN	SMACK, JUNK, TAR, (CHIVA, PURO, GOMA, PUTA), MEXICAN BROWN, CHINA WHITE, HARRY, SKAG, RUFUS, PERZE, "H", DAVA, BOY
HYDROCODONE	HYCODAN, VICODIN	
HYDROMORPHONE	DILAUDID	DILLIES, DRUGSTORE HEROIN
OXYCODONE	PERCODAN, TYLOX	PERCS, OXY, OC, ROXY, ROXIES, OXYCONTIN

OPIOIDS (SYNTHETIC OPIATES)

METHADONE	DOLOPHINE	JUICE, DONES
PROPOXYPHENE	DARVON, DARVOCET-N	PINK LADIES, PUMPKIN SEEDS
MEPERIDINE	DEMEROL	
FENTANYL	SUBLIMAZE	STREET DERIVATIVES ARE MISREPRESENTED AS CHINA WHITE
PENTAZOCINE	TALWIN	PART OF "T'S AND BLUES"
1-ALPHA ACETYL	LAAM	LAM

METHADOL (LONG-ACTING METHADONE)

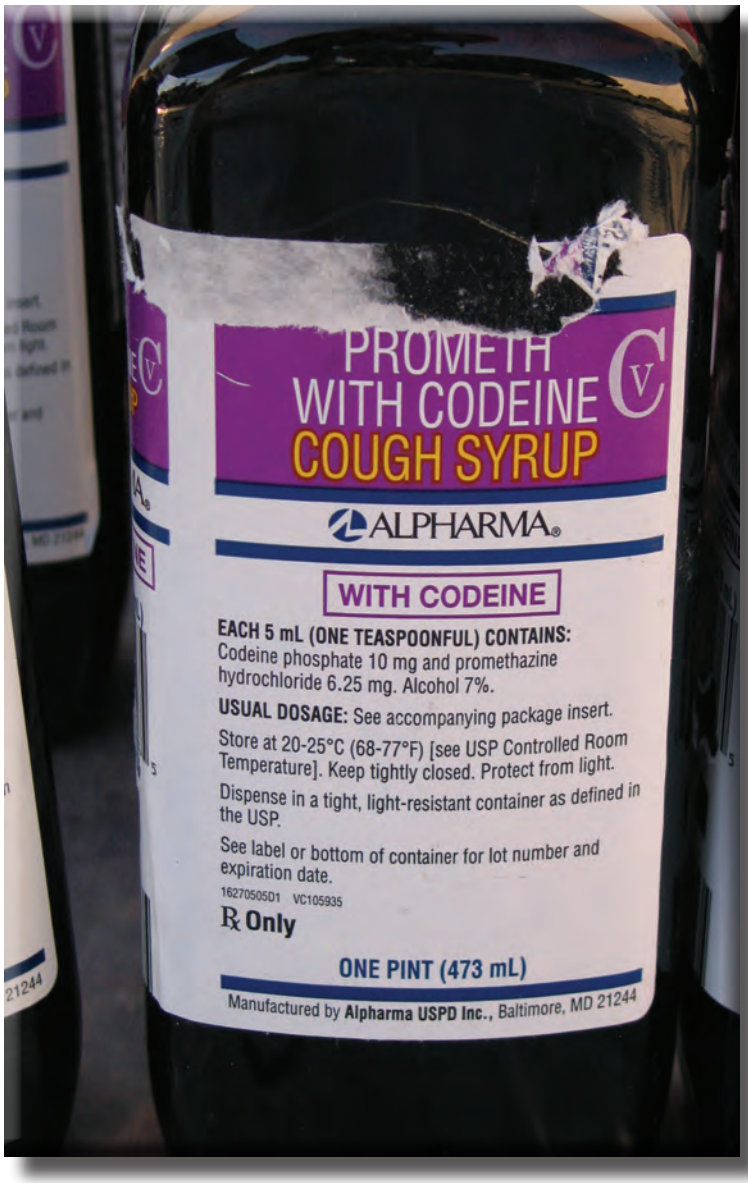
“DRANK”

“LEAN,” “BARRE,” “PURPLE STUFF,” “SIZZURP,” AND “DRANK” ARE STREET NAMES FOR COUGH SYRUP CONTAINING CODEINE AND PROMETHAZINE HYDROCHLORIDE (CPHCS).

THIS COUGH SYRUP COMBINATION HAS BECOME A POPULAR DRUG OF CHOICE FOR AFRICAN-AMERICAN TEENAGERS IN THE STATE OF TEXAS (ELWOOD, 2001; PETERS, KELDER ET AL., 2003).

ITS ABUSE HAS EVOLVED IN CONNECTION WITH “SCREW” MUSIC, A POPULAR AND INNOVATIVE FORM OF HIP-HOP MUSIC WITH ITS ORIGINS IN HOUSTON, TEXAS. DJ SCREW, A HIP-HOP HOUSTON RAPPER WHO DIED OF AN OVERDOSE OF THIS DRUG, CREATED AN OFF- SHOOT OF THE INNER-CITY RAP MUSIC MEDIUM WITH THE DISTIN-GUISHING FEATURE OF A MARKEDLY SLOWED BEAT CALLED “SCREW” MUSIC.

THIE FOLLOWING PICTURES ARE FROM A SEIZURE BY LAPD NARCOTICS. LARGE ` SEIZURES OF PROMETH BEING SHIPPED FROM SOUTHERN CALIFORNIA TO TEXAS HAS BEEN OCCURRING. FOUND PREDOMINANTLY WITH BLACK STREET GANGS, IT IS SPREADING TO MANY OTHERS DUE TO YOU TUBE AND OTHER WEBSITES.



“CRUNK JUICE”

PROMETHAZINE WITH CODEINE IS A CONTROLLED SUSBSTANCE AND DUE TO ITS POPULARITY A “STREET VERSION” HAS BEEN DEVELOPED TO EMULATE THE ORIGINAL. IT IS CALLED “CRUNK JUICE” OR “CRUNKING.”

ONE POPULAR FORMULA REQUIRES THE MIXING OF CRUSHED OPIATE PAIN PILLS SUCH AS PERCOCET OR VICODIN INTO SPRITE WITH VARYING AMOUNTS OF OVER-THE-COUNTER COUGH SYRUPS SUCH AS “NYQUIL COUGH.”

THIS PRODUCES A SIMILAR EFFECT BUT IS VERY EASILY ABUSED TO A LEVEL OF OVERDOSE DEPENDING ON THE STRENGTH OF THE OPIATE PILL(S) THAT ARE USED. \\ THIS IS VERY POPULAR AMOUNGST THE YOUTH ON THE HAWAIIAN ISLANDS AND ON THE MAINLAND OF THE UNITED STATES.

