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Babies Deserve A Good Start! Alcoholism: A Three Fold Disease

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Alcoholism is a disease that can destroy individuals physically, mentally, and spiritually, affecting anyone close to the alcoholic. It is cunning, baffling, and powerful. As a Health/Science teacher, I encounter many children damaged by the disease. The purpose of this unit will deal with the disease itself, the genetic research surrounding alcoholism, consequences of extensive drinking with an emphasis on Fetal Alcohol Syndrome, and the help one can receive in the New Haven community. This unit is designed to provide knowledge, awareness, and help for students. It can be taught at all grade levels by deleting or adding information at the teacher's discretion. It will consist of subject content, lesson plans, a student's reading list, a teacher's reading list, referral services, and bibliography.

Objectives

The student will:

1. Understand the basic disease concept of alcoholism.
2. Know that alcoholism is progressive and understand the levels of progression.
3. Name the three factors contributing to the cause of alcoholism and be able to explain each one with examples.
4. Be able to give examples of the influence that advertising has in the promotion of drinking alcohol.
5. Explain the composition of a cell and its inherited parts from the male sperm and female egg.
6. Understand the basics of heredity.
7. Be able to name physical complications associated with the disease of alcoholism.
8. Define and discuss Fetal Alcohol Syndrome.
9. Understand some of the scientific findings regarding genetics and predisposition of alcohol.
10. Be aware of the signs of alcohol abuse and know where to go for help.
11. Know specific community facilities in New Haven that can provide services for teenagers having questions or needing support.
12. Be aware of healthy alternatives so that drinking is not an option.

Introduction

Unfortunately, many misinformed people still feel that alcoholism can be prevented entirely through “will power”. They also believe that a person is “weak” if he* becomes alcoholic. No one wants the disease. One does not suddenly wake up and say, “Gosh, I have nothing to do today . . . think I’ll become an alcoholic:” One does not “will” diabetes. Once someone has it, there are things that can be done to control it, but it cannot be cured. The same holds true for the disease of alcoholism. This project will shed light on a very sensitive topic in a factual, non-threatening style so that each student completing the unit will have a deeper understanding about the dynamics of an often misunderstood disease. They will be able to clearly see that they have choices, decisions to make, and dilemmas to solve. My students are middle school age, a period of constant change and confusion for most adolescents. Many of them become parents not realizing the impact alcohol can have on the fetus. This project will tie some of the pieces together and clarify areas that have lead to much bewilderment.

Part 1—Alcoholism

Facts

Alcohol can affect the liver through a disease known as cirrhosis, a progressive, fatal illness. Half the patients diagnosed with cirrhosis will die within five years unless they cease drinking. It claims more than 14,000 deaths per year. ¹

Alcohol abuse costs Americans 116.7 billion dollars per year due to insurance premiums, medical care, business losses, incarceration, and prosecutions. ²

There are more than 7,000 alcohol treatment programs in the United States. ³

Alcoholism kills between 100,000 and 200,000 annually ⁴.

Seven million children below the age of 18 live in alcoholic homes, and nearly five million teenagers (three in ten) have drinking problems. ⁵ These are staggering facts that cannot be ignored. With most of the emphasis today on drug abuse, many people are not looking at the number one drug of choice. . . . alcohol:

How Much Is Too Much

The basic difference between the social drinker and the alcoholic is the way he drinks and the effect alcohol has on him. How much a person consumes is not the determining factor. An alcoholic might not have drink for a month, but when he does, he cannot stop. A social drinker could have a drink a number of times per week. That does not make him alcoholic. A problem drinker drinks to escape from unpleasant realities whereas the social drinker drinks to complement an event. The alcoholic becomes both physically and psychologically addicted to alcohol. The social drinker does not.

Alcoholism Is Not Discriminating

The disease does not care if you are black or white, fat or thin, poor or rich. Alcoholism hits people of all races, religions, and creeds. Women are as prone as men. Age is not a factor. One can become alcoholic at 15 or 70.

How Does One Become An Alcoholic? The Disease's Progressions

Some people say they were alcoholic after their first drink. Others say it came more slowly and started with social drinking, led to problem drinking, and then progressed to alcoholism. In the following paragraphs, the three stages will be described. In the first stage, blackout drinking may occur. A blackout is not remembering what you did while drinking. There are many inmates in prisons who have no recollection of events and the result was incarceration. Some robbed stores, others assaulted citizens, and, in the worst cases, victimized family members. Amazingly, there was no recall.

* For the sake of simplicity, "he" is used when referring to the alcoholic but it should be noted that "she" could easily be substituted. Another signal in the first stage is gulping drinks to get a "rush". Pre-drinking before parties or dinner engagements frequently occurs. Sneaking drinks and stockpiling liquor is common. People have been known to become quite ingenious when it comes to hiding bottles—storing them in the back of the toilet, in the bottom of laundry baskets, and even in a windshield dispenser on a car: The alcoholic, in the initial stage, feels guilty and knows that he is not drinking like others. When his friends are satisfied with a drink or two, it is merely a warm-up for him. More women are "closet" drinkers than men due to the stigma associated with "women drunks". A closet drinker hides her drinking from friends and family and sneaks drinks when no one is around.

The second stage of alcoholism shows an increase in a person's desire to drink, yet there is still some ability to stop. Friends and family are now noticing signs of a problem. The problem drinker can still function at work but absenteeism is increasing. Very often he convinces his wife or children to make the "sick" call for him. These people become "enablers" because they help the alcoholic not face his own consequences. The enablers can become as sick or sicker than the alcoholic himself. The drinker is sure he can control his alcohol intake, stops for periods of time to prove to everyone that he does not have a problem, and then usually starts consuming alcohol again. He and his family become part of a never ending merry-go-round.

During the second stage, guilt and fear have set in. Remorse and defensiveness are becoming more common. The drinker feels sorry for himself and thinks that no one understands his problems. He blames the "boss", work, wife, children, in-laws, etc. The alcoholic looks at everyone else for causing his miseries and is incapable of seeing himself realistically. *Alcoholism is known as the disease of denial* .

