

= Alcoholism =

Alcoholism , also known as alcohol use disorder (AUD) , is a broad term for any drinking of alcohol that results in problems . It was previously divided into two types : alcohol abuse and alcohol dependence . In a medical context , alcoholism is said to exist when two or more of the following conditions is present : a person drinks large amounts over a long time period , has difficulty cutting down , acquiring and drinking alcohol takes up a great deal of time , alcohol is strongly desired , usage results in not fulfilling responsibilities , usage results in social problems , usage results in health problems , usage results in risky situations , withdrawal occurs when stopping , and alcohol tolerance has occurred with use . Risky situations include drinking and driving or having unsafe sex among others . Alcohol use can affect all parts of the body but particularly affects the brain , heart , liver , pancreas , and immune system . This can result in mental illness , Wernicke ? Korsakoff syndrome , an irregular heart beat , liver failure , and an increase in the risk of cancer , among other diseases . Drinking during pregnancy can cause damage to the baby resulting in fetal alcohol spectrum disorders . Generally women are more sensitive to alcohol 's harmful physical and mental effects than men .

Both environmental factors and genetics are associated with alcoholism with about half the risk attributed to each . A person with a parent or sibling with alcoholism is three to four times more likely to be alcoholic themselves . Environmental factors include social , cultural , and behavioral influences . High stress levels , anxiety , as well as inexpensive easily accessible alcohol increases risk . People may continue to drink partly to prevent or improve symptoms of withdrawal . A low level of withdrawal may last for months following stopping . Medically , alcoholism is considered both a physical and mental illness . Both questionnaires and certain blood tests may detect people with possible alcoholism . Further information is then collected to confirm the diagnosis .

Prevention of alcoholism is possible by regulating and limiting the sale of alcohol , taxing alcohol to increase its cost , and providing inexpensive treatment . Treatment may take several steps . Because of the medical problems that can occur during withdrawal , alcohol detoxification should be carefully controlled . One common method involves the use of benzodiazepine medications , such as diazepam . This can be either given while admitted to a health care institution or occasionally while a person remains in the community with close supervision . Other addictions or mental illness may complicate treatment . After detoxification support such as group therapy or support groups are used to help keep a person from returning to drinking . One commonly used form of support is the group Alcoholics Anonymous . The medications acamprosate , disulfiram , or naltrexone may also be used to help prevent further drinking .

The World Health Organization estimates that as of 2010 there were 208 million people with alcoholism worldwide (4 @. @ 1 % of the population over 15 years of age) . In the United States about 17 million (7 %) of adults and 0 @. @ 7 million (2 @. @ 8 %) of those age 12 to 17 years of age are affected . It is more common among males and young adults , becoming less common in middle and old age . It is the least common in Africa at 1 @. @ 1 % and has the highest rates in Eastern Europe at 11 % . Alcoholism directly resulted in 139 @, @ 000 deaths in 2013 up from 112 @, @ 000 deaths in 1990 . A total of 3 @. @ 3 million deaths (5 @. @ 9 % of all deaths) are believed to be due to alcohol . It often reduces a person 's life expectancy by around ten years . In the United States it resulted in economic costs of \$ 224 billion USD in 2006 . Many terms , some insulting and others informal , have been used to refer to people affected by alcoholism including : tippler , drunkard , dipsomaniac , and souse . In 1979 , the World Health Organization discouraged the use of " alcoholism " due to its inexact meaning , preferring " alcohol dependence syndrome " .

= = Signs and symptoms = =

= = = Early signs = = =

The risk of alcohol dependence begins at low levels of drinking and increases directly with both the

volume of alcohol consumed and a pattern of drinking larger amounts on an occasion . Young adults are particularly at risk .

=== Long @-@ term misuse ===

Alcoholism is characterised by an increased tolerance to and physical dependence on alcohol , affecting an individual 's ability to control consumption . These characteristics play a role decreasing an alcoholic 's ability to stop drinking . Alcoholism can have adverse effects on mental health , causing psychiatric disorders and increasing the risk of suicide . A depressed mood is a common symptom .

=== Warning signs ===

Warning signs of alcoholism include the consumption of increasing amounts of alcohol and frequent intoxication , preoccupation with drinking to the exclusion of other activities , promises to quit and failure to keep them , the inability to remember what was said or done while drinking , personality changes , denial or the making of excuses for drinking , the refusal to admit excessive drinking , dysfunction at work , the loss of interest in personal appearance or hygiene , marital and economic hardships , and the complaint of poor health , with loss of appetite , respiratory infections , or anxiety .

=== Physical ===

===== Short @-@ term effects =====

Drinking enough to cause a blood alcohol concentration (BAC) of 0 @. @ 03 ? 0 @. @ 12 % typically causes an overall improvement in mood and possible euphoria , increased self @-@ confidence and sociability , decreased anxiety , a flushed , red appearance in the face and impaired judgment and fine muscle coordination . A BAC of 0 @. @ 09 % to 0 @. @ 25 % causes lethargy , sedation , balance problems and blurred vision . A BAC from 0 @. @ 18 % to 0 @. @ 30 % causes profound confusion , impaired speech (e.g. , slurred speech) , staggering , dizziness and vomiting . A BAC from 0 @. @ 25 % to 0 @. @ 40 % causes stupor , unconsciousness , anterograde amnesia , vomiting (death may occur due to inhalation of vomit (pulmonary aspiration) while unconscious and respiratory depression (potentially life @-@ threatening) . A BAC from 0 @. @ 35 % to 0 @. @ 80 % causes a coma (unconsciousness) , life @-@ threatening respiratory depression and possibly fatal alcohol poisoning . As with all alcoholic beverages , drinking while driving , operating an aircraft or heavy machinery increases the risk of an accident ; many countries have penalties against drunk driving .