OPIUM POPPIES

OPIUM OOZING FROM POD

OPIUM POPPIES WITHOUT PETALS

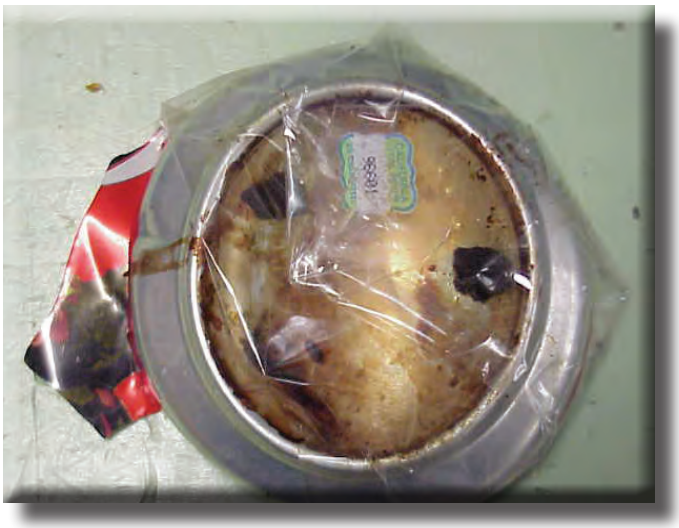
“BLACK TAR” HEROIN

“MEXICAN BROWN” HEROIN

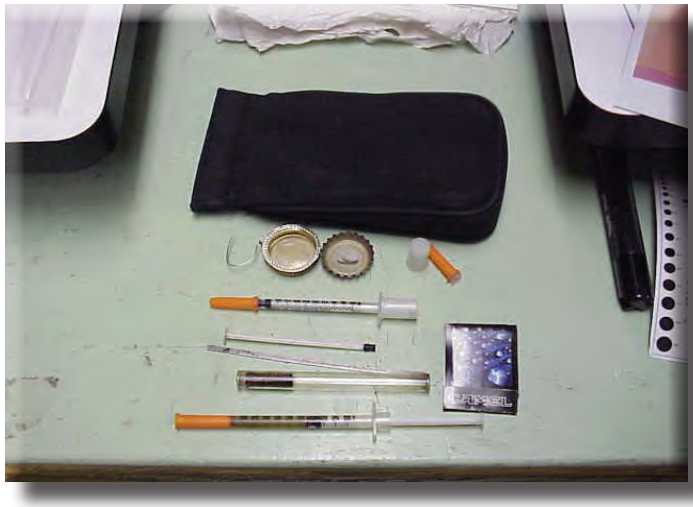
PREPARING HEROIN FOR INJECTION

SMOKING HEROIN

SPOON USED FOR HEROIN



BOTTOM OF CAN USED FOR HEROIN

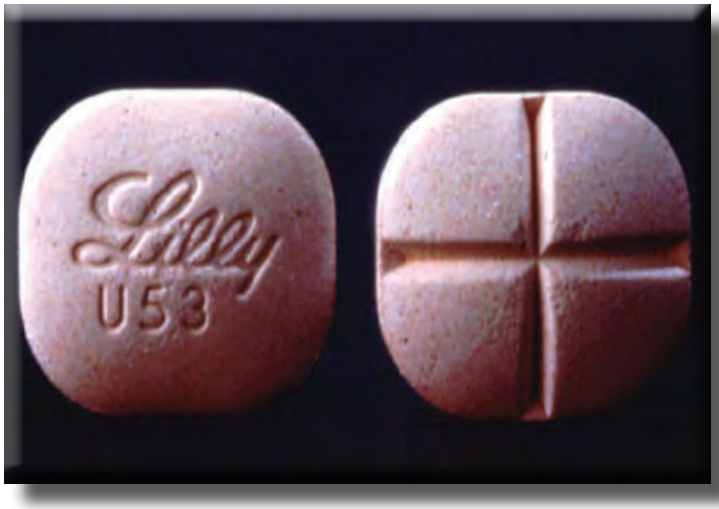


“HYPE KIT” FOR HEROIN

HYPODERMIC SYRINGES WITH BOTH NEEDLE AND PLUNGER CAPS

SCALES FOR PREPARING HEROIN

DOSES OF METHADONE



METHADONE TABLETS

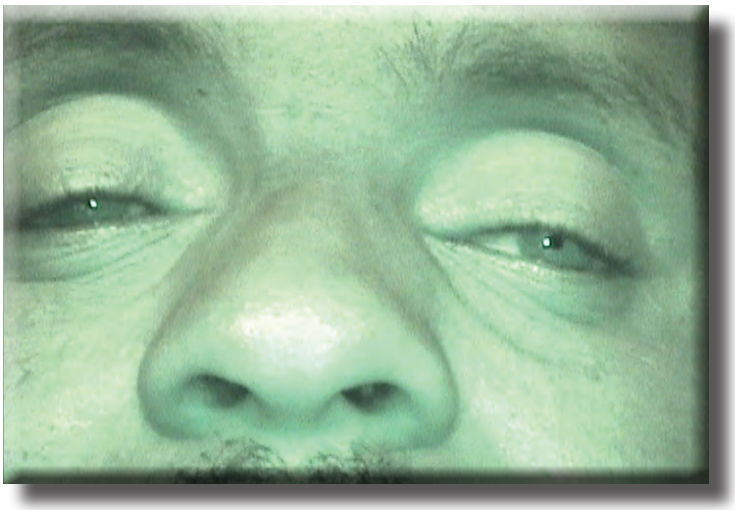
METHADONE TABLETS

METHADOSE PILL

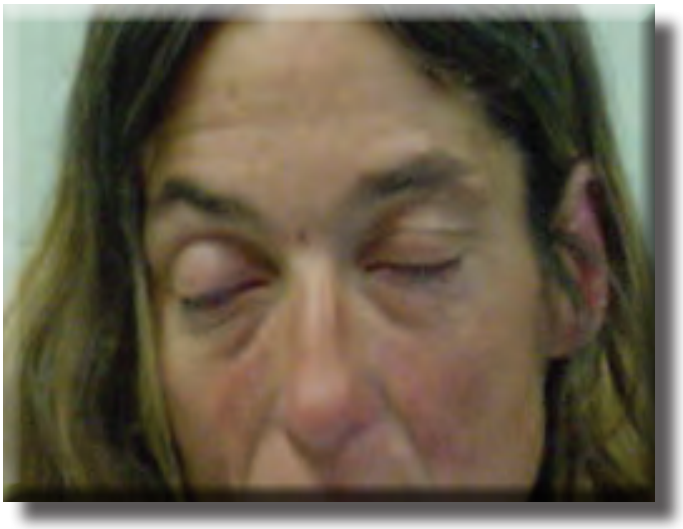
OPIATE INFLUENCE
CONSTRICTED PUPILS

OPIATE INFLUENCE
CONSTRICTED PUPILS

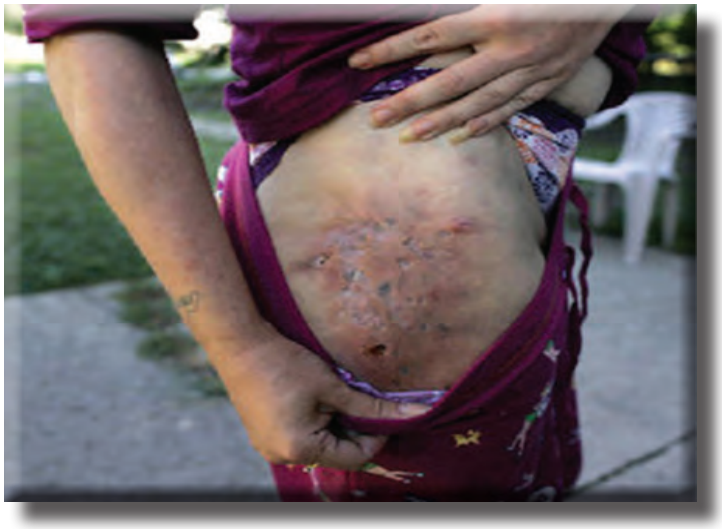
OPIATE INFLUENCE
CONSTRICTED PUPILS



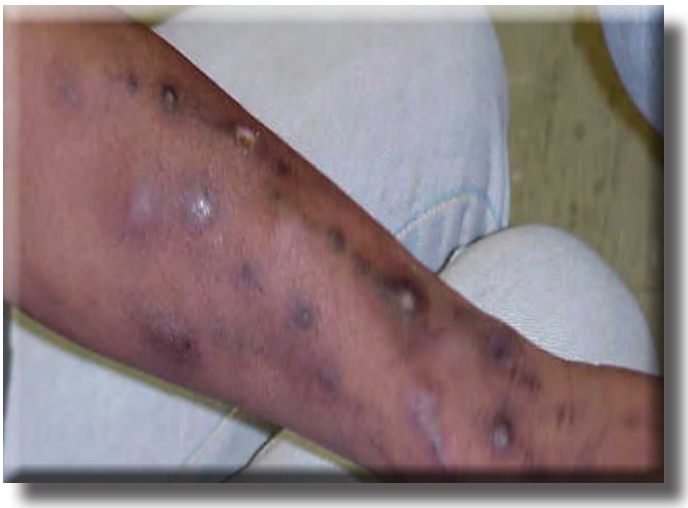
DROOPY EYELIDS



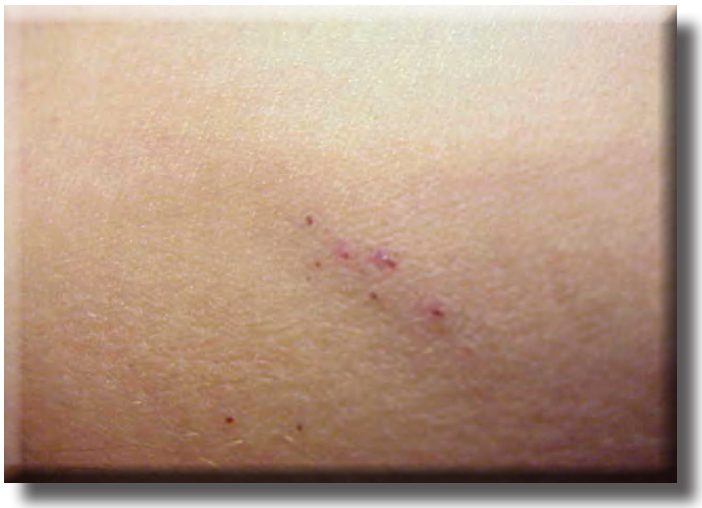
DROOPY EYELIDS



SCARRING FROM INJECTING HEROIN



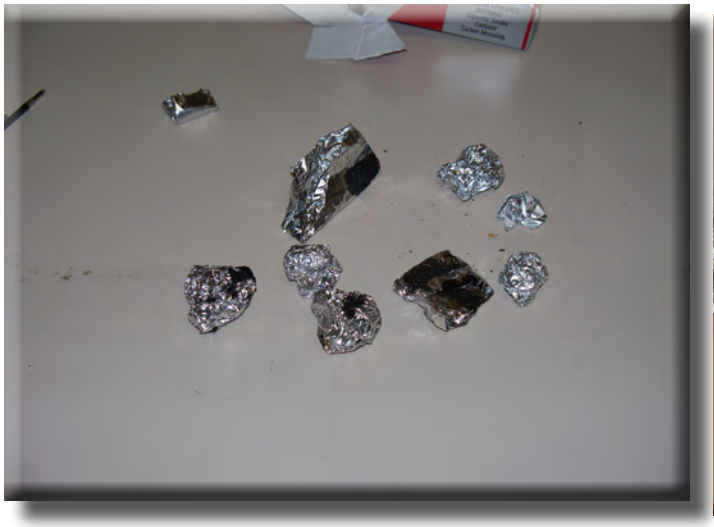
SCARRING FROM INJECTING HEROIN



NEEDLE INJECTION SITES

VEHICLE HOSE CLAMP

HOSE CLAMP USED TO SHAVE PILLS INTO POWDER

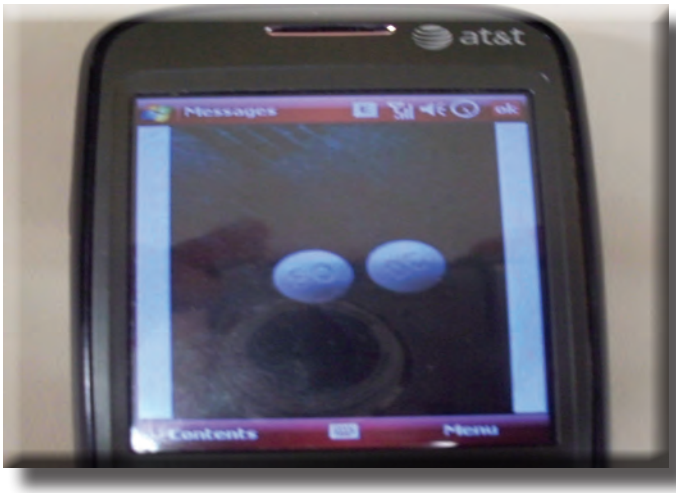


FOIL WITH BURN MARKS

“TRAILS” FROM MELTED PILLS THAT WERE SMOKED ON FOIL

METAL “STASH” CONTAINER

OPIATE PAIN PILL INSIDE CONTAINER



PICTURE OF OPIATE PILLS ON JUVENILES CELLULAR PHONE

TEXT MESSAGES OF OPIATE PILLS ON JUVENILES CELLULAR PHONE

OPIATE PILLS HIDDEN IN DEALERS SOCK

OXYCODONE SEIZED FROM TEENAGED DRUG DEALER

FENTANYL PATCH

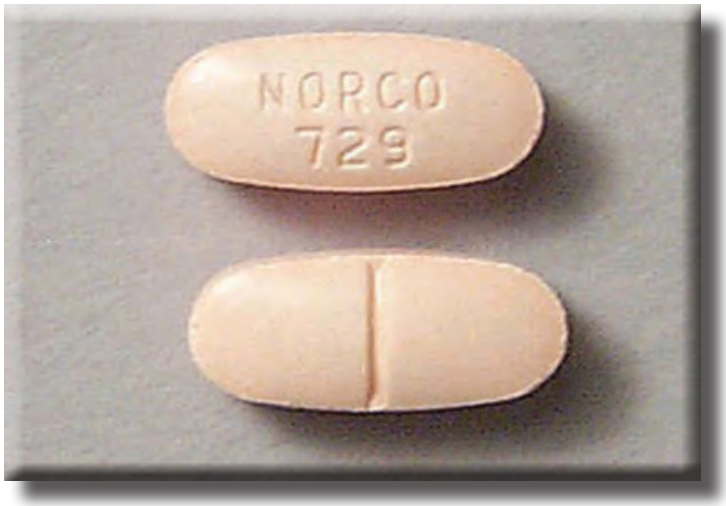
HYDROCODONE/ ACETAMINOPHEN

CODEINE
ACETAMINOPHEN

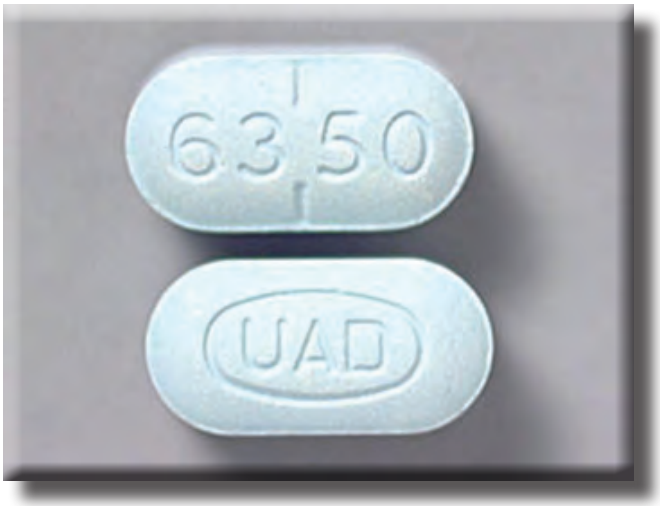
OXYCODONE

HYDROCODONE
ACETAMINOPHEN

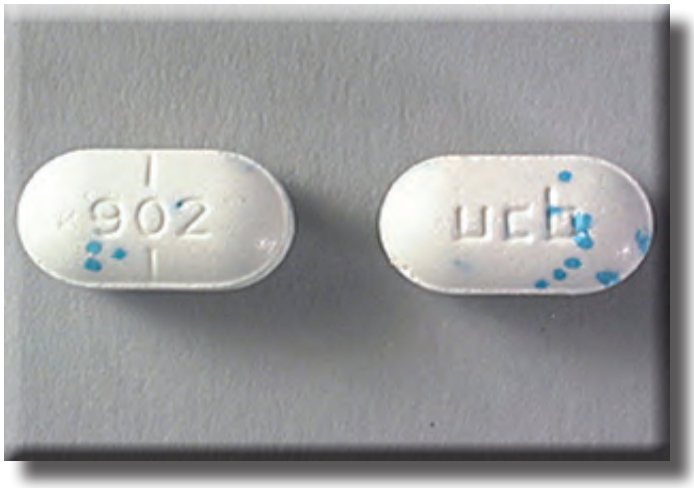
ROXYCODONE



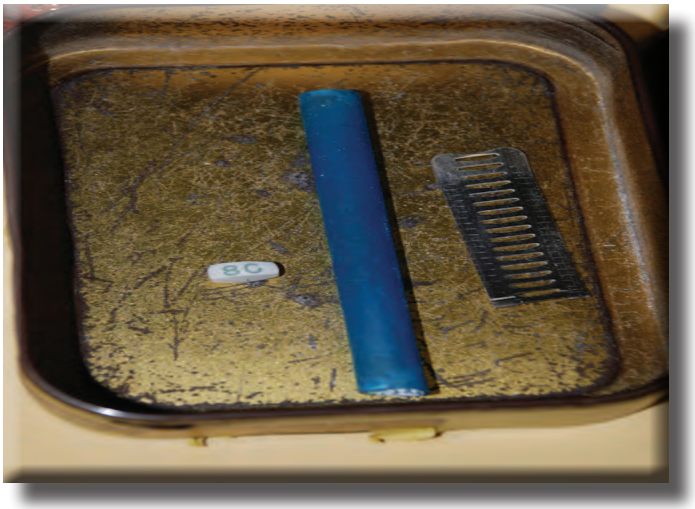
NORCO
HYDROCODONE
ACETAMINOPHEN



LORCET
HYDROCODONE
ACETAMINOPHEN



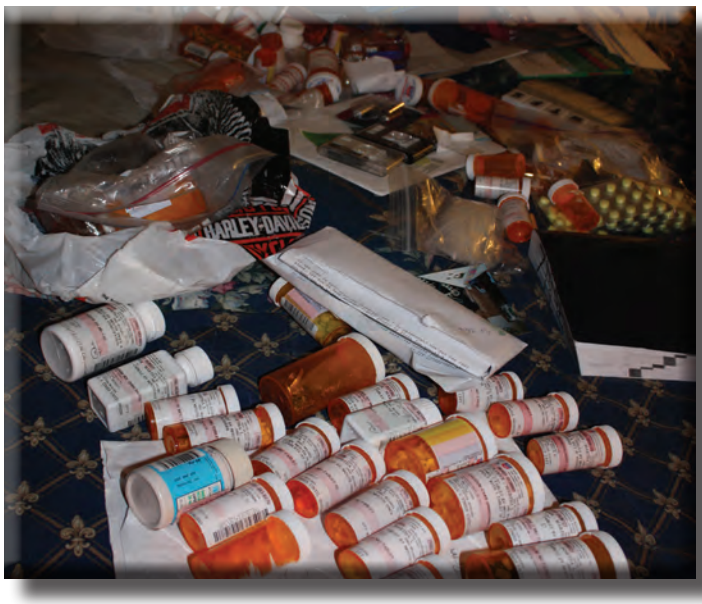
LORTAB
HYDROCODONE / ACETAMINOPHEN



HOSE CLAMP USED TO SHAVE
PILLS INTO POWDER

DARVOCET
PROPOXYPHENE / ACETAMINOPHEN

METHADONE PILLS
PACKAGED FOR SALES



MULTIPLE PHARMACEUTICAL
CONTAINERS FROM DEALER

OPANA WITH CANDY

KRATOM PACKAGED FOR SALE

KRATOM

Cannabinoids

OBJECTIVE SIGNS AND SYMPTOMS OF CANNABIS METABOLITE INFLUENCE

EYES:

HGN NOT PRESENT

VGN NOT PRESENT

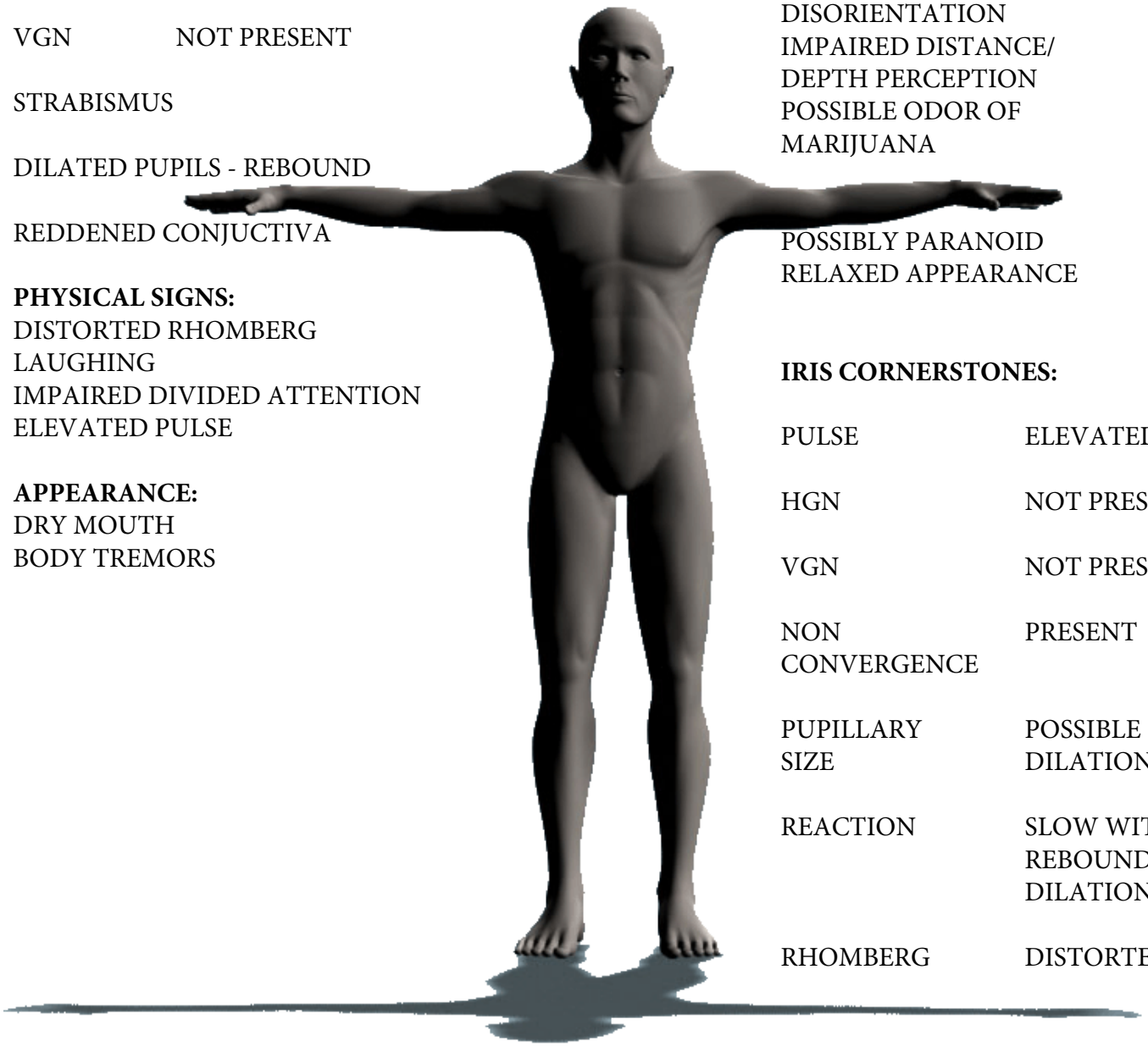
STRABISMUS

DILATED PUPILS - REBOUND

REDDENED CONJUCTIVA

PHYSICAL SIGNS:
DISTORTED RHOMBERG
LAUGHING
IMPAIRED DIVIDED ATTENTION
ELEVATED PULSE

APPEARANCE:
DRY MOUTH
BODY TREMORS



OTHER SIGNS:
EUPHORIA
RELAXED INHIBITIONS
FORGETFULNESS
DISORIENTATION
IMPAIRED DISTANCE/ DEPTH PERCEPTION
POSSIBLE ODOR OF MARIJUANA

POSSIBLY PARANOID
RELAXED APPEARANCE

IRIS CORNERSTONES:

PULSE	ELEVATED
HGN	NOT PRESENT
VGN	NOT PRESENT
NON CONVERGENCE	PRESENT
PUPILLARY SIZE	POSSIBLE DILATION
REACTION	SLOW WITH REBOUND DILATION
RHOMBERG	DISTORTED

CANNABIS (MARIJUANA)

CANNABIS IS THE CATEGORY OF DRUGS THAT ARE DERIVED FROM THE VARIOUS SPECIES OF CANNABIS PLANTS.

THE CANNABIS CATEGORY OF DRUGS INCLUDE:

MARIJUANA (SMOKED CANNABIS)

CONCENTRATED CANNABIS

HASHISH

HASHISH OIL

SYNTHETIC CANNABIS

MARINOL

DRONABINOL

BOTH HASHISH AND HASHISH OIL ARE DERIVED FROM THE CANNABIS PLANT.

MARINOL IS A LEGALLY MANUFACTURED SYNTHETIC THC IN LIQUID FORM THAT IS PRESCRIBED FOR THE RELIEF OF NAUSEA ASSOCIATED WITH CHEMOTHERAPY.

ACTIVE COMPONENT IS:

DELTA-9 TETRAHYDROCANNABINOL (THC).

THIS PSYCHOACTIVE AGENT ASSOCIATED WITH THE CANNABIS PLANT IS CONCENTRATED IN THE RESIN (TRICHOMES) OF THE PLANT WITH THE MAJORITY OF THE RESIN FOUND IN THE FLOWERING TOPS OF THE FEMALE PLANT, WITH LESS FOUND IN THE LEAVES AND ALMOST NONE IN THE FIBROUS STALKS.

CANNABIS SYMPTOMATOLOGY:

STIMULATION
DECREASED ATTENTION SPAN
MOOD ELEVATION
EUPHORIA
SEDATION
GIDDY
SLOW GAIT
SLEEPY APPEARANCE
MUSCLE RELAXATION
ANESTHESIA
INCREASED HEARING THRESHOLD
MEMORY LOSS
HALLUCINOGENIC
HALLUCINATIONS
PARANOIA DELUSIONS
CRAVING FOR SWEETS
POOR CONCENTRATION
POOR MUSCLE COORDINATION
POOR BALANCE
SLOW SLURRED SPEECH
PAIN RELIEF
RED CONJUNCTIVA
POOR DEPTH PERCEPTION
TIME DISTORTION
GLASSY EYES

CANNABIS PLANTS COME IN THREE SPECIES:

CANNABIS SATIVA L.:

GROWN PRIMARILY IN MEXICO, COLOMBIA, JAMAICA AND THAILAND,

CANNABIS SATIVA HAS A RELATIVELY LOW THC CONTENT AND IS A SIXTEEN TO EIGHTEEN FOOT PLANT AT FULL MATURITY. IT IS SOMETIMES REFERRED TO AS “DITCHWEED” DUE TO ITS LOW THC CONTENT.

CANNABIS INDICA:

GROWN PRIMARILY IN THE MIDDLE EAST AND SOUTHEAST ASIA.

CANNABIS INDICA HAS A REDDISH

TINGE TO THE LEAVES, A RELATIVELY HIGH THC CONTENT AND IS A FIFTEEN FOOT BUSH AT FULL MATURITY. IT IS SOMETIMES REFERRED TO AS "SKUNK WEED" DUE TO ITS ODOR.

CANNABIS RUDERALISE:

GROWN PRIMARILY IN RUSSIA, CANNABIS RUDERALISE HAS A RELATIVELY LOW THC CONTENT AND IS A TWO TO THREE FOOT PLANT AT FULL MATURITY.

IT HAS BECOME AVAILABLE IN THE UNITED STATES (VIA HIGH TIMES MAGAZINE ADVERTISERS WHO HAVE MADE THE SEEDS AVAILABLE VIA MAIL ORDER).

UNLIKE THE INDICA AND SATIVA STRAINS, THE RUDERALISE IS KNOWN AS "AUTO FLOWERING" WHICH MEANS THE FEMALE PLANT AUTOMATICALLY BEGINS TO "FLOWER" AFTER 6 WEEKS OF GROWTH.

SINSEMILLA:

IS NOT A "SPECIES" OF CANNABIS, BUT OBTAINED AS A RESULT OF SPECIAL GROWING TECHNIQUES. SINSEMILLA PRODUCES THE HIGHEST THC CONTENT OF ANY OF THE GROWING TECHNIQUES. IT IS ESTIMATED THAT 95+% OF THE CANNABIS GROWN IN CALIFORNIA IS SINSEMILLA.

COMPARISON OF THC CONTENT:

CANNABIS SATIVA L.	.05-6% THC
CANNABIS INDICA	8 -10% THC
CANNABIS RUDERALISE	.05-6% THC
AMERICAN HIGHBRED	8 -10% THC
SINSEMILLA	8 - 34% THC
HASHISH	8 - 10% THC (34%)
HASHISH OIL	20 - 60% THC (90%)

HASHISH:

HASHISH IS OBTAINED BY REMOVING THE RESIN HEADS VIA A SCREEN OR WATER FILTRATION PROCESS (KEIF OR BUBBLE HASH). THE TRICHOMES ARE COMPRESSED INTO ANY SHAPE DESIRED. HASHISH CAN APPEAR AS BROWN, GREEN, RED OR BLACK.

MAJOR MANUFACTURERS OF HASHISH ARE LOCATED IN MOROCCO, MEXICO, THE MIDDLE EAST AND THE CARIBBEAN. DUE TO CALIFORNIA LAW, HASHISH IS USED AS "MEDICINE" AND IS BEING PRODUCED IN LARGE QUANTITIES.

