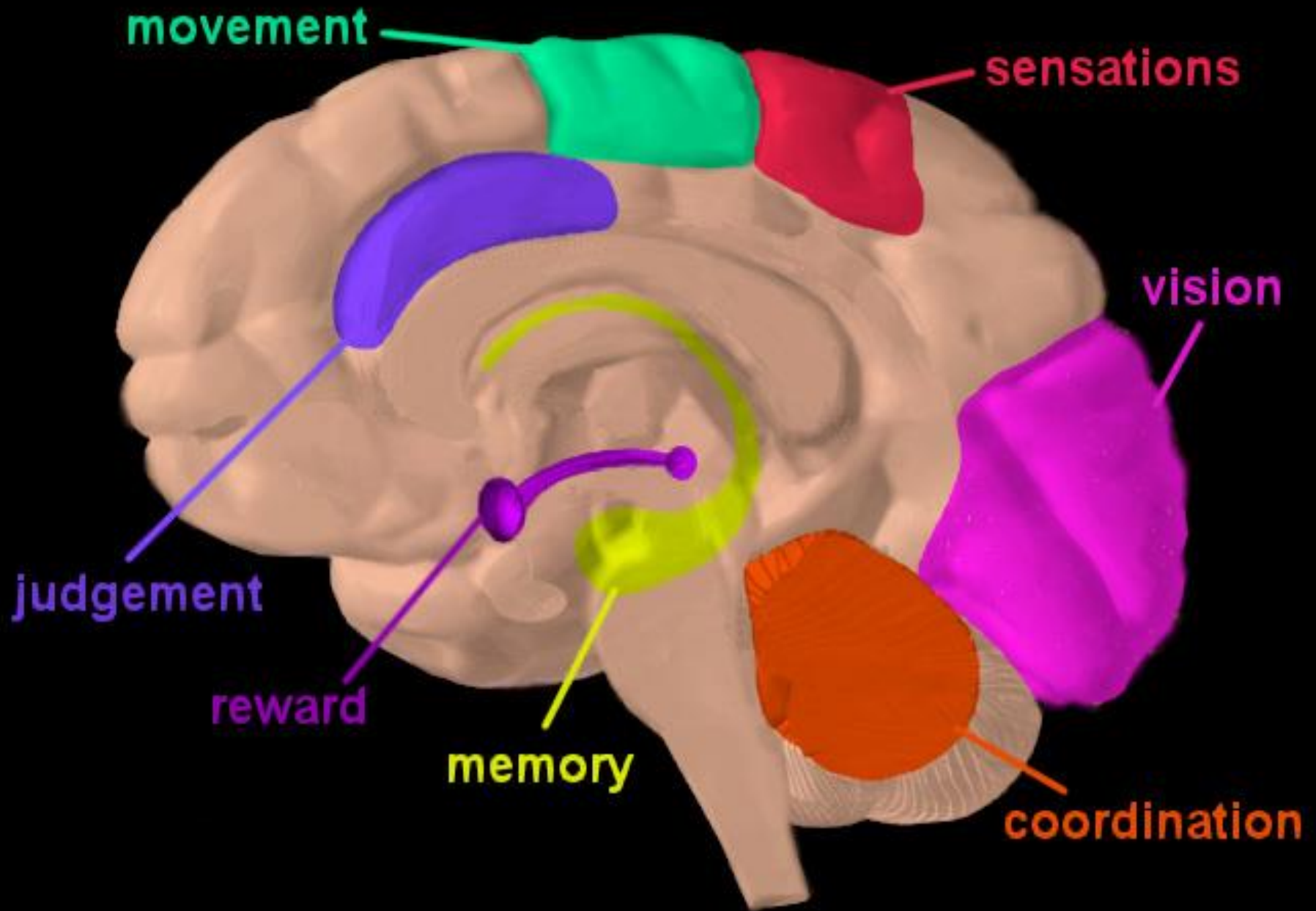


Understanding Drug Abuse and Addiction: What Science Says

*Developed by the
National Institute on Drug Abuse (NIDA)
National Institutes of Health
Bethesda, Maryland*