===== Long @-@ term effects =====

Drinking more than one drink a day for women or two drinks for men increases the risk of heart disease , high blood pressure , atrial fibrillation , and stroke . Risk is greater in younger people due to binge drinking which may result in violence or accidents . About 3 @. @ 3 million deaths (5 @. @ 9 % of all deaths) are believed to be due to alcohol each year . Alcoholism reduces a person 's life expectancy by around ten years and alcohol use is the third leading cause of early death in the United States . No professional medical association recommends that people who are nondrinkers should start drinking wine .

Long @-@ term alcohol abuse can cause a number of physical symptoms , including cirrhosis of the liver , pancreatitis , epilepsy , polyneuropathy , alcoholic dementia , heart disease , nutritional deficiencies , peptic ulcers and sexual dysfunction , and can eventually be fatal . Other physical effects include an increased risk of developing cardiovascular disease , malabsorption , alcoholic

liver disease , and cancer . Damage to the central nervous system and peripheral nervous system can occur from sustained alcohol consumption . A wide range of immunologic defects can result and there may be a generalized skeletal fragility , in addition to a recognized tendency to accidental injury , resulting a propensity to bone fractures .

Women develop long @-@ term complications of alcohol dependence more rapidly than do men . Additionally , women have a higher mortality rate from alcoholism than men . Examples of long @-@ term complications include brain , heart , and liver damage and an increased risk of breast cancer . Additionally , heavy drinking over time has been found to have a negative effect on reproductive functioning in women . This results in reproductive dysfunction such as anovulation , decreased ovarian mass , problems or irregularity of the menstrual cycle , and early menopause . Alcoholic ketoacidosis can occur in individuals who chronically abuse alcohol and have a recent history of binge drinking .

The amount of alcohol that can be biologically processed and its effects differ between sexes . Equal dosages of alcohol consumed by men and women generally result in women having higher blood alcohol concentrations (BACs) , since women generally have a higher percentage of body fat and therefore a lower volume of distribution for alcohol than men , and because the stomachs of men tend to metabolize alcohol more quickly .

== == Psychiatric == ==

Long @-@ term misuse of alcohol can cause a wide range of mental health problems . Severe cognitive problems are common ; approximately 10 percent of all dementia cases are related to alcohol consumption , making it the second leading cause of dementia . Excessive alcohol use causes damage to brain function , and psychological health can be increasingly affected over time .

Social skills are significantly impaired in people suffering from alcoholism due to the neurotoxic effects of alcohol on the brain , especially the prefrontal cortex area of the brain . The social skills that are impaired by alcohol abuse include impairments in perceiving facial emotions , prosody perception problems and theory of mind deficits ; the ability to understand humour is also impaired in alcohol abusers .

Psychiatric disorders are common in alcoholics , with as many as 25 percent suffering severe psychiatric disturbances . The most prevalent psychiatric symptoms are anxiety and depression disorders . Psychiatric symptoms usually initially worsen during alcohol withdrawal , but typically improve or disappear with continued abstinence . Psychosis , confusion , and organic brain syndrome may be caused by alcohol misuse , which can lead to a misdiagnosis such as schizophrenia . Panic disorder can develop or worsen as a direct result of long @-@ term alcohol misuse .

The co @-@ occurrence of major depressive disorder and alcoholism is well documented . Among those with comorbid occurrences , a distinction is commonly made between depressive episodes that remit with alcohol abstinence (" substance @-@ induced ") , and depressive episodes that are primary and do not remit with abstinence (" independent " episodes) . Additional use of other drugs may increase the risk of depression .

Psychiatric disorders differ depending on gender . Women who have alcohol @-@ use disorders often have a co @-@ occurring psychiatric diagnosis such as major depression , anxiety , panic disorder , bulimia , post @-@ traumatic stress disorder (PTSD) , or borderline personality disorder . Men with alcohol @-@ use disorders more often have a co @-@ occurring diagnosis of narcissistic or antisocial personality disorder , bipolar disorder , schizophrenia , impulse disorders or attention deficit / hyperactivity disorder . Women with alcoholism are more likely to have a history of physical or sexual assault , abuse and domestic violence than those in the general population , which can lead to higher instances of psychiatric disorders and greater dependence on alcohol .

== == Social effects == ==

The social problems arising from alcoholism are serious , caused by the pathological changes in the

brain and the intoxicating effects of alcohol . Alcohol abuse is associated with an increased risk of committing criminal offences , including child abuse , domestic violence , rape , burglary and assault . Alcoholism is associated with loss of employment , which can lead to financial problems . Drinking at inappropriate times , and behavior caused by reduced judgment , can lead to legal consequences , such as criminal charges for drunk driving or public disorder , or civil penalties for tortious behavior , and may lead to a criminal sentence .

