

# JOURNAL

## OF ADDICTIVE DISORDERS

**Compulsive Gambling: An examination of compulsive gambling, including pathology, chemistry exchange, similarities to and differences from substance abuse, gambling phases, and assessment questionnaires.**<sup>1</sup>

### ARTICLE

The odds makers, as the saying goes, puts winning in the favor of the house. Even with the odds stacked against them, human beings keep trying to beat these odds. It is estimated that over eighty (80) percent of American Adults reported having gambled at some point in their lives, and close to seventy (70) percent stated they have gambled at one time in the past year. This large percentage of human beings gambling resulted in over five hundred billion dollars in wagering, and for some human beings, a large problem with addiction.

As with alcohol and social drinking, most human beings who wager never end up with an addiction problem. It is estimated that 1.5 percent of American adults at some point in their lifetime, find themselves addicted, compulsive gamblers. Human beings with this illness, lose control of their wagering, of with serious consequences occurring in their lives. Again, as with diagnostic criteria used with determining alcohol addiction, there are human beings who do not meet the diagnostic criteria for gambling addiction, but are still considered problem gamblers. This example mirrors alcohol dependence vs. alcohol abuse. During any year, 2.9 percent of United States adults are considered to either pathological or problem gamblers. (Mayo Clinic) Pathological gambling is defined as a pattern of repeated gambling and preoccupation with gambling. The term was not included in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders until 1980. Since then, psychologists have proposed several theories as to why human beings gamble. For some, it is a form of risk taking, which may be an inherent personality trait. For other human beings, it is the lure of a large financial pay off. Some psychiatrists have proposed the disease model, stating, that like alcoholism, gambling is a disease or sickness of the mind. Behaviorists, on the other hand see pathological gambling as a learned, conditioned response. Due to the reinforcement of intermittently winning one or two jackpots, losing the next, the gambler is motivated to keep playing until the positive reinforcement is again given (Pavlov's theory). Various research studies have shown that this reinforcement in intermittent schedules is extremely difficult to reduce or stop.

Pathological gambling generally begins during adolescence in males and somewhat later in females. Human beings with this disorder often experience a progression in gambling,

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becoming increasingly preoccupied with gambling, increases in the amounts wagered and often continuing to gamble despite numerous attempts to stop or control this behavior.

Unfortunately, by the time a human being reaches the diagnostic condition of a compulsive gambler, treatment is difficult. The most widely used form of treatment is found in Gambler's Anonymous, group therapy. Some luck has been experienced with the use of electric shock associated with gambling (also known as pain aversion). Researchers are now beginning to look at levels of serotonin, dopamine, and noradrenalin in the compulsive gambler's brain and how they interact with this illness.

### **PATHOLOGY OF COMPULSIVE GAMBLING**

- ❑ **Pathology:** the branch of medicine that deals with the nature of the disease and looks at any abnormal variation from a sound condition.
- ❑ **Compulsive:** force.
- ❑ **Gambling:** to play games of chance for money, to take a risk for some advantage, an undertaking involving risk.

The definition of a compulsive gambler can be generalized as: A condition that forces a human being to variate from a sound condition by taking risks that involve games of chance and money. A simple and easy definition of a compulsive gambler. Yet is it that easy to define and regulate a human being into the compulsive gambling pigeonhole?

There are four (4) quadrants in the circle that makes up the total human being. These individual quadrants are: mental, spiritual, physical, and emotional. These four areas are equal in nature and remain in this state as long as the human being remains in balance. It is when an imbalance occurs that a human being begins to, as the definition states, variate from a sound condition.

Balance is sometimes overlooked. Consider: without balance, human beings could not walk. For the ironworker high above the street or the hire wire acrobat above the circus floor, lack of balance means serious injury or death. No balance when riding a bicycle translates into crash and injury. Without balance in everyone's life, the door remains open for disaster, for health problems, relationship problems, and self-doubt about who and what human beings are. Without balance some human beings activate the illness associated with compulsive gambling.

How then does a human beings quadrants achieve imbalance? To better understand what happens in each quadrant, examination is required. There is no order in terms to importance of the quadrants listed. It is the author's choice of which one became identified first and which was last.

**Mental:** What is found in this quadrant is an intense uncontrollable preoccupation with the anticipated changes in moods and feelings that will occur when gambling activities are perused. Various signs and symptoms can include:

- ✓ Loss of interest in normal activities and increasing interest in gambling related activities.
- ✓ Development of increasing interest in gambling odds, hearing about new games to be played, new locations of casinos or lottery stations, along with other gambling related information.
- ✓ There is a metamorphous in conversation that begins to occur. The losses are minimized or little recall of the size of losses. The majority of the time is spent and centered on the wins.