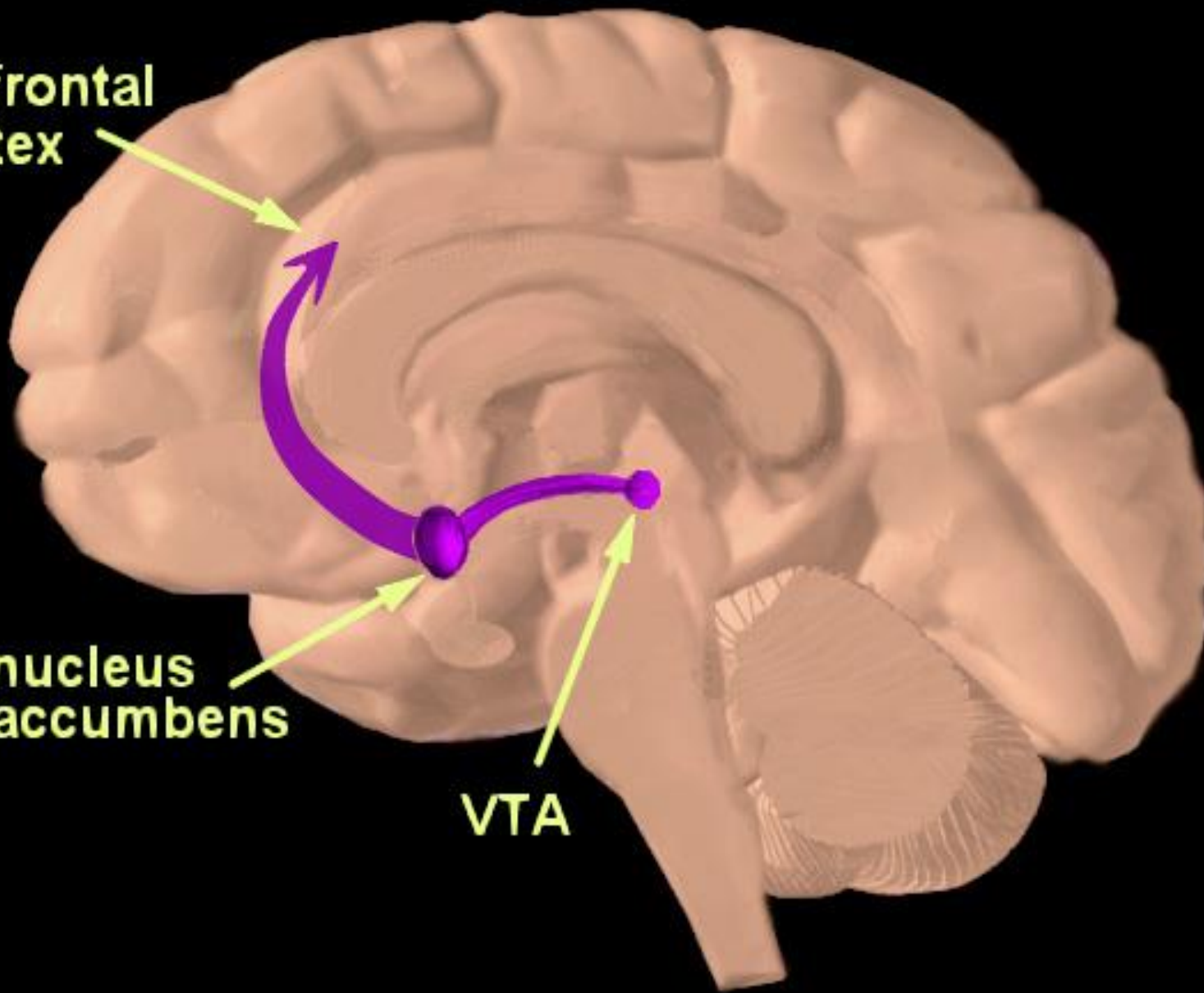
DRUG ADDICTION IS A COMPLEX ILLNESS

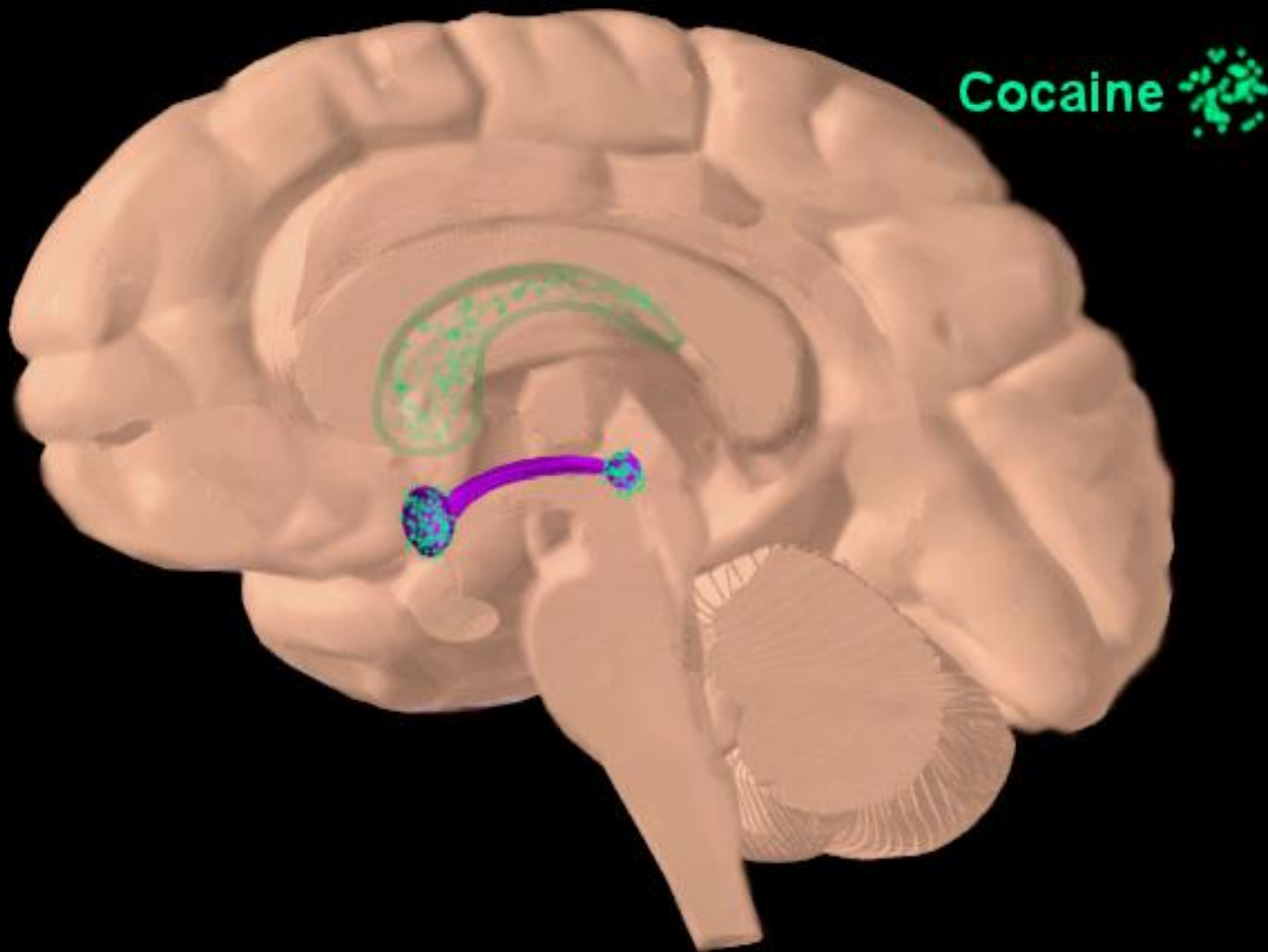


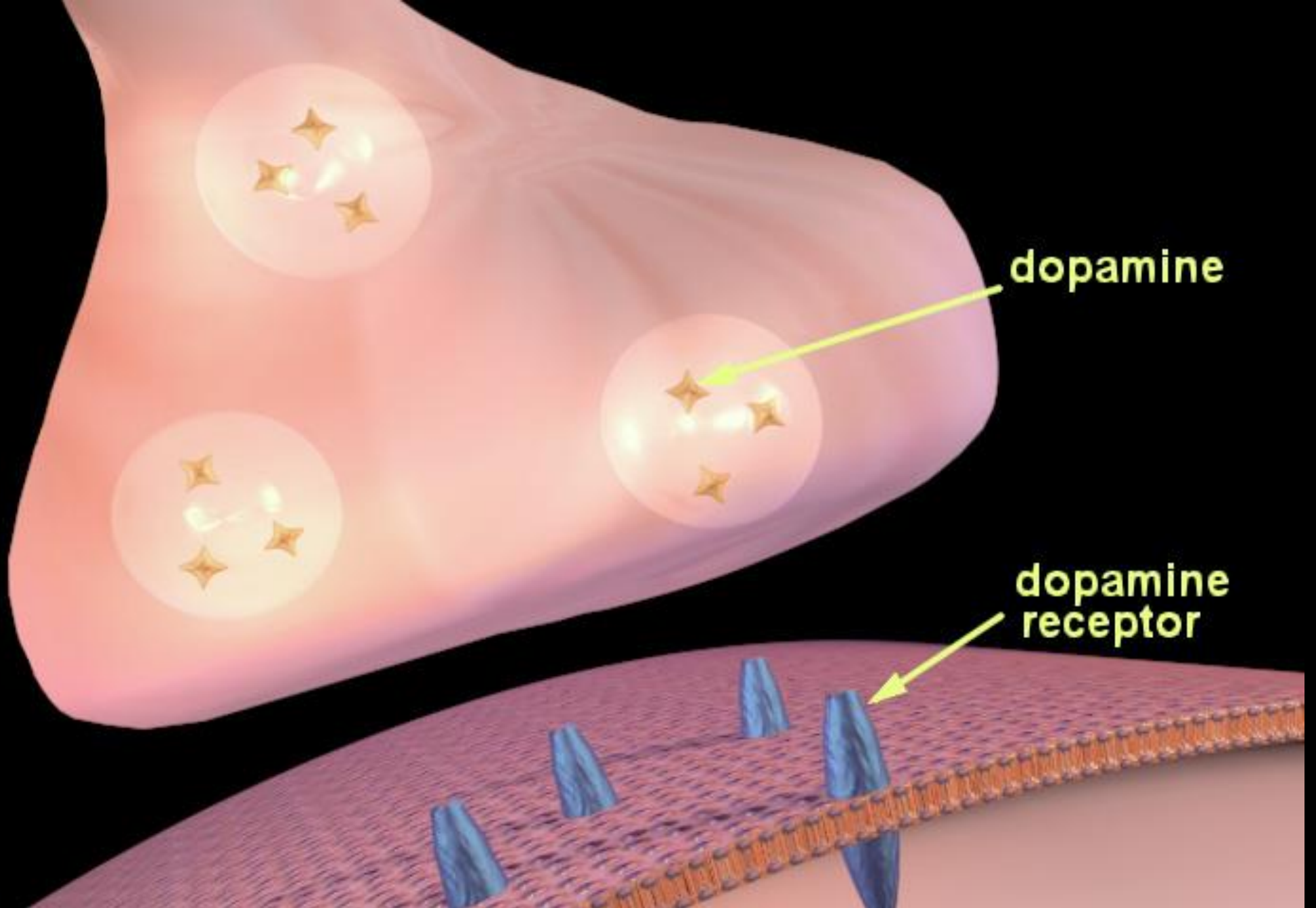
**prefrontal
cortex**

**nucleus
accumbens**

VTA

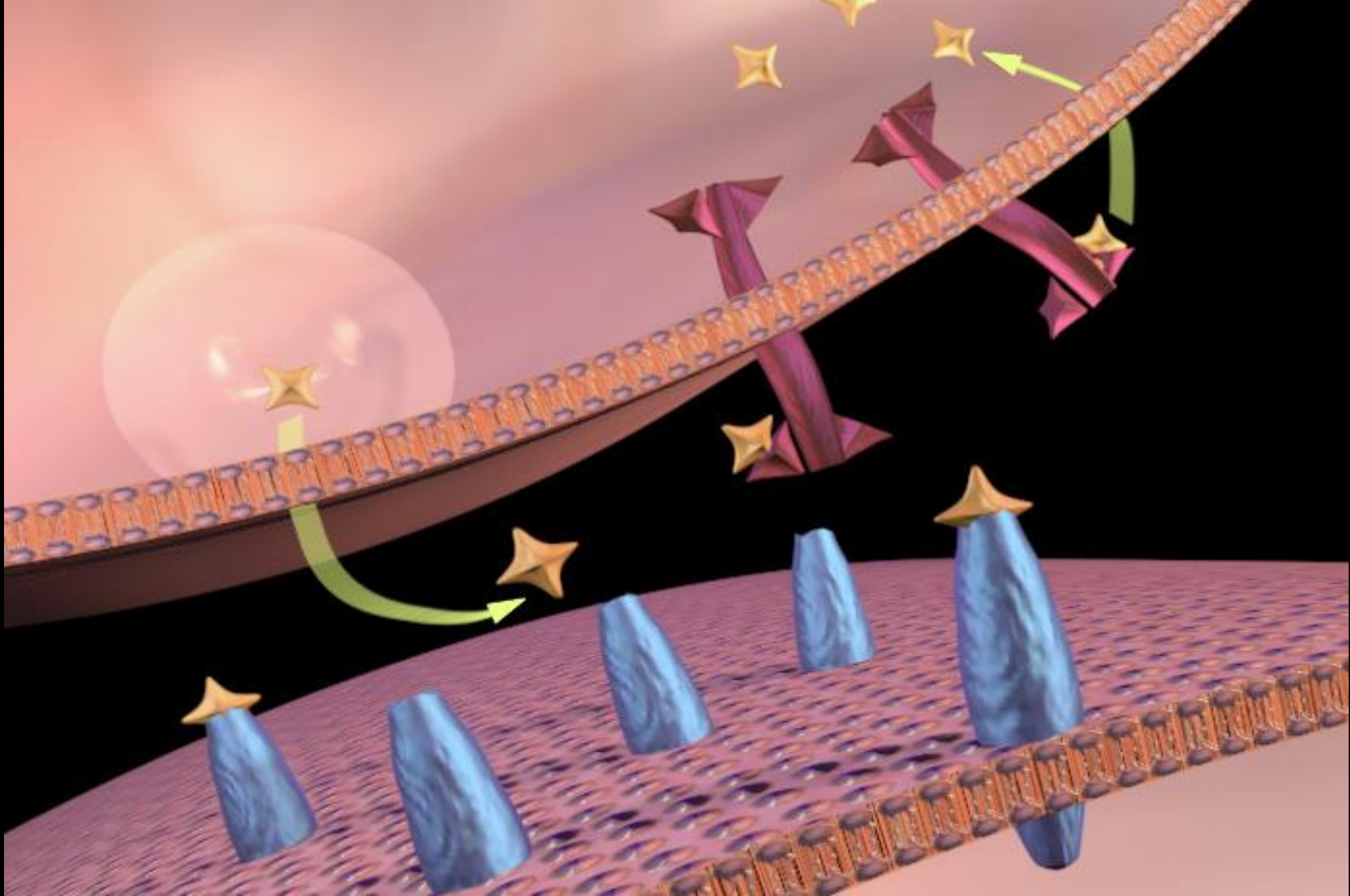


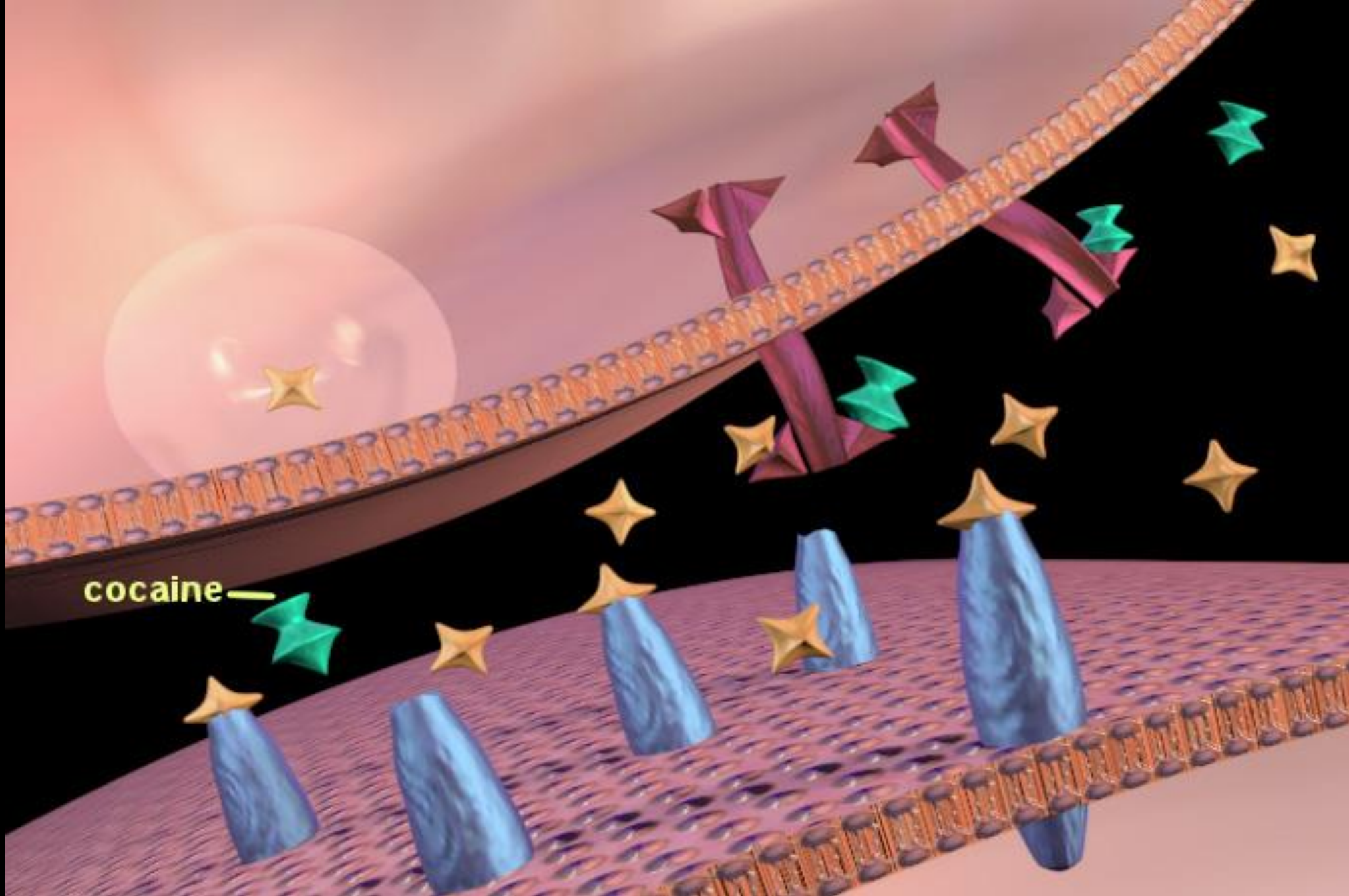




dopamine

dopamine
receptor





