

AMPHETAMINES

Introduction:

Amphetamines belong to a group of drugs called *psychostimulants*, which are a central nervous system stimulant. They speed up the messages going to and from the brain and body. Most amphetamines are produced in “backyard” laboratories and sold illegally. It is available in many different forms and may be identified by color. The colors can range from white to orange to darker colors such as purple and brown. Amphetamine causes increased activity and talkativeness, reduced appetite, and a general sense of well-being. People who buy amphetamines illegally are frequently buying the drugs mixed with other substances that can have horrible or harmful effects. Effects of large doses can cause a fever and sweating, dry mouth, headache, paleness, blurred vision, dizziness, irregular heartbeat, tremors, loss of coordination, and collapse. Long-term effects include tolerance and dependence, violence, aggression, and malnutrition due to failure of appetite. I choose this topic because I never understood what amphetamines were, but I knew that they were very common in our society. I hope to learn and obtain enough knowledge to understand the harm and effects of amphetamines.

Section 1: Background and Problem Statements

FDA Government: Amphetamine

http://www.fda.gov/MEDwatch/safety/2005/aug_PI/Adderall_PI.pdf

I found that this article was very lengthy and wordy. Although, it did help me understand the key ingredients and the amount of milligrams each amphetamine tablet contains. Otherwise, I felt that there was too much information given and most of it I could not comprehend.

MedlinePlus: Amphetamines

<http://www.nlm.nih.gov/medlineplus/clubdrugs.html#cat59>

This Web site was not helpful at all. The link for Amphetamines gave me all information on “Club Drugs”. There was also a lot of information on methamphetamines. This site was very easy to use and to understand but not informative. I was very disappointed that they said they had information on Amphetamines, but there really wasn’t any.

Street Drugs

<http://www.streetdrugs.org/amphetamine.htm>

This Web site explained shortly and sweetly, the history of amphetamines. It explained what the drug used to be used for and how we use it today. The site also explained signs of overdose and withdrawal effects. I liked this Web site even though it was small, it gave very clear information.

<http://faculty.washington.edu/chudler/amp.html>

This Web site was very informative on how amphetamines affect our nervous system. I thought that the information was interesting, but I did not like how small this Web site is. It basically just explained the long and short term effects of amphetamines.

Section 2: Research

Behavioral variables affecting the development of amphetamine tolerance

<http://www.springerlink.com/content/w72m102714q34k57/>

Research: The behavioral effects of chronic administration of d-amphetamine in rats at a dosage of 1 mg/kg were studied with baselines involving either food or shock reinforcement.

Results: The development of behavioral tolerance to amphetamine administration to be a function of the drug's action in relation to its effects on the organism's behavior in meeting reinforcement requirements.

Severity of dependence and route of administration of heroin, cocaine and amphetamines

<http://www3.interscience.wiley.com/journal/119335371/abstract>

Research: This study investigates severity of dependence upon heroin, cocaine and amphetamines in a group of 200 heroin users, 75% of whom were not in contact with any treatment agency.

Results: For amphetamine, there were no differences in severity of dependence ratings for injection, intranasal or oral use. Severity of dependence was correlated with dose and duration of drug use; it was also associated with previous attendance at a drug treatment agency, though dependence problems were also common among heroin users who had never received treatment. Implications of these findings are discussed.

Mechanisms of Amphetamine Action Revealed in Mice Lacking the Dopamine Transporter

<http://www.jneurosci.org/cgi/content/abstract/18/6/1979>

Research: Amphetamine (AMPH) inhibits uptake and causes release of dopamine (DA) from presynaptic terminals. AMPH can act on both vesicular storage of DA and directly on the dopamine transporter (DAT). To assess the relative importance of these two processes, we have examined the releasing actions of AMPH in mice with a genetic deletion of the DAT.

Results: Findings suggest that in the absence of pharmacological manipulation, such as the use of amphetamine, endogenous cytoplasmic DA normally does not reach sufficient concentrations to reverse the DAT

Synaptic plasticity and drug addiction

http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6W7F-4F29SH9-1&_user=843411&_rdoc=1&_fmt=&_orig=search&_sort=d&_view=c&_version=1&_urlVersion

[=0&_userid=843411&md5=361e3c179596a54a9d269ecd875ed271](#)

Research: Recent studies have suggested that the development of addictive behaviors shares common features with traditional learning models

Results: We hypothesize that drug-induced synaptic plasticity might play a role in reward-related learning and addiction by modifying the fine-tuning of dopaminergic cell firing.