- ✓ Grandiose thoughts, fantasies about winning the BIG jackpot occur.
- ✓ Devious or pre-occupied thoughts of winning and how and when the next gambling session will take place.
- ✓ The inability to sleep when winning or losing—can't stop on a winning streak, or the need to keep going to get back or break even when loosing, the experiencing of mood disorders or episodes of depression.
- ✓ Continuous, obsessive thinking, focusing on gambling, added by fantasy thinking, over spending the winnings. Evidence of this thought pattern is shown through broken family/personal commitments, daily routines interrupted and lack of follow through with designated and free choice tasks.

**Physical:** What initially starts as an intense high, a sense of excitement, feeling great as winning continues. As losses become more frequent, as with the mental quadrant, a breakdown in the gamble occurs. This breakdown is evident by some or all of the listed symptoms.

- Weight loss or gain begins to occur regardless of wins or losses.
- Severe headaches begin and each one lasts longer than the previous headache.
- The gambler begins to complain of low back pain, which can be associated with gastrointestinal complaints/disorders.
- Nervous disorders which tie into the mental arena of sleep-disturbances.
- Urinary tract infections, skin disorders and physical exhaustion.

**Emotional:** In this quadrant it is found an intensive emotional impulsiveness to achieve instant/immediate gratification through risk taking, i.e. gambling. This breakdown in balance allows no thought to consequences of behaviors to the individual or others.

- ❖ Self-pity, condemnation of one's-self over exhibited behaviors and/or related gambling losses.
- ❖ Desperation sets in; the gambler begins to double the bets in a futile attempt to make up the losses.
- ❖ Repeated gambling in spite of losses that begin to threaten the financial security of the gambler's family, marriage, job, etc. Continued repeated gambling despite this crisis even with the knowledge of no chance of getting even with the house.
- ❖ Makes promises to self, family, employers, friends, etc., to cut down or quit gambling altogether, does not keep promises.
- ❖ Begins to gamble without thinking of consequences, plan on how/when to stop.

**Spiritual:** In this fourth quadrant, the gambler begins to compromise the core beliefs, morals and or values in the attempt to rationalize or justify the gambling behavior. It is here that the loss of identity or sense of who one is begins.

- ❖ Direct lies, lies of omission being in an attempt to manipulate others. With the passage of time, along with these lies, the gambler becomes pathological in the ability to tell the truth. As more time passes, the gambler begins to believe the lies as the truth. Honesty in general is compromised along with the gamblers ability to be honest with self.
- ❖ The gambler becomes untrustworthy, resulting in loss of trust by family, spouse, employer, friends. Failure to pay dedicated bills, i.e. mortgage payments, writing insufficient fund checks to gamble with, maximum use of credit card balances.
- ❖ Abuse in the form of emotional, financial, and sometimes physical occurs. The gambler has lost respect for others and self.
- ❖ The gambler begins to cease expression of emotions. Relationships begin to deteriorate or cease. The gamblers emotional support becomes compromised.
- ❖ The blaming process begins. The gambler blames God or Creator, family, friends, job, environment, social standing, etc., for the situation the gambler is in.

- ❖ The focus remains outside of the gambler. Given time, the gambler can no longer rationalize their behavior or blame others. As with monetary issues, a spiritual bankruptcy occurs.

With the four quadrants discussed, one other area, which is closely tied to the whole person, needs to be addressed before moving on to the next portion of this document.

**Psychological:** This can be described or identified as an irrational belief in and reliance on risk taking behaviors associated with gambling. The reliance is an attempt by the gambler to achieve positive and welcome changes in one's moods and states of feelings. Signs or symptoms to watch for can include:

- ❑ Arranging personal and work schedules that allow greater time to pursue gambling activities.
- ❑ The gambler begins to rely more on gambling as the primary means of elevating or altering moods.
- ❑ A beginning to associate more with like individuals whose primary interests include gambling and will seek out occasions and settings where gambling is available.
- ❑ An individual begins having difficulty with finances, arranges finances and starts to borrow money for gambling purposes. A hoarding or stashing of money taken from household finances starts, with the intention of using these monies for gambling activity.
- ❑ The gambler starts to experience feelings of guilt, shame, and remorse about gambling losses.

