

UIICK FACTS ABOUT ALCOHOL OTHER DRUGS, AND PROBLEM GAMBLING

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Alberta Alcohol and Drug Abuse Commission
An Agency of the Government of Alberta

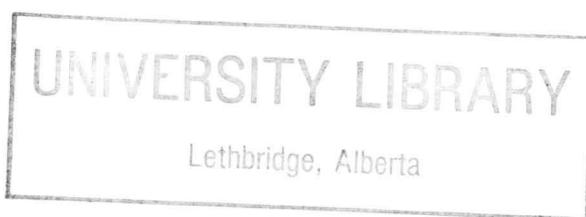
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QUICK FACTS
ABOUT
ALCOHOL, OTHER
DRUGS, AND
PROBLEM
GAMBLING



SEVENTH EDITION

AADAC

Alberta Alcohol and Drug Abuse Commission
An Agency of the Government of Alberta

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PREFACE

Revised and updated, **Quick Facts** provides easy-to-read answers to frequently asked questions about alcohol, other drugs, problem gambling and related issues. **Quick Facts** is also used as a resource to support two other AADAC resources, "Teen Action" and "Touchstones." **Quick Facts** does not intend to be the last word, but rather a starting point for learning more about alcohol, other drugs, problem gambling and related issues.

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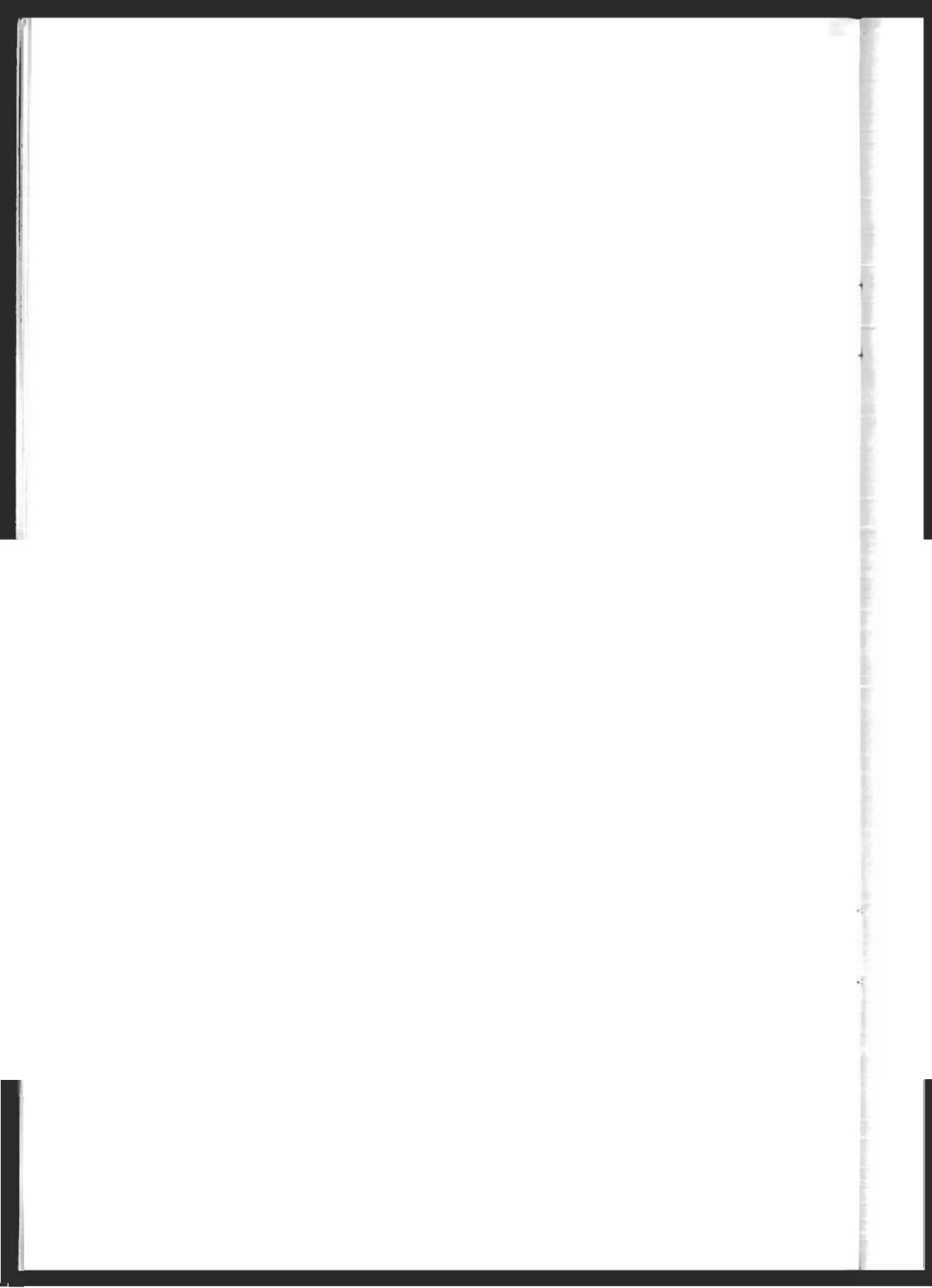
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ALCOHOL

What happens to alcohol in the body?

- ◆ Alcohol is absorbed mainly through the stomach and small intestine into the bloodstream.
- ◆ Once in the bloodstream, alcohol is carried to all parts of the body, reaching the brain almost immediately.
- ◆ Alcohol is broken down or metabolized in the liver at a constant rate. It takes between one and two hours for an adult to metabolize a standard drink such as 1.5 ounces of distilled spirits or 12 ounces of regular Canadian beer or 5 ounces of table wine.
- ◆ Alcohol continues to circulate in the bloodstream until it is broken down by the liver and leaves the body through breath, sweat, and urine.
- ◆ Alcohol freely crosses the placenta between the mother and the fetus and can have harmful effects on the fetus.

What does Blood Alcohol Concentration or BAC mean?

- ◆ BAC is a measure of the concentration of alcohol in the bloodstream; it is the amount of alcohol per unit of blood. Sometimes it is also referred to as blood alcohol level or BAL.
- ◆ At a BAC of .04 most people begin to feel relaxed and content or happy, and less self-controlled. At .06, judgment is somewhat impaired and people are less able to make rational decisions about their capabilities. At .08, muscle coordination and driving skills are known to be impaired. At .10, judgment, motor control and reaction time continue to deteriorate. By .30, loss of consciousness may occur and, above .40, breathing may stop and death may result.
- ◆ The legal limit for impaired driving in Canada is .08, meaning that a driver is impaired with 80 mg of alcohol per 100 ml of blood in the system.

ALCOHOL

What are the immediate effects of drinking alcohol?

- ◆ Short-term effects of drinking depend on how much alcohol is in the bloodstream. How much alcohol is in the bloodstream depends on how much alcohol has been consumed and how quickly it was consumed. These factors determine the amount of alcohol absorbed and the amount metabolized.
- ◆ Even though alcohol is a central nervous system depressant, early effects of drinking may include increased activity and decreased inhibition. These effects result from a depression of brain centres that control behavior.
- ◆ At low to moderate doses, alcohol usually produces a feeling of relaxation and a sense of well-being. However, alcohol can produce feelings of hostility, depression and withdrawal. The environment in which drinking occurs and the amount of alcohol consumed can greatly affect the emotional response.

Are there differences in how men and women metabolize alcohol?

- ◆ Yes, women tend to feel the effects of alcohol sooner than men for three reasons.
- ◆ First, generally women have a higher ratio of body fat to water than men. Alcohol does not dissolve in fat the way it does in water. With less water in their body in which to dilute alcohol, women tend to feel the effects of alcohol sooner than men.
- ◆ Second, the hormones released before a woman's period help to speed up the absorption of alcohol into her bloodstream. So, a woman will feel the effects of alcohol faster right before her period than she will at other times of the month. There is also some evidence to suggest that women on a birth control pill will feel the effects of alcohol more rapidly than other women.

- ◆ Third, women's stomachs have less of a special chemical, called acetaldehyde dehydrogenase (ADH), that allows some of the alcohol to be broken down in the stomach. So, more alcohol is sent from the stomach to the liver in women than in men.

What is low risk drinking?

- ◆ Low risk drinking is the norm for the majority of adult Canadians. Defining what is "low risk," "safe" or "responsible" drinking and describing its effects on the individual and society have been the subjects of study, debate and controversy.
 - ◆ The Addiction Research Foundation in Ontario offers guidelines on risk levels associated with drinking, based on current scientific knowledge, as information that individual drinkers can use in making choices about their alcohol consumption.
-

No Risk (0 drinks) — abstaining = no risk of alcohol problems.

Low Risk (1-2 drinks in any day, with at least one alcohol-free day per week)

— people of average build, in good health and with no history of alcohol-related problems will have only low risk of alcohol problems if their drinking does not exceed this range.

Caution: Increased Risk (3-4 drinks in any day, up to 12 drinks total in a week, with at least one alcohol-free day per week)

— drinking in this range should be limited to one drink per hour. Otherwise the level of alcohol in the blood rises and skills needed to drive or operate machinery become impaired and judgment is affected. This increases the risk of accidents, interpersonal problems, and some health problems.

Hazardous Drinking (5 or more drinks on any day, or 3 or 4 more drinks on more than half of the days of the week)

— after five or more drinks a person may be intoxicated, which can lead to accidents, disputes, violent behavior and problems at work or at home. In this range there is also an increased risk of more severe health problems such as gastritis, cirrhosis of the liver, brain and neck cancers, and possibly breast cancer for women.

ALCOHOL

Is drinking good for your health?

