

# Bright Students with a Dark Future

by Nancy Speelman Edwards

Did you know that approximately 80% of adult smokers began smoking before the age of 18, or that everyday, nearly 4,000 young people under the age of 18 try their first cigarette? The tobacco industry is well aware of these statistics and lures prospective clients to use their products at an early age. They know that once teens start smoking, they will most likely continue for years until they are forced to stop due to illness or death. Tobacco addiction is the most common addiction in the United States, and in 2000, the Surgeon General labeled cigarette smoking as a pediatric disease.

As a result of the Master Settlement Agreement, a major lawsuit against major tobacco companies, in 1998 the tobacco industry agreed to no longer directly market to youth. Clever as they are, they switched their focus to college age students. They do this through sponsoring large events/parties on campuses and give away "free cigarettes and other promotional items." They even pay large sums of money to actors/actresses - including those that do not smoke, but have a strong influence on our youth - to "light up" on screen! Strategic signage placement is another common tactic. We all know that an adult smoker, looking to buy cigarettes, will find them with or without in-store advertisement. Yet, have you ever walk into a convenience store and notice where the signs are placed for cigarette products? Right next to the cash register, where everyone can see and sometimes even low enough for a two year old to read! The fact is, the more a store sells...the less it cost them to buy the product. Additionally, incentives are offered for placing the tobacco industry's marketing signs/displays in strategic places.

In 2003, The Tobacco Dependence Program at UMDNJ-School of Public Health was given the task of creating a new program to help students quit smoking through a grant from the NJ Department of Health and Senior Services. This new curriculum challenges youth to think about their smoking by telling them the truth about their tobacco use, incorporating life skills, and, most of all, ruining their smoking experience by getting them angry at the industry for lying to them and looking at topics that hit home with teens. Through introducing various topics each week and providing a support group within the school setting, our latest research shows that 90% of the students who participate reduce their tobacco use.

In our work with student assistance counselors, school nurses, teachers, REBEL students and coordinators, it is all too common to hear "nobody cares about smoking in our school, we have bigger problems... cocaine... heroin... gangs", "teachers turn their heads", "administration doesn't enforce or there are

punitive responses", "students are fined...but it is their parents that end up paying", "staff smoke with students", "many times it is the parents who buy their teens cigarettes to avoid another fight with them", or "I feel like I am the only person in the whole school fighting this battle".

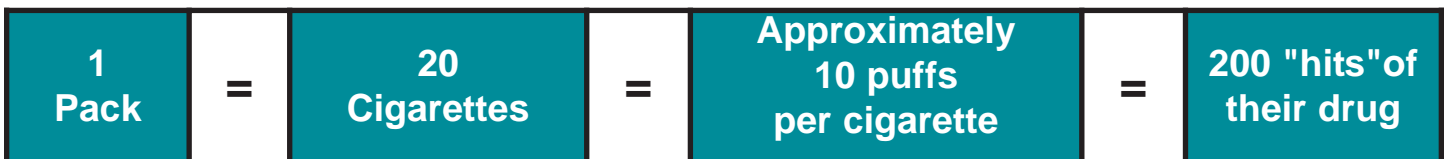
As outrageous as some of these statements may sound, we hear them all too often. Unfortunately, due to lack of current knowledge on the part of school administrators and staff it is understandable why with the "No Student Left Behind" laws everyone is busy tending to their own domains in their school. English teachers care about teaching English, Math teachers care about Math, etc. But smoking directly effects learning! Maybe it's time for schools to take students smoking more seriously and not just write it off as another passing adolescent phase. Understanding tobacco dependence and how it is not "just a habit" but a "chronic addiction" that effects learning may help motivate school professionals to focus on helping their students quit.

We must also emphasize tobacco's role as a gateway drug among young people. The fact is, the adolescent whose drug involvement progresses to substance abuse typically begins with legally available drugs such as alcohol and tobacco, before progressing to marijuana use, and eventually to other drugs or combinations of drugs such as heroin, cocaine, and ecstasy. Polydrug use is more common among adolescents than adults. In fact, among smokers 12 to 17 years of age, two-thirds have also used an illegal drug, and, among those smoking more than one pack per day, eighty percent have used an illegal drug. (NIDA, Diagnosis & Treatment of Drug Abuse in Family Practice, Morrison MA. Addiction in adolescents. West J Med 1990;152:543-46).

**So how can we expect a student to focus on their studies, when clearly the diagnostic criteria for someone experiencing nicotine withdrawal include difficulty concentrating/attention problems, restlessness, and frustration?** These symptoms may begin within a few hours after their last cigarette, forcing students to focus not on their schoolwork, but on where and how they will get their next "hit" of nicotine. And when students get their "hit," the symptoms go away, and they quickly learn that a drug relieves their symptoms. In addition to the pharmacological effects of nicotine, many behavioral factors can also affect the severity of withdrawal symptoms. For some, just the smell and sight of a cigarette reinforces the pleasurable effects of smoking and can make withdrawal or craving worse.