## CHEMISTRY EXCHANGE

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"Addictive behaviors rewire the brain." (Shaffer) The excitement and risk taking associated with gambling can change the brain's chemistry and create compulsive gamblers. When people gamble, they feel excitement, control, power, and stimulation. With these changes in feelings, the adrenaline also starts pumping because of the risk involved in playing table games, slot machines, betting on the lottery, or sporting events. This surge in adrenaline stimulates the "reward mechanism" in the brain. There is recent research to indicate that biological, psychological, and social factors are likely to interact with one another in the onset, development, and course of pathological stages of gambling behaviors.

Genetic vulnerability to pathological gambling through biological changes in neurotransmitters, such as dopamine, noradrenalin, and/or serotonin can have an effect in determining a problem with gambling. Or can it be impulsivity's relationship to gambling behavior that develops because of a genetic predisposition, or may develop independently via social influences such as availability to gaming facilities?

Evidence suggests that there is likely to be a genetic vulnerability to pathological gambling through biological changes in neurotransmitters, such as dopamine, noradrenalin, and/or serotonin. Those with the genetic make up who demonstrate impulsive traits and who are positively disposed towards gambling are likely to be those with the highest vulnerability towards problem gambling. (Sharp)

Research shows that impulsiveness contributes to the tendency to lose control over gambling behavior and is one of numerous factors implicated in pathological gambling, which may contribute to a psychological pattern that leaves human beings at risk for developing gambling problems. Impulsivity's relationship to gambling behavior can develop because of a genetic predisposition, or may develop independently via social influences such as availability to gaming facilities.

Research tells us that family attitudes towards gambling are likely to establish an individual's attitude towards gambling. Positive gambling attitudes may lead human beings to more often engage in gambling related behavior as a social pursuit. As such, the psychosocial model suggests that positive attitudes towards gambling make gambling as a leisure activity more likely.

If family attitudes towards gambling encourages or changes one's attitude toward gambling, is there a genetic link to gambling?

In 1999, The Washington School of Medicine in St. Louis and the Veterans Affairs Medical Center, also located in St. Louis, teamed up to conducted a study to see if some human beings are predisposed to certain gambling behaviors. (USA Today)

The study utilized three thousand three hundred and fifty nine (3,359) pairs of twins to see what genetic influences on gambling behaviors there might be. This sample included both identical twins (who have exactly the same genetic make-up) and fraternal twins (who share approximately half of the same genetic make-up).

To be diagnosed officially with a psychiatric condition called pathological gambling disorder, and individual must exhibit a minimum of five out of ten identified behaviors listed in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, commonly known as the DSM-IV. The diagnostic criteria for 312.31 Pathological Gambling are:

**A. Persistent and recurrent maladaptive gambling behavior as indicated by five or more of the following:**

- Is preoccupied with gambling (e.g., preoccupied with reliving past gambling experiences, handicapping or planning the next venture, or thinking of ways to get money with which to gamble).
- Needs to gamble with increasing amounts of money in order to achieve the desired excitement.
- Has repeated unsuccessful efforts to control, cut back, or stop gambling.
- Is restless or irritable when attempting to cut down or stop gambling.
- Gambles as a way of escape from problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression).
- After losing money gambling, often returns another day to get even (chasing one's losses).
- Lies to family members, therapist, or others to conceal the extent of involvement with gambling.
- Has committed illegal acts such as forgery, fraud, theft, or embezzlement to finance gambling.
- Has jeopardized or lost a significant relationship, job, or education or career opportunity because of gambling.
- Relies on others to provide money to relieve a desperate financial situation caused by gambling.

**B. The gambling behavior is not better accounted for by a Manic Episode.**

The study was able to estimate the specific genetic component for two of the listed gambling behaviors. One was gambling larger amounts than intended, and the other was repeated effort

to reduce or stop gambling. The research concluded for those two symptoms, half of the gambling behavior was genetically mediated.

For three other behaviors; attempts to win back losses at the same place, frequent preoccupation with gambling, and increased betting to maintain interest, the researchers were able to identify a familial vulnerability. This also included a combination of inherited factors along with environmental experiences during growth and development.

The prevalence of each gambling behavior was higher in identical than fraternal twins. If one twin exhibited a particular behavior, the indication was increased that his or her twin would exhibit that behavior as well. There was a documented decrease in fraternal twin pairs, which as noted, are less similar genetically than identical twins. The research and scientists therefore concluded that genetic influences are an important explanation for vulnerability to many gambling behaviors.