4 Some sources suggest that low risk alcohol use can actually help to prevent heart disease. There is some evidence to support this suggestion. But along with helping to prevent heart disease, moderate to high alcohol use can contribute to a number of other serious problems, such as cancer and strokes. This type of prevention must be balanced with the other health risks of drinking.

What are the long-term effects of chronic alcohol abuse?

4 Chronic alcohol use leads to an increased tolerance. This means that more alcohol is needed to achieve the same effect.

4 Physical dependence occurs as the body gets used to having alcohol in the system, and withdrawal symptoms occur if intake is suddenly stopped.

◆ These withdrawal symptoms may include loss of appetite, nausea, anxiety, sleeplessness, irritability, confusion, sweating and tremors (shakes). In severe cases, convulsions and hallucinations may also occur. Delirium tremens (DTs) is the most severe effect of alcohol withdrawal and is characterized by severe agitation, extreme disorientation, high body temperature, accelerated heart rate, and terrifying hallucinations (seeing or hearing things such as bugs crawling on skin).

4 Internal organ effects of chronic alcohol abuse include ulcers, pancreatitis and liver diseases such as cirrhosis.

4 Chronic alcohol use can lead to malnutrition due to a reduced interest in food and the lack of nutrients in alcohol.

4 Long-term alcohol use reduces defences against infectious diseases such as pneumonia, and tuberculosis.

4 Chronic heavy alcohol use can cause a wide range of effects on the heart and blood vessels such as damage to the heart muscle and high blood pressure.

4 Blackouts may occur from the effect of alcohol on the central nervous system. Blackouts are periods when a person is conscious and functioning, but is later unable to recall what he or she did or said.

How does alcohol use affect the liver?

4 Alcohol is broken down or metabolized by the liver. Overuse of alcohol may result in liver damage and/or disease. There are three major forms of liver disease associated with heavy alcohol use.

4 One form is the accumulation of fat in the liver and it is an early symptom of alcohol abuse. Fatty liver is a reversible condition if alcohol use is stopped.

◆ A second form of liver disease is alcoholic hepatitis. It is a more serious inflammation of the liver, occurring after heavy or prolonged drinking.

4 A third form of liver disease from heavy alcohol use is alcoholic cirrhosis. It is a chronic inflammatory disease in which liver cells are replaced by scar tissue. Cirrhosis is a leading cause of death among chronic alcohol abusers.

What is the difference between problem drinking and alcoholism?

4 The two terms are often used to mean the same thing when referring to a person with alcohol-related problems. "Problem" drinking may have less stigma and fewer negative connotations than the word alcoholism. Problem drinking is sometimes used if a person has less advanced problems and can still choose how much to drink. Alcoholism (serious problem drinking) can be defined as an ongoing inappropriate use of alcohol which causes increasingly serious problems in a person's physical or mental health, work, family, or social or spiritual life.

ALCOHOL

- 4 In general, if alcohol use is negatively affecting any aspect of a person's life then that person is experiencing a problem with alcohol.

How many alcoholics are there in Alberta?

- 4 An answer to this question is very complex. Any method used to calculate the number of alcoholics is just an estimate. No one method is perfect; each method has its drawbacks. There are two common methods used to estimate the number of alcoholics.
 - 4 One method is to estimate the risk people have of developing problems **based on how much they drink**. In general, we know that about 5% of adult Canadians drink enough to put them at very high risk of becoming dependent on alcohol. Based on 1994 population figures, we estimate that 102,575 Albertans are at very high risk of becoming dependent on alcohol.

- ◆ A second method is to estimate the number of alcoholics **based on the reported number of deaths from liver cirrhosis**. For this method, the most popular mathematical formula used is the Jellinek Formula. Using this formula, there were about 40,100 alcoholics in Alberta in 1990. However, since many people who are seriously dependent on alcohol die from causes other than liver cirrhosis, the Jellinek Formula tends to underestimate the number of alcoholics.

Is alcoholism a disease?

- 4 Defining alcoholism as a chronic, progressive disease was an important step in facilitating treatment of alcohol abusers. Rather than being viewed as a moral weakness or personal inadequacy, alcoholism could be seen as a treatable condition.
- 4 Looking beyond the disease concept, alcoholism can be viewed more broadly as a complex psychological/social/medical condition.

What are the warning signs of a drinking problem?

- ◆ Loss of control: going beyond your limits, drinking more often, gulping drinks, secret drinking.
- 4** Loss of power over your life: problems with friends, family, work or school, finances or legal matters as a result of drinking.
- ◆ Emotional problems: anxiety, guilt, or depression over alcohol use.
- 4** Physical symptoms: hangovers, blackouts, gastrointestinal problems.

Is problem drinking hereditary?

- ◆ Many factors contribute to alcohol problems, including the genetic and psychological make-up of the individual as well as cultural and sociological factors.
- 4** Studies have shown that alcoholism runs in families. Children of alcoholics have a four times greater risk of developing alcohol-related problems. However, this statistic does not prove that alcoholism is inherited, since **both** the environment **and** genetic factors contribute to the development of alcoholism in children of alcoholics.
- ◆ The current thinking is that heredity does play a role in the development of alcoholism in some people. But alcoholism per se is not thought to be inherited. Rather it is an underlying susceptibility that seems to be inherited. Additional research is needed to determine how and for which people heredity affects the development of alcoholism.

Do certain types of people develop alcohol-related problems?

- ◆ Anyone who drinks can become alcoholic. It is not possible to reliably predict on the basis of any single factor who will develop alcohol-related problems.

- ◆ Some studies of adopted children with a birth parent who was alcoholic show that heredity plays a role in the development of alcoholism for some men.

Does the type of alcohol consumed affect the chance of developing problems?

- ◆ No. The form of alcohol makes no difference. The eventual effect of the pure alcohol contained in all types of alcoholic beverages is the same. The amount of pure alcohol in a 12-ounce bottle of regular beer, 1.5 ounces of distilled spirits or a 5-ounce glass of wine is the same.

How does chronic alcohol use affect the brain?

- ◆ Some of the behavioral changes observed in chronic alcoholics result from the effects of alcohol on the brain. These effects include poor physical coordination, memory deficits, and problems in perceiving situations accurately. During periods of abstinence, some deficits may improve with time.
- ◆ After many years of heavy drinking, more severe impairment may occur, leading to organic brain disorders. Symptoms of these disorders include confusion, speech difficulty, deficits in perception, motor functioning and memory, and a slow, lurching walk.

What is Korsakoffs Psychosis?

- ◆ Korsakoffs Psychosis is caused by a combination of nutritional deficiency (Vitamin B1) and the toxic effects of alcohol. It is characterized by persistent memory impairment, confusion, disorientation and poor coordination. The condition is also characterized by making up stories that have no basis in fact.

Is there any relationship between alcohol use and cancer?

- ◆ Cancer of the mouth, pharynx, larynx and esophagus have been associated with chronic alcohol use.
- ◆ More recent evidence suggests that alcohol use may also be associated with cancer of the liver, pancreas, stomach, large intestine, rectum and breast.

What are alcohol-related birth defects?

- ◆ Alcohol-related birth defects (ARBD) is a general term used by researchers and physicians to refer to the entire range of physical abnormalities and problems in functioning caused by exposure to alcohol in the womb. It is not a diagnosis; it is simply a term to capture the broad range of effects resulting from damage to the fetus when the mother drinks. ARBD covers many different types of effects including very severe effects, such as miscarriage and stillbirth, as well as FAS (a specific type of ARBD), and other effects that cannot be fully classified as FAS, such as behavioral problems or learning disabilities.
- ◆ Except for FAS, it is almost impossible to conclusively identify an ARBD because the different physical or behavioral problems related to drinking during pregnancy may also be caused by other factors. However, being aware of ARBD is important as these birth defects are highly preventable.

What is Fetal Alcohol Syndrome or FAS?

- ◆ Fetal Alcohol Syndrome (FAS) is a term used to describe a set of symptoms seen in some children born to women who drank alcohol heavily during pregnancy. Alcohol easily crosses the placenta and affects the development of the fetus.
- ◆ FAS should only be diagnosed by a specially trained doctor

- ◆ Infants with FAS are smaller than other newborns and have different facial features such as flat noses and small eyes. They also have some brain damage that usually results in mild to severe mental retardation.

How much alcohol can a pregnant woman safely drink?

- ◆ No safe limit of alcohol consumption by a pregnant woman has yet been established. Most experts recommend that women abstain from alcohol during pregnancy.

ADOLESCENTS AND ALCOHOL

What is the legal drinking age across Canada?

◆ TABLE 1: LEGAL DRINKING AGE ACROSS CANADA

<u>Province</u>	<u>Age</u>
British Columbia	19
Alberta	18
Saskatchewan	19
Manitoba	18
Ontario	19
Quebec	18
New Brunswick	19
Nova Scotia	19
Prince Edward Island	19
Newfoundland	19
Northwest Territories	19
Yukon	19

Source: AADAC (1993) Alcohol in Alberta: Perspectives on Its Use and Effects

What is AADAC's position concerning the legal drinking age?

- ◆ AADAC supports retention of a legal drinking age of 18 in Alberta.
- ◆ The concerns around raising the legal drinking age are complex and do not lend themselves to easy resolution by any single measure.
- ◆ It would be inconsistent to increase the legal drinking age without considering the general age of majority.
- ◆ Research shows that raising the legal drinking age in other jurisdictions has produced mixed and inconclusive effects.

What is the trend in drinking among teens?

- ◆ According to a study done by the Alberta government in 1993/94, more than three-quarters (79%) of adolescents (ages 12 to 18) had tried alcohol at least once in their lifetime.