Most students do not know that there are over 4000 chemicals in tobacco smoke, 60 of which are carcinogens...cancer causing!

*continued on next page*



*continued from previous page*

Some occur from the process of drying and curing tobacco. Some are added by the tobacco industry to enhance cigarette flavor and function and to increase the body's absorption of - and addiction to - nicotine. Some occur from the burning process (like carbon monoxide). Whether it an adolescent or an adult smoker, nicotine is the active ingredient in cigarettes which causes the addiction to occur. It activates the reward pathway in the brain, similar to other drugs of abuse. Recently, NIDA-funded researchers have shown in animals that acetaldehyde, another chemical constituent of tobacco smoke, dramatically increases the reinforcing properties of nicotine and may also contribute to tobacco addiction. In addition, the investigators further report that this effect is age-

**The American Psychological Association Diagnostic Criteria for Nicotine Withdrawal includes:**

- A) Daily use of nicotine for at least several weeks.
- B) Abrupt cessation of nicotine use, or reduction in the amount of nicotine used, followed within 24 hours by four (or more) of the following signs:
  - Dysphoric or depressed mood
  - Insomnia
  - Irritability, frustration, or anger
  - Anxiety
  - Difficulty concentrating
  - Restlessness
  - Decreased heart rate
  - Increased appetite or weight gain
- C) The symptoms in Criterion B cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- D) The symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

related, with adolescent animals displaying far more sensitivity to this reinforcing effect, suggesting that the brains of adolescents may be more vulnerable to tobacco addiction. In our Youth Quit2Win Program, we have found that many students were smoking at the same rates as adults; however, it is important to note that current tobacco cessation medications are not approved for people under 18 unless under the direction of a prescribing physician.

In conclusion, we have found that talking to a teen about how tobacco use can kill them in the future is not what hits home. Giving them the facts about what is used to make cigarettes, how the industry lies to them, how it affects their looks and sexual responses has far more impact! Adding life skills to the Youth Quit2Win curriculum, which teaches students to cope with stress and peer pressure, fosters independence, and promotes healthy decision-making, has also shown to be effective.

For more information about the Youth Quit2Win Program, check our website at [www.tobaccoprogram.org](http://www.tobaccoprogram.org) or contact Nancy Speelman Edwards by phone 732-235-8218 or email [nancy.speelman@umdnj.edu](mailto:nancy.speelman@umdnj.edu).

## **A Student's Perspective**

*by Amy Schmelzer, B.A.*

I am a full-time UMDNJ student completing a Masters of Science program at the Graduate School of Biomedical Science in Newark. I will graduate in May 2008 with my MS in Biomedical Sciences. Concurrently, I am obtaining my Masters in Public Health at the New Brunswick/Piscataway School of Public Health, concentrating in Health Education and Behavioral Science. Prior to graduate school, I attended Rutgers College and graduated with a BA in Cell Biology and Neuroscience with a minor in Psychology. After completing the MS and MPH programs, I hope to attend medical school and apply my education and work experience towards effectively communicating with and educating patients on the many behavioral decisions that impact their health. After learning about the dangers of smoking during my time here at the Tobacco Dependence Program, educating patients on the negative health implications of continued tobacco use will remain a top priority in my future healthcare endeavors.

I have been assisting Dr. Michael Steinberg, MD, MPH on two smoking cessation studies. The first study is an outpatient study investigating the efficacy of combination pharmacotherapy in medically ill smokers. The second study is an inpatient study conducted at Robert Wood Johnson University Hospital using Chantix (varenicline). After working with these groups of patients, I have experienced the importance of educating and supporting medically ill smokers during the process of quitting smoking and witnessed first-hand that even medically ill smokers can be successfully treated as outpatients or inpatients for tobacco dependence. Furthermore, I have seen how each study highlights the medical necessity of successfully quitting in those patients already experiencing the damaging effects of continued tobacco use.

In addition to my research contributions at the Program, I recently started assisting the Training and Education team in coordinating the 5-day Certified Tobacco Treatment Specialist (CTTS) training. Trainings are held at least four times per year, attracting healthcare professionals from around the world. After course completion, CTTS training participants are well-prepared to treat tobacco dependence in patients using evidence-based treatment. After completing the training myself, I have a much better understanding of the tobacco field as well as the tobacco dependence addiction chemistry, program development, and treatment options available to help smokers quit.

Working at the Tobacco Dependence Program has been a great experience. I have learned so much about the public health and tobacco industries working alongside the top professionals in the field. Staff members are extremely helpful, informative, and dedicated to the best patient care for their clients. The knowledge gained during my time at the Tobacco Dependence Program will further enhance my future career goals of becoming a physician and public health researcher. Treating smokers both before and after the development of smoking-related illness is essential in providing the best medical care for the patient and should be a top priority for all physicians.