The final stage is a heartbreaker. All control is lost. Daytime drinking is a habit and the alcoholic cannot function without it. Every waking thought is focused around the next drink. The body has now taken over and demands alcohol. The craving controls the drinker. Malnutrition sets in (drinking is much more important than eating and food takes away the high or feeling of euphoria. More and more alcohol is required to "feel good" as the body demands a greater amount. What was effective before in reaching that "high" no longer works.

Isolation and loneliness are common. The family avoids social occasions. Mood swings are drastic. Insomnia and panic attacks are symptomatic of the full blown alcoholic. He can't think clearly and has lost some of his memory. Fears increase. Paranoia and rages are frequent. In the very final stage, he can no longer control his shaking. Hallucinations are common. The brain starts to deteriorate. Suicide doesn't seem like a bad idea. Hope is gone.

When Does An Alcoholic Stop Drinking?

An alcoholic stops drinking when he has hit “bottom”. That bottom may have many different levels. Think of a ladder or elevator. If someone gets off at the first floor, he hasn’t lost much materially. He still has his job, wife, friends, and family. But he is in so much emotional pain that he has reached his particular bottom. Another person may get off at a lower lever where he has had to lose his job, home, and family. The third person may not ever be able to stop and ends up in prison, insane, or dead. Some feel it has to do with how badly a person wants to get better. Others say it takes a “spiritual awakening”. An alcoholic cannot get well without asking for help. Many are too sick to swallow their pride and say they are powerless over alcohol.

What Causes Alcoholism?

It is caused by three factors: 1) environmental, 2) psychosocial, and 3) predisposition. 1) *Psychosocial* dynamics influence how we look at ourselves. If a child sees loving parents in a safe nurturing surrounding, that child, in all probability, will grow up feeling good about himself. He’ll know that it’s okay to make mistakes. His dad means what he says. His mom doesn’t break her promises. The child feels secure and loved. In many cases, he will surround himself with similar friends. He has a fairly healthy sense of his identity and isn’t easily swayed when it comes to changing his values. To be popular (especially teen years), he may experiment with things that aren’t good for him but, generally, comes back on track.

The messages a child hears (whether direct or subtler) influences his thinking and self esteem. A positive value system helps a child discern right from wrong, how to say no instead of yes, and make good decisions by asking others for their opinions and advice. On the other hand, a youngster with negative psychosocial influences often times becomes a “people pleaser” in order to win friends because his self-esteem isn’t intact. That child will be more susceptible to things that make him “ feel good” (most of the time he is in emotional pain). He hasn’t been told that he’s important; he’s learned to survive alone (perhaps not physically but emotionally); he hasn’t felt the security of nurturing. The child from an alcoholic home has lived with mixed messages, poor role models, and the “no talk” rule (don’t think, don’t talk, don’t feel).

2) The *environmental* influence is as strong as the psychosocial in creating an alcoholic. Where a child was raised, and his surroundings, are crucial factors in his development. If he was raised in poverty but there was a solid foundation of love and structure, the child may turn out emotionally healthy. But if that same child had a negative environment and little nurturing, where positive messages about himself were rare, he will not be as prepared for the world. His insecurities will be greater than the average person and alcohol could easily become a crutch for painful emotions.

The psychosocial and environmental influences have a profound impact on a human being’s life. One of the areas which exploits this is advertising. Numerous ad agencies now hire psychologists as an integral part of their staff when designing ads and creating copy. Knowing what makes people tick is the difference between a successful advertising campaign and a flop. Advertising influences how we dress (look at designer labels’ popularity), where we go, how we eat, who we date (who looks the best), what we buy, how we think, styles of haircuts, body shapes, fitness trends, fashionable colors, and even the way our pets should look. Toddlers may not be able to read but they can certainly hum a jingle, recognize Micky D’s, want Addidas, and convince mom to buy Cocoa Puffs. Advertising cleverly uses the psychosocial dynamics and environmental influences to change the way we think.

Alcohol ads are some of the most popular in the country. In 1989, the TV ads voted the most popular by men were 1) Miller Lite, 2) Pepsi, 3) Bud Light, 4) McDonalds, 5) California Raisins, 6) Isuzu, and 7) Budweiser. ⁶

Women's favorites included Pepsi, McDonalds, California Raisins, Coke, Kodak, Michelin Tires, and Friskies Cat Food. ⁷ (Note: No Alcohol Ads:) By the age of 18, a child will have seen 100,000 beer commercials. ⁸ And yet, according to Reginald Smart in his article "Does Alcohol Advertising Affect Overall Consumption? A review of Empirical Studies", the amount of advertisements seen does not influence one's consumption. When advertising bans on alcohol took place, alcohol sales were not reduced. ⁹

3) The third cause of alcoholism is *predisposition*. Predisposition is having a tendency toward something. Many scientists feel that alcoholism is a trait that is inherited. Traits can be the color of your hair, the color of your skin, the shape of your nose, or your height. How can someone inherit his "father's hair" or "mother's body type"? The answer is in the nucleus of the cells. We are made up of thousands of cells. In each cell, there is a nucleus that contains a blueprint or direction guide which determines the size, shape, number of new cells and repairs for each cell. Inside the nucleus are threadlike parts called chromosomes which, in turn, are made up of genes (our actual blueprint or map). The study of genes is called *genetics*.

A child receives genetic information from each parent. During meiosis, the process in which chromosomes in a cell's nucleus are separated, each egg and sperm cell receives 23 chromosomes or one-half of the genetic material needed to create a new organism. A normal child receives 23 chromosomes from each parent, a total of 46 chromosomes. The father passes some of his traits to the offspring as does the mother. For instance, a mother may pass a gene for skin color to her child while the dad passes on his gene for skin color. The pairing of these two genes, called alleles, is the new genetic creation for the child (genotype). Genes define who we are.

Credit for much of this information goes to a great scientist. In 1865, a botanist Austrian monk named Gregor Mendel presented his theories of genetics to a group of scientists. Unfortunately, they dismissed his ideas and it wasn't until later that he was recognized. Through much laborious work, Mendel discovered that specific traits were passed from one generation to the next in a predictable, mathematical pattern. Through his research and study of plant growth and seed shape, Mendel deduced the following two laws of genetics:.