- ◆ In terms of how often teens use alcohol, this same study found that most of those who had used alcohol used it relatively infrequently (once or twice at special events). Only one in 10 adolescents in the study drank frequently (once a week or more). Two out of three adolescents drank on at least one occasion in the last 12 months.
- ◆ As well, the study found a similar proportion of male teens and female teens reported alcohol use. This differs from past research that has generally found that males are more likely than females to have tried alcohol and other drugs.

Are there differences in the treatment needs of adolescents and adults?

- ◆ Although most teens in Alberta are healthy and do not have problems with alcohol or other drugs, over 2,250 entered treatment facilities run by AADAC and its funded agencies during 1995/96, most on an outpatient basis.
- ◆ Like adults, teens face the challenge of developing skills and abilities needed to manage their lives successfully without depending on alcohol or other drugs.
- ◆ Teens may not have as long a history of heavy alcohol or drug use as some adults, but, because of their age and developmental stage, they may be especially vulnerable to the harmful consequences of such use. Troubled adolescents require programs and staff that are sensitive to their developmental level and the issues that they are facing. These may include issues of identity, independence and peer group membership. Involvement of family or other supportive adults may also be especially important.
- ◆ Specialized treatment services are available in Alberta for teens. Contact your local AADAC office (check the phone book for the office nearest you).

IMPAIRED DRIVING

What are the drinking and driving laws in Canada?

4 The legal limit for impaired driving in Canada is .08. A driver is considered impaired if there is 80 mg of alcohol per 100 ml of blood in the body. This measurement is called BAC (Blood Alcohol Concentration) and is determined by analyzing breath or blood samples.

4 The Government of Canada revised the Criminal Code within the Statutes of Canada (1985) to establish minimum penalties that provinces must apply for specific convictions. They are:

4 First conviction – a fine of \$300 and a prohibition from driving for three months.

4 Second conviction – 4 days in jail and a prohibition from driving for six months.

4 Third conviction and later convictions – 90 days in jail and a prohibition from driving for one year.

◆ The provincial government may establish harsher penalties than the minimum penalties outlined in the Criminal Code. The Alberta Motor Vehicle Administration Amendment Act, 1988 Bill 26 has established harsher penalties. They are:

4 First Conviction – a one-year driver licence suspension.

◆ Second Conviction – a three-year driver licence suspension.

4 Third Conviction – a five-year driver licence suspension.

What are the penalties for drinking and driving offences that cause bodily harm?

◆ A maximum of 10 years in prison and up to a 10-year prohibition from driving.

What are the penalties for drinking and driving offences causing death?

4 An impaired driving charge causing death results in a maximum prison term of 14 years and up to 10 years' prohibition from driving. If criminal negligence is involved, the penalty could be life in prison and up to a lifetime prohibition from driving.

In Alberta, how many traffic collisions involving injuries are alcohol-related?

- ◆ According to police collision reports, in Alberta in 1995, 20.4% of all drivers in fatal crashes had consumed alcohol before the crash.
- 4** In that same year, 6.2% of all drivers involved in serious injury crashes (non-fatal) in Alberta had been drinking.

In Alberta, how many drinking teenage drivers are involved in casualty collisions?

- 4** 10.1% of all alcohol-involved casualty collisions had an adolescent (19 years and younger) drinking driver.
- ◆ Although teens are not the only group at risk from drinking-driving, motor vehicle accidents are the leading cause of death for teens. Alcohol and high speeds are two factors that contribute to this result.
- ◆ Male drivers 18 to 21 years of age are more likely than any other age group to have consumed alcohol prior to a collision involving fatalities or serious injuries.

How many impaired driving charges occur each year in Alberta?

- 4** In 1992 in Alberta, 15,358 impaired driving charges were laid.
- 4** As a result of an impaired driving conviction, 11,344 Albertans had their drivers licenses suspended in 1993/94.

ALCOHOL CONSUMPTION AND SALES

How much do Albertans drink?

- ◆ In 1995, 76% of adult Albertans (15 years and older) were current drinkers.
- ◆ TABLE 2: PER CAPITA CONSUMPTION OF ALCOHOL FOR ALBERTANS 15 YEARS OR OLDER

Year	Litres of Absolute Alcohol*
1986/87.....	10.6
1987/88.....	10.0
1988/89.....	9.8
1989/90.....	9.8
1990/91.....	9.3
1991/92.....	8.9
1992/93.....	8.5
1993/94.....	8.7
1994/95.....	8.4

The term absolute alcohol refers to pure alcohol, which is not changed by the amount of water or other additives found in different alcoholic beverages in Alberta.

Source. Statistics Canada (1995). The Control and Sale of Alcoholic Beverages in Canada. Catalogue #63-202 XPB. Statistics Canada (1994). The Control and Sale of Alcoholic Beverages in Canada. Catalogue #63-202 Annual. Statistics Canada (1990/91). The Control and Sale of Alcoholic Beverages in Canada. Catalogue #63-202 Annual.

- ◆ Per capita consumption of alcohol for Albertans 15 years or older decreased from about 11 litres of absolute alcohol in 1986/87 to just over eight litres of absolute alcohol, or the equivalent of about 492 bottles of beer, in 1995. Albertans tend to drink more than the national average which was 7.4 litres per capita in 1995.
- ◆ This figure is an average that has been calculated by pooling statistical information from all Albertans aged 15 years or older; some people drink less or not at all, while others drink more.

How much do Albertans spend on alcohol?

- ◆ *In 1994/95, alcohol sales in Alberta totalled about one billion dollars.*
- ◆ *On average, each Albertan aged 15 years or older spent \$487 on alcohol in 1994/95. This figure is an average. Some people spend less on alcohol, while others spend more.*

How much alcohol is sold each year in Alberta?

- ◆ *In 1994/95, over 220 million litres of beer, wine and spirits were sold in Alberta, most of which (184 million litres) was sold as beer.*

SOCIAL COSTS OF ALCOHOL ABUSE

How many deaths are related to substance abuse?

- ◆ Substance-related deaths tend to be under-reported. The primary cause of death may be listed as something other than alcohol, tobacco or illicit drugs (i.e. illegal drugs such as marijuana, LSD, cocaine, heroin) while any of these substances as a secondary or contributing causes may not be recorded.
- ◆ A study by the Canadian Centre in Substance Abuse (CCSA) in Ottawa estimates that there were 40,930 deaths attributable to substance abuse in Canada in 1992. There were 6,701 deaths as a result of alcohol consumption, 33,498 tobacco-related deaths and 732 deaths due to illicit drugs. All together, this represents 21% of total mortality in Canada for 1992 and 23% of years of potential life lost.
- ◆ In Alberta, alcohol and illicit drug-related deaths occur at a similar rate to that experienced in the rest of Canada. However, tobacco-related deaths are lower in Alberta than elsewhere in Canada. Specifically, there were 3,092 deaths in Alberta attributable to substance abuse in 1992. There were 666 deaths as a result of alcohol consumption, 2,344 tobacco-related deaths and 82 deaths due to illicit drugs. All together this represents 21% of total mortality in Alberta for 1992.
- ◆ In Alberta, as in the rest of Canada, motor vehicle accidents are the leading cause of alcohol-related mortality, while lung cancer, followed by heart disease, contributes the most to tobacco-related mortality. The majority of illicit drug deaths result from suicide and drug poisoning.

What are the economic costs of substance abuse?

- ◆ The same study by the CCSA estimated that substance abuse cost Canadian society more than \$18.4 billion or \$649 per person in 1992. Alcohol accounted for more than \$7.5 billion in costs (\$265 per person), tobacco cost more than \$9.6 billion (\$340 per person), and illicit drugs were estimated at \$1.37 billion (\$48 per person).

SOCIAL COSTS OF ALCOHOL ABUSE

- ◆ In Alberta, the CCSA estimated that substance abuse cost more than \$1.6 billion or \$613 per person in 1992. Alcohol accounted for about \$749 million in costs (\$285 per person), tobacco cost \$728 million (\$277 per person), and illicit drugs were estimated at \$135 million (\$51 per person).

What types of costs are associated with workplace substance abuse?

- ◆ According to an Alberta workplace study in 1991, the costs associated with substance use-related worker absenteeism is about \$400 million to the Alberta economy per year. The most significant potential costs to the workplace associated with substance use identified by employers were: loss of valued customers/clients due to a reduction in the quality of a product or service, and lost production from absenteeism or work slowdowns due to a substance use problem.
- ◆ Other costs associated with workplace substance abuse are the costs of the proportion of Employee Assistance Programs (EAP) and other programs devoted to addressing problems of substance abuse. The CCSA study estimated that EAP and health programs in the workplace cost over one million dollars in Alberta in 1992.
- ◆ Over 60,000 (5.2%) of Alberta's workers report having used alcohol at work. Alcohol problems in the work force result in lower productivity, absenteeism, accidents at work and lower work morale.

How many hospitalizations are related to substance abuse?

- ◆ The exact prevalence of substance abuse related problems among hospitalized patients is difficult to establish and is generally underestimated in most studies. Although prevalence rates will vary among hospitals as they will across wards within hospitals, many investigators conclude that alcohol involvement is a factor in up to 30% of admissions.