HASHISH OIL:

HASHISH OIL IS OBTAINED THROUGH THE SOLVENT EXTRACTION OF THE TRICHOMES FROM THE PLANT MATERIAL . THERE ARE NUMEROUS FLAMMABLE SOLVENTS THAT CAN BE USED. THE SOLVENT DISSOLVES THE RESIN HEADS CONTAINING THE THC FROM THE PLANT MATERIAL. THE SOLVENT EVAPORATES LEAVING JUST THE THC AND THE RESULTING OIL CAN BE MANIPULATED .

THIS OIL DOES NOT HAVE THE ODOR OF MARIJUANA BECAUSE IT IS ONLY THE RESIN FROM THE PLANT, NOT THE PLANT ITSELF.

THE MANUFACTURE OF HASH OIL IS ILLEGAL IN CALIFORNIA (THIS INCLUDES MEDICAL MARIJUANA CASES).

DEPENDING UPON THE VARIOUS TECHNIQUES EMPLOYED, HASH OIL IS REFFERED TO AS; DABS, BUDDER, OIL (710 - OIL UPSIDE DOWN) HONEYCOMB, VAC, WAX, ESSENTIALS, AND EXTRACTS.

PHARMACOLOGY:

MARIJUANA, HASH, AND HASH OIL ARE MOST COMMONLY SMOKED, ALTHOUGH THEY CAN BE INGESTED ORALLY.

ONSET OF EFFECTS:

MARIJUANA

SMOKED	4 TO 6 SECONDS
EATEN	20 TO 40 MINUTES

HASH

SMOKED	4 TO 6 SECONDS
EATEN	20 TO 40 MINUTES

HASH OIL

SMOKED	4 TO 6 SECONDS

METABOLITES OF THC:

ONCE IN THE BODY, THC PARTIALLY CHANGES INTO TWO OTHER COMPOUNDS (METABOLITES); HYDROXY (OH-THC) AND CARBOXY (C-THC).

OH -THC AND C - THC DO NOT CAUSE THE EUPHORIC EFFECTS THAT THC DOES.

THEY DO, HOWEVER, CAUSE VISUAL, MENTAL, AND MOTOR IMPAIRMENT. ALTHOUGH THE THC MAY DISSIPATE FROM THE BODY WITHIN 2-3 HOURS, OH-THC AND C-THC REMAIN IN THE BODY LONGER.

C-THC HAS BEEN SHOWN TO REMAIN WITHIN THE BODY AND CAUSE IMPAIRMENT FOR UP TO 6 DAYS.

DURATION OF EFFECTS:

THC	2-3 HOURS
OH-THC	4-6 HOURS
C-THC	3-6 DAYS

EUPHORIA:

THC	YES
OH-THC	MILD, IF ANY
C-THC	NO

IMPAIRMENT:

THC	YES
OH-THC	YES
C-THC	YES

IN ADDITION TO THE LENGTHY PLASMA LIFE, THC HAS BEEN SHOWN TO BE EXTREMELY “LIPID SOLUBLE”. THIS MEANS THAT ALTHOUGH IT DISAPPEARS FROM THE BLOOD WITHIN HOURS, SOME THC GOES INTO THE FATTY TISSUE OF THE BODY WHERE IT IS STORED AND RELEASED OVER A LONG PERIOD OF TIME (UP TO 45 DAYS AFTER INGESTION).

CHRONIC USE OF HIGH QUANTITIES OF THC CAN DISPLACE SUFFICIENT NOREPINEPHRINE AND ENDORPHIN SO AS TO CAUSE ADDICTION AND TOLERANCE.

DUE TO THE HIGH LEVVELS OF THC COMPOUNDS INFLUENCE RECOGNITION HAS BEEN OBSERVED BY THE AUTHOR 48 HOURS AFTER INGESTION.

SHORT TERM EFFECTS:

BLOODSHOT EYES, ODOR OF BURNT MARIJUANA
LOSS OF SENSE OF TIME AND SPACE
DROOPY EYELIDS
RESIDUE IN MOUTH (GREEN TONGUE)
REDUCED ATTENTION SPAN
IMPAIRED MEMORY, BODY TREMORS
SLOW RESPONSES

CHRONIC EFFECTS:

MOTIVATIONAL SYNDROME
LOWER MALE HORMONE LEVELS
LUNG, THROAT, MOUTH CANCER
INTERFERENCE WITH PHYSICAL AND EMOTIONAL DEVELOPMENT, BIRTH DEFECTS

ADDICTION LIABILITY:

REPRODUCIBLE TOLERANCE
PHYSICAL DEPENDENCE

AFTER 21 DAYS OF HEAVY USE:

ONSET 10 HOURS OF CESSATION
PEAKS WITHIN 48 HOURS
TERMINATES BY FIFTH DAY OF ABSTINENCE

DESCRIPTION OF W/D SYMPTOMS:

AGITATION
RESTLESSNESS
IRRITABILITY
DEPRESSION
TREMOR
NAUSEA
ANOREXIA

CANNABINOID NEUROCHEMISTRY:

THE FOLLOWING INFORMATION REGARDING CANNABINOID NEUROCHEMISTRY IS TAKEN FROM THE:

REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH CSAPH REPORT 3-I-09

CANNABINOIDS AND THE ENDOCANNABINOID SYSTEM

IN 1964, DELTA-9-TETRAHYDROCANNABINOL (HEREAFTER REFERRED TO AS THC) WAS IDENTIFIED AS THE PRIMARY PSYCHOACTIVE CANNABINOID IN CANNABIS SATIVA AND SUCCESSFULLY SYNTHESIZED.

RECEPTORS IN THE BRAIN AND PERIPHERY THAT BIND THC (CANNABINOID RECEPTORS) WERE DISCOVERED IN THE EARLY 1990S, AND THE IDENTIFICATION OF ENDOGENOUS COMPOUNDS THAT ACT AT CANNABINOID RECEPTORS (ENDOCANNABINOIDS) SOON FOLLOWED.

CANNABIS SATIVA:

THE PLANT CONTAINS OVER 400 CHEMICAL COMPOUNDS. THE MAIN PSYCHOACTIVE SUBSTANCE IS GENERALLY BELIEVED TO BE THC, BUT MORE THAN 60 OTHER CANNABINOIDS HAVE BEEN IDENTIFIED IN THE PLANT (PHYTOCANNABINOIDS) AND PYROLYSIS PRODUCTS.

CANNABINOIDS ARE CHEMICAL COMPOUNDS THAT ARE UNIQUE TO THE CANNABIS PLANT. DELTA-8-THC IS SIMILAR IN POTENCY TO THC, BUT IS PRESENT IN ONLY SMALL CONCENTRATIONS. CANNABINOL AND CANNABIDIOL ARE THE OTHER MAJOR CANNABINOIDS PRESENT. THE FORMER IS SLIGHTLY PSYCHOACTIVE, BUT NOT IN THE AMOUNTS DELIVERED BY SMOKING MARIJUANA. CANNABIDIOL IS

NOT PSYCHOACTIVE AND HAS DISTINCTIVE PROPERTIES.

THE AVERAGE CONTENT OF THC IN CANNABIS PLANTS IS HIGHLY VARIABLE DEPENDING ON THE STRAIN, CLIMATE, SOIL AND GROWING CONDITIONS, AND HANDLING AFTER HARVEST.

THC IS A RESINOUS WEAK ACID, PKA = 10.6, WITH A VERY HIGH LIPID SOLUBILITY AND VERY LOW AQUEOUS SOLUBILITY. IT BINDS TO GLASS, DIFFUSES INTO PLASTIC, AND IS PHOTO LABILE AND SUSCEPTIBLE TO HEAT, ACID, AND OXIDATION; THESE CHARACTERISTICS HAVE SERVED AS BARRIERS TO THE DEVELOPMENT OF TRADITIONAL PHARMACEUTICAL DOSAGE FORMS.

THE (-) ENANTIOMER IS UP TO 100 TIMES MORE POTENT THAN THE (+) ENANTIOMER DEPENDING ON THE PHARMACOLOGICAL TEST.

CANNABINOID RECEPTORS:

TWO TYPES OF CANNABINOID RECEPTORS (CB1 AND CB2) HAVE BEEN CLEARLY IDENTIFIED AND BOTH ARE MEMBERS OF THE SUPERFAMILY OF G-PROTEIN-COUPLED RECEPTORS. THE CB1 RECEPTOR, FIRST CLONED IN 1990, IS MAINLY EXPRESSED IN THE BRAIN AND SPINAL CORD.

DISTRIBUTION IS HETEROGENEOUS WITH THE HIGHEST DENSITIES PRESENT IN THE BASAL GANGLIA, HIPPOCAMPUS, AND CEREBELLUM, WITH COMPARATIVELY FEWER RECEPTORS IN THE BRAINSTEM.

CB1 RECEPTORS ARE AMONG THE MOST ABUNDANT G-PROTEIN COUPLED RECEPTORS IN THE BRAIN. BY COUPLING PREDOMINATELY TO INHIBITORY G

PROTEINS, CB1 RECEPTORS INHIBIT CERTAIN INWARDLY DIRECTED CALCIUM CHANNELS, ACTIVATE OUTWARDLY DIRECTED POTASSIUM CHANNELS, AND ACTIVATE VARIOUS MITOGEN-ACTIVATED PROTEIN (MAP) KINASES.

THE LATTER MAY PLAY A ROLE IN THE MODULATION OF SYNAPTIC PLASTICITY, CELL MIGRATION, AND NEURITE REMODELING.

CB1 RECEPTORS ARE LOCATED ON THE TERMINALS OF CENTRAL AND PERIPHERAL NEURONS. GENERALLY, THEIR ACTIVATION INHIBITS THE ONGOING RELEASE OF A NUMBER OF DIFFERENT EXCITATORY AND INHIBITORY TRANSMITTERS, OR HYPERPOLARIZES NEURONS, WHICH ALSO INHIBITS ACTIVITY.

THE CB2 RECEPTOR, FIRST CLONED IN 1993 IS PREDOMINANTLY EXPRESSED IN CELLS OF THE IMMUNE AND HEMATOPOIETIC SYSTEMS BUT ALSO IS PRESENT IN NONPARENCHYMAL CELLS OF THE LIVER, ENDOCRINE PANCREAS, AND BONE.

SOME CB2 RECEPTORS ALSO ARE FUNCTIONALLY EXPRESSED IN THE CNS, NOTABLY ON MICROGLIAL CELLS. CB2 RECEPTOR ACTIVATION ALTERS THE RELEASE OF CYTOKINES FROM IMMUNE CELLS AND PARTICIPATES IN THE REGULATION IMMUNE FUNCTION.

CB2 AGONISTS GENERALLY SUPPRESS THE FUNCTIONS OF THESE CELLS. CB2 MODULATES IMMUNE CELL MIGRATION BOTH WITHIN AND OUTSIDE THE CENTRAL NERVOUS SYSTEM

ENDOCANNABINOIDS:

IN PARALLEL WITH THE DISCOVERY OF CANNABINOID RECEPTORS, ENDOGENOUS SUBSTANCES THAT BIND AND ACTIVATE THESE RECEPTORS WERE IDENTIFIED (ENDOCANNABINOIDS). THE TWO BEST CHARACTERIZED ARE ARACHINDONOYL ETHANOAMIDE (AEA OR ANANDAMIDE) AND

2-ARACHIDONOYLGLYCEROL (2-AG), ALTHOUGH OTHER PUTATIVE ENDOCANNABINOIDS ALSO HAVE BEEN IDENTIFIED.

IN CONTRAST TO CONVENTIONAL NEUROTRANSMITTERS, ENDOCANNABINOIDS ARE NOT STORED IN SYNAPTIC VESICLES, BUT ARE PRODUCED ON DEMAND VIA CLEAVAGE OF MEMBRANE LIPID PRECURSORS AND THEN RELEASED AFTER DE NOVO SYNTHESIS.

ONCE FORMED IN RESPONSE TO PRESYNAPTIC DEPOLARIZATION, ENDOCANNABINOIDS FUNCTION AS “RETROGRADE” MESSENGERS, DIFFUSING BACK ACROSS THE SYNAPSE AND SIGNALING THE PRESYNAPTIC (UPSTREAM) NEURON TO DECREASE NEUROTRANSMITTER RELEASE AND/OR ACTIVITY.

THESE EFFECTS HAVE BEEN IMPLICATED IN THE MODULATION OF BOTH SHORT- AND LONG TERM SYNAPTIC PLASTICITY, EVENTS WHICH ARE INTEGRAL TO THE REMODELING OF SYNAPTIC NETWORKS IN THE CNS, AS WELL AS FUNDAMENTAL PROCESSES SUCH AS LEARNING AND MEMORY.

TERMINATION OF THE ACTION OF AEA AND 2-AG IS ACCOMPLISHED BY RE-UPTAKE INTO THE NEURON AND SUBSEQUENT ENZYMATIC DEGRADATION. THESE TRANSPORT PROTEINS AND DEGRADATIVE ENZYMES REPRESENT OTHER TARGETS FOR MANIPULATING THE ENDOCANNABINOID SYSTEM.

AEA PRIMARILY ACTIVATES CB1 RECEPTORS, AND ALSO STIMULATES TRPV1 RECEPTORS. THE LATTER IS AN IMPORTANT COMPONENT OF PAIN SIGNALING PATHWAYS. AEA IS A PARTIAL OR FULL AGONIST AT CB1 RECEPTORS, DEPENDING ON THE SPECIES, TISSUE,

AND BIOLOGICAL RESPONSE BEING EXAMINED.

PARTIAL AGONISTS ARE CAPABLE OF BINDING TO A RECEPTOR, BUT DO NOT CAUSE MAXIMAL ACTIVATION. PHARMACOLOGICALLY, THEY CAN FUNCTION AS AGONISTS OR ANTAGONISTS, DEPENDING ON THE DOSE, AND ENDOGENOUS ACTIVITY OF THE BIOLOGICAL SYSTEM THEY ARE INTERACTING WITH. THIS FACT COMPLICATES THE INTERPRETATION OF ENDOCANNABINOID EFFECTS THAT HAVE BEEN OBSERVED IN ANIMAL MODELS, AS WELL AS FINDINGS WHICH MAY BE RELEVANT TO PHYTOCANNABINOIDS SUCH AS THC.

ALTHOUGH AEA BINDS TO CB2 RECEPTORS, IT HAS A LOW EFFICACY, AND MAY ACT PRIMARILY AS AN ANTAGONIST. 2-AG HAS APPROXIMATELY EQUIVALENT ACTIVITY AT CB1 AND CB2 RECEPTORS, IS MUCH MORE ABUNDANT THAN AEA IN THE BRAIN, AND IS BELIEVED TO ACT PRIMARILY AS AN AGONIST AT CANNABINOID RECEPTORS. OTHER PUTATIVE ENDOCANNABINOIDS ALSO TEND TO BE CONSIDERABLY MORE ACTIVE AS CB1 RECEPTOR AGONISTS. ADDITIONALLY, OTHER RECEPTOR SYSTEMS APPEAR TO RESPOND TO ENDOCANNABINOIDS.

THC IS ALSO A PARTIAL AGONIST AT THE CB1 AND CB2 RECEPTORS. CANNABIDIOL DISPLAYS ANTI-OXIDANT ACTIVITY, IS A TRPV1 AGONIST LIKE AEA, AND INHIBITS THE UPTAKE AND METABOLISM OF AEA. IT HAS LOW EFFICACY FOR CB1 AND CB2 RECEPTORS.

TAKEN TOGETHER, THE ENDOCANNABINOID SYSTEM IS WIDELY DISPERSED AND IT MODULATES THE ACTIVITY OF SEVERAL PROMINENT NEUROTRANSMITTERS, IMMUNE REGULATING CELLS, AND OTHER

TISSUE AND ORGANS. ACCORDINGLY,

ENDOCANNABINOIDS LIKELY PLAY A ROLE IN THE REGULATION OF A WIDE VARIETY OF FUNCTIONS AND DISEASE STATES. SOME OF THE MOST PROMINENT INCLUDE APPETITE REGULATION, PERIPHERAL ENERGY METABOLISM, OBESITY AND ASSOCIATED METABOLIC ABNORMALITIES, PAIN AND INFLAMMATION, GASTROINTESTINAL MOTILITY AND SECRETION, CENTRAL NERVOUS SYSTEM DISORDERS, NEUROTOXICITY/ NEUROINFLAMMATION/ NEUROPROTECTION, AND CERTAIN MENTAL DISORDERS, INCLUDING SUBSTANCE MISUSE.

BRIEF HISTORY OF CANNABIS AS A MEDICINE:

THE FOLLOWING INFORMATION REGARDING CANNABIS AS A MEDICINE IS TAKEN FROM THE:

THE ROLE OF THE PHYSICIAN IN “MEDICAL” MARIJUANA, SEPTEMBER 2010

AMERICAN SOCIETY OF ADDICTION MEDICINE (ASAM)

MODERN HISTORY OF CANNABIS IN MEDICINE

IN THE EARLY PART OF THE 19TH CENTURY, THE EUROPEAN MEDICAL COMMUNITY BECAME AWARE OF THE THERAPEUTIC POTENTIAL OF CANNABIS-BASED MEDICATIONS.

DR. WILLIAM O’SHAUGHNESSY, AN IRISH PHYSICIAN, CONDUCTED CLINICAL AND NONCLINICAL WORK IN INDIA WITH CANNABIS PREPARATIONS AND UPON HIS RETURN TO ENGLAND, THE RESULTS OF HIS STUDIES BECAME WIDELY KNOWN.

ACROSS EUROPE AND NORTH AMERICA INTEREST INCREASED IN THE THERAPEUTIC POTENTIAL OF THESE MATERIALS. (O’SHAUGHNESSY WB, 1973)

PHARMACISTS AND EARLY PHARMACEUTICAL COMPANIES DEVELOPED ORAL CANNABIS EXTRACTS AND TINCTURES FOR VARIOUS MEDICAL CONDITIONS (HAMILTON HC, LE-SCOHIER AW & PERKINS RA, 1913).

THESE CANNABIS PREPARATIONS WERE UNSTABLE AND UNRELIABLE, HOWEVER, BECAUSE UNLIKE OPIATES, CANNABINOIDS ARE LIPID-, RATHER THAN WATER-SOLUBLE, AND SENSITIVE TO DEGRADATION BY HEAT AND LIGHT (GARRETT ER, HUNT CA, 1974).

BECAUSE OF THESE CHARACTERISTICS, AND THE LIMITED TECHNOLOGY AVAILABLE AT THE TIME, THE ACTIVE INGREDIENTS IN CANNABIS PREPARATIONS WERE UNKNOWN, THE PREPARATIONS LACKED STANDARDIZATION, AND PATIENT RESPONSE WAS VARIABLE.