1. Mendel's First Law—A simple genetic trait is determined by a pair of separate factors (called alleles of a gene). An offspring will receive one allele from each parent. 2. Mendel's Law of Segregation—Paired alleles of parents segregate during the formation of egg and sperm cells so that only one of the two alleles is included in each egg or sperm. He worked with garden peas and discovered specific, predictable information. He found that some pea plants grow tall, other short. Mendel observed that when both pea plant parents were tall, the offspring was tall and, conversely, when both are short, the offsprings were short. He then mixed a tall plant and a short plant (hybrid). They produced tall plants because tall was a dominant (stronger) trait. Shortness didn't show up (a recessive trait). Then Mendel crossed two hybrid tall plants. They produced mainly tall plants (one out of four was short).

People and pea plants are different, yet similar. Their differences are obvious: one's a plant, the other a human being. Pea's grow from seeds that are planted in the ground. People grow from a female egg and a male sperm joining to form a single cell, the beginning of all human life. But pea plants and people are similar because they pass on traits to their offspring. As the pea plant passed on tallness in Mendel's experiment, a father can pass on tallness to his children.

Alcoholism, many believe, can be generational. Perhaps it's on the father's side. A child may have a greater chance of becoming alcoholic than someone who doesn't have a parent who's alcoholic. If that child never drinks, he will never have a problem, but if he does, the likelihood is greater than the child with no known

history in his family. The next section of this project will look at those findings.

Part II—Is Alcoholism Inherited?

Alcoholism runs in families. It was implied in the Bible. Plutarch and Aristotle discussed it, and the clergy and doctors alike in the nineteenth century said that yes, indeed, drunken fathers produced drunken sons. But is this true? Wouldn't it be a sorry state of affairs for a son to see his alcoholic father ruin his life and know that absolutely, he too will end up with the same demise: If that were the case, people wouldn't have any options when it came to alcoholism whatsoever: Their fate would be sealed. It is true that alcoholism is a family disease, but is it genetically created or environmentally induced and influenced? For most psychologists and sociologists, "running in the family" no longer implies inheritance.¹⁰

It does imply many other factors, such as one's environment. If a son sees his father drinking on a daily basis at the dinner table, he considers this "normal" behavior. When he does the same as an adult, he doesn't consider that to be alcoholic, yet it may be for both his father and himself. Is that genetic or environmental? "Familial" (family) is not the same as genetic. My father spoke English and so do I. It is "familial". I learned it because of my environment. Many children learn about drinking from parents. Non-genetic factors play a major role in the study of alcoholism. Cultural differences, attitudes toward drinking, finances, life's events, one's vocation, and peer group, all influence how we feel about alcohol consumption.

Someone may be born a certain way but that may not be genetic either. Remember that genes are present when life starts (conception) and that 23 chromosomes are from the mother's egg and 23 are from the father's sperm to create 46 chromosomes. Those chromosomes are made up of thousands of genes. Everyone has a unique composition and no two people are exactly alike. (Even identical twins may have differences due to the environment.)

How can someone be born a particular way but it's not caused by genes? It means that there were other influences. For example, an FAS (Fetal Alcohol Syndrome) baby isn't genetically malformed—it can't be passed on to the next generation. But an FAS baby is physically impaired due to the mom's drinking while she was pregnant. The "other" influence was alcohol.

Scientific research has come to a number of different conclusions. There does seem to be a tendency for alcoholism to run in families and some people are more susceptible toward the disease than others. As far as pinpointing a specific gene that causes alcoholism, it has yet to be proven absolutely even though one has been possibly suggested.*

There have been hundreds of studies trying to prove the genetic factors behind alcoholism but many have been non-conclusive due to uncontrollable variables. The most accurate findings to date are three groups of studies: Twin studies; family studies; adoption studies.

Family studies have revealed that there is a three to four times greater risk to sons and daughters of alcoholics to become alcoholic than to other primary psychiatric diseases.¹¹ However, since many children are raised by their biological parents, it was important to study children adopted out to non-biological parents, so the findings wouldn't be influenced by the environmental factors.

Dr. Goodwin, one of the foremost researchers in the area of alcoholism and genetics, has done numerous studies of Dutch adoptees. The reason he chose the Dutch is that they have very accurate records about children and their biological parents. His finding revealed a threefold to fourfold higher risk for alcoholism in adopted out sons even though they were raised by non-alcoholic adoptive parents. ¹² It was no different than their brothers who were raised by alcoholic biological parents. This type of evidence shows there is a strong implication that heredity plays a major role in the disease. In contrast, Dr. Roe found good foster placement was associated with non alcohol abuse in all but one of 27 children of alcoholic parentage and in all but two of 22 children of normal parentage. ¹³

The inheritance of alcohol abuse was studied in 913 Swedish women adopted by nonrelatives at an early age. There was three times the alcohol abuse among the adopted daughters of alcoholic biological mothers compared with other daughters from non-alcoholic biological mothers. ¹⁴

In addition to studying adoptees, another method for evaluating whether genetic factors predispose people to alcoholism is to compare identical twins with fraternal twins when at least one of the twins is alcoholic.

* See review of N.Y. Times Article, April 18, 1990 and JAMA, April, 1990, Noble & Blum A Swedish study was conducted by Lennart Kaij, involving 174 male twins. With identical twins, 54 percent were concordant for alcoholism whereas it was greatly reduced for fraternal twins (28 percent). ¹⁵ There have been many other studies in the area of twin research. In Finland, Dr. Partanen studied 902 male twins and found the amount of drinking and frequency of drinking of the identical twins was much greater than the fraternal twins (suggesting genetic influence). (Note: Identical twins have the same genes; fraternal twins don't.) ¹⁶

The third type of study used to look at the correlation of genetic findings and alcoholism are studies about "genetic markers". Marker studies are of two type: pedigree studies in which single families are studied, and population studies. Population studies are still in the grass roots stage of development and the findings aren't conclusive.