Earlier in this section, three neurotransmitters were identified, dopamine, noradrenalin, and serotonin, as possible links to pathological gambling. Does the lack of or more than of each of these transmitters have an effect on a human being in terms of behaviors associated with pathological gambling?

Morphine and heroin are the most potent pain relieving and pleasure producing medications known to exist. They are so potent that they were long believed to mimic some unknown, but naturally occurring body chemical. Technical advances led to the uncovering of natural morphine-like molecules that are indeed, made in each human being's brain. Collectively these substances known as Endorphins and are responsible for regulating our moment-to-moment awareness of pain. The neurotransmitter dopamine seems to be concentrated in the same area of the brain, immediately adjacent to where the major endorphin releasing mechanisms lie. Dopamine acts as a key neurotransmitter in the brain. Studies have shown its regulatory role for motor and limbic functions along with a role in regulating cognitive functions. Dopamine runs the body's Pleasure Center. This is the area of the brain that allows a human being to enjoy life and feeling good. Researchers believe that dopamine plays a direct involvement in learning or anticipation of reward, however it is clearly not responsible for continuous pleasure. Scientists now believe, that serotonin, actually rings the pleasure center.

Serotonin seems to play the role of regulator to the ups and downs of mood disorders. Low serotonin levels associated with irritability, aggression, impatience, and anxiety. Evidence suggests serotonin inhibits aggressive behavior in experimental animals and humans. One study gave human subjects serotonin-reducing beverages, within five to six hours, the study group became impulsive, depressive, and aggressive and in some cases violent. Abundant laboratory research suggests there is a deficiency of serotonin activity in the brains of most depressed persons. Low levels of serotonin in the brain have associated with an increased susceptibility to impulsive behavior, aggression, overeating, depression, alcohol abuse, and violent suicide. Suicidal human beings show a significant decrease in serotonin levels. Noradrenalin has many important functions in the body's nervous system. The one that most concerns the issue discussed in this paper, is the role of noradrenalin in setting energy levels for human beings. Proper functioning of noradrenalin in the brain is essential for human beings to feel energized. Without enough brain noradrenalin, a person feels exhausted, tired, droopy and without energy. Human beings with noradrenalin failure become progressively more and more lethargic, with little or no energy to accomplish even simple tasks. An example of running the brain low of noradrenalin is similar to running a vehicle without a generator. The longer the car

runs without this generator, the weaker the vehicle's battery becomes. There will come a certain time when there is little energy left to start the vehicle.

### **SIMILARITIES TO AND DIFFERENCES FROM SUBSTANCE ABUSE**

Sometimes the question, of which influences, which is, like deciding what came first, chicken or the egg. Does gambling promote Alcohol use or does Alcohol create gambling behaviors? For example: Human beings are more likely to drink while gambling. If the frequency of gambling increases, does the drinking and use of alcohol increase to fall under either substance abuse or dependence? Yet on the other hand, if individuals were already abusing substances like alcohol, then with the loosening of inhibitions, cause the individual to gamble more, as like with alcohol use until it manifests itself with a clinical diagnosis?

Studies of gambling problems among human beings in treatment for substance dependence have consistently yielded rates well above those in the general population. For example, in 1986 a study found a lifetime prevalence of nineteen percent for problem gambling among four hundred and fifty eight substance-dependent inpatient consumers. Half of the problem gamblers met the DSM criteria for pathological gambling. (Lesieur) A 1992 study of two hundred ninety eight cocaine abusers found an overall current prevalence of pathological gambling at nineteen percent. (Steinberg)

Pathological gambling may develop before the onset of substance dependence, concurrent with it or after the human being gives up the use of substances (known as switching addictions). Screening for gambling problems is especially important in chemical dependency treatment. This importance is due to consumers with intense interests in gambling or problem gambling in the past, may find the gambling re-emerging and manifesting itself back into a full case of pathological gambling, once chemical abstinence is achieved. (Blume) If gambling problems are not recognized and addressed during chemical dependency treatment, gambling will play a bigger role in substance related relapse.

Compulsive Gambling and Substance abuse have a number of similar characteristics that mimic each other; however, like other illnesses, there are distinct differences as well. The lists below will attempt to show both similar and differences, listed first are the similarities to Substance Abuse.