An alcoholic 's behavior and mental impairment , while drunk , can profoundly affect those surrounding them and lead to isolation from family and friends . This isolation can lead to marital conflict and divorce , or contribute to domestic violence . Alcoholism can also lead to child neglect , with subsequent lasting damage to the emotional development of the alcoholic 's children . For this reason , children of alcoholic parents can develop a number of emotional problems . For example , they can become afraid of their parents , because of their unstable mood behaviors . In addition , they can develop considerable amount of shame over their inadequacy to liberate their parents from alcoholism . As a result of this failure , they develop wretched self @-@ images , which can lead to depression .

= = = Alcohol withdrawal = = =

As with similar substances with a sedative @-@ hypnotic mechanism , such as barbiturates and benzodiazepines , withdrawal from alcohol dependence can be fatal if it is not properly managed . Alcohol 's primary effect is the increase in stimulation of the GABAA receptor , promoting central nervous system depression . With repeated heavy consumption of alcohol , these receptors are desensitized and reduced in number , resulting in tolerance and physical dependence . When alcohol consumption is stopped too abruptly , the person 's nervous system suffers from uncontrolled synapse firing . This can result in symptoms that include anxiety , life @-@ threatening seizures , delirium tremens , hallucinations , shakes and possible heart failure . Other neurotransmitter systems are also involved , especially dopamine , NMDA and glutamate .

Severe acute withdrawal symptoms such as delirium tremens and seizures rarely occur after 1 week post cessation of alcohol . The acute withdrawal phase can be defined as lasting between one and three weeks . In the period of 3 ? 6 weeks following cessation increased anxiety , depression as well as sleep disturbance is common ; fatigue and tension can persist for up to 5 weeks as part of the post @-@ acute withdrawal syndrome ; about a quarter of alcoholics experience anxiety and depression for up to 2 years . These post @-@ acute withdrawal symptoms have also been demonstrated in animal models of alcohol dependence and withdrawal . A kindling effect also occurs in alcoholics whereby each subsequent withdrawal syndrome is more severe than the previous withdrawal episode ; this is due to neuroadaptations which occur as a result of periods of abstinence followed by re @-@ exposure to alcohol . Individuals who have had multiple withdrawal episodes are more likely to develop seizures and experience more severe anxiety during withdrawal from alcohol than alcohol dependent individuals without a history of past alcohol withdrawal episodes . The kindling effect leads to persistent functional changes in brain neural circuits as well as to gene expression . Kindling also results in the intensification of psychological symptoms of alcohol withdrawal .

There are decision tools and questionnaires which help guide physicians in evaluating alcohol withdrawal . For example , the CIWA @-@ Ar objectifies alcohol withdrawal symptoms in order to guide therapy decisions which allows for an efficient interview while at the same time retaining clinical usefulness , validity and reliability , ensuring proper care for withdrawal patients , who can be in danger of death .

= = Causes = =

A complex mixture of genetic and environmental factors influences the risk of the development of alcoholism . Genes that influence the metabolism of alcohol also influence the risk of alcoholism , and may be indicated by a family history of alcoholism . One paper has found that alcohol use at an

early age may influence the expression of genes which increase the risk of alcohol dependence . Individuals who have a genetic disposition to alcoholism are also more likely to begin drinking at an earlier age than average .

Also , a younger age of onset of drinking is associated with an increased risk of the development of alcoholism , and about 40 percent of alcoholics will drink excessively by their late adolescence . It is not entirely clear whether this association is causal , and some researchers have been known to disagree with this view .

Severe childhood trauma is also associated with a general increase in the risk of drug dependency . Lack of peer and family support is associated with an increased risk of alcoholism developing . Genetics and adolescence are associated with an increased sensitivity to the neurotoxic effects of chronic alcohol abuse . Cortical degeneration due to the neurotoxic effects increases impulsive behaviour , which may contribute to the development , persistence and severity of alcohol use disorders . There is evidence that with abstinence , there is a reversal of at least some of the alcohol induced central nervous system damage .

The use of cannabis was associated with later problems with alcohol use . Alcohol use was associated with an increased probability of later use of tobacco , cannabis , and other illegal drugs .

== Alcohol availability ==

Alcohol is the most available and widely abused substance . Beer alone is the world 's most widely consumed alcoholic beverage ; it is the third @-@ most popular drink overall , after water and tea . It is thought by some to be the oldest fermented beverage .

== Gender difference ==

Based on combined data from SAMHSA 's 2004 ? 2005 National Surveys on Drug Use & Health , the rate of past year alcohol dependence or abuse among persons aged 12 or older varied by level of alcohol use : 44 @. @ 7 % of past month heavy drinkers , 18 @. @ 5 % binge drinkers , 3 @. @ 8 % past month non @-@ binge drinkers , and 1 @. @ 3 % of those who did not drink alcohol in the past month met the criteria for alcohol dependence or abuse in the past year . Males had higher rates than females for all measures of drinking in the past month : any alcohol use (57 @. @ 5 % vs. 45 %) , binge drinking (30 @. @ 8 % vs. 15 @. @ 1 %) , and heavy alcohol use (10 @. @ 5 % vs. 3 @. @ 3 %) , and males were twice as likely as females to have met the criteria for alcohol dependence or abuse in the past year (10 @. @ 5 % vs. 5 @. @ 1 %) .