Section 3: Statistics

<http://www.gdcada.org/statistics/amph.htm>

I found that these statistics were very clear, to the point, and easy to understand. The most interesting one I thought was: an estimated 13 millions Americans use amphetamines without medical supervision.

http://www.wrongdiagnosis.com/a/amphetamines/stats.htm#medical_stats

This Web site was not helpful at all because it only gave statistics from Australia. I did think that this was out of the ordinary: 8.4% of teens reported some lifetime use of amphetamines in Australia 2001.

<http://www.pbs.org/wgbh/pages/frontline/shows/medicating/drugs/stats.html>

I thought that this Web site was very helpful because of all the graphs and maps. I'm more of a visual learner so Web sites like this are very useful to me. I found out that amphetamine prescriptions, primarily Adderall, have increased dramatically recently, from 1.3 million in 1996 to nearly 6 million in 1999.

<http://www.oas.samhsa.gov/2k4/methTX/methTX.htm>

This was another really good Web site. It had a lot of important statistics on amphetamines and used different visuals such as charts and graphs. I learned that in 1992, 12 percent of primary methamphetamine/amphetamine admissions reported smoking as the primary route of administration, but by 2002, 50 percent did (Smoked methamphetamine/amphetamine is often referred to as "ice.")

Section 4: Consumer Information

<http://www.consumerreports.org/health/best-buy-drugs/adhd.htm>

This Web site was great for consumers who have ADHD or children with it. It showed different affordable drugs that help treat ADHD. Their monthly cost ranges from \$10 to \$86.

<http://www.druglibrary.org/Schaffer/LIBRARY/studies/cu/CU36.html>

This site would be helpful for consumers who are thinking of taking amphetamines. It explained the different effects and how it compares to cocaine.

http://www.ndri.curtin.edu.au/pdfs/ats/consultation_paper_final.pdf

This Web site is great for people who are taking amphetamines and for those who may want to. It discusses different issues, treatments, and preventing/producing problems. What I found interesting was all the law enforcement they explained about amphetamines.

http://www.crimecommission.gov.au/content/publications/aidr_2002/04_Amphetamines.pdf

This Web site was very long (16 pages), but very informative. This Web site would be very useful for research consumers. The site gives all different facts and information on distribution of amphetamines throughout the world. Some topics that are discussed include availability, price, purity, and user patterns.

Conclusions:

Section 1 Background Statement:

Best Web site

<http://www.streetdrugs.org/amphetamine.htm>

I thought that this Web site gave great background information on topic. It gave a few important key facts that really explained amphetamines.

Worst Web site

<http://www.nlm.nih.gov/medlineplus/clubdrugs.html#cat59>

This site was useless and a waste of time. It gave me no good information on amphetamines.

Section 2: Research

The research that has been done on amphetamines mainly is comparing it to other drugs such as heroine and cocaine. Also, trying to figure out what makes people so addicted and dependent on these drugs.

Section 3: Statistics

Most of these Web sites taught me different interesting statistics on amphetamines. Here are some key statistics that I thought were fascinating. Approximately 15% of 10th and 12th graders

surveyed had ever used amphetamines without a prescription. The top five ranking states in 1999 for methylphenidate and amphetamine use were: New Hampshire (5,525 grams per 100,000 population); Vermont (5,005); Michigan (4,848); Iowa (4,638); and Delaware (4,439). I think that the statistics were some of the most beneficial information I received.

Section 4: Consumer Information

I thought that all four of the consumer Web sites I found were filled of good information. Each of the Web sites had their own way of presenting the information. They explained which amphetamines are good for ADHD and the effects of taking these pills.

After I graded all my Web sites, I wish that I had found ones I was more understanding of. In my opinion, I would say that 10 out of the 16 were good.

Back to Betty C. Jung's Web site	http://www.bettyjung.net/
Back to Web site Critique Reports Directory	http://www.bettyjung.net/Pch201wsreports.htm

The Effects of Amphetamines (Class Handout)

- After I found 4 different Web sites about the background/ problem information of amphetamines, the best site was, WWW.StreetDrugs.org

This Web site provided clear information, was very short, and to the point.

- The Web site that I thought was most helpful for researching was,

<http://www3.interscience.wiley.com/journal/119335371/abstract>. This site

investigated the severity of amphetamine dependence only using a short article. It was very easy to read and understand.

- The Web site that was best for statistics I felt was, www.PBS.ORG.

<http://www.pbs.org/wgbh/pages/frontline/shows/medicating/drugs/stats.html>.

Besides giving good facts, there were also different graphs and charts, which made the information very clear.

- The Web site I found to be the best for consumer information was,

http://www.ndri.curtin.edu.au/pdfs/ats/consultation_paper_final.pdf. The Web site

explained all the different issues, treatments, and preventing the problems of amphetamines.