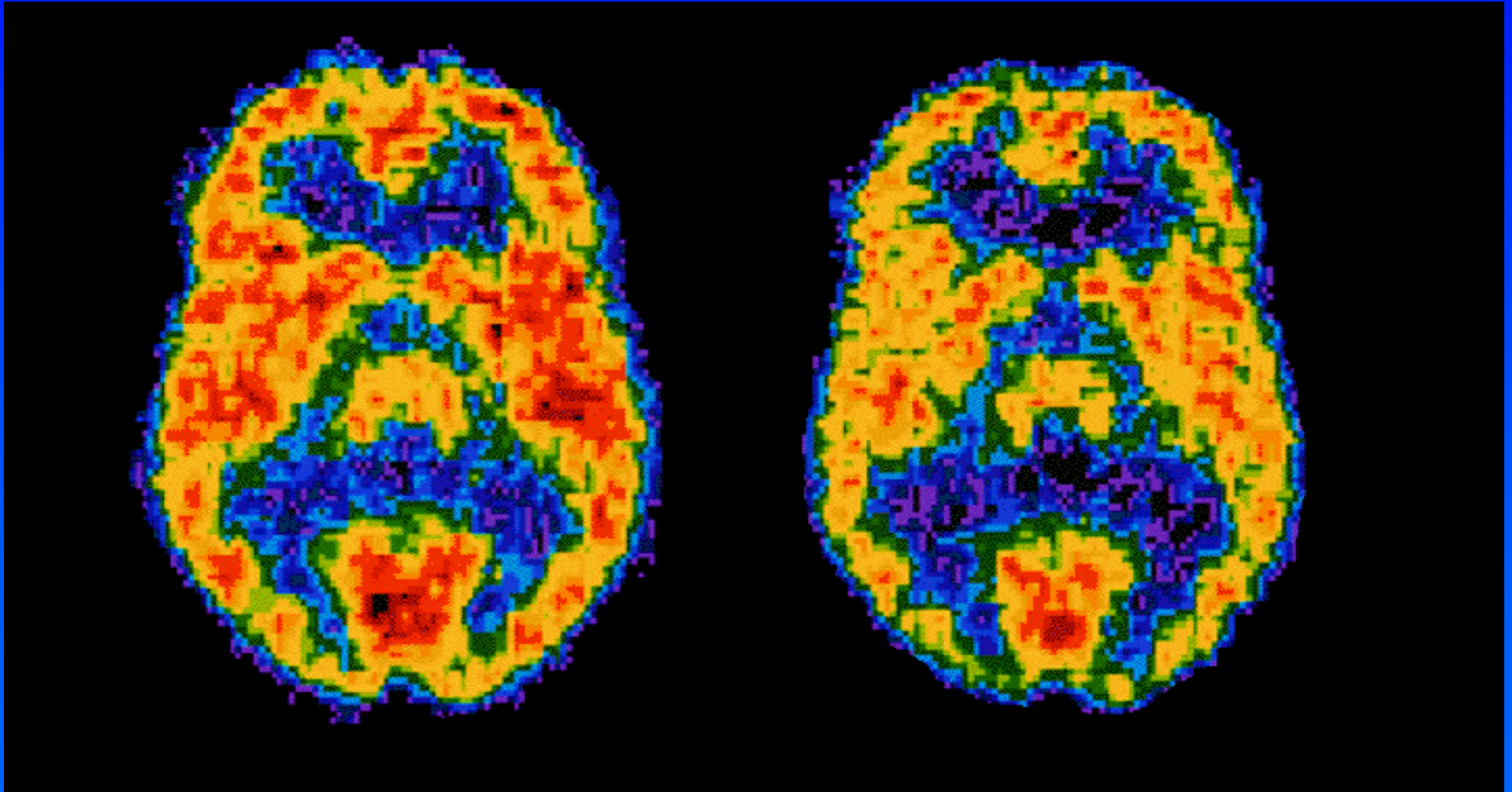
cocaine

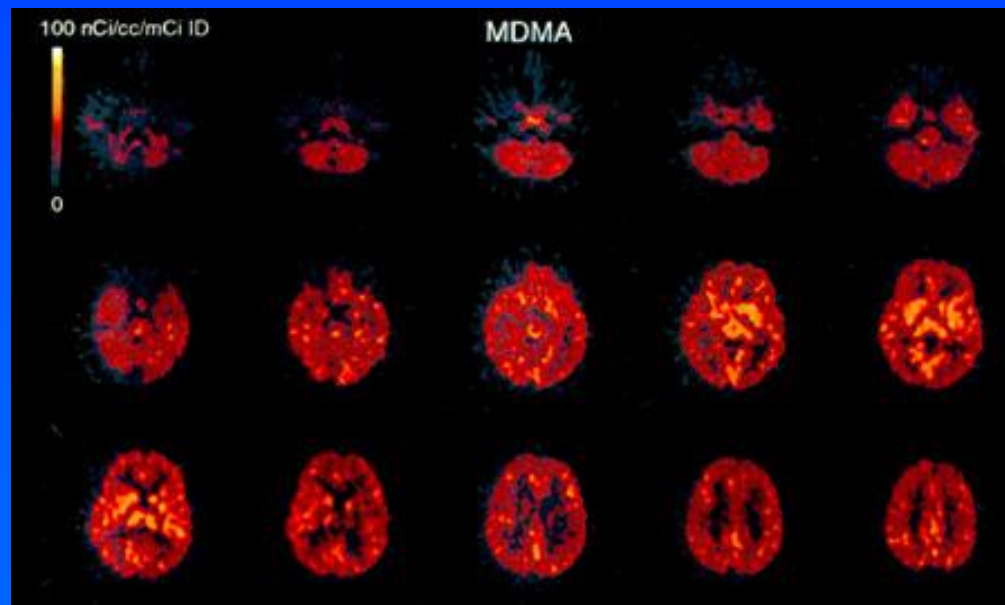
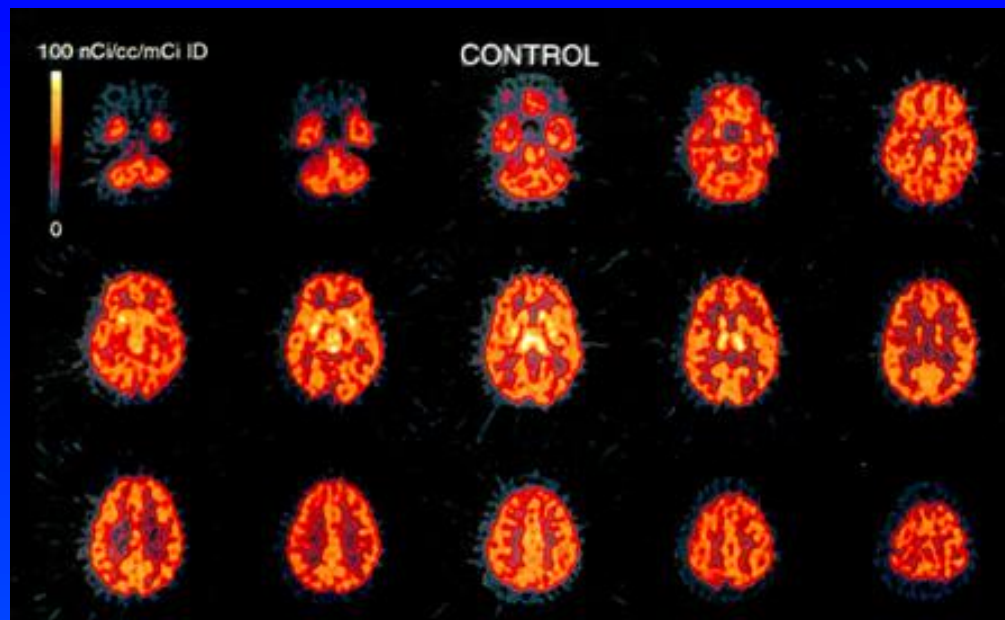
Positron Emission Tomography (PET)



control

on cocaine





Preventing Drug Use Among Children and Adolescents

A RESEARCH-BASED GUIDE



Prevention Programs Should

Reduce Risk Factors

- **ineffective parenting**
- **chaotic home environment**
- **lack of mutual attachments/nurturing**
- **inappropriate behavior in the classroom**
- **failure in school performance**
- **poor social coping skills**
- **affiliations with deviant peers**
- **perceptions of approval of drug-using behaviors in the school, peer, and community environments**

Prevention Programs Should

Enhance Protective Factors

- **strong family bonds**
- **parental monitoring**
- **parental involvement**
- **success in school performance**
- **prosocial institutions (e.g. such as family, school, and religious organizations)**
- **conventional norms about drug use**



Prevention Programs Should

. . Target all Forms of Drug Use



. . . and be Culturally Sensitive

Prevention Programs Should

Include Interactive Skills-Based Training

- **Resist drugs**
- **Strengthen personal commitments against drug use**
- **Increase social competency**
- **Reinforce attitudes against drug use**

Prevention Programs Should be. . .