Markers are predictors and not all predictors are genetic. It is very important to study children before they start drinking in order to make an accurate observation about a group of people. At this stage of research, most of the studies are still in the initial predrinking stage but some of the findings thus far are:

1. Sons of alcoholics do less well on tests for abstract thinking and categories. ¹⁷ 2. Sons of alcoholics (most studies use men as opposed to women which is why some of the information may not be as accurate) feel less intoxicated after drinking the same amount of alcohol as sons of nonalcoholics. ¹⁸ It was found that cells taken from alcoholics appear to be biochemically different from cells of nonalcoholics. The findings fit in with a growing body of data indicating that some people inherit an inclination toward alcohol abuse.

Researchers Laura Nagy, Dr. Ivan Diamond, and Adrienne Gordon, from the University of California, found that white blood cells of alcoholics metabolize alcohol more easily than cells from nonalcoholics and have lower levels of a fundamental chemical enzyme that exists inside cells. This chemical messenger is necessary for many fundamental cellular activities, including growth and metabolism. ¹⁹

At the State University of New York Downstate Medical Center in Brooklyn, Doctor Henri Begleiter found differences in electrical brain responses to alcohol. He and his colleagues showed that the brain waves that follow a characteristic pattern when people have to make a decision, called P3 waves, differ markedly in the sons of alcoholics from the P3 waves in people who drink only socially—after just one drink. ²⁰

Most recently, The New York Times ran an article (April 18, 1990) about Doctors Noble and Blum from the University of California and the University of Texas respectively, and recent findings of a specific gene that put people at risk of becoming alcoholics. The discovery should open new avenues of research for preventions and treatment of alcoholism. (Original article *JAMA* , April, 1990, Noble & Blum)

The researchers said the gene linked to alcoholism was the receptor gene for dopamine, a chemical that plays an essential part in helping brain cells communicate with each other. They studied brains of 35 people dying from alcoholism and 35 others who were not alcoholics. The gene was present in 77 percent of the alcoholics and in 28 percent of the non-alcoholics.

Drs. Blum and Noble did indicate that no single gene caused all forms of alcoholism. Some with the gene did not become alcoholic and others who did not have the gene were alcoholic. Social and cultural factors are major contributors to the disease.

It is felt that this gene influences appetite, personality, and behavior. It is located on Chromosome 11 and is called dopamine D2 receptor gene. That gene has two parts, A1 and A2 (alleles). The A1 allele was associated with alcoholism.

By pinpointing the specific gene to the receptor site, scientists could use drugs to block the gene's action or stimulate the receptors which would prevent addiction. A goal is to develop genetic engineering techniques to eliminate the gene from affecting people. ²¹

To summarize, the genetic findings using twin studies, adoption studies, and genetic markers, represent three approaches in the research about the predisposition of alcoholism (is it inherited?). From all indications, the tendency toward genetic alcoholism is present. If alcoholism seems to run in a family, it is wise never to start drinking. Many people attend regular COA meetings (Children of Alcoholics) and have wisely chosen to abstain from alcohol. COA meetings are anonymous and throughout Connecticut.

If your mother, father, or grandparent was an alcoholic, consider yourself at risk of alcohol abuse. If you choose to drink, limit your intake.

Part III—The Physical Damages from Alcohol Abuse

Alcohol abuse causes a myriad of serious problems for the drinker as well as those affected by his drinking. These problems include physical and mental disorders, the disintegration of relationships, damage to unborn babies, and disabling and fatal accidents. Twenty-five percent of all fatalities for children ages fourteen to seventeen are alcohol related. ²²

Problem drinkers and alcoholics suffer from depression that can lead to suicide (alcohol is a depressant), and a variety of disorders in the digestive system.

Heart problems as well as liver damage are common.

Heart complications increase as fat collects around the organ causing the heart to pump less efficiently, leading to heart disease.

Cirrhosis of the liver causes a slow painful death. As the sickness progresses, the victim become

jaundiced and develops a swollen belly as the liver expands.

Hepatitis is another liver disfunction. In many cases, both hepatitis and cirrhosis can be reversed if the person stops drinking immediately.

Prolonged alcohol use can also lead to cancer of the esophagus, throat, and mouth.

Ulcers occur frequently. The brain starts to be destroyed as nerve cells die. Memory initially becomes poor as the disease progresses. Eventually one can end up with “wet brain”, a condition identified as a physical shrinking of the brain. A “wet brain” patient or victim has a deficit of the senses (i.e. abstractions, memory, and concentration). If drinking ceases, those destroyed cells never regenerate.

Malnutrition sets in as the desire to drink becomes stronger than the desire to eat food. Even though many alcoholics appear “puffy”, they are starving to death. Puffiness and red hands are symptoms of a drinking problem as the body fills with toxic fluids and the liver cannot properly clear them.

Other physical problems can appear through the occurrence of accidents—falling, car accidents, poor judgement, and drowning. The occurrence of crime and violence as well as child abuse are statistically staggering. The alcoholic cannot reason things out, ask for help, or admit he is wrong. Because he can no longer think through situations, he reacts to small as well as large issues. Life becomes Chaotic. Some become violent while others quietly withdraw, suffering internally both physically and mentally. Many alcoholics turn to other chemicals and death by overdose is frequent.

Of all the effects of drinking, the most pathetic is FAS or Fetal Alcohol Syndrome. The victims are helpless unborn fetus that never stand a chance of a healthy, normal life due entirely to the mother’s consumption of alcohol.