== Genetic variation ==

Genetic differences exist between different racial groups which affect the risk of developing alcohol dependence . For example , there are differences between African , East Asian and Indo @-@ racial groups in how they metabolize alcohol . These genetic factors are believed to , in part , explain the differing rates of alcohol dependence among racial groups . The alcohol dehydrogenase allele ADH1 B * 3 causes a more rapid metabolism of alcohol . The allele ADH1 B * 3 is only found in those of African descent and certain Native American tribes . African Americans and Native Americans with this allele have a reduced risk of developing alcoholism . Native Americans however , have a significantly higher rate of alcoholism than average ; it is unclear why this is the case . Other risk factors such as cultural environmental effects e.g. trauma have been proposed to explain the higher rates of alcoholism among Native Americans compared to alcoholism levels in caucasians .

== Diagnosis ==

== Definition ==

Misuse , problem use , abuse , and heavy use refer to improper use of alcohol which may cause physical , social , or moral harm to the drinker . Moderate use is defined by The Dietary Guidelines for Americans as no more than two alcoholic beverages a day for men and no more than one alcoholic beverage a day for women . Some drinkers may drink more than 600 ml of alcohol per day during a heavy drinking period .

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) defines binge drinking as the amount of alcohol leading to a blood alcohol content (BAC) of 0 .08 , which , for most adults , would be reached by consuming five drinks for men or four for women over a 2 -hour period . According to the NIAAA , men may be at risk for alcohol -related problems if their alcohol consumption exceeds 14 standard drinks per week or 4 drinks per day , and women may be at risk if they have more than 7 standard drinks per week or 3 drinks per day . It defines a standard drink as one 12 -ounce bottle of beer , one 5 -ounce glass of wine , or 1 .5 ounces of distilled spirits . Despite this risk , a 2014 report in the National Survey on Drug Use and Health found that only 10 % of either " heavy drinkers " or " binge drinkers " defined according to the above criteria also met the criteria for alcohol dependence , while only 1 .3 % of non -binge drinkers met this criteria . An inference drawn from this study is that evidence -based policy strategies and clinical preventive services may effectively reduce binge drinking without requiring addiction treatment in most cases .

The term " alcoholism " is commonly used , but poorly defined . The WHO calls alcoholism " a term of long -standing use and variable meaning " , and use of the term was disfavored by a 1979 WHO Expert Committee . The Big Book (from Alcoholics Anonymous) states that once a person is an alcoholic , they are always an alcoholic , but does not define what is meant by the term " alcoholic " in this context . In 1960 , Bill W. , co -founder of Alcoholics Anonymous (AA) , said :

We have never called alcoholism a disease because , technically speaking , it is not a disease entity . For example , there is no such thing as heart disease . Instead there are many separate heart ailments , or combinations of them . It is something like that with alcoholism . Therefore we did not wish to get in wrong with the medical profession by pronouncing alcoholism a disease entity . Therefore we always called it an illness , or a malady ? a far safer term for us to use .

In professional and research contexts , the term " alcoholism " sometimes encompasses both alcohol abuse and alcohol dependence , and sometimes is considered equivalent to alcohol dependence . Talbot (1989) observes that alcoholism in the classical disease model follows a progressive course : if a person continues to drink , their condition will worsen . This will lead to harmful consequences in their life , physically , mentally , emotionally and socially .

Johnson (1980) explores the emotional progression of the addict ? s response to alcohol . He looks at this in four phases . The first two are considered ? normal ? drinking and the last two are viewed as " typical " alcoholic drinking . Johnson 's four phases consist of :

Learning the mood swing . A person is introduced to alcohol (in some cultures this can happen at a relatively young age) , and the person enjoys the happy feeling it produces . At this stage there is no emotional cost .

Seeking the mood swing . A person will drink to regain that feeling of euphoria experienced in phase 1 ; the drinking will increase as more intoxication is required to achieve the same effect . Again at this stage , there are no significant consequences .

At the third stage there are physical and social consequences , i.e. , hangovers , family problems , work problems , etc . A person will continue to drink excessively , disregarding the problems .

The fourth stage can be detrimental , as Johnson cites it as a risk for premature death . As a person now drinks to feel normal , they block out the feelings of overwhelming guilt , remorse , anxiety , and shame they experience when sober .

Other theorists such as Milam & Ketcham (1983) focus on the physical deterioration of alcohol . They describe the process in three stages :

Adaptive stage ? The person will not experience any negative symptoms , and believe they have capacity for alcohol . Physiological changes are happening with the increase in tolerance , but this

will not be noticeable to the drinker or others .

Dependent stage ? At this stage , symptoms build gradually . Hangover symptoms may be confused with withdrawal symptoms . Many addicts will maintain their drinking to avoid withdrawal sickness , drinking small amounts frequently . They will try to hide their problem from others , and will avoid gross intoxication .

Deterioration stage ? Various organs are damaged due to long @-@ term drinking . Medical treatment will be required ; otherwise the pathological changes will cause death .