- Inability to stop
- Denial
- Severe depression and mood swings
- Progressive disease with phases and stages
- Chasing the first win/high
- First drink remembered, first win remembered
- Blackouts from drinking/using, Brownouts from gambling
- Activity used to escape from pain
- Preoccupation
- Low self-esteem and high ego
- Dysfunctional families
- High of gambling similar to rush or high of cocaine
- Use of rituals

Unlike Substance Abuse, gambling has it's own set of unique signs. Those are:

- Hidden addiction
- Individuals cannot overdose, there is no saturation point

- Tremendous financial problems which require immediate attention in treatment
- Compulsive gamblers can function for longer periods of time at employment site
- Compulsive gambling cannot be tested in employment, school setting, etc., as with alcohol or other drugs
- Compulsive gambling does not require ingestion of chemicals for achieved high
- Fewer resources available for compulsive gamblers and families
- Perception of disease not easily related to the general public
- Prevention message not easily accepted by the community.

### PHASES OF GAMBLING

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One of the similarities identified between alcohol and gambling is the progression of each distinct illness was stages or phases a human being goes through. For compulsive gamblers, phases have been identified. These phases are behavior based with no scientific backup, other than observed through actual case study.

#### WINNING PHASE

In this, the beginning phase of the illness, the gambler is winning more than losing, has achieved a minimum of one big win equal to at least a months salary, and sometimes equal to a years income. This early big win, bolsters the confidence of the gambler, causing ego to inflate, superior thinking and feeling over other participants. Obsession with thoughts of becoming a professional gambler. The gambler in this phase begins to spend more time gambling, is gambling for and with larger amounts of money. Winning streak begins to wane, losses start.

#### LOSING PHASE

In the losing phase, the gambler begins betting even larger amounts. The gambler accepts the fact that these losses are part of the game, and starts to double up on bets; stays in hands (poker) when folding would be best. The gambler bets on the long shots, knowing chances are not good for winning, however will pay big if win occurs. The gambler is now losing more than winning. In an attempt to gain back the money lost, the gambler spends more time gambling. The gambler is chasing the dragon. Lying starts, to cover up tracks of gambling and losses. Gambler must frequently lie to family, friends, employer, even casinos to convince them that the gambler is still a happy person and all around good person.

Deep financial troubles begin. Using lying techniques, the gambler is able to convince employer, family, etc., of some type of cataclysmic disaster, which requires a borrowing of large amounts of money. The gambler considers this money as a win. Soon the gambler is using this bailout to gamble more. The gambler life has now become unmanageable, family life is increasingly difficult, with deterioration occurring.

#### DESPERATION PHASE

The desperation phase can last for a short time or for several years. During this phase, the majority of the gambler's time is preoccupied with gambling on all levels, i.e., planning, where and when. The gambler has no control over the gambling, to alleviate the inner pain, the gambler gambles, knowing the odds of wining are gone, and it does not matter. Lying on the gamblers part is out of control. When family, friends, employers, etc., do not believe the gambler, anger erupts and is directed towards these non-believers, the gambler blames for the problems in life.

The gambler has one focus and one goal...get money in which to gamble with regardless of costs. Family life has deteriorated to the point of non-existence. Illegal activity is now

occurring, behaviors similar to heroin junkies or crack addicts are evident, and the gambler can be embezzling money, stealing money in other ways.

### HOPELESS PHASE

Once the gambler has transitioned from the desperation phase, it would indicate that everything bad that was going to happen has happened. However, in the hopelessness phase, the pathological gambler has given up the gambler believes that nothing can help; they gambler does not care if life goes on. In fact, for many pathological gamblers consider suicide during this phase. Again, behaviors will occur which put the gambler in jeopardy of jail or prison. Clinical depression is a given. In the gamblers mind, no one cares, no hope is available.

### SUICIDE AND GAMBLING

For millions of Americans, gambling addiction has become a pathway to pain and misery; for some as described in the Hopeless Phase, it leads to death. Gambling related suicides have become increasingly common phenomena as legalized gambling has increased across the United States. To what extent and how great this phenomena is remains unclear at this time. Most information available is based on suicide levels prior to gambling entering a community or area, and from members of Gamblers Anonymous, or from gamblers themselves in public testimony given to state and federal investigated boards, looking into legalized gambling and the issue of suicide.