REPORTS OFTEN BLAME THE ENACTMENT OF THE FEDERAL MARIHUANA TAX ACT OF 1937, WHICH IMPOSED ADMINISTRATIVE LIMITATIONS ON THE PRESCRIPTION OF CANNABIS PREPARATIONS, FOR THE CONTRACTION IN THE USE OF MARIJUANA IN MEDICINE.

THE MAIN REASONS FOR THIS DISAPPEARANCE WERE THE VARIABLE POTENCY OF CANNABIS EXTRACTS, THE ERRATIC AND UNPREDICTABLE INDIVIDUAL RESPONSES, THE INTRODUCTION OF SYNTHETIC AND MORE STABLE PHARMACEUTICAL SUBSTITUTES SUCH AS ASPIRIN, CHLORAL HYDRATE AND BARBITURATES, AND THE RECOGNITION OF IMPORTANT ADVERSE EFFECTS SUCH AS ANXIETY AND COGNITIVE IMPAIRMENT (FANKHAUSER M, 2002).

ACCORDINGLY, CANNABIS PREPARATIONS GRADUALLY FELL OUT OF USE BY THE MEDICAL PROFESSION. AS ONE PROMINENT PHYSICIAN IN 1938 NOTED (WALTON RP,1938):

> THE THERAPEUTIC APPLICATION OF CANNABIS IS MORE A MATTER OF HISTORY THAN OF PRESENT-DAY PRACTICE. SYNTHETIC ANALGESICS AND HYPNOTICS HAVE ALMOST ENTIRELY DISPLACED THESE PREPARATIONS FROM THEIR ORIGINAL FIELD OF APPLICATION. THE NEWER SYNTHETICS ARE MORE EFFECTIVE AND RELIABLE AND, IN ADDITION, HAVE BEEN MORE INTENSIVELY EXPLOITED BY COMMERCIAL INTERESTS.
>
> THE DRUG HAS CERTAIN REMARK ABLE PROPERTIES AND IF ITS CHEMICAL STRUCTURE WERE DETERMINED AND SYNTHETIC VARIATIONS DEVELOPED, SOME OF THESE MIGHT PROVE TO BE PARTICULARLY VALUABLE, BOTH AS THERAPEUTIC AGENTS AND AS EXPERIMENTAL TOOLS.

WALTON'S PREDICTIONS TODAY REMAIN BOTH HOPEFUL AND ELUSIVE. BECAUSE OF THE TECHNOLOGICAL CHALLENGES INVOLVED IN CANNABINOID FORMULATION AND RESEARCH, IT WAS NOT UNTIL 1964 THAT THE PRIMARY PSYCHOACTIVE INGREDIENT IN CANNABIS, DELTA-9-TETRAHYDROCANNABINOL (THC), WAS IDENTIFIED AND SYNTHESIZED (MECHOULAM R & GAONI Y, 1965).

COINCIDENTALLY, POPULAR INTEREST IN SMOKED CANNABIS BEGAN TO INCREASE SIGNIFICANTLY. A NUMBER OF INDIVIDUALS REPORTED THAT SMOKING CANNABIS FOR RECREATIONAL PURPOSES SEEMED TO ALLEVIATE SOME OF THEIR MEDICAL SYMPTOMS. INTEREST GREW IN FINDING THERAPEUTIC USES FOR SMOKED CANNABIS. MORE ADVANCED TECHNOLOGY IN THE 1800S AND EARLY 1900S MIGHT HAVE MADE A RANGE OF CANNABINOID MEDICATIONS SIMILAR TO THAT OF MODERN OPIATES AVAILABLE, AND CANNABIS SMOKING MIGHT HAVE BEEN RELEGATED TO THE REALM OF NON-DEPENDENT, NON-MEDICAL USE FOR PLEASURE (MCCARBERG WH & BARKIN RL, 2007). THUS, THE "LAG" IN THE TECHNOLOGICAL CAPABILITIES OF MODERN SCIENCE PROBABLY CONTRIBUTED TO THE CONTROVERSY OF "MEDICAL MARIJUANA." THAT TECHNOLOGY HAS NOW ARRIVED, AND THE ERA OF MODERN CANNABINOID \MEDICATION DEVELOPMENT IS WELL ON ITS WAY.

SYNTHETIC CANNABINOIDS (CS)

WHAT ARE THEY?

DESIGNED TO MIMIC THC AND OTHER CANNABINOIDS

DEVELOPED TO RESEARCH CANNABINOID RECEPTORS IN THE BRAIN

CANNABINOIDS ACT BY BINDING TO C1 AND C2 RECEPTORS

HOW DO WE KNOW IF THE CANNABINOID HAS POTENTIAL FOR ABUSE?

STRENGTH OF CANNABINOID MEASURED BY AFFINITY CONSTANT (KI)

DIFFERENT CANNABINOIDS HAVE DIFFERENT KI VALUES

THE LOWER THE KI VALUE, THE HIGHER THE AFFINITY

HIGH AFFINITY IS CONSIDERED KI < 100 NM

FOR THC THE KI IS 10.2 NM

Substance	K_i Value (nM)
JWH-018	2.9
JWH-073	8.9
JWH-200	42
CP-47,497	9.54
HU-210	0.06
? ⁹-THC	**10.2**
JWH-081	1.2

HOW MANY SC'S ARE THERE?

STRUCTURALLY THERE ARE 7 DIFFERENT CLASSES OF SC'S:

NAPHTHOYLINDOLES
NAPHTHYLMETHYLINDOLES
NAPHTHOYLPYRROLES
NAPHTHYLMETHYLINDENES
PHENYLACETYLINDOLES
CYCLOHEXYPHENOLS
CLASSICAL CANNABINOIDS

EACH OF THESE CLASSES HAVE A MULTITUDE OF COMPOUNDS WITHIN THEM.

EACH OF THESE INDIVIDUAL COMPOUNDS ARE IDENTIFIED BY THE MANUFACTURER OF THE COMPOUND. THE FOLLOWING IS THE LIST OF THE ORIGNINAL MANUFACTURES

HU – HEBREW UNIVERSITY

JWH – DR. JOHN W. HUFFMAN

CP – CYCLOHEXYLPHENOLS
DEVELOPED BY PFIZER

WIN – STERLING-WINTHROP
PHARMACEUTICALS

RCS - RESEARCH CHEMICAL
SUPPLIER (CHINA)

AM - ALEXANDROS MAKRIYANNIS

ALTHOUGH THESE COMPOUNDS ORIGINATED FROM THESE PERSON'S / LOCATIONS, A MAJORITY OF THESE COMPOUNDS ARE PRODUCED AND SOLD FROM CHINA.

GENERAL CHARACTERISTICS:

LIPID SOLUBLE
NON-POLAR
FAIRLY VOLATILE
MORE POTENT THEN DELTA9-THC
AVERAGE DOSE IS < 1 MG.

SYNTHETIC CANNABINOIDS VARY IN POTENCY

PRODUCTS MARKETED ON THE STREET:

SOLD AS HERBAL INCENSE

MARKETED SINCE 2002

DIFFERENT FLAVORS AVAILABLE

WHEN SMOKED – PRODUCES CANNABIS - LIKE EFFECTS

REPORTED TO CONTAIN A VARIETY OF SYNTHETIC CANNABINOIDS

THE EFFECTS PRODUCED BY EACH PRODUCT ARE NOT CONSISTENT

MARKETED AS HERBAL INCENSE "NOT FOR HUMAN CONSUMPTION" TO AVOID FDA CONTROL.

MOST ARE NOT SCHEDULED UNDER THE CONTROLLED SUBSTANCES ACT (CSA)

FEDERAL REGULATIONS:

NOVEMBER 24, 2010

DEA IS USING ITS EMERGENCY SCHEDULING AUTHORITY TO TEMPORARILY CONTROL

JWH-018
JWH-073
JWH-200
CP-47,497
CANNABICYCLOHEXANOL

DESIGNATED AS SCHEDULE I

HERBAL INCENSE PRODUCERS ALREADY REPLACING SYNTHETIC CANNABINOIDS WITH NEW ONES:

Product	K_i Value (nM)
AM-694	0.08
AM-2201	1.0
RCS-4	?
JWH-122	0.69
JWH-210	0.46
WIN-48,098	?

ISSUES OF SC'S:

DUI DRIVERS ARE IMPAIRED

DRUG SCREEN (-)

LAB NEEDS A SPECIFIC REQUEST TO DETECT

OHERS WHO ABUSE

PAROLEES

PROBATIONERS

WORKERS (WHO ARE DRUG TESTED)

MILITARY

COLOR TEST

(DUQUENOIS-LEVINE) –NEGATIVE

URINE SCREENING – NEGATIVE

CANINES WILL NOT DETECT

New Leaf Treatment Center

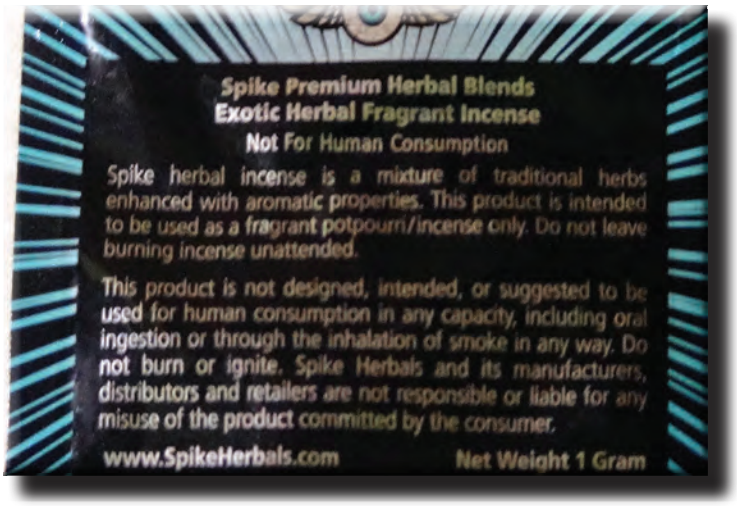
Press Information Release:

Designer Drugs From "Bath Salts" to "Spice"; What They Are, What They Look Like, And Why They Are Dangerous To Consume.

Editied and Released for Media by the Staff f New Leaf Treatment Center, Layfayette, CA
S.Alex Stalcup, M.D. and Jackie Long, Director of Training

The Staff f New Leaf Treatment Center have received several inquiries from parents regarding the use of substances that are being sold as "Legal Highs" (also known as "Bath Salts" and "Spice") by their children. Patients of New Leaf have also provided information regarding the prevalence and use of these compounds in the East Bay and Northern California area.

Th s press information release is being provided to dispel the myths of these "legal highs", and to provide factual information as to the dangers and illegal use of these classes of designer drugs.



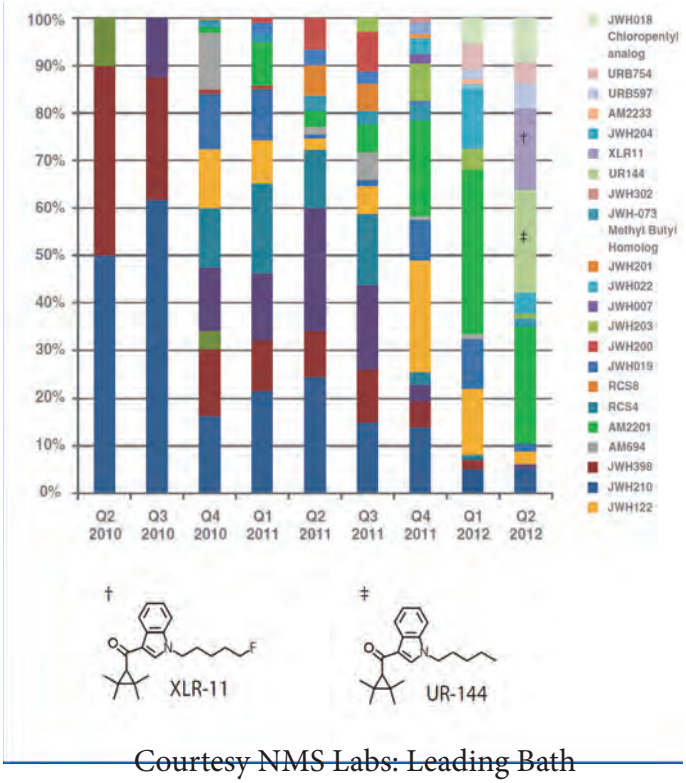
Synthetic Cannabinoids: What Are They And Are They Harmful?

Often referred to as "Legal Weed", synthetic cannabinoids (syn canns) are classes of chemicals that activate the same pleasure pathways in the brain as the psychoactive chemical delta-9-Tetrahydrocannabinol (THC) which is found in marijuana (cannabis). For a drug to have an effect on the human brain there has to be neurochemistry that is either activated or imitated by the drug. In the early 1990's the brains natural (THC) neurotransmitter was identifi d and called Anandamide. Th s discovery allowed for continued research on the receptors found in the brain and body that are affected by cannabinoids (CB1 and CB2).

As a result of this research, 7 classes of syn canns were developed (one internet site advertises 386 different syn canns that it sells for "research"). Some of these compounds are many times (up to one hundred times) more potent than THC from cannabis. Syn canns fully affect the CB1 receptor where THC only partially affects the CB1 receptor. It is important to note that none of these compounds were intended for human use or consumption.

In the August 2012 report from NMS Labs, it

documented that there were three primary syn canns that were able to be identifi d in 2010. By 2012, that number had grown to thirteen. With the increasing research conducted by NMS Labs, additional syn canns are being identifi d, and in 2012, additional syn canns that have never been developed before were identifi d. (6)



Courtesy NMS Labs: Leading Bath Salt Compounds, June 2012

The terms "spice", 'incense", or "herbal blends" is used when synthetic cannabinoid compounds are sprayed or soaked onto plant material (to resemble cannabis) and consumed by smoking. Currently there are new products that are being advertised and are sold in powder, capsule, and liquid form. (6) These compounds are sold under multiple different names (K-2, Spike, Spice, are just a couple of common names).

The same "loop hole" in the law exists for synthetic cannabinoids. The majority of these compounds are not regulated by law and as long as the package is marketed as "Not for Human Consumption" it is not regulated by the FDA. These products are being sold containing a form plant material that has been adulterated by not only one syn cann compound, but as many as five different syn canns in an effort to "boost" the high.

Because these compounds activate the same brain chemistry as THC, the users are expecting the same euphoric effects as they would receive by consuming (smoking) cannabis. Unfortunately these syn canns were not intended for human consumption and never studied to be consumed in combinations with other syn canns. As a result, the consumption of these
marketed compounds is very dangerous. Adverse reactions to the consumption of syn canns include (7);

Agitation,
Alteration of time perception,
Anxiety,
Dysphoria,
Elevated blood pressure,
Listlessness
Hallucinations,
Nausea,
Paranoia,
Seizures,
Tachycardia,
Chest pain

Long term use of these compounds has been attributed to the loss of cognitive effects, halting of speech, avoidant eye contact, loss of consciousness, and confusion. It must be stressed that there is growing research that links the consumption (smoking) of these compounds to extreme anxiety, sudden depression, paranoia and hallucinations as being linked to the withdrawal of these compounds. There have been confi med reports of deaths that have been attributed to the consumption of these compounds. In one case an adolescent died of coronary ischemia (not enough blood in the coronary arties) and in another an adolescent committed suicide due to extreme anxiety from the drug. (8)

Mental health issues (psychosis) have also been at tributed to the use of these compounds. In a report from a Central California Juvenile Probation Offic , three adolescents on probation had to be admitted to a psychiatric ward for up to ten days after having an adverse reaction to smoking these compounds.

Are These Compounds Legal In California?

In California some of these compounds are in a "grey area". The majority of these compounds are not specifi ally identifi d as a controlled substance in the California Health & Safety (H&S) Code. There is an H&S section that makes a legal argument that these compounds can be illegal in California; The Controlled Substance Analog Act, 11401 H&S. (9)

Th s Act was passed by the California Legislature in 1988 in an effort to deal with the increasing designer drugs that were being formulated to bypass California law. Until this law was passed, if a substance was made that was not specifi ally listed in the H&S it was considered legal.

Th s law specifi ally states;

> (c) the term "controlled substance analog" means either of the following:
>
> (1) A substance the chemical structure of which is substantially similar to the chemical structure of a controlled substance classifi d in Section 11054 and 11055.
>
> (2) A substance which has, is represented as having, or is intended to have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to, or greater than, the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance classifi d in Section 11054 or 11055.

Sections 11054 and 11055 of the Health and Safety Code are the fi st two "Schedules" of drugs that are controlled in California (11054 through 11058). These are referred to as Schedule I (not medically accepted) and Schedule II drugs (medically accepted).

In Schedule I, many hallucinogens, THC (along with its synthetic equivalents) and the stimulant hallucinogen MDA (MDMA-Ecstacy is an analog of MDA) are controlled. In Schedule II, methamphetamine, cocaine, and cathinone are controlled.

If the "bath salts" are identifi d to contain cathinone or methcathinone analogs they can be argued as a Schedule II controlled substance under H&S 11401. The syn canns in "Spice" can be argued as analogs of Schedule I as a synthetic equivalent of THC. It should be noted that the filing of these compounds in a criminal court must be done so with prior consultation with the local District Attorney.

Currently there is a California law, H&S 11357.5, that makes it a misdemeanor to;

> Sell, distribute, furnish, administer, give, offer to sell, any synthetic cannabinoid.

But the identifi d syn canns in this act are; JWH 018, 73,200, CP47,497 and C8 homolgue. These specific syn canns are federally controlled, but in California it is only illegal to sell them; not to possess or use them.

What makes this a difficult law to enforce in California is that until the material is analyzed it is impossible to identify if it is illegal. Also as these compounds follow the federal law of 2010, these compounds have now been substituted for many other syn canns that

are not regulated.

In July, 2012, a federal law, The FDA Safety & Innovation Act, Public Law 112-144 (S.3187), was passed which made certain syn canns and certain compounds found in bath salts as controlled Schedule I compounds (banning sales, use, and possession). There are fi een syn canns, Mephedrone, MDPV, and nine 2C compounds that are federally controlled. (10) As a federal law, it can only be enforced by federal agents in California as this law is not prosecutable in state court.

In California, the Drug Dealer Liability Act (H&S 11700-11717) may be a civil remedy for families that have suffered a loss by the use of these compounds. It is highly recommended that a before such an action is filed in Court, that consultation with a qualifi d attorney licensed to practice in California be conducted. New Leaf Treatment Center has staff vailable for consultation with legal professionals regarding the possible qualifi ations of designer compounds under this legal proceeding.

How Can I Recognize If Someone Is Using These Compounds?