- ◆ In 1992, hospital separation rates for alcohol and illicit drug use were higher in Alberta than the Canadian national average. At the same time, hospital separation rates for tobacco-related illnesses were lower than the national average.
- ◆ There were 6,820 separations from active care and psychiatric hospitals in Alberta for alcohol-related (primary and secondary diagnosis) disorders for a total of 85,476 patient days in 1994/95. This resulted in an estimated cost to the province of \$75 million.
- ◆ Hospital separations from active care and psychiatric facilities for drug-related diagnoses (primary and secondary) totalled 5,458 in 1994/95. This resulted in 53,973 patient days in Alberta Hospitals as a cost of \$47 million.
- ◆ According to the CCSA study in 1992, tobacco use accounted for 171,228 patient days in Alberta.
- ◆ Hospital separation rates for substance-related diagnosis are generally higher in Northern Alberta than in the rest of the province.
- ◆ In Alberta, 3.5% of known AIDS cases are attributable to exposure via injection drug use. Of 181 positive HIV serological tests conducted in Alberta in 1995, in 41 or 22.6% drug abuse was the reported risk factor (see the AIDS section of Quick Facts).

How does substance abuse affect legal costs and crime?

- ◆ In Alberta, the CCSA study estimates that the total law enforcement costs including policing, court costs, and prison costs due to alcohol were over \$111 million in 1992. For illicit drugs, the total law enforcement costs for Alberta were estimated at about \$30 million.
- ◆ Alcohol and drug abuse is often associated with criminal behavior, especially violent crime. Different researchers from various countries have found an association between alcohol and violent behavior such as homicide over a period of 40 years. Although most

SOCIAL COSTS OF ALCOHOL ABUSE

researchers believe that alcohol does not cause violent behavior, the use of alcohol in violence-prone individuals is a very important factor in homicide and other violent criminal behaviors.

- ◆ In Canada, 29% of slain wives and 72% of slain husbands were noted by police to have consumed alcohol prior to the homicide in 1991/92. Use of other drugs were noted for 8% of women and 12% of men, most of whom had also consumed alcohol. As well, two-thirds of both Canadian men and women who killed someone other than a spouse had also used alcohol.
- ◆ Canadian justice statistics show that alcohol tends to increase the severity of violence. For example in 1991/92, 56% of men who were drinking at the time of a spousal abuse incident, physically injured their spouses such that 47% of the women required medical attention. By comparison, one-third of men who were not drinking at the time of a spousal abuse incident, injured their spouses such that only 37% required medical attention.
- ◆ In Alberta between 1992 and 1995, 47% of family violence incidents reported to Alberta municipal police services involved substance abuse. In 30% of the total number of incidents where substance use was documented, both partners had used drugs or alcohol.
- ◆ In 1995, among Albertans who drink, 28% had been physically assaulted and 13% had been sexually assaulted by someone who had been drinking.
- ◆ A 1992 study of University of Alberta students indicated drug or alcohol involvement in almost half of reported sexual assaults. In 44% of the reported cases, the perpetrator had consumed alcohol and/or drugs. A similar percentage (40%) reported that the victims had consumed alcohol and/or drugs.
- ◆ After standardizing for population, Alberta had one of the highest illicit drug possession offence rates in 1992 among all provinces and territories.

- ◆ In 1992, there were 5,685 drug-related offenses.
- In 1992, 69% of criminal offenses related to drugs in Alberta involved cannabis.
- In 1994, Alberta had the second highest number of reported thefts/losses in the country for narcotics and controlled drugs. There were a total of 247 thefts and losses of opiates, stimulants, hypnotics, and other drugs in the province.
- In 1994, Alberta had the second highest number of prescription forgeries for opiates, stimulants, hypnotics and other drugs. There were a total of 80 prescription forgeries in Alberta.

What other costs are associated with substance abuse?

- Other social and economic costs associated with substance abuse arise for individuals and the communities in which they live. For example, substance use is a factor in many cases of family abuse, suicide, and property damage caused by fire.
- In 1993, 67% of spousal abuse incidents reported by Alberta municipal police services involved substance abuse. In 48% of the incidents where substance abuse was involved, both partners had used drugs or alcohol.
- Some research has found a higher level of alcohol and drug use among those who have experienced violence compared to the general population. For example, a 1994 national survey of 12,300 Canadian women found that over 25% of ever-married women who lived with violence reported using alcohol, drugs or medication to help them cope with their situation.

In Alberta, there were 140 suicides due to alcohol and 10 suicides due to drugs in 1991.

- ◆ In Alberta, the CCSA study estimates alcohol-related fire damage at over \$2 million and tobacco-related fire damage at over \$1 million in 1992.

THE FAMILY AND PROBLEM DRINKING

What is the impact of living in a family with an alcohol-dependent person?

- ◆ While research has pointed out some negative effects often experienced by individual family members as well as by the family unit as a whole, it is important to realize that the effects vary a lot from person to person and family to family. It's also important to know that these effects are not necessarily "permanent."
- ◆ Researchers also caution against generalizing about the negative effects of living with an alcohol-dependent person for several reasons. First, it is uncertain whether various problems seen in children of alcoholics remain through to adulthood. Second, few differences have been identified between the effects of living in a family with an alcoholic and those of living in a family with a parent who has another type of problem, such as mental illness. Finally, it is generally found that the negative effects of living with an alcoholic can be turned around after the alcoholic goes into recovery.

How does alcoholism affect the family?

- ◆ Over time, families tend to develop certain ways of communicating and coping with the alcohol-dependent family member. While these coping strategies may help the family to operate more smoothly and get along better, they may also let the alcohol dependence continue. Ironically, abusing alcohol can also become a way of coping with the problems alcohol abuse has created in the family.

How does alcoholism affect the children?

- ◆ Alcohol abuse by parents often creates an unstable family environment. Family members are often not very close and do not provide emotional support to each other. As well, parents may not effectively discipline their children or provide them with training in basic life skills.

- ◆ Research also indicates that alcohol-related birth defects such as Fetal Alcohol Syndrome can result in children born to problem-drinking mothers. As well, younger children and teens may be more likely to show antisocial behavior and have problems such as delinquency, skipping school, aggressiveness, hyperactivity, and temper tantrums. Adult children of alcoholics may be at higher risk for mental health and behavioral problems including depression, substance abuse, low self-esteem, anxiety, and antisocial behavior.

How does alcoholism affect the spouse?

- ◆ Among spouses of alcoholics, there is often a tendency to try many different coping strategies as the drinking problems progress and gradually withdraw from the alcoholic after repeated attempts to stop the alcoholic's drinking. The alcoholic and spouse may show little affection for each other, communicate by arguing, and have difficulty resolving problems together.

Should the family of an alcoholic seek help?

- ◆ Because there is a wide range of individual and family reactions to living with an alcoholic person, it is very important to consider each individual's unique situation and to treat the alcohol problems within a family context.
- ◆ Outside help from a source with staff who are trained to deal with alcoholism is recommended so that families can learn to interact with each other in healthy ways that are not based on drinking behavior. Once family members begin relating to each other on the basis of inappropriate roles, it is difficult to change the situation from inside the family system.

THE FAMILY AND PROBLEM DRINKING

Is there help available for the family of an alcoholic?

- ◆ Help is available through a number of agencies and organizations, including Al-Anon, Alateen and AADAC.
- ◆ Al-Anon is a group of family and friends of problem-drinkers who have joined together to support and share with each other their experiences in an attempt to gain a better understanding of alcohol-related problems.

Alateen is a group similar to Al-Anon, but is for young people aged 12 to 20.

- ◆ Alcoholics Anonymous, a program that is available for the problem drinker, is discussed under the Treatment section of *Quick Facts*.
- ◆ AADAC provides counselling services to families and friends of problem drinkers who are trying to gain an understanding of the process of addiction and their role in it.

Is there legal protection available to the family of a problem drinker?

- ◆ The Criminal Code of Canada provides protection to persons who are being physically abused. These provisions include assault charges and peace bonds.
- ◆ A person charged with assault must appear in court to plead guilty or not guilty. Depending on the plea, the case may go to trial and a fine or jail term may be imposed as a sentence.
- ◆ A peace bond is a promise to the court by the abuser to maintain good behavior. Both partners must appear in court where a judge decides whether a peace bond should be ordered.

MARIJUANA

- ◆ Marijuana, hashish and hashish oil are obtained from a plant called *Cannabis sativa*. The major active chemical ingredient in marijuana is THC (tetrahydrocannabinol).
- ◆ Marijuana is a psychoactive (mind-altering) drug. It can alter perceptions, moods and sensations.

What are the short-term effects of marijuana use?

- ◆ The three major areas of functioning that are affected by marijuana use are the central nervous system, the cardiovascular system and psychological functioning.
- ◆ Effects on the nervous system include: impairment of intellectual functioning, short-term memory and learning ability. Both physical coordination and the performance of complex visual tasks also become impaired.
- ◆ In amounts commonly used, marijuana can impair a person's ability to engage in activities such as driving a car, operating machinery or flying a plane. When used together with other drugs like alcohol, greater impairment occurs.
- ◆ Effects on the cardiovascular system include increased heart rate and changes in blood pressure, often associated with changing positions from sitting or lying to standing.
- ◆ Effects on psychological functioning include feelings that range from well-being and exhilaration to anxiety and fear. In some cases, panic and disorientation may occur. Among individuals with a personal or family history of psychosis, marijuana use can increase the risk of psychotic symptoms.
- ◆ Marijuana use while pregnant possibly increases the risk of children being born with birth defects.

MARIJUANA

What are the long-term effects of marijuana use?

4 Long-term effects of marijuana use are still under investigation. Dangerous effects seem to be associated mostly with heavy chronic use.

4 Marijuana smoke contains many of the same irritants that are found in tobacco smoke. As with tobacco, smoking marijuana over the long term will damage the lungs. Chronic marijuana smoking can cause the sinuses and bronchial tubes to become inflamed and contribute to respiratory diseases such as chronic bronchitis.

◆ Although there is no conclusive proof that marijuana causes lung cancer, there is growing evidence that it does. Also, current research suggests that when both tobacco and marijuana are smoked, there is a greater potential to produce cancer than with either substance alone.

