

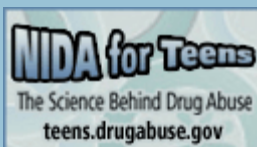
CONCEPT HOUSE, INC.

# CONCEPT HOUSE, INC.

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WORKING FOR OUR COMMUNITY SINCE 1970

LINKS:



This Issue:

- Alcohol Abuse Can Damage The Brain
- 7 Questions From Adolescents About Drugs and Alcohol

Concept House received a Certificate of Appreciation from The Eleventh Judicial Court of Florida

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## Alcohol Abuse Can Damage The Brain

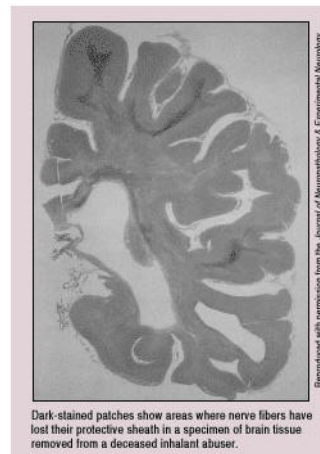
Article adapted by Medical News Today from original press release

Too much alcohol can cause permanent brain damage, such as Wernicke-Korsakoff syndrome, which is largely related to thiamine deficiency. Previous animal studies have shown that alcohol can also cause brain injury and degeneration by inhibiting insulin and insulin-like growth factor (IGF). A new study using postmortem human brain tissue has found that chronic alcohol abuse can decrease levels of genes needed for brain cells to respond to insulin/IGF, leading to neurodegeneration similar to that caused by Type 2 diabetes mellitus. Results will be published in the September issue of *Alcoholism: Clinical & Experimental Research* and are currently available at OnlineEarly.

"Insulin is one of the most important hormones in the body," said Suzanne de la Monte, professor of pathology/ neuropathology and clinical neuroscience at Rhode Island Hospital and the Warren Alpert School of Medicine at Brown University. "It has many functions, including regulation of metabolism. Cells throughout the body depend upon insulin just to stay alive and carry out 'ordinary daily functions.' The best known diseases associated with abnormalities in insulin's availability or actions are Type 1 and Type 2 diabetes." De la Monte is also the study's corresponding author.

During the past several years, she added, there has been growing interest in insulin's effects on brain function. Scientists now believe that deficiencies in insulin, and the loss of brain cells' ability to respond to insulin, are critical factors leading to neurodegeneration, including Alzheimer's dementia. Alcohol may exacerbate the problem.

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Dark-stained patches show areas where nerve fibers have lost their protective sheath in a specimen of brain tissue removed from a deceased inhalant abuser.

## 7 Questions From Adolescents About Drugs and Alcohol

Article adapted from U.S News Posted April 25, 2008

The [National Institute on Drug Abuse](#) recently offered adolescents the first ever "[Drug Facts Chat Day](#)." Students from high schools and middle schools across the country submitted anonymous questions online—about alcohol, the brain, addiction and everything in between—to NIDA scientists, including some of the nation's top experts in substance abuse. The scientists then responded with personalized, nonjudgmental answers. Below is a sample of the inquiries that relate specifically to **drugs and sex**. All the questions and answers below are unedited.

Among the scientists were [Nora Volkow](#), director of NIDA; Steve Gust, director of NIDA's international program, research and training activities; Nicolette Borek, a NIDA psychologist in the Division of Clinical Neuroscience and Behavioral Research who oversees research on how exposure to drugs of abuse during the prenatal period affects a baby's brain and behavioral development; Marsha Lopez, an epidemi-



Caption describing picture or graphic.

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Caption describing picture or graphic.

## From story 1

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During the past several years, she added, there has been growing interest in insulin's effects on brain function. Scientists now believe that deficiencies in insulin, and the loss of brain cells' ability to respond to insulin, are critical factors leading to neurodegeneration, including Alzheimer's dementia. Alcohol may exacerbate the problem.