In psychology and psychiatry , the DSM is the most common global standard , while in medicine , the standard is ICD . The terms they recommend are similar but not identical .

The DSM @-@ IV diagnosis of alcohol dependence represents one approach to the definition of alcoholism . In part this is to assist in the development of research protocols in which findings can be compared to one another . According to the DSM @-@ IV , an alcohol dependence diagnosis is : " maladaptive alcohol use with clinically significant impairment as manifested by at least three of the following within any one @-@ year period : tolerance ; withdrawal ; taken in greater amounts or over longer time course than intended ; desire or unsuccessful attempts to cut down or control use ; great deal of time spent obtaining , using , or recovering from use ; social , occupational , or recreational activities given up or reduced ; continued use despite knowledge of physical or psychological sequelae . "

Despite the imprecision inherent in the term , there have been attempts to define how the word " alcoholism " should be interpreted when encountered . In 1992 , it was defined by the NCADD and ASAM as " a primary , chronic disease characterized by impaired control over drinking , preoccupation with the drug alcohol , use of alcohol despite adverse consequences , and distortions in thinking . " MeSH has had an entry for " alcoholism " since 1999 , and references the 1992 definition .

AA describes alcoholism as an illness that involves a physical allergy (where " allergy " has a different meaning than that used in modern medicine .) and a mental obsession . The doctor and addiction specialist Dr. William D. Silkworth M.D. writes on behalf of AA that " Alcoholics suffer from a " (physical) craving beyond mental control " .

A 1960 study by E. Morton Jellinek is considered the foundation of the modern disease theory of alcoholism . Jellinek 's definition restricted the use of the word " alcoholism " to those showing a particular natural history . The modern medical definition of alcoholism has been revised numerous times since then . The American Medical Association currently uses the word alcoholism to refer to a particular chronic primary disease .

= = = Social barriers = = =

Attitudes and social stereotypes can create barriers to the detection and treatment of alcohol abuse . This is more of a barrier for women than men . Fear of stigmatization may lead women to deny that they are suffering from a medical condition , to hide their drinking , and to drink alone . This pattern , in turn , leads family , physicians , and others to be less likely to suspect that a woman they know is an alcoholic . In contrast , reduced fear of stigma may lead men to admit that they are suffering from a medical condition , to display their drinking publicly , and to drink in groups . This pattern , in turn , leads family , physicians , and others to be more likely to suspect that a man they know is an alcoholic .

= = = Screening = = =

Several tools may be used to detect a loss of control of alcohol use . These tools are mostly self @-@ reports in questionnaire form . Another common theme is a score or tally that sums up the general severity of alcohol use .

The CAGE questionnaire , named for its four questions , is one such example that may be used to screen patients quickly in a doctor 's office .

Two " yes " responses indicate that the respondent should be investigated further .

The questionnaire asks the following questions :

Have you ever felt you needed to Cut down on your drinking ?

Have people Annoyed you by criticizing your drinking ?

Have you ever felt Guilty about drinking ?

Have you ever felt you needed a drink first thing in the morning (Eye @-@ opener) to steady your nerves or to get rid of a hangover ?

The CAGE questionnaire has demonstrated a high effectiveness in detecting alcohol @-@ related problems ; however , it has limitations in people with less severe alcohol @-@ related problems , white women and college students .

Other tests are sometimes used for the detection of alcohol dependence , such as the Alcohol Dependence Data Questionnaire , which is a more sensitive diagnostic test than the CAGE questionnaire . It helps distinguish a diagnosis of alcohol dependence from one of heavy alcohol use . The Michigan Alcohol Screening Test (MAST) is a screening tool for alcoholism widely used by courts to determine the appropriate sentencing for people convicted of alcohol @-@ related offenses , driving under the influence being the most common . The Alcohol Use Disorders Identification Test (AUDIT) , a screening questionnaire developed by the World Health Organization , is unique in that it has been validated in six countries and is used internationally . Like the CAGE questionnaire , it uses a simple set of questions ? a high score earning a deeper investigation . The Paddington Alcohol Test (PAT) was designed to screen for alcohol @-@ related problems amongst those attending Accident and Emergency departments . It concords well with the AUDIT questionnaire but is administered in a fifth of the time . Certain blood tests may also indicate possible alcoholism .

= = = Genetic predisposition testing = = =

Psychiatric geneticists John I. Nurnberger , Jr . , and Laura Jean Bierut suggest that alcoholism does not have a single cause ? including genetic ? but that genes do play an important role " by affecting processes in the body and brain that interact with one another and with an individual 's life experiences to produce protection or susceptibility " . They also report that fewer than a dozen alcoholism @-@ related genes have been identified , but that more likely await discovery .

At least one genetic test exists for an allele that is correlated to alcoholism and opiate addiction . Human dopamine receptor genes have a detectable variation referred to as the DRD2 TaqI polymorphism . Those who possess the A1 allele (variation) of this polymorphism have a small but significant tendency towards addiction to opiates and endorphin @-@ releasing drugs like alcohol . Although this allele is slightly more common in alcoholics and opiate addicts , it is not by itself an adequate predictor of alcoholism , and some researchers argue that evidence for DRD2 is contradictory .