Fetal Alcohol Syndrome

FAS is one hundred percent preventable if a woman does not drink alcohol while pregnant. In 1981, the Surgeon General issued a statement that recommended women who are pregnant or considering pregnancy should abstain from alcohol and items containing alcohol. If one has ever looked for alcohol free cough syrup on the market, she’s in for quite a surprise. Contac is one of the few available. A majority of syrups are up to four percent alcohol even for babies: Cold remedies are loaded with alcohol (Nyquil is fifty percent alcohol) as well as mouth wash (Lysterine is forty-five percent alcohol), vanilla extract, cakes, sauces, dressings, and candies. The public is quite unaware of the ingredients in many products. Fetal Alcohol Syndrome was first identified in the United States in 1973. It is defined as a pattern of mental, physical, and behavioral defects that develop in infants born to women who drink heavily during pregnancy. ²³ It is characterized by a cluster of congenital birth defects that include the following: prenatal and postnatal growth deficiency; a particular pattern of facial malformations, including a small head circumference, flattened midface, sunken nasal bridge;

central nervous system dysfunction; and degrees of major organ systems malformations. ²⁴ Studies have shown that an average of one to two drinks daily do decrease birth weight and growth size. ²⁵ The incidence of FAS is approximately one to three per 1,000 live births. ²⁶

If drinking alcohol stops during early pregnancy, the risks of Fetal Alcohol Syndrome decreases. In 1980, the cost associated with FAS was the following: \$14.9 million for health treatment of babies born with FAS; \$670 million in total treatment costs for 68,000 children under the age of 18; \$760 million in treatment for 160,000 FAS adults; and \$510.5 million in indirect productivity losses. ²⁷

One in six women in the peak childbearing years of 18 to 24 may drink enough to present a hazard to an unborn child. ²⁸ Regular drinking is common among high school and middle school age girls and a sizable number drink heavily. ²⁹

Since 1989, the government has required a warning label on all alcoholic beverages. If one has ever looked for these warning signs, it is almost impossible to spot because of size, location, and camouflaging. It is a start but a feeble attempt at best.

On March 30, 1990, 20/20 ran a special about FAS. It featured the work of Michael Dorris, who after discovering that his son had FAS, wrote the book *The Broken Cord* (Harper and Row, 1989). In it he tells of his own anguish once he learned that his wife had drunk anti-freeze (for the alcohol) and given birth to an FAS baby. For many years he didn't know what was wrong with his son and, thankfully, found specialists that dealt exclusively with FAS children. Mr. Dorris' book has helped thousands of confused, frustrated, heartbroken parents who for years have not known what was wrong with their children. Of those interviewed on 20/20, many had adopted children and not been told of the birth mother's drinking habits. Some of the children looked visibly deformed (eyes far apart, nose flattened, protruding forehead), while others had only behavioral problems. These children are known as Fetal Alcohol Affective (not full blown FAS). Behavioral problems such as reacting without thinking, gullibility, vulnerability to things that are dangerous for them, not knowing right from wrong, and lacking sense of reason are all signs that these specific parents experience with their children. (This is not scientifically documented but rather what the interviewed parents on 20/20 reported.)

FAS children have trouble with balance, coordination, learning, and memory skills. Others are mentally retarded varying from educatable to severe retardation. Learning disabilities may show up in school. Hyperactivity, short attention span, and other behavioral problems are common.

Pregnancy and FAS

The first trimester is a crucial time period. Cells are rapidly developing and forming major organs in the body. Alcohol damage at this point would destroy cells that are present as well as newly developing cells. The brain is very vulnerable because its structure is being formed during the first three months of pregnancy. ³⁰ During the second trimester, there is an increase in tissue and organ size. The fetus is growing the most rapidly at this present time. A pregnant mother needs all the vitamins and nutrition that she can so alcohol consumption during this period could cause a baby to be smaller than normal. ³¹

In the last three months of pregnancy, everything comes together for the fetus. Brain cells are maturing and connections between them are developing. If mothers drink two drinks per day during the eighth month of pregnancy, babies will weigh five to six ounces less at birth than the normal child. Also during this period, if

one drinks too much, a baby's mental activity will be dulled. ³²

The Father's Drinking

If the father drinks, does this effect the baby? Much research is presently being done now in this area. They do know that alcohol can harm the testicles, and heavy drinking (five or more drinks daily) is linked to a low sperm count. ³³ Problems with infertility among alcoholic men is indicated.

What You Can Do To Give Your Baby A Healthy Start

It is suggested to not drink alcohol if you are pregnant or thinking about getting pregnant. Get involved in healthy alternatives: Listen to music, take an aerobics class (low impact), plant a garden or do volunteer work. A baby deserves a healthy start in life and a new mother can help her fetus be the best she/he can be.

- Eat right (lots of fruits and vegetables, carbohydrates like cereals without sugar, whole wheat bread, pasta, and rice, low fat milk, fish and chicken, occasional red meat with the fat removed, and lots of water—eight glasses a day if you can.
- Exercise often.
- Have a good attitude.
- Get enough sleep and rest.
- Enjoy your pregnancy.

And remember, don't smoke, drink, or take drugs:

Part IV—Solutions

Recognize The Signs of Substance Abuse

1. Abandonment of goals and reduction of ambitions.
2. Gradual withdrawal from school and other activities.
3. A drop in the quality of schoolwork and a corresponding drop in grades.
4. Rejection of family standards and values.
5. Overreaction to criticism from any source.
6. Increase in minor illnesses.
7. Erratic mood changes, apathy, and lethargy.
8. Neglect of personal appearance and hygiene.
9. Misrepresentation of facts—often lying.

10. Increased secretiveness, especially about friendships and associates, and radical changes in friendship patterns.
11. Telephone calls at odd hours.

What You Can Do Before There's A Problem

The best solution is to not drink alcohol at all. You cannot miss something you've never had. Knowing all the negative aspects of drinking could be enough to stop any desire to experiment. If you do decide to drink, there are some guidelines that are suggested:

1. Don't drive with someone who is drinking. Be sure there's a designated driver for the evening.
2. If you do drink too much, call for a ride home from a trusted friend or parent.
3. If you're invited to a party, try and find out who will be there ahead of time. Once you arrive, if you're not comfortable, leave and don't feel ashamed.
4. If you drink alcohol, try and drink slowly. Alternate with soda or juice.
5. Hang around with friends that you trust that don't drink excessively. If you have friends that party heavily, see them at other functions where there's no drinking.
6. Get involved with the local chapter of SADD (Student's Against Drunk Driving). They are positive, energetic students who want to help teenagers stay alive and healthy. There's a chapter in most towns.