Aside from the identifi d symptoms of these compounds as described above, the recognition of influence of these compounds can be detected by law enforcement personnel and others who are trained in the Drug Abuse Recognition (DAR) or the Drug Recognition Expert (DRE) programs.

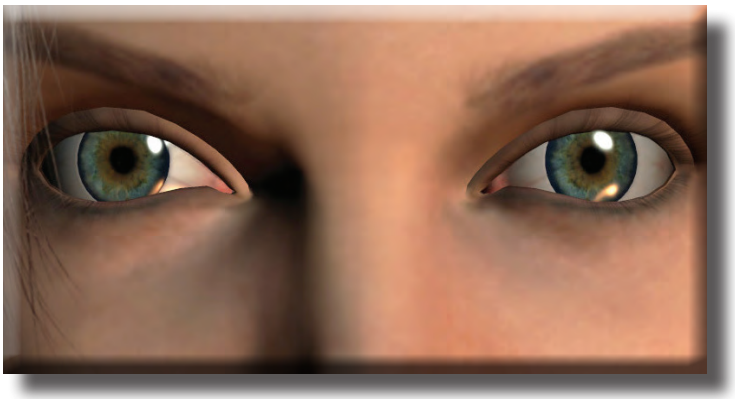
These compounds are designed to produce the same effect as controlled substances, they affect the same neurochemistry, thus influence is identifiable. As bath salts affect the same pathways of stimulants and hallucinogens, influence symptoms may include (depending on the dose consumed);

Dilated pupils
(Pupils that appear large and non-reacting in room or bright lighting conditions)
Sweaty appearance
Flushed appearance
Clenching of the teeth
Elevated body temperature
Elevated pulse rate
Talkative
Muscle tremors or spasm

Influence Symptomatology

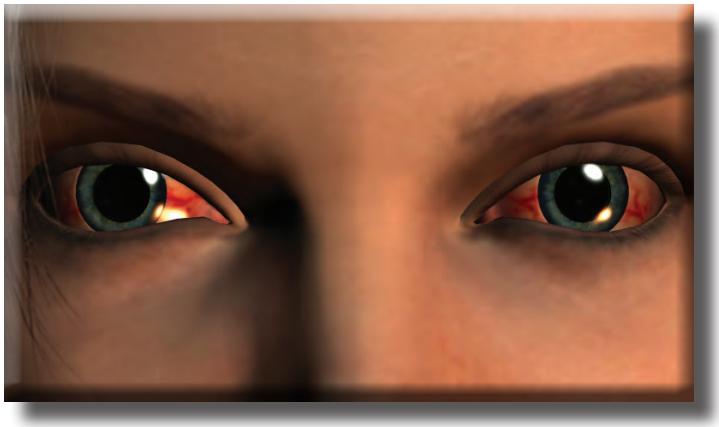
Synthetic Cannabinoids affect CB1 receptors in the brain (the receptor identifi d as causing the euphoria associated with THC in cannabis). Influence symptoms of syn canns will mimic that of THC;

Dilated pupils
(Pupils that appear large in room and bright light conditions yet have a re bound under direct light)
Elevated body temperature
Elevated pulse rate
Elevated body temperature
Relaxed, droopy eye lids
Non-convergence of the eyes



Normal Range Pupils

Constricted Pupils



Dilated Pupils

It must be stressed that one of the advantages and reasons for taking these compounds is that the majority of them are not detectible under normal urine and blood testing protocols. There are a few tests kits available on the market that claims they can test for "bath salts" and "Spice". Caution is advised before using these test kits. Before purchasing or using these kits, confi m what specific desi ner compound the test will identify. Many will confi m for syn canns that are no longer being used due to their legal status, thus others will not be detected and provide a false "negative". Please remember that "bath salts" and "spice" are only marketed names, not the real identity of the multitude of synthetic or other compounds that may be contained in the product.

NMS Labs has taken the lead in conducting research in the detection of these compounds on material and in urine and blood samples. As of this time NMS Laboratories does not provide a test kit for the open market, but NMS does have a program that is available to law enforcement and the medical community to provide analysis services. Refer to Reference Section for the contact information of NMS Laboratories.

If I Think There Is A Problem, Who Can Help Me?

There is mounting evidence to support that these compounds can produce addiction, physical dependency and withdrawal. New Leaf Treatment Center can provide outpatient services to assist in the medical treatment for addiction and withdrawal of these and other compounds. Local treatment providers may also have the same expertise and staff to render assistance, but it is suggested that their experience in treating these compounds is confi med prior to utilizing their services.

In cases where the paraphernalia (including the packaging materials) is discovered and an intervention or assessment is needed, many law enforcement and public health agencies have the ability to assist. New Leaf Treatment Services also provides training programs regarding these compounds (drug trends and user identifi ation) for law enforcement, public health, emergency services, social services, community organizations and parents.

In cases of an emergency, dial 911 and request assistance. In some cases law enforcement may be necessary to assist in dealing with the person who has become combative due to the acute intoxication from the drug. Medical services need to be watchful for the medical complications associated with excited delirium and be prepared for sedation and hyperthermia control. If the packaging of the material is found or available this should be given to the responding emergency personnel for possible analysis in the aid to treatment.

In cases of suspected depression by these compounds, seek medical assistance immediately. These instances may be immediate after the drug or may manifest days afterward. Th s depression can be treated, but if not addressed, it has led to documented suicides.

Conclusion:

The belief that "bath salts" and "spice" products are "safe" due to their perceived "legal" status are placing

many users, their families, and their communities in danger. Serious mental and physical health issues are being reported by the wide spread use of these compounds. The medical staff, associate staff nd training staff f NLTC are committed to addressing these issues in providing medical assisted treatment services for addiction and withdrawal of these and other compounds. NLTC is also committed to providing prevention, intervention, and treatment training services to law enforcement, court personnel, emergency services, public health, social services, schools and community services regarding these and other substances of abuse.

Special Thanks:

A special thank you to Dr. Logan and the staff rom NMS Labs for allowing the use of their materials for this documentation.

Reference Contacts;

New Leaf Treatment Center, Dr. S. Alex Stalcup, Medical Director, 251 Lafayette Circle, Suite 150, Lafayette, CA 94549. Telephone 1 (925) 284-5200. Web: www.nltc.com

NMS Laboratories, 3701 Welsh Road, Willow Grove, PA 19090. Telephone: 1(800) 522-6671. Web: www.nmslabs.com

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CANNABIS SEEDS

CANNABIS SEEDS

SEEDLING

SEEDLINGS

VEGETATIVE
STAGE

VEGETATIVE
STAGE

YOUNG FEMALE
FLOWERING

MALE PLANT
POLLEN SACS (FLOWERS)

SINSEMILLA
(WITHOUT SEEDS)

FEMALE PLANTS
(FLOWERS)

HIGH GRADE
SINSEMILLA

LOW GRADE CANNABIS
(NOTE THE SEEDS)

MAGNIFIED PICTURE OF
TRICHOMES (THC)

LOW GRADE CANNABIS
PRESSED INTO CANS

TRIMMING OF BUD

BUDS CURING

BUDS

HARVESTED BUDS

CANNABIS LEAVES
(SHAKE)

MAKING KEIF
(HASHISH)

KEIF
(HASHISH)

CANNABIS CIGARETTES
(ROACHES)

CANNABIS CIGARETTES
(ROACHES)

HAND ROLLED
CANNABIS CIGARETTES

BLUNT WRAPS WITH BUD

COLLECTION OF EMPTY BLUNT WRAPS

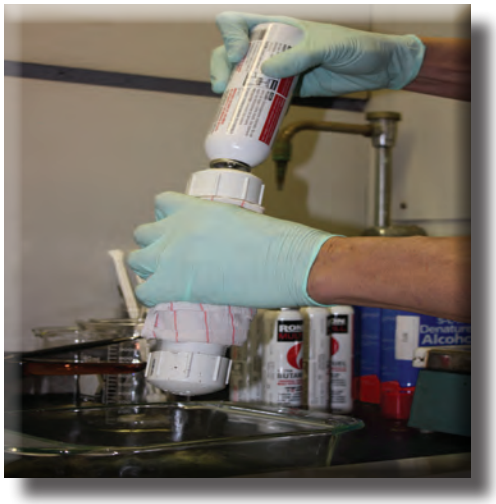
TOBACCO EMPTIED FROM CIGARS
FOR CANNABIS

CIGAR CUTTER

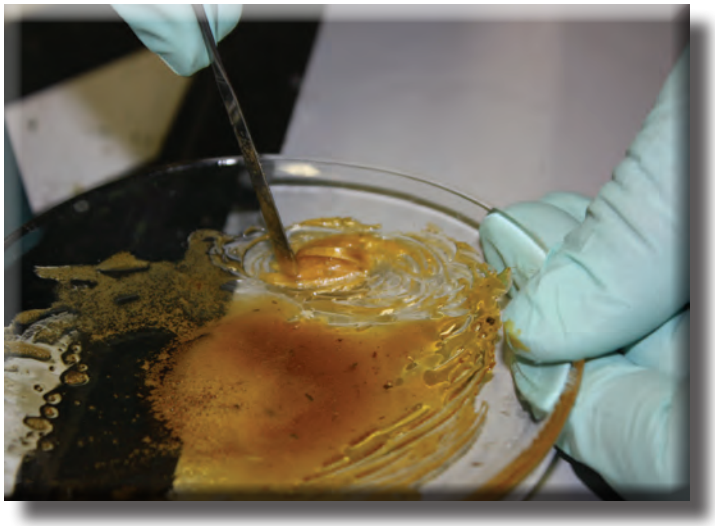
CIGAR CUTTER

BUTANE EXTRACTION LABORATORY

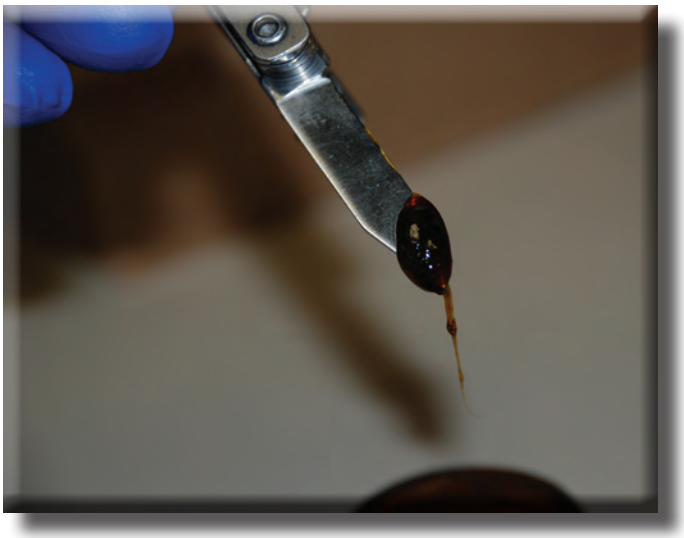
EXTRACTION TUBE



EXTRACTING THC FROM
CANNABIS MATERIAL



BUTANE “HONEY OIL”



BUTANE “HONEY OIL”

BUTANE “HONEY OIL”
OR “DAB”

HONEY OIL OR DAB
SMOKING MATERIALS

ELECTRONIC DAB SMOKING PEN

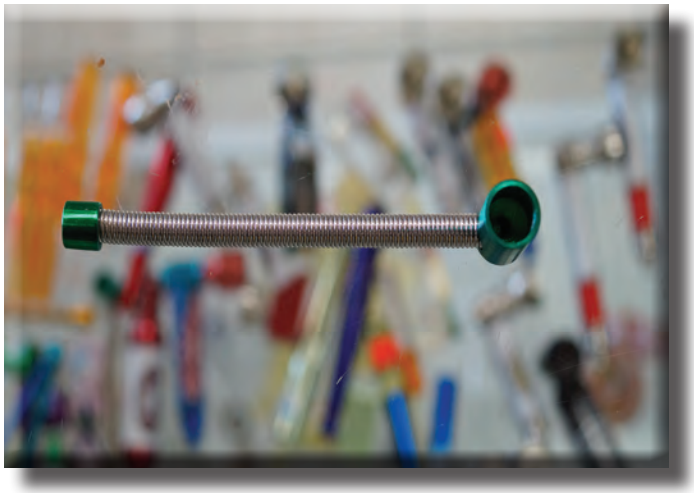
“BONGS”

PIPES

CLOSED PIPE

OPEN PIPE

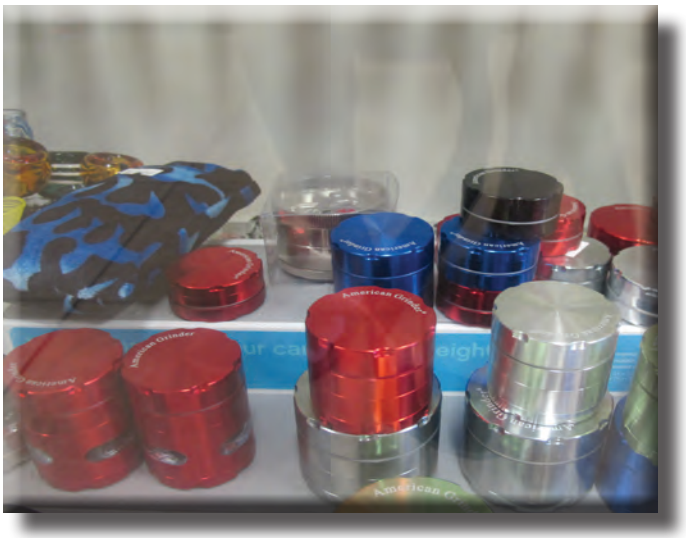
CLOSED PIPE



OPEN PIPE

PIPES

PIPES



“GRINDERS”

“GRINDER”

BLUNT WRAPS

ROLLING PAPERS

"STASH" CANS

"STASH" CANS

"STASH" CANS

"STASH" CANS

URINE KITS

URINE FLUSHES

HAIR DETOX

MOUTH DETOX

SMOKE FILTER

UNIVERSAL SIGN FOR CANNABIS USE

“420 TIME”

SYNTHETIC CANNABIS
“SPICE”

SYNTHETIC CANNABIS

CELL PHONE PICTURE FROM
CANNABIS DEALER

“710” REPRESENTS CANNABIS
OIL SMOKERS

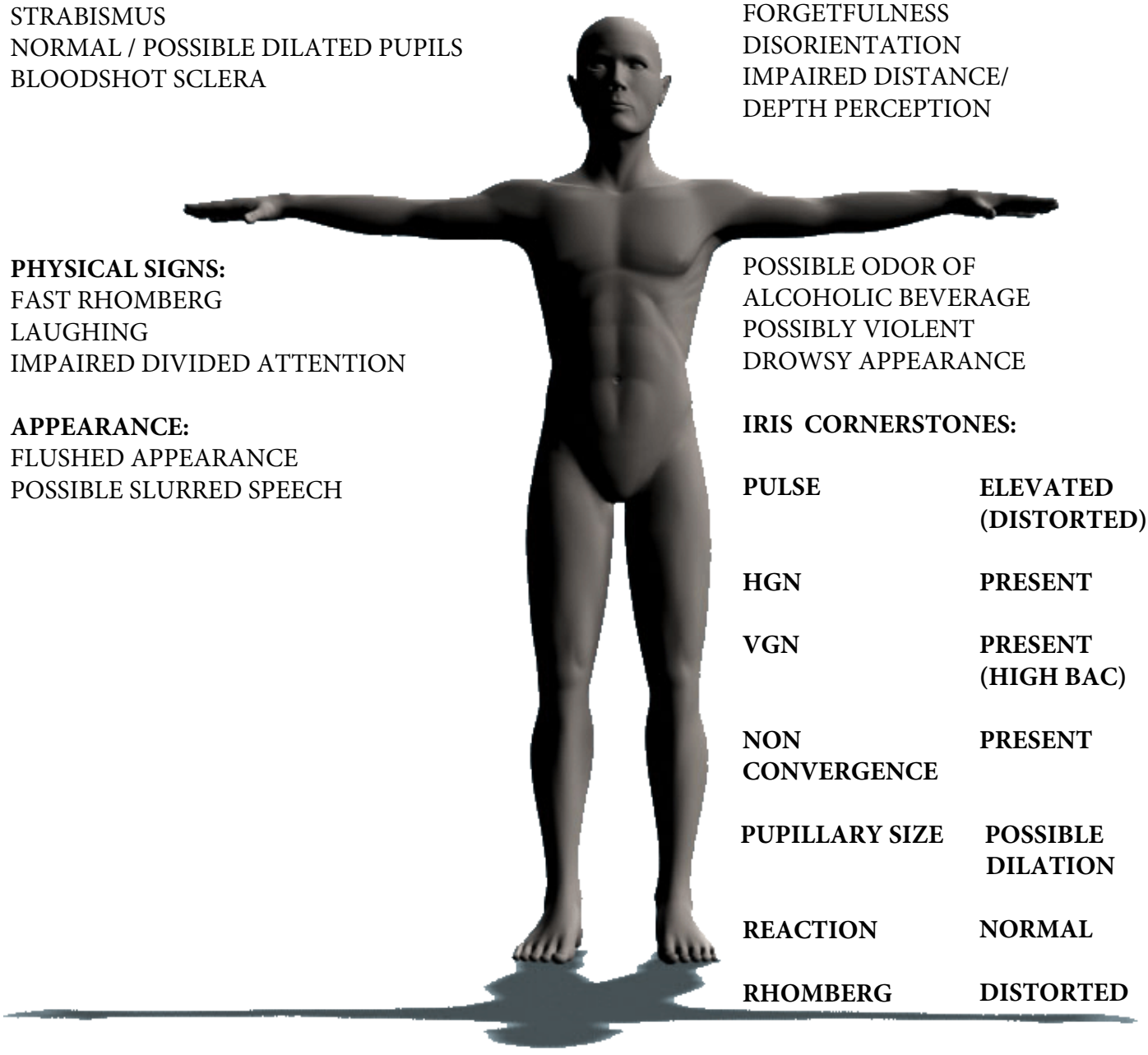
“710” REPRESENTS CANNABIS
OIL SMOKERS

Alcohol

OBJECTIVE SIGNS AND SYMPTOMS OF ALCOHOL INFLUENCE

EYES:
HGN PRESENT
VGN MAY BE PRESENT
STRABISMUS
NORMAL / POSSIBLE DILATED PUPILS
BLOODSHOT SCLERA

OTHER SIGNS:
EUPHORIA
RELAXED INHIBITIONS
FORGETFULNESS
DISORIENTATION
IMPAIRED DISTANCE/
DEPTH PERCEPTION



PHYSICAL SIGNS:
FAST RHOMBERG
LAUGHING
IMPAIRED DIVIDED ATTENTION

APPEARANCE:
FLUSHED APPEARANCE
POSSIBLE SLURRED SPEECH

POSSIBLE ODOR OF
ALCOHOLIC BEVERAGE
POSSIBLY VIOLENT
DROWSY APPEARANCE

IRIS CORNERSTONES:

PULSE	**ELEVATED (DISTORTED)**
HGN	**PRESENT**
VGN	**PRESENT (HIGH BAC)**
NON CONVERGENCE	**PRESENT**
PUPILLARY SIZE	**POSSIBLE DILATION**
REACTION	**NORMAL**
RHOMBERG	**DISTORTED**

ALCOHOL

HISTORY:

NAMES:

ALCOHOL
ETHANOL
ETHYL ALCOHOL

IT IS A POISON:

THE MOST COMMONLY ABUSED PSYCHOACTIVE SUBSTANCE.