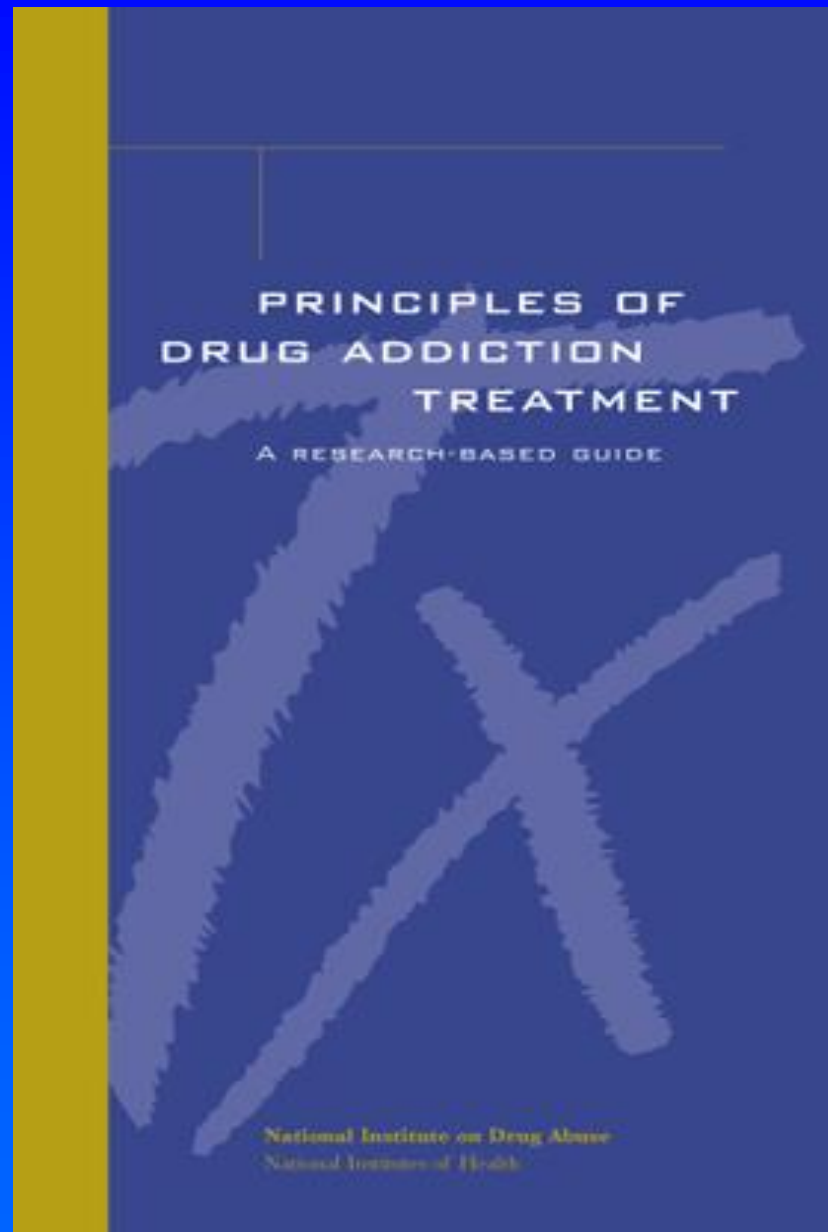
Family-Focused

- **Provides greater impact than parent-only or child-only programs**
- **Include at each stage of development**
- **Involve effective parenting skills**

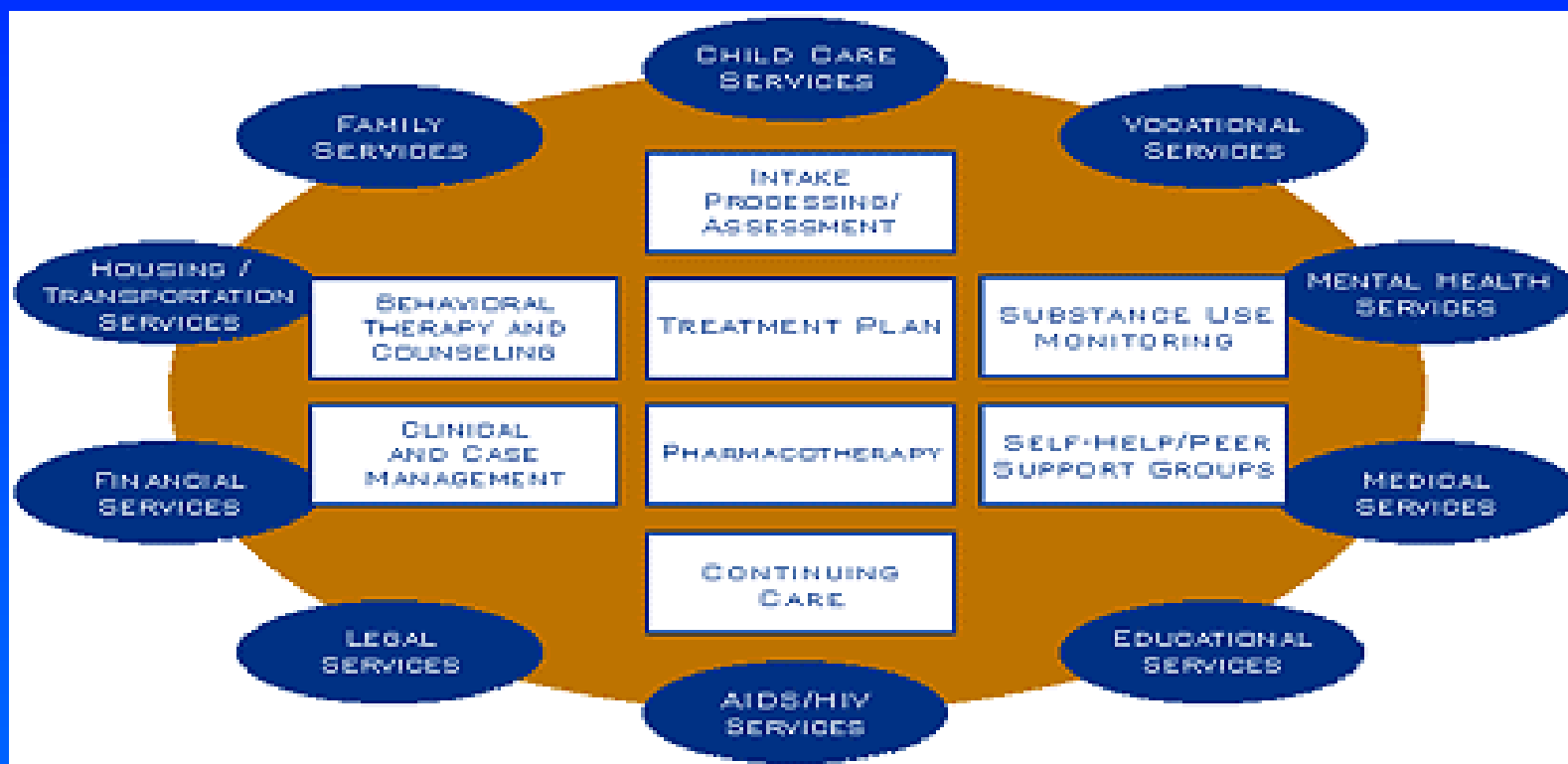
Prevention Programs Should

Involve Communities and Schools

- **Media campaigns and policy changes**
- **Strengthen norms against drug use**
- **Address specific nature of local drug problem**



Components of Comprehensive Drug Addiction Treatment





Matching Patients to Individual Needs

- **No single treatment is appropriate for all individuals**
- **Effective treatment attends to multiple needs of the individual, not just his/her drug use**
- **Treatment must address medical, psychological, social, vocational, and legal problems**