Know Yourself

One of the ways to find out your priorities is to complete a Coat of Arms. You can write the answers to the questions, draw the answers, or even act them out. This can be made into a contest as well (based on creativity). The purpose of any Coat of Arms is to answer the questions honestly, and then take a look at your life. If you are not doing what makes you happy and content, then it's important to figure out how to change some of your lifestyle so you can be satisfied. A Coat of Arms is a way of setting goals (both long range as well as short term). An example might be the following—Question: What's my greatest success so far. Answer: Trying to complete school and receive a diploma. It will take many short term plans to finally achieve the long term goal of graduation. When you know yourself (both good and bad traits), it's easier to set boundaries. If you're asked to a party and everyone is drinking, and you're not comfortable, what will you do? If you know your values, you may choose to leave, or you could stay and only have a drink. If you're not sure of yourself, you may go along with things that aren't good for you because you feel insecure saying no to your friends.
(figure available in print form)

If There's A Family Problem With Alcohol

There are many people who can help teenagers if there is a problem with a family member. You can always go to the school counselor, social worker, or a favorite teacher. All towns have counseling centers based on a sliding financial scale. Look in the phone book under Alanon and Alateen. Both those organizations are free of charge and welcome anyone with an alcohol problem in the home. It is an anonymous fellowship. Any teenager can listen and say nothing until she is comfortable. In the fellowship, she'll get phone numbers of other kids having similar situations. It helps students realize that they're not alone.

If you don't feel that you can talk to anyone in school or Alateen, discuss your home problem with a minister or friend. Most important of all, don't keep your feelings inside and don't blame yourself for your parent (or other family members) drinking. You didn't cause the problem, and you can't cure it:

Some Healthy Alternatives To Drinking

Do volunteer work. There are many places that need a teenager's help (secretarial, filing, clerical, children in hospitals, old folks, the handicapped). Helping someone less fortunate makes you feel good about yourself and deepens the sense of gratitude. Keep your life as balanced as possible—Rest, have fun, eat nutritious meals, and exercise. If your life has harmony, your attitude will stay positive a majority of the time. Drinking and drugging won't even be considered an option.

Get involved with sports, or a play, or a part-time job. Keep your life active and productive. Have a hobby, read a book, walk the dog, or babysit. Do whatever you like that's positive and growth producing.

If You Or A Friend Develop A Problem

If you feel you or a friend might have a problem, get help. There are many services available in the New Haven area that are more than willing to help someone who wants to stop drinking, such as free clinics running drug and alcohol programs, hospitals, treatment centers, institutions, mental health centers, Alcoholics Anonymous, schools, and support groups. Many of these are free of charge or based upon a family's income (sliding scale). The AA hotline is a 24 hour service for anyone with questions or needing help. To date, the most successful program available to alcoholics is AA, founded more than fifty years ago by Bill Wilson and Doctor Bob. It also is an anonymous program (as is Alateen and Alanon). There are hundreds of free meetings in New Haven weekly. AA doesn't push anyone into its program since it's based on the principle of attraction, not promotion. Meetings are listed in the newspaper and anyone is invited to attend.

Conclusion

In conclusion, alcoholism causes this country billions of dollars annually in medical care, accident coverage, treatment programs, and court and incarceration. It is a disease caused by environmental, psychosocial, and predisposition. It bankrupts the abuser physically, mentally, and spiritually. Alcohol abuse can ruin life for those around the alcoholic, the alcoholic himself, and most unfortunate, the unborn child of a drinking mother. An alcoholic will not recover until he hits a bottom. No one can do it for him but a supportive family helps in the process of recovery once he makes up his mind to stop drinking. Teenagers are prone to drinking due to social pressure, experimentation, and the need for acceptance. Alcohol abuse is preventable. FAS can be eliminated entirely by just not drinking alcohol one day at a time!

The community, home, and school has a responsibility to our children to tell them about the disease for alcoholism with facts, support, and guidance. Preventive education is essential if we are ever going to win the war against alcohol abuse!

Part V—Student Activities & Lesson Plans

Lesson Plan I

(figure available in print form)

COAT OF ARMS*

Project: Who Am I?

Have each student draw a large Coat of Arms on poster board.

Each square should answer questions 1 through 6 graphically.

Run a contest with the most creative posters winning a prize.

Stickers and magic markers make this contest colorful.

*Modified from *Values Clarification* (see List of Reference)

Lesson Plan II

Substance Abuse Questionnaire

Ask yourself the following 20 questions and please answer them as honestly as you can. Remember, *drugs* includes reefer (pot) and *drinking* includes beer and wine coolers!

1. Are you absent from school due to drinking or drugs? YES NO

2. Is drinking or drug use causing more problems at home? YES NO

3. Do you drink or use drugs because you are shy with other people? YES NO

4. Is drinking or drug use affecting your reputation? YES NO

5. Have you ever felt badly after drinking or drug use? YES NO

6. Have you gotten into financial difficulties as a result of drinking or drugs. YES NO

7. Do your friends or where you hang out change when drinking or taking drugs. YES NO

8. Does your drinking or drug use make you less responsible	YES	NO
	for your family's welfare? (Are you spending too much money on drugs or drinks?)	
9. Have your goals changes since drinking or using drugs.	YES	NO
10. Do you need a drink or drug at a definite time regularly?	YES	NO
11. Do you need a drink or drug the next morning to get rid	YES	NO
	of hangover or low?	
12. Does drinking or drug use cause you to have difficulty in	YES	NO
	sleeping?	
13. Do you do less positive things since drinking or taking	YES	NO
	drugs?	
14. Is drinking or taking drugs jeopardizing your ability to	YES	NO
	complete whatever you are doing?	
15. Do you drink or take drugs to forget or get away from	YES	NO
	worries or troubles?	
16. Do you drink or take drugs alone?	YES	NO
17. Have you ever had a complete loss of memory as a result	YES	NO
	of drinking or drug use? (A blackout)	
18. Has your physician ever treated you for drinking or taking	YES	NO
	drugs?	
19. Do you drinking or take drugs to build up your self	YES	NO
	confidence?	
20. Have you ever been to a hospital or institution due to	YES	NO
	drinking or taking drugs?	