4 Both psychological and physical dependence can occur with regular use. When heavy users stop taking the drug, they often experience withdrawal symptoms which include irritability, sweating, tremor, upset stomach and diarrhea.

4 Habitual use can also precipitate or worsen symptoms of mental illness or emotional problems.

4 Chronic heavy use may include decreased motivation and interest, as well as difficulties with memory and concentration. In turn, this results in a decline in work performance noticed in adults as underachievement and in adolescents as lowered educational achievement.

4 Marijuana use during pregnancy can cause premature birth, low birth weight, mild withdrawal symptoms in the newborn, and other problems.

How many people use marijuana?

- ◆ In 1995, Canada's Alcohol and Other Drug Survey found that 29% of all Albertans aged 15 or older have tried marijuana at least once. In Alberta, 8.4% had reported using marijuana in the preceding year. According to the survey, marijuana is the most commonly used illicit substance in Canada and Alberta.
- ◆ A 1993 Alberta study revealed that 16.2% of 12 to 18 year olds had used marijuana during the 12 months before the study, and 3% used it frequently (20 or more times per year).

What is the law in Canada concerning marijuana?

- ◆ Despite the fact that marijuana is not a narcotic, its use is controlled by the Narcotic Control Act. Under this act, an individual can be charged with possession, trafficking, possession for the purpose of trafficking, cultivation, and importing or exporting.

How many drug offences are marijuana-related?

- ◆ In 1989, there were 3,466 possession offences in Alberta and 29,119 possession offences in Canada related to marijuana.
- ◆ In 1991, Alberta police forces made 2,344 marijuana seizures for a total of 2,445 kg. of marijuana.
- ◆ In 1992, 69% of criminal offenses related to drugs in Alberta involved cannabis.
- ◆ In Alberta, drug offences for marijuana account for 77% of all drug-related offences.

What is AADAC's policy concerning marijuana?

- ◆ AADAC recognizes that the use of illicit substances adversely affects the health and well-being of many Albertans.

MARIJUANA

AADAC is committed to actions that will minimize the harmful consequences of use and supports all reasonable efforts to discourage the consumption of these substances as long as those efforts do not create more serious problems than the actual use of the drugs.

TOBACCO

What is in a cigarette?

- ◆ The smoke produced when tobacco is burned contains over 4,000 different chemicals, 50 of which are cancer producing agents called carcinogens.
- ◆ Carbon monoxide absorbed from smoking a single cigarette stays in the bloodstream for up to six hours. This forces the heart to work harder trying to supply the body with enough oxygen.
- ◆ Nicotine is one of the principle ingredients in tobacco and is classified as a drug. It is a stimulant which causes the heartbeat and blood pressure to increase. Nicotine is a highly addictive drug; withdrawal symptoms are a major reason it is so difficult to quit smoking.
- ◆ Tar consists of solid particles from cigarette smoke. It interferes with the normal exchange of oxygen and carbon dioxide in the lungs, and contributes to shortness of breath. Continued exposure to tar increases the risk of developing lung cancer.

What are the pleasurable effects from smoking tobacco?

- ◆ Initially, the brain and nervous system are stimulated and the smoker may interpret this as relaxation.

What are the short-term effects of smoking tobacco?

- ◆ Immediate effects of smoking for the first time may include increased heartbeat and blood pressure, dry and irritated throat, coughing and dizziness.
- ◆ Inhaled smoke irritates the air tubes and air sacs. Harmful chemicals enter the bloodstream through the lungs.

TOBACCO

What are the long-term effects of smoking tobacco?

- ◆ Long-term effects of tobacco use include heart disease, strokes and lung cancer. Between 90 and 95% of all lung cancers are caused by smoking.
- ◆ Other long-term effects of smoking include emphysema, chronic bronchitis and cancers of the larynx, esophagus, bladder, kidney and pancreas.

What are the fetal effects of smoking tobacco?

- ◆ Newborn babies of mothers who smoked while pregnant often have low birth weight, are shorter in length, and have a small head circumference. Some studies link smoking during pregnancy with miscarriage and stillbirths. Some research also suggests that smoking during pregnancy can lead to the child having learning and behavior problems.

What is the trend in tobacco use?

- ◆ TABLE 3: PERCENTAGE OF CANADIANS WHO ARE REGULAR SMOKERS

Age Group	Men		Women	
	1991	1985	1991	1985
15-19	12%	20%	20%	21%
20-24	28%	32%	27%	38%
25-44	33%	38%	30%	31%
45-64	25%	36%	28%	29%
65+	15%	23%	12%	15%
Overall	26%	33%	26%	28%

Source. Statistics Canada (1992) General Social Survey, 1985 and 1991, Special Data Run.

- ◆ In 1985, 33% of all men and 28% of all women were regular smokers. By 1991, the smoking rates for both men and women who were regular smokers were the same at 26%.

- ◆ All age groups showed decreases from 1985 to 1991 in the percentages of males and females who were regular smokers. The largest decrease was for males aged 45 to 64 and females aged 20 to 24.

How many deaths are related to smoking tobacco?

- ◆ In 1992, there were 33,498 tobacco-related deaths in Canada representing 17% of total Canadian mortality.
- ◆ In Canada, the largest number of tobacco-related deaths (11,704) were from lung cancer, representing 35% of all such deaths in 1992.
- ◆ In Alberta, there were 2,344 tobacco-related deaths in 1992. This represents 35,531 potential years of life lost as a result of tobacco use.

What is environmental tobacco smoke (second-hand smoke)?

- ◆ Environmental tobacco smoke is tobacco smoke in the air, composed of sidestream smoke and smoke exhaled by the smoker.
- ◆ Sidestream smoke is smoke released into the air by a burning cigarette or other tobacco product. Sidestream smoke accounts for 85% of tobacco smoke in the environment.

What is passive or involuntary smoking?

- ◆ Passive or involuntary smoking occurs when non-smokers are exposed to environmental tobacco smoke.

What are the risks associated with passive smoking?

- ◆ Passive smoking increases the risk of developing lung cancer and heart disease in non-smokers.

Compared with the general population, non-smoking spouses of smokers have two to three times the risk of developing lung cancer.

TOBACCO

- ◆ More than 300 non-smokers in Canada die each year from lung cancer caused by exposure to environmental tobacco smoke.
- ◆ Children whose parents (particularly their mothers) smoke are more likely to have bronchitis, pneumonia, ear infections, and asthma attacks than children of non-smoking parents. They are also more likely to die from sudden infant death syndrome (SIDS).
- ◆ Exposure to environmental tobacco smoke may be particularly harmful during pregnancy.
- ◆ Clove cigarettes, containing 30 to 40% cloves and 60 to 70% tobacco, contain almost twice the tar and nicotine of ordinary cigarettes. They can cause allergic and toxic reactions, lung congestion, asthma and chest pain.
- ◆ Smokeless cigarettes contain nicotine and tobacco flavouring, but the user puffs on them without lighting them. Little is yet known about potential negative effects of this product.
- ◆ Some evidence indicates that light cigarettes contain more tar, nicotine and carbon monoxide than manufacturers claim. Recent evidence reveals that there is no difference in the risk of heart disease from smoking light or regular cigarettes.

COCAINE

What is cocaine?

- ◆ Cocaine is a powerful central nervous system stimulant. It is prepared from the leaves of the *Erythroxylum coca* bush found primarily in Peru and Bolivia. After coca paste is extracted from the leaves, it is purified to produce an odorless, white crystalline powder called cocaine hydrochloride. Often the white crystalline powder is diluted with sugar, cornstarch, talcum powder, etc.

How is cocaine used?

- ◆ Cocaine is usually sniffed or snorted through the nostrils, where it is absorbed through the mucous membrane of the upper respiratory tract.
- ◆ Other methods of use include smoking or injecting.

What is freebase cocaine?

- ◆ Freebase cocaine is cocaine that has been chemically treated, through an extraction process using flammable solvents, to remove the hydrochloride portion of the cocaine. The resulting freebase vaporizes more readily than regular cocaine (which contains the hydrochloride base) and can therefore be smoked.
- ◆ Crack is a freebase form of smokeable cocaine. It is made by adding baking soda to cocaine and heating the mixture. The dried residue forms clumps known as crack or rock, which is then smoked.

What are the short-term effects of cocaine use?

- ◆ Short-term effects of cocaine use include decreased appetite, increased alertness and high energy, euphoria followed by agitation and anxiety, exaggerated reflexes and pupil dilation.
- ◆ Additional effects include increased blood pressure, rapid heartbeat and breathing, sweating and pallor.

COCAINE

- ◆ At higher doses, users may experience rapid and weak pulse, nausea and vomiting and shallow respiration, erratic or violent behavior, tremors, uncoordination, twitching, hallucinations, chest pain or pressure, blurred vision, fever, muscle spasms, convulsions and death.

What are the long-term effects of cocaine use?

- ◆ Chronic cocaine use may lead to agitation, excitability, mood swings, and hypersensitivity to sensory stimuli, sometimes resulting in hallucinations. Other effects include sleep disorders, eating disorders and sexual dysfunction.
- ◆ If used during pregnancy, cocaine can cause complications such as spontaneous abortions. Dramatic media reports about grossly abnormal cocaine/crack babies are not supported by the available scientific information. However, heavy use of cocaine during pregnancy is associated with reduced fetal weight, and an increased stillbirth and malformation rate.
- ◆ Depending on the method of administration, some users may develop respiratory problems, destruction of tissue in the nose or infections such as hepatitis. Heart attacks, seizures, headaches, and strokes can also result from cocaine use, and AIDS from injecting the drug with non-sterile needles and syringes.
- ◆ Chronic, heavy cocaine use can cause severe psychiatric disorders such as paranoid psychosis. At first, users feel good (euphoria). With continued use, they can begin to feel increasingly uncomfortable (dysphoria), and finally become very suspicious and lose contact with reality (paranoid psychosis).