= = = Urine and blood tests = = =

There are reliable tests for the actual use of alcohol , one common test being that of blood alcohol content (BAC) . These tests do not differentiate alcoholics from non @-@ alcoholics ; however , long @-@ term heavy drinking does have a few recognizable effects on the body , including :

Macrocytosis (enlarged MCV)

Elevated GGT

Moderate elevation of AST and ALT and an AST : ALT ratio of 2 : 1

High carbohydrate deficient transferrin (CDT)

With regard to alcoholism , BAC is useful to judge alcohol tolerance , which in turn is sign of alcoholism .

However , none of these blood tests for biological markers is as sensitive as screening questionnaires .

= = Prevention = =

The World Health Organization , the European Union and other regional bodies , national governments and parliaments have formed alcohol policies in order to reduce the harm of alcoholism . Targeting adolescents and young adults is regarded as an important step to reduce the harm of alcohol abuse . Increasing the age at which licit drugs of abuse such as alcohol can be purchased , the banning or restricting advertising of alcohol has been recommended as additional ways of reducing the harm of alcohol dependence and abuse . Credible , evidence based educational campaigns in the mass media about the consequences of alcohol abuse have been recommended . Guidelines for parents to prevent alcohol abuse amongst adolescents , and for helping young people with mental health problems have also been suggested .

= = Management = =

Treatments are varied because there are multiple perspectives of alcoholism . Those who approach alcoholism as a medical condition or disease recommend differing treatments from , for instance , those who approach the condition as one of social choice . Most treatments focus on helping people discontinue their alcohol intake , followed up with life training and / or social support to help them resist a return to alcohol use . Since alcoholism involves multiple factors which encourage a person to continue drinking , they must all be addressed to successfully prevent a relapse . An example of this kind of treatment is detoxification followed by a combination of supportive therapy , attendance at self @-@ help groups , and ongoing development of coping mechanisms . The treatment community for alcoholism typically supports an abstinence @-@ based zero tolerance approach ; however , some prefer a harm @-@ reduction approach .

= = = Detoxification = = =

Alcohol detoxification or ' detox ' for alcoholics is an abrupt stop of alcohol drinking coupled with the substitution of drugs , such as benzodiazepines , that have similar effects to prevent alcohol withdrawal . Individuals who are only at risk of mild to moderate withdrawal symptoms can be detoxified as outpatients . Individuals at risk of a severe withdrawal syndrome as well as those who have significant or acute comorbid conditions are generally treated as inpatients . Detoxification does not actually treat alcoholism , and it is necessary to follow @-@ up detoxification with an appropriate treatment program for alcohol dependence or abuse to reduce the risk of relapse . Some symptoms of alcohol withdrawal such as depressed mood and anxiety typically take weeks or months to abate while other symptoms persist longer due to persisting neuroadaptations . Alcoholism has serious adverse effects on brain function ; on average it takes one year of abstinence to recover from the cognitive deficits incurred by chronic alcohol abuse .

= = = Psychological = = =

Various forms of group therapy or psychotherapy can be used to deal with underlying psychological issues that are related to alcohol addiction , as well as provide relapse prevention skills . The mutual @-@ help group @-@ counseling approach is one of the most common ways of helping alcoholics maintain sobriety . Alcoholics Anonymous was one of the first organizations formed to provide mutual , nonprofessional counseling , and it is still the largest . Others include LifeRing Secular Recovery , SMART Recovery , Women For Sobriety , and Secular Organizations for Sobriety .

Rationing and moderation programs such as Moderation Management and DrinkWise do not mandate complete abstinence . While most alcoholics are unable to limit their drinking in this way , some return to moderate drinking . A 2002 US study by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) showed that 17 @. @ 7 percent of individuals diagnosed as alcohol dependent more than one year prior returned to low @-@ risk drinking . This group , however , showed fewer initial symptoms of dependency . A follow @-@ up study , using the same subjects that were judged to be in remission in 2001 ? 2002 , examined the rates of return to problem drinking in 2004 ? 2005 .

The study found abstinence from alcohol was the most stable form of remission for recovering alcoholics . A long @-@ term (60 year) follow @-@ up of two groups of alcoholic men concluded that " return to controlled drinking rarely persisted for much more than a decade without relapse or evolution into abstinence . "

= = = Medications = = =

In the United States there are four currently approved medications for alcoholism : disulfiram , two forms of naltrexone , and acamprosate . Several other drugs are also used and many are under investigation .

Acamprosate (Campral) may stabilise the brain chemistry that is altered due to alcohol dependence via antagonising the actions of glutamate , a neurotransmitter which is hyperactive in the post @-@ withdrawal phase . By reducing excessive NMDA activity which occurs at the onset of alcohol withdrawal , acamprosate can reduce or prevent alcohol withdrawal related neurotoxicity . Acamprosate reduces the risk of relapse amongst alcohol dependent persons .