Lesson Plan III

*Advertising: Its Effect on Children**

Children grow up in the United States being affected by the media in every phase of their life. By the age of two, a little tike knows that goodies are at the bottom shelf of every grocery store. He is aware of the best toys, the "in styles", the places to shop, and products to buy, around the age of five. Messages about family life, communication, medication, sports activities, churches to visit, sexual activities, cleaning products, and the roles of men and women, have subtly infiltrated, impressionable young minds. Advertising has the greatest single influence on this country and when used constructively can redirect negative thoughts into positive ideas. Unfortunately, since the bottom line is profit, the majority of ad agencies and big business stock holders somehow forget the importance of simple human values.

* Block, S., (1988) "Advertising, Drugs, & Booze", Institute of Teaching & Learning, State Department of Education, Hartford, CT Let's take a look at a typical Sunday afternoon in many homes throughout the country. A little boy knows that his dad and cronies will be watching football. "The boys" will be munching on sandwiches and potato chips, accompanied by multitude of beers. Every fifteen minutes the game will be interrupted with beer commercials or automobile advertisements. Each commercial will show "macho men" who laugh, slug each other on the shoulder, knock down a beer or two, have a sexy woman on their arm, or drive into the sunset, looking for freedom. Mom and "the girls" are in the kitchen fixing food, cleaning up after the boys, or occasionally joining their "men". The little boy is confused because during the week he sees mom and dad come home from work, barely communicating, watching television and drinking beer, falling asleep only to repeat the same pattern again the next day. What is the little boy learning about family life? Let's break it down:

1. Adults talk to tv sets, not to each other.

2. Mom and dad relax by eating junk food and drinking alcohol.

3. "The boys" drink together and have fun.

4. "The girls" hang together and have fun.

5. "The girls" and "the boys" are not together. What this same little boy is discovering about alcohol is:

1. Alcohol brings people together.

2. Alcohol helps you relax.

3. Alcohol is integral part of daily life. The message continues on, no matter where this little boy goes. On his way to school, he sees a billboard with a famous sports figure leaning over a suggestive looking woman. At the bottom of the ad is a large bottle of scotch. Even if a child can't read, the message is loud and clear . . . BOOZE MAKES IT HAPPEN . . . whether it's sports, sex, or life's events.

And what about drugs? A first grader may not yet read, but she absolutely knows what mom takes for a headache, how much reefer her brother smokes with his friends, the amount of alcohol dad consumes at the end of the day, how strange her aunt behaves at family parties after a few cocktails and the name of the cough syrup she takes when she has a cold. Ask this same little girl to walk into a drugstore and pick out congestion medication, feminine hygiene sprays, or ointment for itching, and she will be able to perfectly complete this task. The impact of advertising is so powerful that it's frightening.

Teaching about the disease of alcoholism and drug abuse through media and print advertising is the most effective method this author has discovered. Utilizing what is second nature for children helps them to stay comfortable on a topic that could otherwise become very threatening. The way to reach people, regardless of age, is through listening, sharing, and personal experiences. In this way, trust is established. Without trust, education about the influence of alcohol and drug abuse can never be effective. It will be disregarded or

dismissed as just another course a student is required to take. Most people turn to some type of support when they are lonely, afraid, uncertain, or have low self esteem. Unfortunately, often times that support is not positive. Alcohol and drugs become the quick fix for all of life's problems and solutions. Teaching about addiction must first establish a feeling of safety where thoughts and questions can be shared. It's a lot more than book knowledge of chemicals and listings of rehabilitation centers; it's about attitudes and messages that children have seen from the time of birth through the influence of parents, environment, and advertising.

PROJECTS:

1. Cut out magazine ads; watch tv ads at different times of the day and early evening; listen to different radio stations; cut out newspaper ads.
2. Look at each ad for content and messages, plus hidden messages that can be derived from the heading or photo.
3. Design a chart of ads that give mixed messages.
4. Design your own ad about a store you can own or a product you'd like to sell.
5. Design an ad about drugs or alcohol use.

Lesson Plan IV

WORD FIND PLUS

Can you find these words?

CLOSETDRINKER	PSYCHOSOCIAL	ENVIRONMENT
PREDISPOSED	CHROMOSOMES	ABSTINENCE
HEREDITARY	ALCOHOLISM	ANONYMOUS
CIRRHOISIS	ALCOHOLIC	POWERFUL
BAFFLING	ADOPTION	RECOVERY
BLACKOUT	CUNNING	DISEASE
ENABLER	ALATEEN	BOTTOM
DENIAL	ALANON	GENES
LIVER	TWIN	SADD
FAS		

Answer Key for: WORD FIND PLUS

Lesson Plan V

1. What situations in your life seem like they will never change, never be different no matter what you do? Make a list. What do you control? What is out of your control? (Do you know the difference?)
2. What are you doing, thinking, feeling about the above?
3. What else can you CHOOSE to do? Think? Feel?
4. What fears do you have about change? How can you challenge, question, contradict these fears?
5. Think about and answer:

I learned that

I rediscovered that

I'm beginning to wonder

I was surprised to find that

I would like to explore

Now, that I think of it, I

I would like to follow up on

I would like to make a contract with myself to

I see the need to ask the support of

I want to think more about

Lesson Plan VI

Design a DNA Model

Chromosomes are made up of the chemical DNA. DNA looks like a long, twisted ladder if seen under a powerful microscope. Different genes result from different arrangements of the rungs and billions of arrangements are possible.

Build a DNA Model.

Use colored paper, straws, or pipe cleaner and see what you can create. Make sure it's a least three feet in length.

Lesson Plan VII

Role Playing Situations

Students take different parts and act out the following coming up with a variety of solutions for each situation.

1. You are pregnant and your friends are smoking reefer and drinking. They tell you to have some with them. What will you do?
2. You're leaving your grandparents' house and your Dad has had too much to drink. You do not have your license. You live two miles from your grandparents.
3. You're at a party and your friends are drunk. You can't drive. What will you do?
4. A friend of yours is drinking a lot and not just on weekends. He acts crazy when he drinks. His dad is an alcoholic. Will you talk to him about his problem or leave him alone because it's his life.
 - a. Have the friend be resistant and angry.
 - b. Have the friend be agreeable.
5. Your mother is depressed very often and has a high pressured job. She says she "needs" to drink after work to calm down but its becoming excessive. Will you talk to her about it. What will you say. (Have someone be the mom in denial.)