Is crack more dangerous than cocaine?

- ◆ As a form of freebase cocaine, crack can be smoked, and the inhaled drug reaches the brain very rapidly. The sharp and drastic rises in cocaine blood levels from crack could put the user at

increasingly greater risk for acute toxic overdose reactions including seizures, high blood pressure, heart attack and stroke.

Are cocaine and crack addicting?

- ◆ Studies indicate that cocaine is physically and psychologically addicting. The craving for the drug experienced by regular users is thought to be due to physiological changes in brain chemistry brought on by the drug. This craving makes it very difficult for users to stop using cocaine.
- ◆ Although media reports often imply that crack is a terribly addictive new drug, it is just another form of cocaine. Crack is probably as addictive as intravenously injected cocaine which causes similar effects. However, as a form of freebase cocaine, crack can be smoked, and the inhaled drug reaches the brain very rapidly and produces a dramatic, but short lasting euphoria, followed by an extreme low ("crash"). This sequence favors repeated use of the drug which can quite quickly result in addiction. Another difference from regular cocaine is that crack is sold in smaller, thus less expensive, amounts. so it is available to more users.

How many people use cocaine?

- ◆ In 1995, Canada's Alcohol and Other Drug Survey found that 5.2% of all Albertans aged 15 or older had used cocaine at least once in their lifetime. In Alberta, 1.3% had used cocaine at least once in the year preceding the survey.
- ◆ A 1993 survey of Alberta students (aged 12 to 18) found that 2.6% had used cocaine/crack in the past year.

How many drug offences are cocaine-related?

- ◆ In Alberta, of all illicit drug-related offences, 12% are cocaine-related.

COCAINE

- ◆ In 1989, 316 drug possession offences in Alberta and 7,018 drug possession offences in Canada were cocaine-related.
- ◆ In 1991, Alberta police forces made 450 cocaine/crack seizures for a total of 13.5 kg of cocaine/crack.

CAFFEINE

What is caffeine?

- ◆ Caffeine is one of the most widely used drugs in the world.
- ◆ In its pure form, caffeine is a white, crystalline powder. It is found in coffee beans, tea leaves, cocoa leaves and kola nuts.

How much caffeine do various products contain?

- ◆ Depending on the strength, a cup of percolated or brewed coffee contains between 40 and 180 mg of caffeine. Instant coffee ranges from 30 to 100 mg of caffeine per cup.
- ◆ Again depending on strength, a cup of tea contains between 10 and 90 mg of caffeine.
- ◆ The most common level of caffeine in cola drinks is 30 mg per 10 ounce can.
- ◆ A typical chocolate bar contains 20 to 25 mg of caffeine.
- ◆ Stay-aware pills contain 100 mg of caffeine
- ◆ The amount in headache and cold medicines varies; the amount is indicated on the product label.
- ◆ Over-the-counter medications containing caffeine include: Anacin®, Instantine®, Tylenol #1®, Excedrin®, 222s®, Atasol-8®, Dristan®.

What are the short-term effects of caffeine use?

- ◆ Short-term effects of consuming caffeine include mild mood elevation, increased sensory awareness and alertness, and postponement of drowsiness.
- ◆ Other effects include slightly increased blood pressure, increased metabolic rate, urination, and body temperature; shortened sleep; decreased appetite; constriction of cerebral blood vessels, and stimulation of cardiac muscles and respiration.

CAFFEINE

How much caffeine is too much?

Daily use in low doses of up to 300 mg (about 3 to 4 cups of coffee) in otherwise healthy adults does not appear to produce negative effects.

- ◆ High doses of 600 mg or more (the equivalent of 6 to 8 cups of coffee) can produce: chronic insomnia, anxiety, depression, gastrointestinal irritation and rapid irregular heartbeat. Some people experience these unpleasant effects at lower doses.
- ◆ Although caffeine has not been proven to cause birth defects, pregnant women are advised to consume as little as possible.

SOLVENTS/ INHALANTS

What types of products contain solvents or inhalants which are abused?

- ◆ Many industrial, commercial and household products contain solvents that are commonly abused. They include: gasoline, some types of glue and household cements, cleaning fluid, nail polish remover, paint remover, and general household cleaners.

What are the short-term effects of solvent or inhalant use?

- ◆ Early effects may include euphoria, dizziness, numbness, and weightlessness, followed by decreased motor coordination, muscle weakness, slowed reflexes, impaired judgement, visual disturbances and ringing in the ears. Bizarre behavior, perceptual distortions and severe depression may occur.
- ◆ Other effects include increased heart rate, irregular heartbeat, headache, sneezing, coughing, nasal inflammation, respiratory depression, nausea, vomiting and diarrhea.
- ◆ A prolonged period of inhalation can result in coma or seizures. Reduced oxygen supply to the brain can cause unconsciousness and brain damage.

What are the long-term effects of solvent or inhalant use?

- ◆ Many chronic solvent users have experienced psychological problems including apathy, mood swings, depression and paranoid thinking. There is increasing evidence that brain damage occurs with continued heavy use.
- ◆ Other effects may include blood abnormalities and damage to the liver, kidneys, lungs, and heart.
- ◆ Little is known about the effects of inhalants on pregnancy and the growth of the fetus. Because of potential serious effects, pregnant women are advised to avoid exposure to solvents.

SOLVENTS/ INHALANTS

Can solvent or inhalant use be fatal?

- 4 One cause of death among solvent users is "sudden sniffing death." Death results from heart failure brought about by severely irregular heartbeat, usually associated with some stress or vigorous activity after inhaling the solvent.
- 4 Users often use a plastic bag to inhale the substance. If a user lapses into sleep or unconsciousness while a bag remains over the nose and mouth, there is a substantial risk of death from asphyxiation.
- 4 Accidental or intentional overdose of solvents has resulted in a number of deaths.

Who uses solvents or inhalants?

- 4 In Canada, solvent abuse occurs all across the country, in various ethnic and socioeconomic groups, and in both urban and rural areas. Most commonly, users are young, between the ages of 8 and 16, although some heavy users are in their late teens or older.
- 4 A 1993 survey of 12-to 18-year-olds in Alberta found that 3.4% had used glue/solvents in the past 12 months.
- 4 Most young people who use solvents do so only on an occasional or experimental basis. Heavy users are often socially disadvantaged, do poorly in school, and come from unstable home environments.

What is methyl alcohol?

- 4 Methyl alcohol is a very dangerous poison and cannot be made safe to drink. Some people may try to get high using products that contain this poisonous substance. However, they are poisoning themselves without getting the high they seek.

- ◆ Drinking an ounce or less of methyl alcohol can cause blindness, nerve damage, coma, convulsions and death from respiratory arrest.
- ◆ Methyl alcohol (methyl hydrate, wood alcohol) is used chiefly as an industrial solvent. Common household products that contain methyl alcohol include paint removers, antifreeze and liquid fuel.

OTHER DRUGS

What are amphetamines?

- ◆ Amphetamines are a group of central nervous system stimulant drugs. These drugs produce short-term effects such as feelings of well-being, increased alertness and energy, and increases in heart rate and breathing rate. Long-term effects may include sleep disturbances, anxiety, appetite suppression and high blood pressure.
- ◆ Chronic use results in physical dependence and withdrawal symptoms when the drug is stopped. Psychological dependence can occur even among regular low-dose users.

What are barbiturates?

- ◆ Barbiturates are a group of central nervous system depressant drugs. Low doses of these drugs produce relaxation and result in mildly impaired cognitive and motor functioning. At high doses, effects range from severe impairment and intoxication to anesthesia, unconsciousness and respiratory arrest.
- ◆ Barbiturates are highly dangerous among drugs of abuse. Tolerance occurs rapidly, so higher doses are needed to maintain desired effects. Higher doses can lead to risk of death from overdose. If the user stops using the drug suddenly, they can experience severe withdrawal symptoms.

What are tranquillizers?

- ◆ Tranquillizers are depressant drugs which slow down the central nervous system. They affect the body in a way that is similar to the effects of other depressants such as alcohol, solvents and barbiturates.
- ◆ Some common examples of tranquillizers used to relieve anxiety include: Valium® (diazepam), Vivot® Librium®, Ativan® and Sertax®.
- ◆ Effects of tranquillizers vary with the particular drug, the dose and how it is taken. Small doses produce a feeling of well-being and

calm, loss of inhibition, relaxed muscle tension, reduced mental alertness and mildly impaired coordination and balance. Larger doses will probably cause people to appear intoxicated and to become drowsy and fall asleep. Driving motor vehicles and operating machinery should be avoided when taking tranquillizers. Long term effects include irritability, nausea, headache, skin rash, weight gain, impaired thinking, memory and judgment.

◆ Tolerance develops with regular use, making increased doses necessary to produce the desired effect. Psychological and physical dependence can also occur. Withdrawal symptoms include sleeplessness, sweating, stomach cramps, agitation, tremors, delirium, convulsions and even death.

What are steroids?

◆ Anabolic steroids make up a group of synthetic hormones similar to the male hormone testosterone. Steroids are most often used by athletes wanting to improve their performance, especially in sports requiring strength and power.

◆ Short-term effects of anabolic steroid use include increased muscle bulk and strength, and masculinization of both sexes. Women who use steroids can experience increased body and facial hair and menstrual irregularity. Men can experience testicular shrinking and impotence. Adolescents using anabolic steroids may have their growth prematurely and permanently stunted.