FIRST DISCOVERED OVER 5,000 YEARS AGO.

AL KOH'L - ARABIC FOR "ESSENCE".

MANUFACTURED THROUGH NATURAL FERMENTATION OF SUGARS AND YEASTS.

CAN ONLY REACH 14% ALCOHOL CONTENT.

HIGHER AMOUNTS ARE DISTILLED.

POSSIBLE EFFECTS:

REDUCED INHIBITIONS
SLOWED REFLEXES
IMPAIRED VISION
POOR JUDGMENT
LACK OF COORDINATION
EMOTIONAL INSTABILITY
DEPTH PERCEPTION
GLARE RECOVERY
TUNNEL VISION
INABILITY TO DIVIDE ATTENTION
IMPAIRED CONCENTRATION

ALCOHOL CONTENTS:

ALCOHOL	%	PROOF	OZ/ (100 PROOF)
BEER	<5	10	12
WINE	12	24	4
BOURBON	43	86	1 1/4
SCOTCH	50	100	1
BACARDI	75	151	¾

GLASS SIZE DESIGNED TO GIVE SAME AMOUNT:

SHOT	1 TO 11/2 OZ
WINE	4 OZ
BEER	12 OZ

ABSORPTION:

ABSORBS INTO SYSTEM AS ITSELF, GOES THROUGH THE BODY AS ITSELF AND ELIMINATED FROM THE BODY AS ITSELF. GOES TO HIGH WATER CONCENTRATIONS IN THE BODY (BRAIN).

1 TO 2% IS EXCRETED VIA URINE, RESPIRATION, AND PERSPIRATION.

20% METABOLIZES IN THE STOMACH.

80% IN THE SMALL INTESTINES.

METABOLITES:

ENZYMES IN THE LIVER METABOLIZES ALCOHOL INTO ACETALDEHYDE. IT IS THEN METABOLIZED INTO ACIDIC ACID, WHERE THE BY-PRODUCTS OF WATER AND CARBON DIOXIDE ARE PRODUCED IN THE KIDNEYS.

ACETALDEHYDE IS THE TOXIN THAT MAKES YOU SICK.

THE BODY METABOLIZES, OR BURNS OFF, APPROXIMATELY 3/4 TO 1 OUNCE OF ALCOHOL PER HOUR.

ENZYMES OF ALCOHOLDEHYDROGENASE, AND ACETALDEHYDE DEHYDROGENASE CAN BUILD IN THE SYSTEM CAUSING TOLERANCE.

RULES OF THUMB:

1. 175 LB MALE W/ 6 OZ OF (100 PROOF) = .15 BAC

2. .025 BAC = 1 OZ (100 PROOF)

3. BURN OFF .015/.020 BAC PER HOUR

EFFECTS ON THE BRAIN:

1-2 DRINKS	REASON, CAUTION, INTELLIGENCE, MEMORY
3-4 DRINKS	SELF-CONTROL, JUDGMENT
5-6 DRINKS	SENSES
7-8 DRINKS	COORDINATION
9 DRINKS	BALANCE
10+ DRINKS	VITAL CENTERS

ACUTE ALCOHOL TOLERANCE:

- TACHYPHYLAXIS:

THE LEVEL OF INTOXICATION FELT GOING UP WILL NOT BE THE SAME GOING DOWN.

ALCOHOL:

HOW IT AFFECTS GABA IN THE BRAIN

APPROXIMATE BLOOD ALCOHOL CONCENTRATIONS FOR DIFFERENT BODY WEIGHTS

No. of Drinks	1	2	3	4	5	6	7	8	9	10
MALE										
100 lbs.	.043	**.087**	.130	.174	.217	.261	.304	.348	.391	.435
125 lbs.	.034	.069	**.103**	.139	.173	.209	.242	.287	.312	.346
150 lbs.	.029	.058	**.087**	.116	.145	.174	.203	.232	.261	.290
175 lbs.	.025	.050	.075	**.100**	.125	.150	.175	.200	.225	.250
200 lbs.	.022	.043	.065	**.087**	.108	.130	.152	.174	.195	.217
225 lbs.	.019	.039	.058	.078	**.097**	.117	.136	.156	.175	.195
250 lbs.	.017	.035	.052	.070	**.087**	.105	.122	.139	.156	.173
FEMALE										
100 lbs.	.050	**.101**	.152	.203	.253	.304	.355	.406	.456	.507
125 lbs.	.040	**.080**	.120	.162	.202	.244	.282	.324	.364	.404
150 lbs.	.034	.068	**.101**	.135	.169	.203	.237	.271	.304	.338
175 lbs.	.029	.058	**.087**	.117	. 146	.175	.204	.233	.262	.292
200 lbs.	.026	.050	.076	**.101**	.126	.152	.177	.203	.227	.253

TIME TABLE FACTOR

HOURS SINCE FIRST DRINK	1	2	3	4	5	6	7	8
SUBTRACT FROM BAC	.015	.030	.045	.060	.075	.090	.105	.130

ALCOHOL INFUSED WHIPPED CREAM

FIELD OPERATED BREATH SENSOR FOR ALCOHOL

Depressants

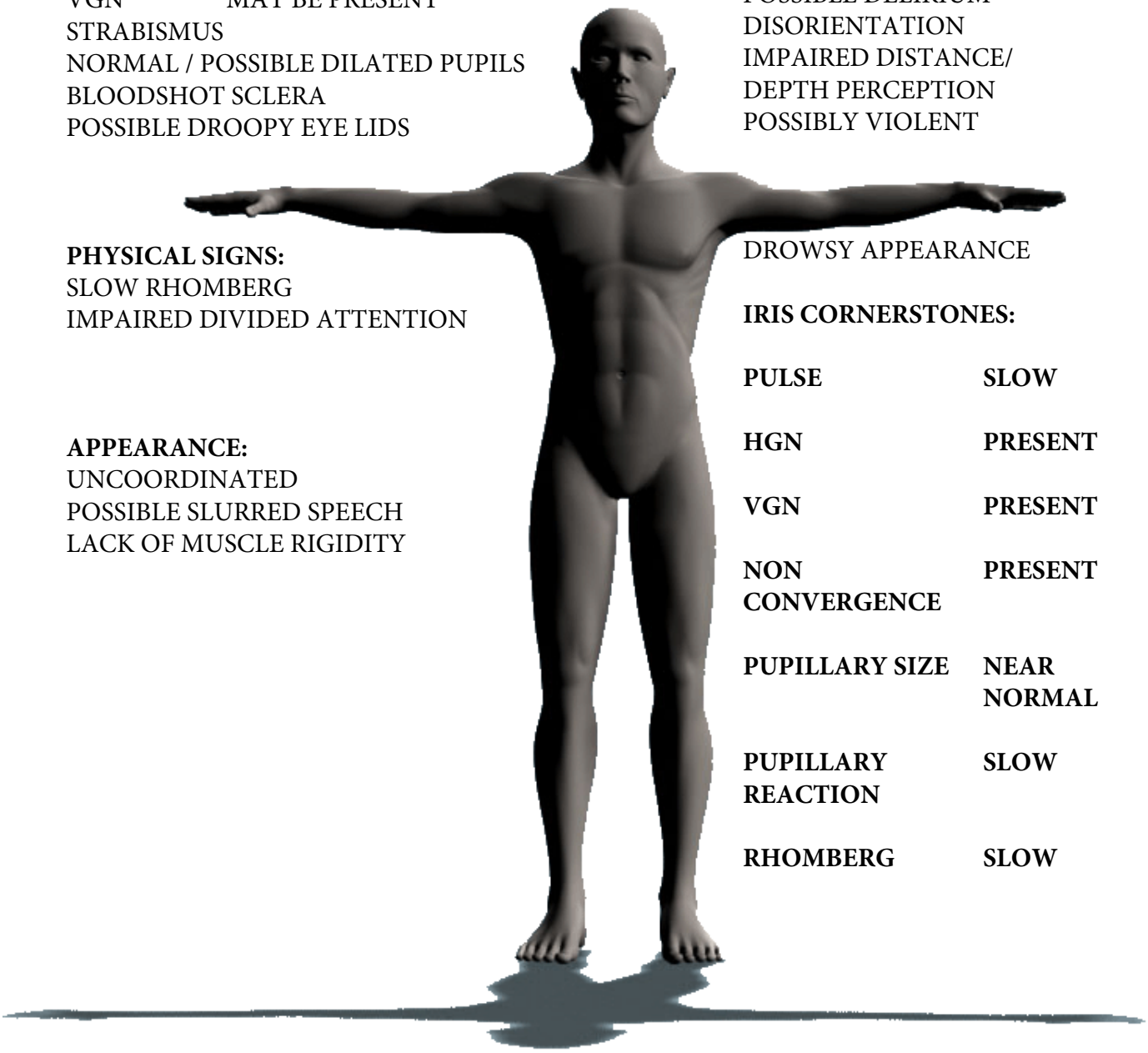
OBJECTIVE SIGNS AND SYMPTOMS OF DEPRESSANT INFLUENCE

EYES:

HGN PRESENT
VGN MAY BE PRESENT
STRABISMUS
NORMAL / POSSIBLE DILATED PUPILS
BLOODSHOT SCLERA
POSSIBLE DROOPY EYE LIDS

PHYSICAL SIGNS:
SLOW RHOMBERG
IMPAIRED DIVIDED ATTENTION

APPEARANCE:
UNCOORDINATED
POSSIBLE SLURRED SPEECH
LACK OF MUSCLE RIGIDITY



OTHER SIGNS:
FORGETFULNESS
CONFUSION
POSSIBLE DELIRIUM
DISORIENTATION
IMPAIRED DISTANCE/
DEPTH PERCEPTION
POSSIBLY VIOLENT

DROWSY APPEARANCE

IRIS CORNERSTONES:

PULSE	**SLOW**
HGN	**PRESENT**
VGN	**PRESENT**
NON CONVERGENCE	**PRESENT**
PUPILLARY SIZE	**NEAR NORMAL**
PUPILLARY REACTION	**SLOW**
RHOMBERG	**SLOW**

CNS DEPRESSANTS

DEFINED:

SUBSTANCES THAT DEPRESS THE CNS

PRIMARY TYPES:

BARBITURATES
NONBARBITURATES
ANTIDEPRESSANTS
ANTIANXIETY TRANQUILIZERS
ANTIPSYCHOTIC TRANQUILIZERS

CNS DEPRESSANT SYMPTOMATOLOGY:

NO ALCOHOLIC BEVERAGE ODOR
EUPHORIA
SUICIDAL TENDENCIES
CONFUSION
ANXIETY
RESTLESSNESS

WITHDRAWAL SYMPTOMS:

HEADACHE	NAUSEA
VOMITING	ANXIOUSNESS
WEAKNESS	SLEEPLESSNESS
TREMORS	FEVER
WEIGHT LOSS	ABDOMINAL CRAMPS
HALLUCINATIONS	DEATH
TAGGERING GAIT	SLUGGISHNESS
DROWSINESS	DOUBLE VISION
DROOPY EYELIDS	SKIN RASH

DEPRESSION
NARROWED ATTENTION SPAN
EMOTIONAL INSTABILITY
UNCOORDINATED MOVEMENTS
SLURRED & INCOHERENT SPEECH
IRRATIONAL BEHAVIOR

MEDICAL USES FOR CNS DEPRESSANTS:

SEDATION
INSOMNIA
SEDATION PRIOR TO SURGERY
CONVULSIVE DISORDERS
EPILEPTIC SEIZURES

ONSET AND EFFECT DURATIONS:

THERE ARE FOUR PRIMARY CLASSIFICATIONS:

ULTRASHORT:

ONSET	SECONDS
DURATION	MINUTES

SHORT:

ONSET	10 TO 20 MINUTES
DURATION	4 TO 5 HOURS

INTERMEDIATE:

ONSET	20 TO 40 MINUTES
DURATION	6 TO 8 HOURS

LONG:

ONSET	I HOUR
DURATION	8 TO 14 HOURS

BARBITURATES:

DERIVATIVES OF BARBITURIC ACID

HIGH ABUSE POTENTIAL

CHEMICAL	**TRADE NAME**
ULTRA SHORT ACTING:	
THIOPENTAL SODIUM	PENTOTHAL, SODIUM PENTOTHAL
SHORT ACTING:	
PENTOBARBITAL	NEMBUTAL
SECOBARBITAL	SECONAL

INTERMEDIATE ACTING:

AMOBARBITAL	AMYTAL
BUTABARBITAL	BUTICAPS, BUTALAN, SARISOL

LONG ACTING:

METHARBITAL	GEMONIL
PHENOBARBITAL	LUMINAL

NONBARBITURATES:

SIMILAR IN ACTION

DIFFERENT CHEMICAL

HIGH ABUSE POTENTIAL

CHEMICAL	**TRADE NAME**
CHLORAL HYDRATE	NOCTEC
ETHCHLORVYNOL	PLACIDYL
GLUTETHIMIDE	DORIDEN
METHYPRYLON	NOLUDAR
METHCARBAMOL	ROBAXIN
METHAQUALONE	QUAALUDE, SOPOR, PAREST

ANTIDEPRESSANTS:

PSYCHIC ENERGIZERS

MOOD ELEVATORS

“ANTI” DEPRESSION

NOT COMMONLY ABUSED

CHEMICAL	**TRADE NAME**
MAO INHIBITORS:	
ISCARBOXAZID	MARPLAN
PHENELZINE	NARDIL
TRANYLCYPROMINE	PARNATE
TRICYCLIC:	
AMITRIPTYLINE HCL	ELVAL, ENDEP
DESPRAMINE HCL	NORPRAMIN, PERTOFRANE
DOXEPIN HCL	ADAPIN, SINEQUAN
NORTRIPTYLINE HCL	AVENTYL, PAMELOR
PROTRIPTYLINE HCL	VIVACTIL
OTHER:	
FLUOXETINE HCL	PROZAC

ANTIANXIETY TRANQUILIZERS:

WIDELY ABUSED

COMMONLY MIXED WITH ALCOHOL

CHEMICAL	TRADE NAME
BENZODIAZEPINES:	
ALPROSOLAM	XANAX
CHLODIAZEPOXIDE	LIBRIUM
DIAZEPAM	VALIUM
LORAZEPAM	ATIVAN
OXAZEPAM	SERAX
PRAZEPAM	CENTRAX
FLURAZEPAM	DALMANE
TRIAZOLAM	HALCION
TEMAZEPAM	RESTORIL
FLUNITRAZEPAM	ROHYPNOL (ROOFIES, R-2)
MEPROBAMATE	EQUANIL, MILTOWN, MEPRIAM, SEDABAMATE

ANTIPSYCHOTIC TRANQUILIZERS:

NOT WIDELY USED

CHEMICAL	**TRADE NAME**
LITHIUM	

LITHIUM CARBONATE	ESKALITH, LITHANE
BUTYROPHENONES:	
HALOPERIDOL	HALDOL
PHENOTHIAZINES:	
CHLORPROMAZINE	THORZINE
FLUPHENAZINE HCL	PERMITIL, PROLIXIN
PERPHENAZINE	TRILAFON
PIPERAXETAZINE	QUIDE
PROCHLORPERAZINE	COMPAZINE
THIORADAZINE	MELLARILL
RESERPATES:	
DESERPIDINE	HARMONYL
RESERPINE	SERPASIL

GAMMA HYDROXY BUTYRATE

(GHB)

GAMMA BUTRYL LACTONE

(GBL)

2,3-DIHYDROFURAN(NONE)

(GBL)

WHAT IS IT?

1960's

FIRST MANUFACTURED

INDUCED SLEEP-LIKE STATES

MINOR CARDIOVASCULAR EFFECTS

1963

IDENTIFIED AS A NATURAL SUBSTANCE IN THE BRAIN.

BELIEVED TO REACT WITH THE GABA-B NEUROTRANSMITTER.

1970's

SLEEP DISORDERS

POSSIBLE STEROID ENHANCING EFFECT.

WHAT DOES IT DO?

GHB IS BELIEVED TO PROMOTE R.E.M. SLEEP. IT IS BELIEVED THAT HUMAN GROWTH HORMONE IS RELEASED DURING THIS TIME. GHB IS BELIEVED TO ACTIVATE THE METABOLIC PROCESS KNOWN AS:

"PENTOSE PATHWAY"

REDUCING THE RATE THAT THE BODY BREAKS DOWN PROTEIN. STORING DOPAMINE UNTIL IT IS RELEASED WHEN PERSON IS AWAKENED.

WHAT IS GHB USED FOR?

1990's

FOR SPORTS (ILLEGALLY)

AS A NEW AGE DRUG AT "RAVES"

AS A "DATE RAPE" DRUG

WHAT DOES IT DO IN THE BODY?

ACTIVATES THE GABA PATHWAY IN THE BRAIN AND THE BODY

MUSCLE RELAXANT

SLEEP INDUCED WITH HIGHER DOSES

SIMILAR EFFECTS AS ALCOHOL AND OTHER DEPRESSANT DRUGS.

WHAT FORMS DOES IT COME IN?