Lesson Plan VIII crossword Plus

ACROSS:

3. Passed on from generation to generation.
4. Fetal Alcohol Syndrome.
6. When you lose everything materially or emotionally.
8. In your family line, making you susceptible to a sickness.
11. When a person hides her drinking and drinks alone.
12. Our surroundings.
13. The disease of uncontrollable drinking.
16. Not drinking alcohol.
17. A person not able to control drinking.
20. Becoming a parent to someone else's child.
21. Sneaky.

22. Group supported meetings for teenagers living with or affected by alcoholism.

DOWN:

1. Made up of genes.
2. Not drinking a day at a time.
5. Students Against Drunk Driving.
7. Strong.
8. What you think about people's approval of you.
9. A disease of the liver.
14. Confusing and strange.
15. When a person can't remember what he did when drinking.
18. Help you become what you are.
19. Siblings born at the same time.

(figure available in print form)

ANSWER KEY

- | | |
|-------------------|-----------------|
| Across: | Down: |
| 3. HEREDITARY | 1. CHROMOSOMES |
| 4. FAS | 2. RECOVERY |
| 6. BOTTOM | 5. SADD |
| 8. PREDISPOSED | 7. POWERFUL |
| 11. CLOSETDRINKER | 8. PSYCHOSOCIAL |
| 12. ENVIRONMENT | 9. CIRRHOSIS |
| 13. ALCOHOLISM | 10. ANONYMOUS |
| 16. ABSTINENCE | 14. BAFFLING |
| 17. ALCOHOLIC | 15. BLACKOUT |
| 20. ADOPTION | 18. GENES |
| 21. CUNNING | 19. TWIN |
| 22. ALATEEN | |

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C   R
H E R E D I T A R Y
R   C                               F A S
B O T T O M                         P   A
M   V   P R E D I S P O S E D
O   E   S                           W   D   C
S   R   Y                           E   A   I
O   Y   C L O S E T D R I N K E R
M           H                       F   O   R
E N V I R O N M E N T   U   N   H
S           S                       L   Y   O
      A L C O H O L I S M   M   S
      B           C           B   O   I
A B S T I N E N C E   L   U   S
F           A           A   S
F   A L C O H O L I C           G
L   T                       K           E
I   W                       A D O P T I O N
C U N N I N G           U           E
      G   N           A L A T E E N   S

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Lesson Plan IX

RECIPE FOR THE CREATION OF A NEW PERSON

A stand-by favorite in all parts of the world. Can come out in a variety of ways depending upon specific ingredients that vary according to each couple.

Take 1 sperm (made up of Dad’s 23 chromosomes) Mix with 1 egg (made up of mom’s 23 chromosomes) Join and stir until a zygote is created. Leave in mom’s oven at 98.6 °for nine months. Nurture and feed with wholesome foods and vitamins. Remove when well done.

Recipe will produce one healthy, happy new person with her/his very own 46 chromosomes!

(figure available in print form)

Each student should create her/his own unique idea as a rap, song, or drawing.

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B. *Films*

Connecticut Clearinghouse (Funded by CADAC)

1-800-232-4424 FAX (203) 793-9813

Free Service with pamphlets, books, curriculum, guides, and VCR tapes

Some of their free loan VCR tapes:

HS *Calling the Shots—Alcohol & Advertising* , 30 min.

JH *Alcohol Abuse & Teens—The Turning Point* , 29 min.

ADULT *Alcohol/Addiction* , 28 min.

HS *Alcohol & The Family: The Breaking Point* , 26 min.

JH/HS *Alcohol & Human Physiology* , 23 min.

JH/HS *All Bottled Up* , 11 min.

JH/HS *Bodywatch: Inheriting Alcoholism* , 30 min.

JH/HS *I Live In An Alcoholic Family* , 33 min.

JH/HS *I'll Quit Tomorrow*

K-12 "Here's Looking At You 2000"—33 videos

C. *More Information for Teachers and Students*

REHABILITATION CENTERS

(Look in yellow pages under Alcoholism information)

Gaylord Hospital

Gaylord Farms Road

Wallingford, Connecticut Sandy Hook, Connecticut

268-3344

Eagle Hill

Alberts Hill Road

426-8085

Teenage Rehabilitation Centers:

Arms Acres
Carmel, New York

Wakeman Hall
Whitney Avenue

Hamden, Connecticut

Institute For Living
Hartford, Connecticut

FREE PAMPHLETS AND SPEAKERS

Alcoholics Anonymous:

Narcotics Anonymous: Look in white pages of any phone book

"It's Up to You"—Free pamphlet

(Substance Abuse)—Blue Cross/CMS

"Understanding Alcoholism"—Blue Cross/CMS

MADD

669 Airport Freeway

Suite 310

Hurst, TX 76053

"Just Say No"

Connecticut Department of Transportation

24 Wolcott Hill Road

P. O. Drawer A

Wethersfield, CT 06109

CHARTS AND PAMPHLETS

Write for catalogues: Health EDCO, Inc.

P. O. Box 21207
Waco, TX 76702

BOOKS/ADVERTISING

Booze Merchants, Adweek, N.Y., NY,

The Inebriating of America

Center for Science in the Public Interest

1501 16th Street N.W.

Washington, DC 20036

Values Clarification , Simon, Howe, Kirchenbaum

"Coat of Arms", Hart Pub. Co., N.Y. 10003

Drugs, Cigarettes, & Alcohol , Media Materials, Inc. Baltimore, Maryland

Toxic Substances & You: Alcohol, Tobacco, Marijuana, Hard Drugs (worksheets, activities), J. Weston Walch, Pub., Portland, ME 04104

MISCELLANEOUS

For more information, get in touch with:

The National Association for Children of Alcoholics (NACOA), P.O. Box 421691, San Francisco, CA 94142, (415) 431-1366

The National Council on Alcoholism, 133 East 62 Street, New York, NY 10021, (212) 935-7070

The Children of Alcoholics Foundation, 540 Madison Avenue, New York, NY 10022, (212) 980-5394

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