Benzodiazepines , while useful in the management of acute alcohol withdrawal , if used long @-@ term can cause a worse outcome in alcoholism . Alcoholics on chronic benzodiazepines have a lower rate of achieving abstinence from alcohol than those not taking benzodiazepines . This class of drugs is commonly prescribed to alcoholics for insomnia or anxiety management . Initiating prescriptions of benzodiazepines or sedative @-@ hypnotics in individuals in recovery has a high rate of relapse with one author reporting more than a quarter of people relapsed after being prescribed sedative @-@ hypnotics . Those who are long @-@ term users of benzodiazepines should not be withdrawn rapidly , as severe anxiety and panic may develop , which are known risk factors for relapse into alcohol abuse . Taper regimes of 6 ? 12 months have been found to be the most successful , with reduced intensity of withdrawal .

Calcium carbimide (Temposil) works in the same way as disulfiram ; it has an advantage in that the occasional adverse effects of disulfiram , hepatotoxicity and drowsiness , do not occur with calcium carbimide .

Disulfiram (Antabuse) prevents the elimination of acetaldehyde , a chemical the body produces when breaking down ethanol . Acetaldehyde itself is the cause of many hangover symptoms from alcohol use . The overall effect is severe discomfort when alcohol is ingested : an extremely fast @-@ acting and long @-@ lasting uncomfortable hangover . This discourages an alcoholic from drinking in significant amounts while they take the medicine .

Naltrexone is a competitive antagonist for opioid receptors , effectively blocking the effects of endorphins and opiates . Naltrexone is used to decrease cravings for alcohol and encourage abstinence . Alcohol causes the body to release endorphins , which in turn release dopamine and activate the reward pathways ; hence when naltrexone is in the body there is a reduction in the pleasurable effects from consuming alcohol . Evidence supports a reduced risk of relapse among alcohol dependent persons and a decrease in excessive drinking . Nalmefene also appears effective and works by a similar manner .

Evidence does not support the use of selective serotonin reuptake inhibitors (SSRIs) , tricyclic antidepressants (TCAs) , antipsychotics , or gabapentin .

= = = Dual addictions and dependences = = =

Alcoholics may also require treatment for other psychotropic drug addictions and drug dependences . The most common dual dependence syndrome with alcohol dependence is benzodiazepine dependence , with studies showing 10 ? 20 percent of alcohol @-@ dependent individuals had problems of dependence and / or misuse problems of benzodiazepines . Benzodiazepines increase cravings for alcohol and the volume of alcohol consumed by problem drinkers . Benzodiazepine dependency requires careful reduction in dosage to avoid benzodiazepine withdrawal syndrome and other health consequences .

Dependence on other sedative hypnotics such as zolpidem and zopiclone as well as opiates and

illegal drugs is common in alcoholics .

Alcohol itself is a sedative @-@ hypnotic and is cross @-@ tolerant with other sedative @-@ hypnotics such as barbiturates , benzodiazepines and nonbenzodiazepines . Dependence upon and withdrawal from sedative hypnotics can be medically severe and , as with alcohol withdrawal , there is a risk of psychosis or seizures if not managed properly .

= = Epidemiology = =

The World Health Organization estimates that as of 2010 there are 208 million people with alcoholism worldwide (4 @. @ 1 % of the population over 15 years of age) .

Substance use disorders are a major public health problem facing many countries . " The most common substance of abuse / dependence in patients presenting for treatment is alcohol . " In the United Kingdom , the number of ' dependent drinkers ' was calculated as over 2 @. @ 8 million in 2001 . About 12 % of American adults have had an alcohol dependence problem at some time in their life . In the United States and Western Europe , 10 to 20 percent of men and 5 to 10 percent of women at some point in their lives will meet criteria for alcoholism .

Within the medical and scientific communities , there is broad consensus regarding alcoholism as a disease state . For example , the American Medical Association considers alcohol a drug and states that " drug addiction is a chronic , relapsing brain disease characterized by compulsive drug seeking and use despite often devastating consequences . It results from a complex interplay of biological vulnerability , environmental exposure , and developmental factors (e.g. , stage of brain maturity) . "

Alcoholism has a higher prevalence among men , though in recent decades , the proportion of female alcoholics has increased . Current evidence indicates that in both men and women , alcoholism is 50 ? 60 percent genetically determined , leaving 40 ? 50 percent for environmental influences . Most alcoholics develop alcoholism during adolescence or young adulthood . 31 percent of college students show signs of alcohol abuse , while six percent are dependent on alcohol . Under the DSM 's new definition of alcoholics , that means about 37 percent of college students may meet the criteria .

= = Prognosis = =

Alcoholism often reduces a person 's life expectancy by around ten years . The most common cause of death in alcoholics is from cardiovascular complications .

There is a high rate of suicide in chronic alcoholics , which increases the longer a person drinks . Approximately 3 ? 15 percent of alcoholics commit suicide , and research has found that over 50 percent of all suicides are associated with alcohol or drug dependence . This is believed to be due to alcohol causing physiological distortion of brain chemistry , as well as social isolation . Suicide is also very common in adolescent alcohol abusers , with 25 percent of suicides in adolescents being related to alcohol abuse .

Among those with alcohol dependence after one year , some met the criteria for low @-@ risk drinking , even though only 25 @. @ 5 percent of the group received any treatment , with the breakdown as follows : 25 percent were found to be still dependent , 27 @. @ 3 percent were in partial remission (some symptoms persist) , 11 @. @ 8 percent asymptomatic drinkers (consumption increases chances of relapse) and 35 @. @ 9 percent were fully recovered ? made up of 17 @. @ 7 percent low @-@ risk drinkers plus 18 @. @ 2 percent abstainers .