IN A WHITE POWDER:

PLACED INTO LIQUID AND DISSOLVED

IN A LIQUID FORM:

ODORLESS, COLORLESS SOAPY - SALTY TASTE

ADDED TO WATER OR OTHER BEVERAGE COLORED " BLUE, GREEN, OR RED"

STREET NAMES FOR GHB

LIQUID X
LIQUID ECSTACY
CHERRY METH
SCOOP
GEORGIA HOME BOY
SOAP
GRIEVOUS BODILY HARM
GBH
NATURE'S QUAALUDE
EASY-LAY

DOSAGE EFFECTS:

LOW DOSE

EUPHORIA
SOCIABILITY
LIGHT-HEADEDNESS
INEBRIATION
APHRODISIA

SIDE EFFECTS

IMPAIRMENT
INABILITY TO DRIVE
TONIC-MYOCLONIC SEIZURES
NAUSEA

MEDIUM DOSE

INTENSIFICATION OF LOW DOSE
SLEEP
SHORT OR NORMAL TIME

SIDE EFFECTS

GROGGINESS
CHEYENNES-STOKES RESPIRATION
INCREASES MOTOR LOSS
SLEEP PARALYSIS

HIGH DOSE

COMA

"STUPID" DOSE

TRACHEAL INTUBATION

SIDE EFFECTS

DEPRESSED BREATHING
INCONTINENCE

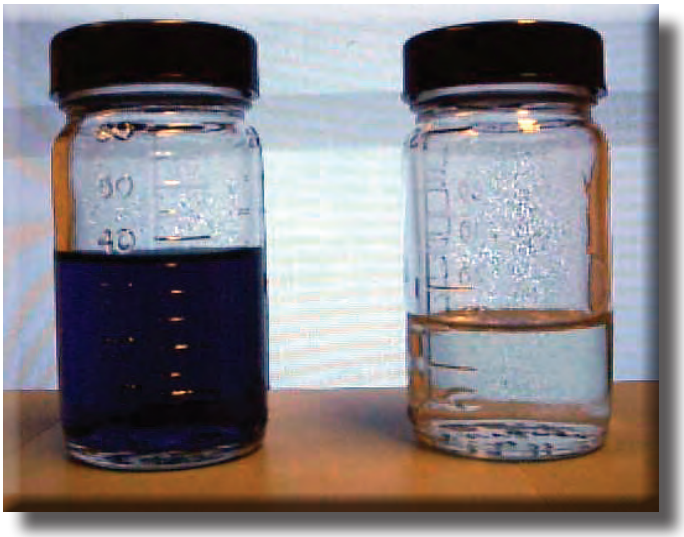
GHB SHOULD NEVER BE COMBINED WITH ALCOHOL AS A MULTIPLICATIVE EFFECT IS PRODUCED AND THE COMBINATION IS DEADLY.

TIME OF EFFECTS:

ONSET:	10-20 MINUTES
DURATION:	1-3 HOURS
NORMAL	2-4 HOURS

GHB

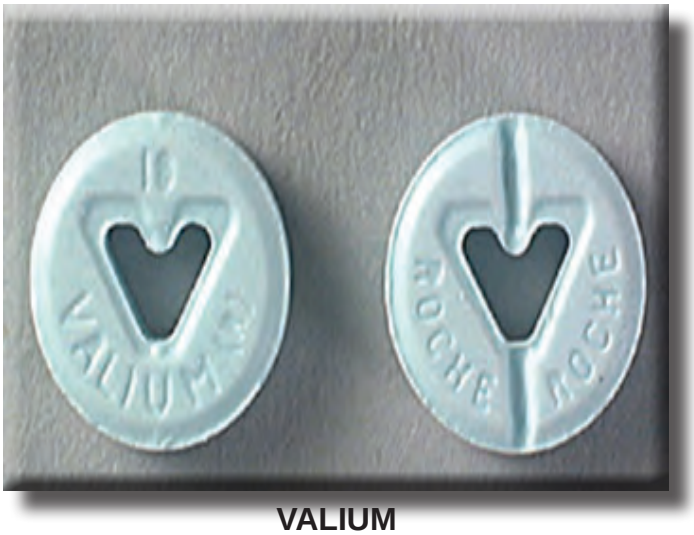
GHB IN WATER



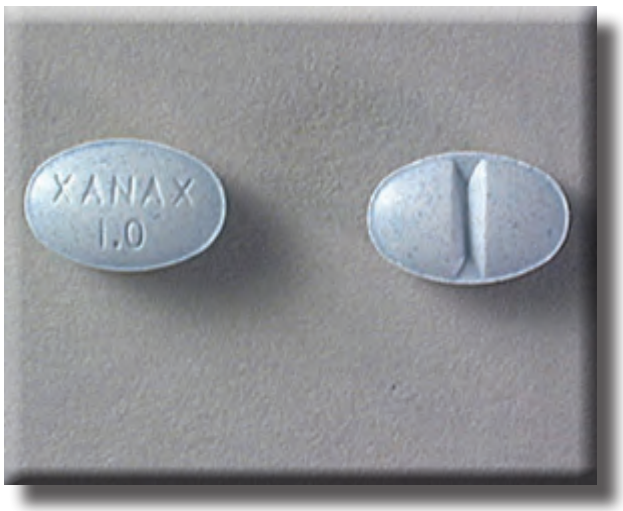
GHB

DOSE OF GHB

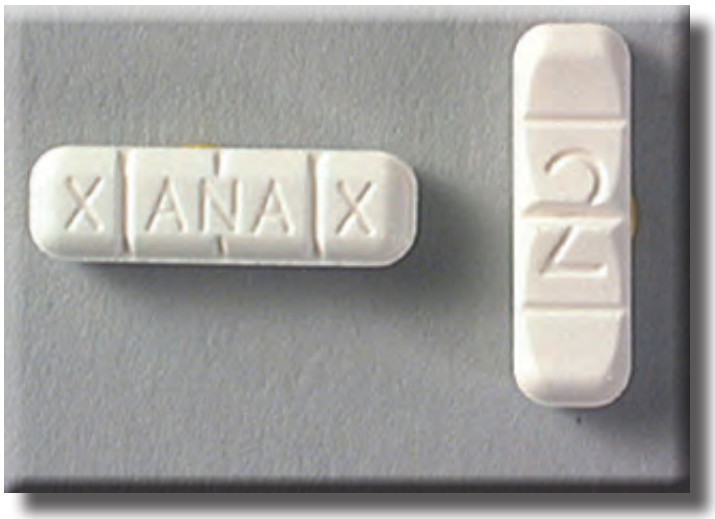
KLONOPIN



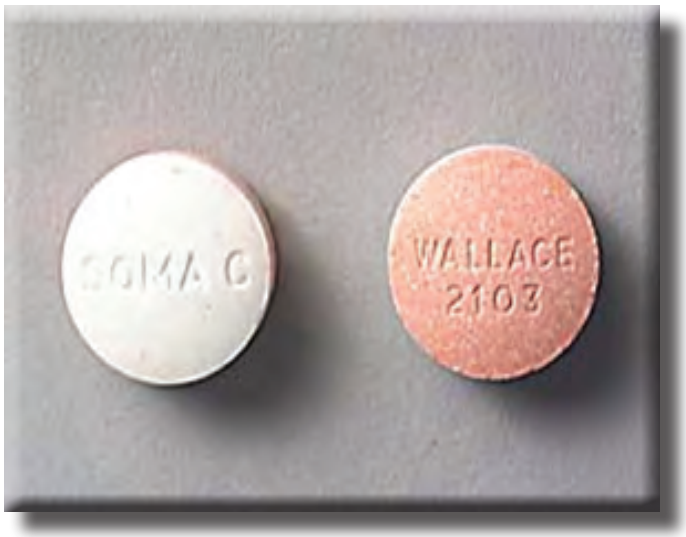
VALIUM



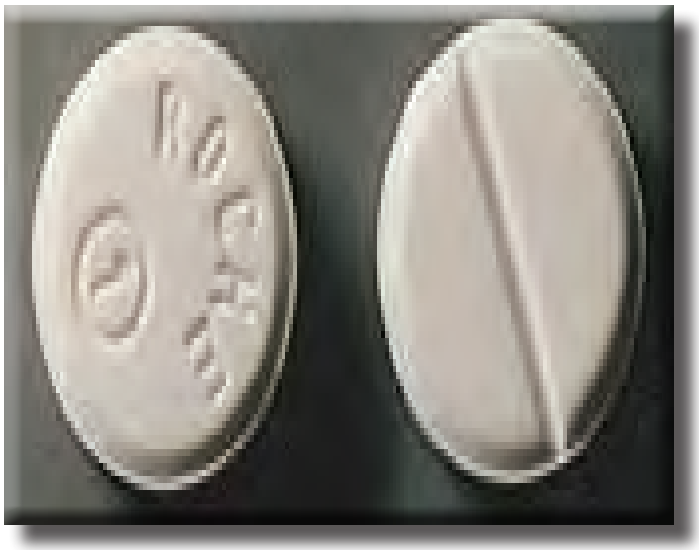
XANAX



XANAX



SOMA



ROHYPNOL
“ROOFIES”

Inhalants

OBJECTIVE SIGNS AND SYMPTOMS OF INHALANT INFLUENCE

EYES:

HGN PRESENT

VGN MAY BE PRESENT*

STRABISMUS*

NORMAL / POSSIBLE DILATED PUPILS

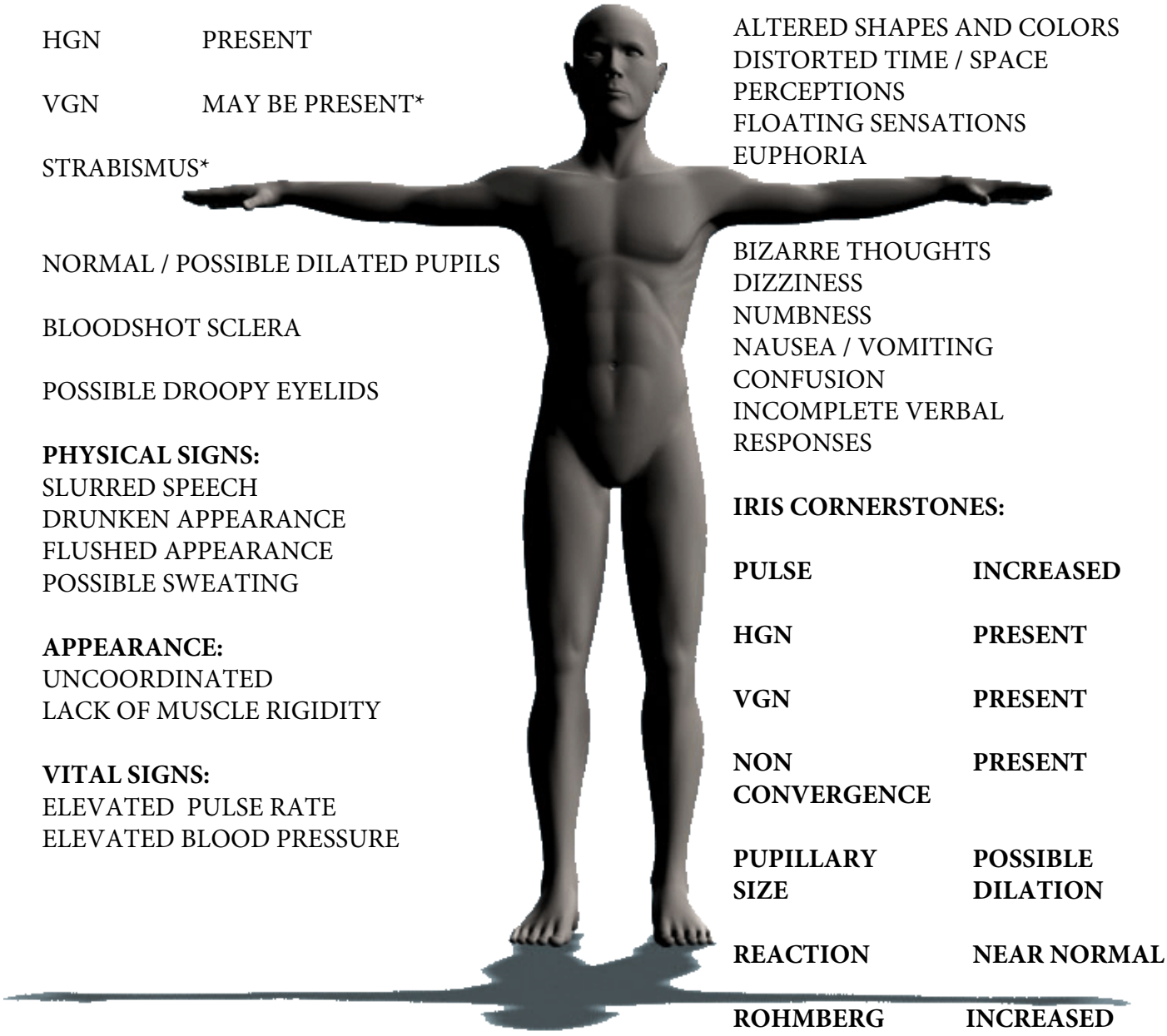
BLOODSHOT SCLERA

POSSIBLE DROOPY EYELIDS

PHYSICAL SIGNS:
SLURRED SPEECH
DRUNKEN APPEARANCE
FLUSHED APPEARANCE
POSSIBLE SWEATING

APPEARANCE:
UNCOORDINATED
LACK OF MUSCLE RIGIDITY

VITAL SIGNS:
ELEVATED PULSE RATE
ELEVATED BLOOD PRESSURE



OTHER SIGNS:

ALTERED SHAPES AND COLORS
DISTORTED TIME / SPACE PERCEPTIONS
FLOATING SENSATIONS
EUPHORIA

BIZARRE THOUGHTS
DIZZINESS
NUMBNESS
NAUSEA / VOMITING
CONFUSION
INCOMPLETE VERBAL RESPONSES

IRIS CORNERSTONES:

PULSE	**INCREASED**
HGN	**PRESENT**
VGN	**PRESENT**
NON CONVERGENCE	**PRESENT**
PUPILLARY SIZE	**POSSIBLE DILATION**
REACTION	**NEAR NORMAL**
ROHMBERG	**INCREASED**

ORGANIC SOLVENTS & SPRAYS

COMMON NAMES	ACTIVE INGREDIENTS
AIRPLANE GLUE	TOLUENE, ETHYL ACETATE
RUBBER CEMENT	TOLUENE, HEXANE, METHYL CHLORIDE, ACETONE, METHYL ETHYL KETONE, METHYL BUTYL KETONE
PVC CEMENT	TRICHLOROETHYLENE
PAINT SPRAYS	TOLUENE, BUTANE, PROPANE, FLUOROCARBONS, HYDROCARBONS
HAIR SPRAYS	BUTANE, PROPANE, FLUOROCARBONS
DEODORANTS	
LIGHTER FLUID	BUTANE, ISOPROPANE
FUEL GAS	BUTANE
DRY CLEANING FLUID	TETRACHLOROETHYLENE, TRICHLOROETHANE
SPOT REMOVERS	
CORRECTION FLUID	
DEGREASERS	
POLISH REMOVER	ACETONE
PAINT REMOVER/THINNERS	TOLUENE, METHYLENE CHLORIDE, METHANOL
LOCAL ANESTHETIC	ETHYL CHLORIDE
ANALGESIC/ASTHMA SPRAYS	FLUOROCARBONS
GASOLINE	GASOLINE
OTHER ANESTHETICS:	
CHLOROFORM	CHLOROFORM
ETHER	ETHER
VOLATILE NITRITES:	
ROOM ODORIZERS	(ISO)AMYL NITRITE,
”LOCKER ROOM”	(ISO)BUTYL NITRITE,
”RUSH”, “QUICKSILVER”,	(ISO)PROPYL NITRITE
”BOLT”, “POPPERS”	
NITROUS OXIDE	NITROUS, NITROUS OXIDE WHIPPED CREAM, PROPELLANT, WHIPPETS, LAUGHING GAS,

Nitrous Oxide (N2O)

Nitrous oxide was first discovered and prepared in 1793. For the first 40 years or so, nitrous oxide's primary use was for one of recreational enjoyment (nitrous oxide capers) and public show, leading to the first reference of it as "laughing gas".

Nitrous oxide is a colorless, almost odorless gas. When placed inside a tank it is a compressed gas. Being a compressed gas, when expelled from the tank it is extremely cold.

Tanks for Nitrous Oxide can vary in size from less than one foot tall to four feet tall.

People who abuse nitrous oxide will use / possess tanks of any color or size, sometimes using oxygen tanks, acetylene tanks, etc. People who use nitrous oxide legitimately will use / possess the proper tank.

Dentistry & Surgery

Nitrous oxide is a very safe and popular agent utilized by many dental practices. Nitrous oxide has both sedative and analgesic properties that can be utilized for procedures which tend to be more pain inducing or where local anesthetic effectiveness is diminished. Examples include oral surgery, periodontal surgery, procedures in areas of infection, or procedures where access to the pulp is necessary. In the pediatric population, nitrous oxide can be used to help aid behavior management in those children where more conventional measures have proven unsuccessful.

People who abuse nitrous oxide will sometimes obtain their tanks by theft from hospitals or dental offices. The tanks are used to fill balloons with nitrous oxide at parties, the balloons being sold from $2 to $5 per balloon.

Auto Racing

Nitrous oxide is also used in auto racing. It is injected into the carburetor of an engine, providing more oxygen for more fuel ignition and extra horsepower, while acting as a cooling agent at the same time. The tank that fits into the vehicle is relatively small, but larger tanks are used for nitrous oxide storage, and sales to refill the smaller tanks.

People who abuse nitrous oxide who possess tanks will get the tanks refilled at racing shops selling nitrous oxide. Many legitimate racing shops will have nitrous oxide. Racing shops purchase the nitrous oxide direct from a manufacturer. Some manufacturers add sulphur dioxide to the tank to discourage inhalation and abuse. Some manufacturers do not add the sulphur dioxide. Some racing shop's employees will fill tanks for friends. Again, the tanks are used to fill balloons with nitrous oxide at parties, the balloons being sold from $2 to $5 per balloon.

Whipped Cream Propellant

Nitrous oxide, being a compressed gas, is used as a safe propellant in several food products. The most common of these products is Readi-Whip whipped cream. If used properly, the buyer depresses the button on top of the can and the whipped cream is propelled out of the can by the nitrous oxide.

Whipped cream can also be purchased in bulk, with the nitrous oxide propellant purchased separately. Coffee shops and caterers will use the nitrous oxide to propel the whipped cream out of the containers and onto food products. The nitrous oxide used for this purpose is very commonly sold in small boxes of 10 (about $15) or 25 (about $25) metal canisters resembling CO2 cartridges at food specialty stores. The canisters bare no markings indicating the contents. The box containing the canisters is usually marked "Whipped Cream Refillers" and may or may not indicate the contents as N2O.

People who abuse nitrous oxide will purchase these canisters from the food specialty stores, or from pornography retail shops or “Head” shops, who also stock them. The latter two suppliers also sell plastic, brass, or metal two piece containers into which a singe canister is placed. The container will have a hole punched in one end, with a spike protruding into the container to pierce the nitrous oxide cartridge. The user will place a balloon over the hole on the end of the device, screw the two parts of the device together, piercing the canister inside and filling the balloon with nitrous oxide. One cartridge will fill one 12” balloon. The user will then inhale the nitrous oxide from the balloon. One balloon has many doses.