What is Ecstasy (MDMA)?

◆ Ecstasy is a drug that is structurally related to amphetamines or stimulants, but also has some hallucinogenic properties. Its chemical name is 3,4-methylenedioxymethamphetamine or short form name MDMA. It is known as a 'designer drug' produced in underground laboratories. Ecstasy can produce mild intoxication, a sense of pleasure, and euphoria. As with stimulant use, users may feel full of energy and confidence. As well, Ecstasy may cause sweating,

OTHER DRUGS

increased blood pressure and heart rate, nausea, grinding of the teeth and jaw pain, anxiety attacks, blurred vision, and vomiting. Strong negative effects may last for days or weeks from relatively small doses. These include confusion, panic, insomnia, and convulsions.

- ◆ Use of Ecstasy has been associated with young people who attend 'raves.' Raves are typically held in abandoned warehouses or at outdoor locations that can hold large numbers of people. There have been some deaths associated with Ecstasy use at raves. The combination of exertion from dancing, heat, heavy sweating, and lowered fluid intake, has resulted in dehydration and subsequent death.
- ◆ Between 1993 and 1995, the use of Ecstasy increased among Ontario students (grades 7 through 13) from 0.6% to 1.8% that reported having used the drug during the past 12 months before the survey.

What is heroin?

- ◆ Heroin is a semi-synthetic drug produced by chemically modifying morphine, which comes from the opium poppy. It is classified as a narcotic analgesic or opiate.
- ◆ Heroin can be sniffed, smoked or swallowed, but is often injected intravenously.
- ◆ Effects of heroin use include euphoria, tranquillity, numbness and pain relief. There are often decreased physical activity, inability to concentrate, apathy, droopy eyelids and reduced vision. Serious negative consequences are often related to the lifestyle of the user and factors relating to intravenous drug administration. For example, users who can't afford their addiction may turn to crime (e.g. drug offenses, theft etc.). Other lifestyle factors include malnutrition, poor housing, untreated illnesses, and frequent use of other drugs, all of which result in a generally poor state of health and lowered resistance to infection. Heroin users commonly develop infections at

injection sites and collapsed veins resulting from repeated injections. The combination of lowered resistance and injection drug use increases the risk of developing hepatitis, AIDS and other infections (e.g. pneumonia, tuberculosis).

- ◆ Heroin overdose is a common cause of death among heroin addicts. In the past few years, overdose deaths from heroin have increased in Canada (e.g. in Vancouver, Toronto, Calgary) due to the lower cost of heroin and the very high purity level (i.e. in excess of 90% purity on the streets).
- ◆ Tolerance develops rapidly as do both physical and psychological dependence.

What is LSD?

- ◆ Lysergic Acid Diethylamide (LSD) is the most powerful of the known hallucinogens. Even in very small doses, its effects include changes in perception, mood and thought. Hallucinations and perceptions of the senses can meld together. Users may experience a sense of wonder and joy, or they may feel anxious and fearful. In some cases, psychotic episodes can occur. These are characterized by bizarre behavior, delusions, terror and hallucinations.
- ◆ Tolerance to LSD develops quickly, so that with consecutive daily doses, no amount of the drug can produce desired effects. Only after a period of abstinence of three to four days does sensitivity return. Physical dependence on LSD does not appear to occur. Some users may become psychologically dependent.

What is methadone?

- ◆ Methadone is a synthetic narcotic analgesic and is currently used in the treatment of people dependent on other narcotic analgesics such as heroin.

Methadone is a long acting painkiller and its effects, risks and tolerance are similar to heroin.

OTHER DRUGS

- ◆ AADAC operates an Opiate Dependency Program. Its primary focus is to help those addicted to opiates to establish a "normal" lifestyle through the use of methadone maintenance and withdrawal.

PROBLEM GAMBLING

How much do Albertans gamble?

- ◆ According to a 1994 study by Wynne Resources (for Alberta Lotteries and Gaming), about 93% of adult Albertans have engaged in some form of gambling over their lifetime.
- ◆ The vast majority of Albertans who gamble do so responsibly. They gamble for entertainment or for social reasons and do not bet more than they can afford to lose.

What is problem gambling?

- ◆ Problem gambling refers to any form of gambling behavior that adversely affects family, personal, or vocational pursuits. It includes gambling that causes occasional problems as well as gambling that results in ongoing serious consequences. It may have a number of negative consequences for players, their families and friends, and the communities they live in.
- ◆ Players who are problem gamblers can experience decreased initiative, narrowed interests to gambling, and reduced feelings of self-worth. Common emotional reactions include depression, outbursts of rage, and feelings of being out of control. Problem gamblers can experience loneliness and alienation from family and friends. Physical consequences include stress-related conditions such as insomnia, digestive problems, and back or neck pain. Problem gamblers also experience withdrawal symptoms similar to those experienced by alcoholics and drug addicts.
- ◆ The effects of problem gambling on the family are interpersonal conflict, instability, separation or divorce, and disregard for the safety and care of any children. The problem gambler may neglect responsibilities at home, work, or school.
- ◆ For communities, problems related to gambling can include increased criminal activity (in casinos and to finance gambling), an increase in the number of pawn shops, and lost productivity in the workplace.

PROBLEM GAMBLING

How many problem gamblers are there in Alberta?

- ◆ The 1994 study by Wynne Resources found that about 88% of adult Albertans are social, non-problem gamblers and 7% do not gamble at all.
- ◆ The remaining 5% of adult Albertans experience some problems related to gambling. Based on an estimated 1994 Alberta population of 2.7 million, it is estimated that approximately 135,000 individuals in Alberta experience problems with gambling. This group consists of 4% of Albertans who experience mild to moderate gambling-related problems and 1% who experience more severe difficulties. Severe difficulties can include spending all the family savings and incurring immense gambling debts, loss of job, marital or family difficulties, criminal activities such as theft and embezzlement to finance gambling, and health problems such as depression.
- ◆ The prevalence of problem gambling among adolescents is higher than the adult rate in Alberta, and is among the highest reported in similar studies from elsewhere in Canada and the United States.

How many people have a problem with Video Lottery Terminals or VLTs?

- ◆ In 1995/96, there were 2,713 calls to the 1-800 Alberta Gambling Help Line from problem gamblers, friends or family of problem gamblers, and professionals. Sixty percent of the calls to the Help Line concerned VLT gambling.
- ◆ In 1995/96, there were 2,114 clients with gambling or gambling and alcohol and/or drug issues in treatment at AADAC and its Funded Agencies. Over half (57%) of these clients cited VLTs as the "most frequent type of gambling."

What are the warning signs of a gambling problem?

- ◆ Gambling problems can range from minor to severe. Here are some signs that a person may have a gambling problem:

Spends large amount of time gambling. This allows little time for family, friends or other interests.

Begins to place larger, more frequent bets. Larger bets are necessary to get the same level of excitement.

Has growing debts. The problem gambler is secretive or defensive about money, and may borrow from family members or friends.

Pins hopes on the "big win." The problem gambler believes the big win will solve financial and other problems.

Promises to cut back on gambling. The problem gambler is unable to reduce or stop gambling.

Refuses to explain behavior, or lies about it. The problem gambler may be away from home or work for long periods of time, or make an unusually high number of telephone calls.

Feels frequent highs and lows. If unable to gamble, the problem gambler misses the thrill of the action and may be bad-tempered, withdrawn or restless. During a winning streak, the gambler is on a high.

Boasts about winning. The problem gambler loves to relive a win but will make light of losses when others express their concern.

Prefers gambling to a special family occasion. The problem gambler may arrive late or miss family events such as birthdays, school activities and other family events.

Seeks new places to gamble close to home and away. The problem gambler may insist that evenings out or even family vacations be at places where gambling is available.

PROBLEM GAMBLING

How many teens in Alberta gamble?

- ◆ In a 1996 study on adolescent gambling by Wynn Resources (for AADAC), 67% of Alberta adolescents surveyed had gambled in the past year. This was similar to an Ontario study that reported 65% of adolescents had gambled and 60% in a Nova Scotia study.
- ◆ In the Alberta study, 44% of the adolescents who gambled did not experience any problems with their gambling, 15% were identified as being at risk for developing gambling problems, and 8% were considered problem gamblers.

What is the legal gambling age in Alberta?

- ◆ In Alberta, the legal age is 18 for most forms of gambling (VLTs, casinos, lotteries). Betting on horse races is restricted to those who are 16 years of age or older. Age of participation at bingo halls is set by the individual bingo associations and at present there is no minimum age restriction.

How much money does the Alberta government make from gambling?

- ◆ In 1994/95, the Alberta government made \$2.76 billion dollars in gross revenues from gambling, compared to \$556 million in 1983/84. Most of the revenue in 1994/95 came from VLTs (55%), followed by 13% from lotteries, 11% from bingos, 10% from casinos, 7% from horse racing, 2% from pull-tickets, and 2% from raffles.

AIDS

What is AIDS?

- ◆ AIDS (Acquired Immune Deficiency Syndrome) is a disease caused by a viral infection which weakens the immune system resulting in the development of life-threatening infections and/or cancers.
- ◆ AIDS is the later stage of infection. During the early stage, patients may have no symptoms or they may develop less severe infections.

What causes AIDS?

- ◆ AIDS is caused by the Human Immunodeficiency Virus (HIV). The virus has been found in blood, semen, breast milk and urine. It has also been found in small amounts in saliva and tears and in other body fluids and tissues.

How is HIV transmitted?