In contrast , however , the results of a long @-@ term (60 @-@ year) follow @-@ up of two groups of alcoholic men indicated that " return to controlled drinking rarely persisted for much more than a decade without relapse or evolution into abstinence . " There was also " return @-@ to @-@ controlled drinking , as reported in short @-@ term studies , is often a mirage . "

= = History = =

Historically the name " dipsomania " was coined by German physician Dr. C. W. Hufeland in 1819 before it was superseded by " alcoholism " . That term now has a more specific meaning . The term " alcoholism " was first used in 1849 by the Swedish physician Magnus Huss to describe the systematic adverse effects of alcohol .

Alcohol has a long history of use and misuse throughout recorded history . Biblical , Egyptian and Babylonian sources record the history of abuse and dependence on alcohol . In some ancient cultures alcohol was worshiped and in others its abuse was condemned . Excessive alcohol misuse and drunkenness were recognised as causing social problems even thousands of years ago . However , the defining of habitual drunkenness as it was then known as and its adverse consequences were not well established medically until the 18th century . In 1647 a Greek monk named Agapios was the first to document that chronic alcohol misuse was associated with toxicity to the nervous system and body which resulted in a range of medical disorders such as seizures , paralysis and internal bleeding . In 1920 the effects of alcohol abuse and chronic drunkenness led to the failed prohibition of alcohol being considered and eventually enforced briefly in America . In 2005 the cost of alcohol dependence and abuse was estimated to cost the US economy approximately 220 billion dollars per year , more than cancer and obesity .

= = Society and culture = =

The various health problems associated with long @-@ term alcohol consumption are generally perceived as detrimental to society , for example , money due to lost labor @-@ hours , medical costs , and secondary treatment costs . Alcohol use is a major contributing factor for head injuries , motor vehicle accidents , violence , and assaults . Beyond money , there are also significant social costs to both the alcoholic and their family and friends . For instance , alcohol consumption by a pregnant woman can lead to fetal alcohol syndrome , an incurable and damaging condition .

Estimates of the economic costs of alcohol abuse , collected by the World Health Organization , vary from one to six percent of a country 's GDP . One Australian estimate pegged alcohol 's social costs at 24 % of all drug abuse costs ; a similar Canadian study concluded alcohol 's share was 41 % . One study quantified the cost to the UK of all forms of alcohol misuse in 2001 as £ 18 @.@ 5 ? 20 billion . All economic costs in the United States in 2006 have been estimated at \$ 223 @.@ 5 billion .

Stereotypes of alcoholics are often found in fiction and popular culture . The " town drunk " is a stock character in Western popular culture . Stereotypes of drunkenness may be based on racism or xenophobia , as in the depiction of the Irish as heavy drinkers . Studies by social psychologists Stivers and Greeley attempt to document the perceived prevalence of high alcohol consumption amongst the Irish in America .

Alcohol consumption is relatively similar between many European cultures , the United States , and Australia . In Asian countries that have a high gross domestic product , there is heightened drinking compared to other Asian countries , but it is nowhere near as high as it is in other countries like the United States . It is also inversely seen , with countries that have very low gross domestic product showing high alcohol consumption .

In a study done on Korean immigrants in Canada , they reported alcohol was even an integral part of their meal , and is the only time solo drinking should occur . They also believe alcohol is necessary at any social event as it helps conversations start .

Caucasians have a much lower abstinence rate (11 @.@ 8 %) and much higher tolerance to symptoms (3 @.@ 4 ± 2 @.@ 45 drinks) of alcohol than Chinese (33 @.@ 4 % and 2 @.@ 2 ± 1 @.@ 78 drinks respectively) . Also , the more acculturation there is between cultures , the more influenced the culture is to adopt Caucasians drinking practices .

Peyote , a psychoactive agent , has even shown promise in treating alcoholism . Alcohol had actually replaced peyote as Native Americans ' psychoactive agent of choice in rituals when peyote was outlawed .

= = Research = =

Topiramate , a derivative of the naturally occurring sugar monosaccharide D @-@ fructose , has been found effective in helping alcoholics quit or cut back on the amount they drink . Evidence suggests that topiramate antagonizes excitatory glutamate receptors , inhibits dopamine release , and enhances inhibitory gamma @-@ aminobutyric acid function . A 2008 review of the effectiveness of topiramate concluded that the results of published trials are promising , however as of 2008 , data was insufficient to support using topiramate in conjunction with brief weekly compliance counseling as a first @-@ line agent for alcohol dependence . A 2010 review found that topiramate may be superior to existing alcohol pharmacotherapeutic options . Topiramate effectively reduces craving and alcohol withdrawal severity as well as improving quality @-@ of @-@ life @-@ ratings .

Baclofen , a GABAB receptor agonist , is under study for the treatment of alcoholism . A 2015 systematic review concluded that there is insufficient evidence for the use of baclofen for withdrawal symptoms in alcoholism . There is tentative data supporting baclofen in alcohol dependence however further trials are needed as of 2013 .

Ondansetron , a 5HT3 antagonist , appears promising .