"Alcohol is a toxin that clearly can injure or kill brain cells," de la Monte said. "Fortunately, alcohol has to pass through the gastrointestinal tract and liver where enzymes detoxify alcohol, and consequently reduce the levels that reach the brain. However, in either high concentrations, or at lower levels over a longer period of time, alcohol will dissolve some of the lipid in the cell's membrane." This is where insulin and IGF receptors normally sit, in the cell's membrane, waiting to initiate a signal that tells the cells to make more energy. Earlier animal and tissue research showed that alcohol-related damage causes insulin and IGF receptors to become less accommodating, and the signals needed for cells to increase energy production and stay alive instead become weak and ineffective.

For this study, researchers examined brain tissue from six male chronic alcoholics with a mean age of 57.7 years, and six male "controls" without alcoholism with a mean age of 57.5 years, provided through the New South Wales Tissue Resource Centre at The University of Sydney. Two brain regions were selected for study - the cerebellar cortex in the anterior superior cerebellar vermis region, and the anterior cingulate gyrus in the frontal lobe - as they represent major targets of alcohol's neurotoxicity.

Our study of human alcoholic brains is really the first of its kind, where we were able to study the effects of chronic alcohol abuse on brain degeneration," said de la Monte. "The subjects had all signed up to donate their brains, and they were included only if alcohol was the only drug used in life."

The results showed that in chronic alcoholics' brains, there was significant insulin and IGF resistance in those regions known to be highly sensitive to alcohol's toxic effects.

"Insulin and IGF resistance in the cerebellum and frontal lobe was associated with loss of neurons and their connections, and decreased levels of neurotransmitters needed for learning, memory, and motor function," said de la Monte. "The damage that we saw in the cerebellum would account for the poor balance, and increased rates of falling and trauma we see in alcoholics. The insulin and IGF resistance in alcoholics' frontal lobes would account for their associated problems in memory."

De la Monte added that the insulin resistance their study found was quite similar to what happens in Type 2 diabetes, which means that alcoholic brain disease may be treatable in part by use of drugs that make brain cells more responsive to insulin and IGF.

Public-health warnings about problems associated with alcohol abuse are fairly prevalent today, but the major emphasis seems to be on the short-term effects related to impairments that cause accidents and promote violence," said de la Monte. "Most people also seem to know that alcohol abuse damages the liver. What I believe is not well known to the public is that, over the long haul, heavy drinking will permanently damage the brain and cause dementia. Some of the dementia is certainly related to a lack of thiamine, also known as Vitamin B1, however, in the majority of cases, thiamine deficiency is not the principal problem. Our study indicates that chronic alcohol abuse causes a Type 2 diabetes effect in certain brain regions."

## 7 Questions About Sex and Drugs

ologist at NIDA's National Advisory Council on Drug Abuse who has expertise in behavioral pharmacology, drug epidemiology, and co-occurring psychiatric conditions as they relate to drug use; Jacques Normand, who is responsible for planning, developing and coordinating all the HIV/AIDS research at NIDA; and Steve Grant, a neuroscientist who investigates cognitive processes in addiction. —Compiled by Sarah Baldauf

### 7 Questions Teens have about Sex and Drugs:

**jwphealth** - *high school* - can drugs cause std's

**Nora V.** - when you are intoxicated with drugs you are much more likely to have unprotected sex and thus increase your risk for a sexually transmitted disease including HIV. You can find information for young people, parents and teachers about the link between drug abuse and HIV infection, with links to the latest research findings and news updates at <http://www.hiv.drugabuse.gov>.

**luvsmusic4life** - *middle school* - I once saw on a show that if a kiss someone on the cheek or hug them you can't get HIV from them. Is that true?

**Steve G.** - In order for HIV to be transmitted there needs to be the exchange of bodily fluid. It is not possible to spread HIV through casual contact like hugging or kissing on the cheek, as long as blood, saliva, or other bodily fluids are not shared. For more information on HIV, visit <http://www.hiv.drugabuse.gov>.