Glass Chillers

Because nitrous oxide is a compressed gas and exits it’s container at a very cold temperature, the “Whipped Cream Refillers” are also used by people in the wine/champagne selling business to chill glasses rather than refrigerate the glass, then serve the wine or champagne in the chilled glass.

Because of it’s low cost and easy availability, nitrous oxide is popular with teenagers and young adults. The balloon containing the nitrous oxide is the most common item possessed by a user, although they may also possess the “Whipped Cream Refillers” and paraphernalia mentioned above. After an outdoor or underground Rave party it is not uncommon to discover hundreds of the “Whipped Cream Refillers” boxes and canisters left behind on the ground.

The nitrous oxide is inhaled from the balloon. Depending on the size of the balloon (they will vary), a single balloon may contain between one and 20 doses.

Remembering that nitrous oxide is an anesthetic, the effects caused by it’s ingestion are those typical of anesthetics. Nitrous oxide, when abused, causes euphoria and dizziness, and a general state of CNS depression. Horizontal Gaze Nystagmus will be present, Vertical Nystagmus may be present, non-convergence will be present. Muscles will be relaxed. Lowered blood pressure, arrhythmias, and elevated pulse are common. Generally the person acts extremely anesthetized, sometimes becoming unconscious.

Onset of the effects are immediate, and generally last approximately 5 minutes, depending on the dose. After the drug wears off, the user inhales another lung full from the balloon with the nitrous oxide, for another 5 minutes of influence.

Chronic, long term abuse can lead to can lead to bone marrow depression. A resultant anemia-like state may develop causing peripheral numbness, tingling sensations, and uncoordination. In extreme cases, death can ensue.

Nitrous oxide diffuses into air-containing spaces 34 times faster than nitrogen can diffuse out, and can lead to potentially dangerous airspace expansion (pneumothorax, bowel obstruction, etc).

A Word of Caution

Nitrous oxide is an oxidizer, meaning it displaces oxygen. A number of deaths from inhaling nitrous oxide have occurred when users have rolled up the windows in their car and left the nitrous oxide tank on. All of the oxygen is displaced by the nitrous oxide, and the user dies from a lack of oxygen.

“HUFFING” KIT

NITROUS FILLED BALLOON

HUFFING AXE PROPELLANT

NITROUS OXIDE HUFFING KIT

“CRACKER”
FOR NITROUS OXIDE

NITROUS OXIDE

AMYL NITRATE
“POPPERS”

NITROUS OXIDE

NITROUS OXIDE

KIT FOR KITROUS OXIDE

NITROUS OXIDE

HUFFING MATERIALS

Dissociative Anesthetics

OBJECTIVE SIGNS AND SYMPTOMS OF DISSOCIATIVE ANESTHETIC INFLUENCE

EYES:

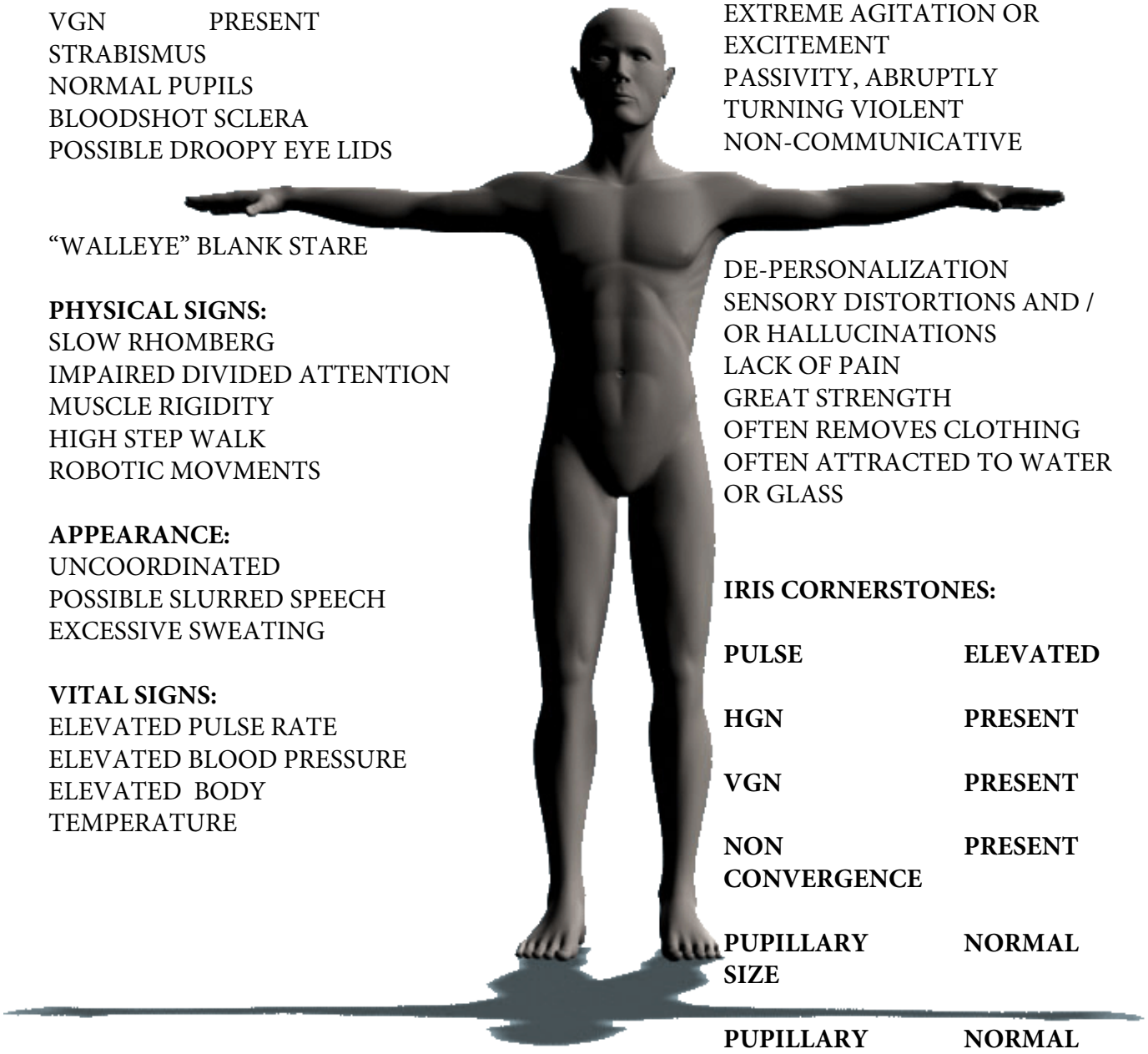
HGN PRESENT
VGN PRESENT
STRABISMUS
NORMAL PUPILS
BLOODSHOT SCLERA
POSSIBLE DROOPY EYE LIDS

"WALLEYE" BLANK STARE

PHYSICAL SIGNS:
SLOW RHOMBERG
IMPAIRED DIVIDED ATTENTION
MUSCLE RIGIDITY
HIGH STEP WALK
ROBOTIC MOVMENTS

APPEARANCE:
UNCOORDINATED
POSSIBLE SLURRED SPEECH
EXCESSIVE SWEATING

VITAL SIGNS:
ELEVATED PULSE RATE
ELEVATED BLOOD PRESSURE
ELEVATED BODY TEMPERATURE



OTHER SIGNS:
DISORIENTATION
LOSS OF MEMORY
EXTREME AGITATION OR EXCITEMENT
PASSIVITY, ABRUPTLY TURNING VIOLENT
NON-COMMUNICATIVE

DE-PERSONALIZATION
SENSORY DISTORTIONS AND / OR HALLUCINATIONS
LACK OF PAIN
GREAT STRENGTH
OFTEN REMOVES CLOTHING
OFTEN ATTRACTED TO WATER OR GLASS

IRIS CORNERSTONES:

PULSE	**ELEVATED**
HGN	**PRESENT**
VGN	**PRESENT**
NON CONVERGENCE	**PRESENT**
PUPILLARY SIZE	**NORMAL**
PUPILLARY REACTION	**NORMAL**
RHOMBERG	**DISTORTED**

PHENCYCLIDINE

DEFINED:

A SUBSTANCE THAT AFFECTS THE CNS AS A STIMULANT, DEPRESSANT, ANALGESIC, OR HALLUCINOGEN.

SINCE 1979 THERE ARE NO VALID OR LEGAL USE FOR PCP. TOTALLY MANUFACTURED IN CLANDESTINE LABORATORIES.

SUBSTANCE IS FAT SOLUBLE, CAN CAUSE ADDICTION, DEPENDENCE, TOLERANCE AND WITHDRAWAL.

PCP SYMPTOMATOLOGY:

HEAVY SWEATING	SLURRED SPEECH
MOON WALK	HALLUCINATIONS
HOT SKIN	STUPOR
SEIZURES	POSSIBLE COMA
BLANK STARE	AGITATION
EXCITEMENT	MUSCLE RIGIDITY
MOOD SWINGS	DISORIENTATION
MEMORY LOSS	CHEMICAL ODOR

INCREASED PAIN THRESHOLD
SENSORY DISTORTIONS
LOSS OF BODY CONTACT/FEELING
NON-COMMUNICATIVE

PCP

IDENTIFICATION:

LIQUID (BASE):

FOUND IN SOUTHERN CALIFORNIA AMBER COLORED STRONG ETHER/ CHEMICAL ODOR.

SOLID (HCL):

FOUND IN NORTHERN PORTION OF CALIFORNIA

VARIOUS COLORS TO WHITE.

NO ODOR

CONSUMPTION METHODS:

LIQUID:

DARK CIGARETTES ARE DIPPED INTO SOLUTION AND SMOKED

SOLID:

PLACED INTO HAND ROLLED CIGARETTES AND SMOKED.

PLACED INTO LIQUID FORM AND INJECTED

CRUSHED AND SNORTED.

ACTIVE COMPONENT:

1-1-PHENYLCYCLOHEXYL PIPERIDINE (PCP)

STREET NAMES:

PCP	ANGEL DUST
DUST	WET DADDY
MOORES	SHERMS
TRANK	JUICE
WATER	KRYSTAL JOINT (KJ)

DOSAGE:

5 MG FOR MEDICAL USE

10 MG AND ABOVE CAN CAUSE DEATH IN NON-TOLERANT USER

TIME OF EFFECTS:

6 TO 11 HOURS

Ketamine

2-(o-chlolrohpenyl)-2-(methylamino) cyclohexane

Ketamine was first discovered in 1961 for use as a dissociative anesthetic. It is both chemically and behaviorally related to PCP, having about 1/5 the potency of an equivalent amount of PCP. Parke-Davis Laboratories started synthesis of Ketamine in 1962.

Ketamine is currently used legitimately as an anesthetic on both humans (10%) and animals (90%).

Pharmaceutical Ketamine is sold in multi-injectable glass vials under the following names.

Ketamine HCL	animal / human
Ketavet	animals
Ketalar	humans
Ketasol	humans
Ketaset	animals
Ketalin	humans
Ketajet	animals
Ketaved	animals
Vetalar	animals
Vetamine	animals
Vetaket	animals

Ketamine is obtained for illegal use by theft from veterinarian offices, purchase in Mexico, or diversion from legitimate U.S. sources.

COMMON STREET NAMES & TERMS

K, Special K, Super K, Vitamin K, Ket, Honey oil

K-Hole	Heavily anesthetized
K-land	The Ketamine influence experience
K-club	Ketamine user
K-state	The Ketamine influence experience
K-cyberspace	The Ketamine influence experience
K-waves	Wavy feelings during onset

Please note that some street slang is directly related to specific cultures or geographical regions and may differ amongst different people.

A typical medical dosage for humans is 1-10 mg of Ketamine per kilogram of body weight. Thus, a 120 pound human would receive between 50-500 mg of liquid as an anesthetic via intramuscular injection.

The most popular method used to ingest Ketamine illicitly is by insuffalation (snorting) of the powder form. An average dose would be 125-250 mg via a coke spoon or straw. Some users split the dose between each nostril. Some users will start off with a small amount and increase the dose occasionally until they get the desired effect.

Some users will inject liquid Ketamine. Subcutaneous injections are typically 70-125 mg, intramuscular injections are typically 25-125 mg, intravenous injections are typically 50 mg. Intravenous injections of Ketamine are dangerous and can lead to overdose and possibly death.

Ketamine may also be smoked by either dipping a cigarette or marijuana joint into the liquid, or sprinkling the powder into the cigarette or joint. Dosages can vary greatly when it is used in this manner.

Ketamine may be taken orally, however this is the least popular method of ingestion. This is in part due to the chemical taste, slow onset of effects, and substantial dose to obtain the same level of effects produced by other methods of ingestion.

Users attempt to take a dosage that is as high as possible without causing unconsciousness, to experience the most intense effects possible. It is common for them to misjudge the dose and become unconscious.

Ketamine is a dissociative anesthetic. The severity of its effects are directly related to the method of ingestion and amount ingested. The effects can be described as taking place in three stages.

1st Stage: Anesthetic State

During this stage there is a loss willful movement. The person will have muscle rigidity, be awake, feel no pain, and will eventually become immobile. This stage occurs generally within the first 15 minutes. The person will feel waves of emotions during this state and may panic. Regular users tell beginners to "ride the waves" and not panic, it's the effects of the drug beginning to take place. Users call these feelings "K-waves".

2nd Stage Emergence State

As the Emergence State takes over, the effects of the anesthetic continue, and begin to include agitation, paranoia, and sensory distortions. The person may have bizarre/ impulsive behavior, dissociation, and out of body experiences.

Hallucinations are a common effect during this stage. A person in this stage may become violent and will feel no pain, just like a person on PCP.

3rd Stage Recovery State

As the drug starts to wear off the person acts "stoned" and has flashbacks to the experience they just encountered.

The person's mind set and the setting they are in when they experience the effects of Ketamine can influence the experience greatly. Some users report the experience as being spiritual and feeling as if they are near death or dying, but it doesn't scare them at the time as they feel it doesn't matter. Some users report contact with alien beings during the Emergence Stage. Clothing, stickers, necklaces, and similar items with an alien face/ body are popular with K users.

Someone under the influence of Ketamine will display slurred speech, immobility, anesthesia, horizontal and vertical gaze nystagmus, inability of the person to cross their eyes, and an elevated pulse and blood pressure. The person may have uncontrollable shivering and will be extremely impaired. The person will be unable to maintain attention and will suffer memory loss. Depending on the method of ingestion, the Ketamine user may have injection marks or a runny nose.

Caution should be used when dealing with someone under the influence of this drug as they may become violent and will feel no pain, just like a user of PCP. Sometimes the reduction of stimuli can help control these individuals.

It's common for Ketamine to be combined with marijuana, Ecstasy, and other drugs popular with the Rave community. Mixing Ketamine with depressants is extremely dangerous and may cause respiratory arrest. Mixing Ketamine with alcohol commonly induces vomiting.

DEXTROMETHORPHAN (DXM)

DXM:

Destromethorphan (DXM) is a safe and effective cough suppressant ingredient found in over-the-counter (OTC) cough medicines. When used according to directions, products containing DXM produce few side effects and have a long history of safety and effectiveness.

People who are abusing this medicine are causing serious damage to their bodies. High doses produce hallucinations and a sense of dissociation.

Symptoms of an overdose of cough syrup that contains DXM can include nausea, vomiting, diarrhea, abdominal pain, dizziness, confusion, poor coordination, rapid heart rate and hallucinations. At very high doses, DXM can cause inability to move arms or legs or to talk, respiratory depression and even death.

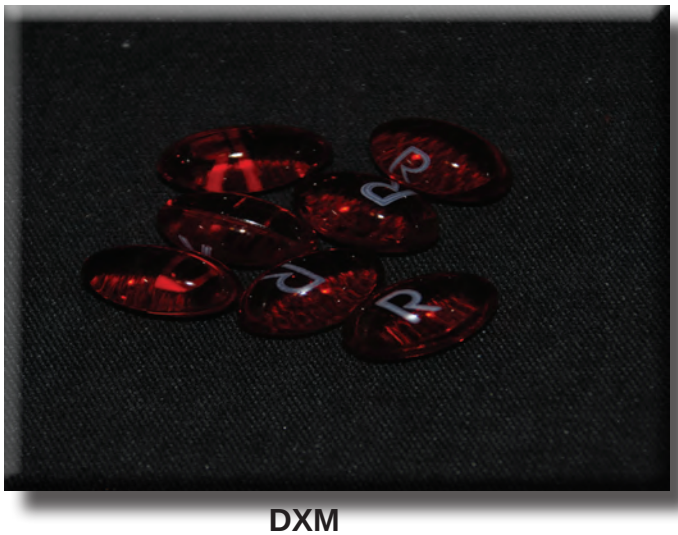
OTC medications that contain detroxmethorphan (like Robitussin and Coricidin) often contain antihistamine and decongestant ingredients. High doses of these mixtures can seriously increase the harmful effects of both substances.

A common brand that is abused is Coricidin HBP Cough & Cold, also called “Triple C’s”. Coricidin HBP Cough & Cold) is available as red tablets containing 30 milligrams of dextromethorphan. It is likely that individuals abuse similar products, which may include Coricidin HBP Chest Congestion & Cough (available as softgels containing 10 milligrams of dextromethorphan) and Coricidin HBP Maximum Strength Flu (available as tablets containing 15 milligrams of dextromethorphan).

Triple C tablets generally are taken orally. Powdered extractions of dextromethorphan, which are either inhaled or repackaged in capsules or tablets as MDMA and swallowed, are reportedly available, Coricidin HBP products have proven to be safe and effective when users adhere to recommended doses (containing 10 to 30 milligrams of dextromethorphan taken every 6 hours). However, abusers typically consume many times the recommended dose, which produces hallucinations and dissociative effects similar to those experienced with PCP (phencyclidine) or ketamine. While under the influence of the drug, which can last for as long as 6 hours, abusers risk injuring themselves and others because of the drug’s effects on visual perception and cognitive processes.

High doses of dextromethorphan result in an increased body temperature, which poses a particularly acute health threat if the drug is used in an environment - such as a rave or dance club - where users are dancing among crowds of people. Other risks associated with dextromethorphan abuse include nausea, abdominal pain, vomiting, irregular heartbeat, high blood pressure, headache, numbness of fingers and toes, loss of consciousness, seizure, brain damage, and possibly death.

DXM



DXM

LIQUID PCP

PCP LACED CIGARETTES
WRAPPED IN FOIL

CONTAINERS OF PCP

PCP IN BOTTLE WITH
MOORE CIGARETTE

PCP POWDER (hcl)

KETAMINE POWDER

KETAMINE IN LIQUID FORM

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