- ◆ The virus is transmitted primarily through sexual contact, mainly by unprotected vaginal and anal intercourse. In addition to the well-known spread in the gay community, most HIV infections worldwide are transmitted by unsafe heterosexual activity.
- ◆ The virus is also transmitted through shared use of infected needles and syringes, particularly by injection drug abusers. Before the screening of the blood supply began in Canada in 1985, the virus was also transmitted through administration of infected blood transfusions and blood products.
- The virus can also be transmitted from an infected mother to her newborn child.
- There is no evidence that HIV can be transmitted through ordinary social or occupational contact.

AIDS

Who is at risk for contracting HIV infection?

- ◆ Sexually active homosexual and bisexual men account for the majority of AIDS cases resulting from HIV infection in Canada (79%). Intravenous drug users are the other main high risk group.
- ◆ Heterosexual partners of infected persons and children born to infected mothers are also at high risk.
- ◆ The risk of transmission to health care professionals appears to be low, but the infectious nature of the syndrome does call for strict compliance with infectious disease control procedures. Only one health care professional, a dentist, is known to have infected a patient.

How many AIDS cases have been reported?

- ◆ **TABLE 4: PREVALENCE OF AIDS AS OF JUNE 1996**

	Canada	Alberta
Number of Cases	13,810	850
Number of Deaths	9,969	615

Source: Health Canada (July, 1996). Quarterly Surveillance Update: AIDS in Canada.

Source: Communicable Disease Control and Epidemiology (July, 1996). Alberta AIDS Surveillance.

- ◆ The number of Canadians with AIDS is increasing in all regions in Canada. The rise is particularly pronounced among women and intravenous drug users, although sexual relations between men still account for most cases. As well, known cases of AIDS have increased among the federal inmate population and among the Canadian aboriginal population.

How can AIDS be treated?

- ◆ There is still no cure for AIDS and no vaccine is yet available to prevent infection with HIV.

- 4** Medical treatment of HIV infections includes: treatment with antiviral drugs, attempts to stimulate the immune system, antibiotic treatment of specific infections and anti-cancer treatment for cancers associated with AIDS.
- 4** Supportive counselling, information and drug abuse treatment programs are important components of treatment for persons with AIDS and those in high-risk groups.

TREATMENT AND PREVENTION OF SUBSTANCE ABUSE, AND GAMBLING PROBLEMS

What is AADAC's treatment and prevention philosophy?

- ◆ AADAC is an addictions agency which operates from the general principle that the person, not just the substance or activity, is the most important element in substance use and gambling problems. AADAC's approach to the prevention and treatment of substance abuse and problem gambling primarily aims at reducing people's demand for alcohol, other drugs and gambling through developing individual competence and creating healthy families and communities. AADAC's mission is to assist Albertans to achieve a life free from the abuse of alcohol, other drugs and gambling.

How are AADAC services organized?

- ◆ AADAC provides a comprehensive network of services which include:
- ◆ 23 AADAC area offices and three AADAC clinics that provide prevention and treatment services to individuals and families concerned about substance use and gambling;
- ◆ three detoxification centres that provide a safe environment for individuals to withdraw from alcohol or other drugs;
- ◆ three residential treatment facilities, including a Business and Industry Clinic, that provide specialized intensive programs within a protective and supportive environment; and
- ◆ two youth treatment centres that provide specialized intensive day treatment programs for teens.
- ◆ AADAC also funds 26 community agencies which complement and extend this network by providing: detoxification, outpatient counselling, residential treatment, residential support (Halfway Houses), adolescent treatment, overnight shelter, and community prevention and education programming.

In general, what services does AADAC offer?

- ◆ As summarized in Table 5, AADAC and the 26 community agencies it funds offer services in four areas: community outpatient services, crisis services, residential services, and information services.
- ◆ TABLE 5: SUMMARY OF SERVICES FOR AADAC AND ITS FUNDED AGENCIES 1995/96

	SERVICE PROVIDED	TREATMENT ADMISSIONS	CRISIS SERVICES	CONTACTS	INFO. PRODUCTS DISTRIBUTED/DELIVERED
COMMUNITY SERVICES	<ul style="list-style-type: none">• Prevention and Education• Training• Counselling Services• Adult Day Treatment• Adolescent Day Treatment			115,373 7,246	
CRISIS SERVICES	<ul style="list-style-type: none">• Detoxification• Overnight Shelter Stays• Gambling Help Line Counselling	21,579 1,324 186	8,980 77,446 2,702		
RESIDENTIAL TREATMENT	<ul style="list-style-type: none">• Short-Term Residential• Long-Term Residential	4,335 705			
INFORMATION SERVICES	<ul style="list-style-type: none">• Information Resources. Communications and Newsletters• Information Development Initiatives			613,762 268	
	TOTALS	37,109	80,148	122,619	614,030

What is Alcoholics Anonymous?

Alcoholics Anonymous is a fellowship of people who meet to deal with alcoholism.

- ◆ The program consists of meetings at which members share experiences, and help each other to maintain sobriety.
- ◆ Alcoholics Anonymous is not associated with any other political, social or religious organization. It is supported through voluntary member contributions.

TREATMENT AND PREVENTION OF SUBSTANCE ABUSE, AND GAMBLING PROBLEMS

Can someone with an alcohol, other drug or gambling problem be forced into treatment?

- ◆ Successful treatment requires co-operation of the client.
- ◆ More effective than forcing someone into treatment is helping them to realize the problems that alcohol, other drugs or gambling are causing in their lives, and the consequences that will result from continued substance abuse and/or problem gambling, such as loss of job, family or health.

Is abstinence the only answer to alcoholism?

- ◆ Traditionally, total abstinence was presumed a necessary condition for successful treatment of alcoholism, and for many it is still the most appropriate goal.
- ◆ More recent studies suggest that some people with alcohol problems, particularly those in the earlier stages, can successfully return to controlled social drinking.

FOR FURTHER INFORMATION

For further information contact

your local AADAC office

or the AADAC Library

Suite 200, 10909 Jasper Avenue

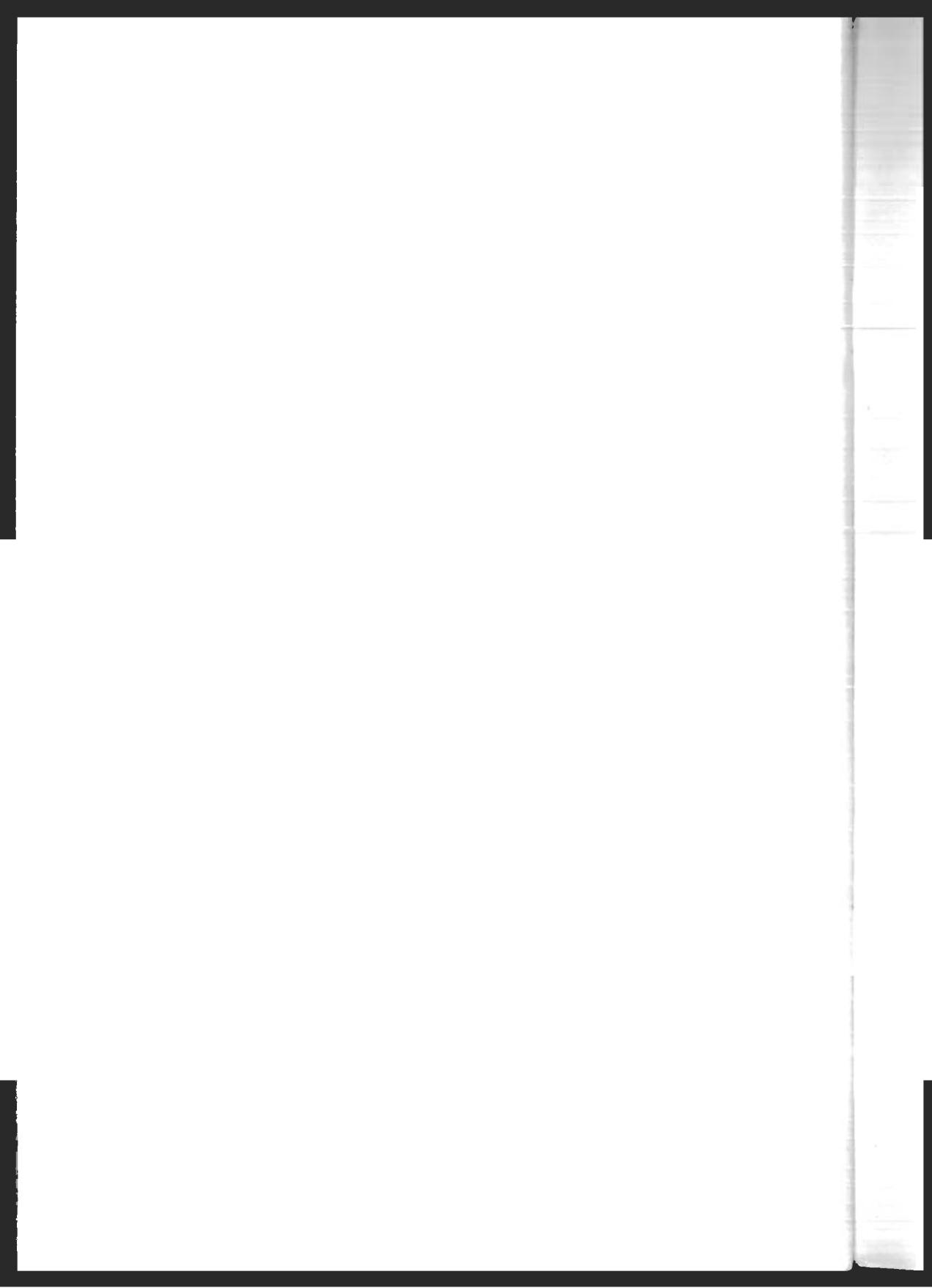
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