**hi** - *Std's* - Why do drugs increase your likeliness of having unprotected sex?

**Nicolette B.** - Drugs can increase your likelihood of having unprotected sex since drugs impact the brain circuitry associated with decision making...we sometimes say drugs can 'hijack' the circuitry. You can find information for young people, parents and teachers about the link between drug abuse and HIV infection, with links to the latest research findings and news updates at <http://www.hiv.drugabuse.gov>.

**Jessica something 1** - *Jr high* - What Is Date Rape?

**Marsha L.** - Date rape is a forced, unwanted sexual contact from someone you know and/or thought you could trust. A number of drugs have been used in date rape because they can be slipped into someone's drink and have no taste or smell; some of these are ketamine, rohypnol and gamma hydroxybutyrate (GHB). If you have experienced any sexual assault you can call a 24 hour help line for assistance 1-800-333-4444, and some more information on date rape can be found at <http://www.clevelandclinic.org/health/health-info/docs/0600/0613.asp?index=4538>.

**nicci13** - *eastern* - when you do drugs do you mess up your sex life?

**Jacques N.** - Drugs definitely influence your judgement and inhibition putting you at risk for sexually transmitted diseases as well as sexual violence. Please go to the following link to learn more about the relationship between drug use and HIV infection. <http://WWW.HIV.drugabuse.gov>

**Jesslca SOMeTHing** - *Jr. High* - What are Date Rape Drugs??

**Marsha L.** - A number of drugs have been used in date rape because they can be slipped into someone's drink and have no taste, smell, or color; some of these are ketamine, rohypnol and gamma hydroxybutyrate (GHB). If you have experienced any sexual assault you can call a 24 hour help line for assistance 1-800-333-4444, and some more information on date rape can be found at <http://www.clevelandclinic.org>

**lexiepooh714** - *clay high school* - how much drugs do you have to take in order for the drugs to affect your baby while you are pregnant

**Steve G.** - Not much, but it depends on which drug and how early or late in pregnancy you take it. In general, the earlier in pregnancy you take a drug, and the longer you keep taking drugs the more your baby will be affected. Alcohol is particularly harmful and opioid drugs (heroin, oxycotin and other prescription pain killers) might lead your baby to have withdrawal symptoms after birth. To learn more, check out "The Science of Addiction" at <http://www.nida.nih.gov/scienceofaddiction>.

**For more information on alcohol abuse, go to the National Institute on Alcohol Abuse & Alcoholism at <http://www.niaaa.nih.gov/>**

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South Florida  
KKDF Prevention Center

**Story 1 continue**

## Concept House A Comprehensive Behavioral Health Care Program



### Back Page Story 1

De la Monte recommended that readers who are concerned about family or friends having problems with memory or behavior, and are concerned about dementia, to consider prior drinking habits and report this to a professional if warranted. "All dementias are not caused by Alzheimer's disease," she said.

"Alcohol is a toxin that clearly can injure or kill brain cells," de la Monte said. "Fortunately, alcohol has to pass through the gastrointestinal tract and liver where enzymes detoxify alcohol, and consequently reduce the levels that reach the brain. However, in either high concentrations, or at lower levels over a longer period of time, alcohol will dissolve some of the lipid in the cell's membrane



Nick Koenig our Executive Director and Judge Sheldon R. Schwartz during Concept House Inc. recognition on May 28, 2008

Partially Funded by:



Board Member





## Schedule of Events

- June 28 Health Fair by Project hope co-sponsored by Health Connect and Economic Opportunity Family Health Center
- Concept House will collaborate with H.O.P.E. Miami Beach helping homeless in the area.

## Upcoming Events

- September 27 TANF Coalition Picnic
- September 15-17, 2008 Tampa, Florida 3rd National Conference on Women, Addiction and Recovery: Inspiring Leadership, Changing Lives **SAVE THE DATE!**



**JUNE 2008**

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
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