Duration of Treatment

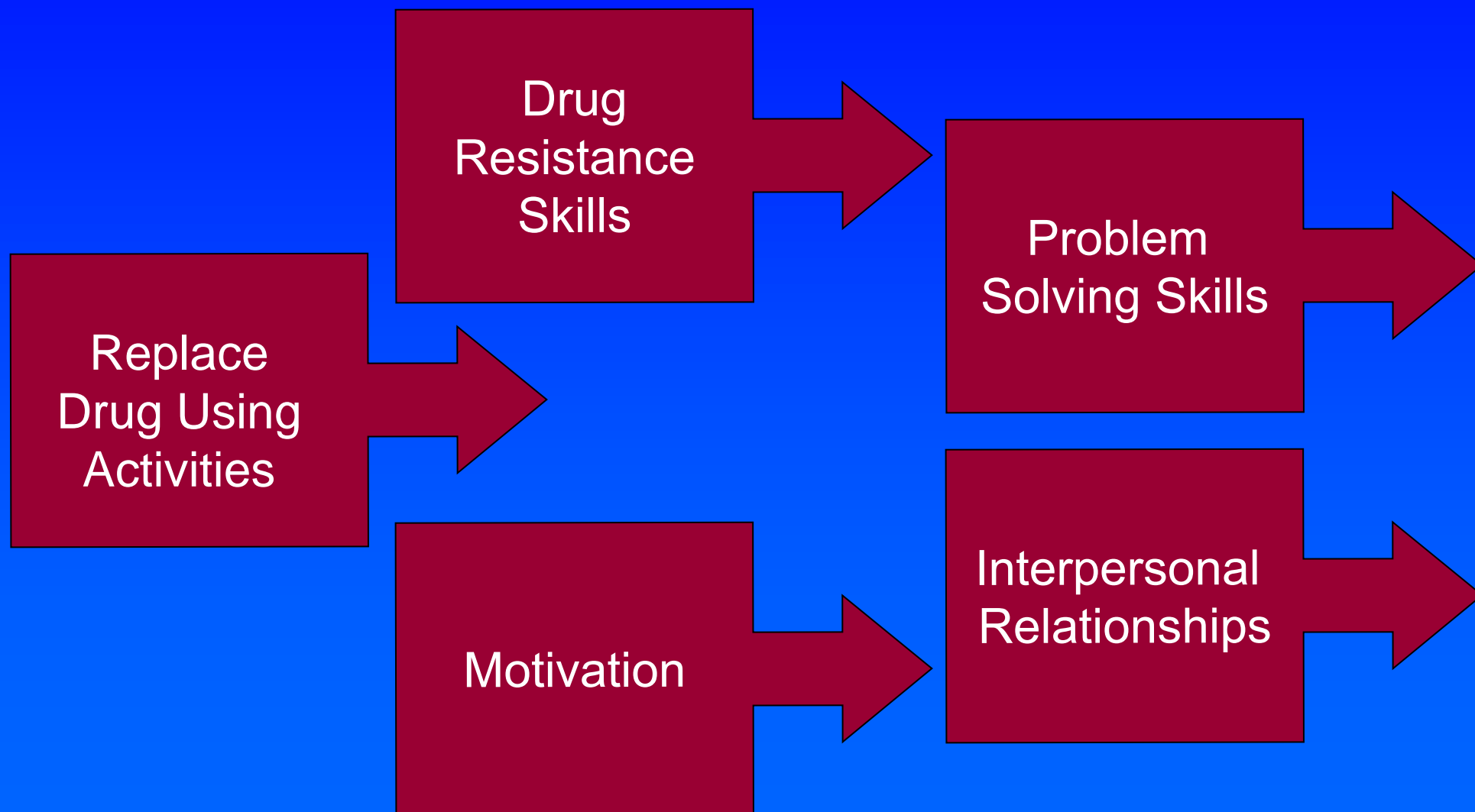
- **Depends on patient problems/needs**
- **Less than 90 days is of limited/no effectiveness for residential/outpatient setting**
- **A minimum of 12 months is required for methadone maintenance**
- **Longer treatment is often indicated**



Medical Detoxification

- **Detoxification safely manages the physical symptoms of withdrawal**
- **Only first stage of addiction treatment**
- **Alone, does little to change long-term drug use**

Counseling and Other Behavioral Therapies





Medications for Drug Addiction

- Methadone
- LAAM
- Naltrexone
- Nicotine Replacement
 - patches
 - gum
 - bupropion



Motivation to Enter/ Sustain Treatment

- **Effective treatment need not be voluntary**
- **Sanctions/enticements (family, employer, criminal justice system) can increase treatment entry/retention**
- **Treatment outcomes are similar for those who enter treatment under legal pressure vs voluntary**



HIV/AIDS, Hepatitis and Other Infectious Diseases

- **Drug treatment is disease prevention**
- **Drug treatment reduces likelihood of HIV infection by 6 fold in injecting drug users**
- **Drug treatment presents opportunities for screening, counseling, and referral**



Effectiveness of Treatment

- Goal of treatment is to return to productive functioning
- Treatment reduced drug use by 40-60%
- Treatment reduces crime by 40-60%
- Treatment increases employment prospects by 40%
- Drug treatment is as successful as treatment of diabetes, asthma, and hypertension



Self-Help and Drug Addiction Treatment

- **Complements and extends treatment efforts**
- **Most commonly used models include 12-Step (AA, NA) and Smart Recovery**
- **Most treatment programs encourage self-help participation during/after treatment**



Cost-Effectiveness of Drug Treatment

- Treatment is less expensive than not treating or incarceration (1 yr methadone maintenance = \$4,700 vs. \$18,400 for imprisonment)
- Every \$1 invested in treatment yields up to \$7 in reduced crime-related costs
- Savings can exceed costs by 12:1 when health care costs are included
- Reduced interpersonal conflicts
- Improved workplace productivity
- Fewer drug-related accidents

For More Information

NIDA Public Information Office:

301-443-1124

Or

www.nida.nih.gov

www.drugabuse.gov

**National Clearinghouse on Alcohol and
Drug Information (NCADI):**

1-800-729-6686