From information gathered, pathological gamblers engage in destructive behaviors, they commit crimes, they run up large debts, they damage relationships with family and friends, and they commit suicide. In the 1998 National Gambling Impact Study Commission, (NGISC) members were given examples of pathological gambling and suicide:

- A sixteen-year-old boy who attempted suicide after loosing six thousand dollars on lottery tickets.
- A middle-aged couple that both committed suicide after the wife accumulated two hundred thousand dollars in casino debt.
- A survey of four hundred Gamblers Anonymous members revealed that two thirds had contemplated suicide, forty seven percent had a definite plan to kill themselves, and seventy seven percent stated that they have wanted to die because of their gambling.
- In Gulfport, Mississippi, suicides increased by two hundred and thirteen percent (from twenty four to seventy five) in the first two years after casinos arrived. In neighboring Biloxi, suicide attempts jumped by one thousand percent (from six to sixty six) in the first year alone.
- The Illinois Council on Compulsive Gambling reports that twenty Illinois residents have killed themselves as a result of a gambling addiction since the casinos arrived in this state. (NGISC)

### ASSESSMENT QUESTIONNAIRES

Behavior therapies of various kinds have been reported to be effective in treating problem gamblers. However, one first must determine whether or not a problem does exist.

The South Oaks Gambling Screen (SOGS) is a questionnaire developed by Dr. Henry Lesieur and Dr. Shelia Blume in 1992 to identify human beings with serious (pathological) gambling problems among a group receiving treatment for substance abuse problems. This

questionnaire<sup>2</sup> has been used since as a common tool for identifying human beings with gambling problems in general. Like other screening tools, it is meant to be used with caution as no questionnaire by itself can tell if a human being really has a serious problem. It can certainly be used as an indicator that might encourage one to seek further information and assessment from a professional counselor. In this questionnaire, the term “pathological” is used in a similar way the word “compulsive” is used on the Gamblers Anonymous questionnaires. Both screening documents refer to the problem gambler who has maladaptive, addictive gambling behavior.

The questions used are listed below and the scoring method of this questionnaire is given at the end of the questions:

**1. Please indicate which of the following types of gambling you have done in your lifetime.** (For a more current profile, you may ask yourself the questions in a time frame of the past three or six months.)

	Not at all	Less than once a week	Once a week or more
Scratch 'n win tickets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lottery tickets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Break open tickets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sports select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Video lottery/poker machines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bingo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Casino	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Card games for money	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dice games for money	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Raffles or fundraising tickets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skill games like pool, darts for money	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sports pools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Horse races	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speculative investing in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stocks, futures, commodities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**2. What is the largest amount of money you have ever gambled with on any one-day?**

- Never have gambled
- \$1 or less
- More than \$1 up to \$10
- More than \$10 up to \$100
- More than \$100 up to \$1000
- More than \$1000 up to \$10000
- More than \$10000

**3. Select which of the following people in your life has (had) a gambling problem.**

- Father
- Mother
- A brother or sister
- A grandparent

<sup>2</sup> This questionnaire is in the public domain, and may be found at several sources on the Internet, including the United States National Library of Medicine, <http://www.nlm.nih.gov>; and the Nova Scotia (Canada) Department of Health, <http://www.gov.ns.ca>.





16j	Not counted	-
16k	Not counted	-

## SCORING

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0 = No Problem

3 to 4 = Some Problem

5 or more = Problem Pathological Gambler

Current treatment is based on an addiction model and uses a similar approach including psychoeducation, group, individual and family counseling, and referral to 12-Step self-help groups (GA and Gam-Anon). Treatment may be offered in separate facilities for gambling disorders or included as a special track within addiction programs. Regardless of setting, the capacity to treat psychiatric disorder is essential. Family members, spouses/significant others are also in need of assistance, and can be greatly helped, even if the pathological gambler never accepts treatment. Pathological gamblers do not usually seek help on their own until reaching the desperation phase of the illness.

## GAMBLERS ANONYMOUS

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As with Alcoholic Anonymous, gamblers have a support, self-help network as well. Gamblers Anonymous offers support to anyone who wishes to stop gambling, and offers the following 20 questions to anyone who may have a gambling problem. The questions are provided to help the individual decide if their behaviors have reached the compulsive stage and wish to stop gambling:

1. Did you ever lose time from work or school due to gambling?
2. Has gambling ever made your home life unhappy?
3. Did gambling affect your reputation?
4. Have you ever felt remorse after gambling?
5. Did you ever gamble to get money with which to pay debts or other wise solve financial difficulties?
6. Did gambling cause a decrease in your ambition or efficiency?
7. After losing, did you feel you must return as soon as possible and win back your losses?
8. After a win did you have a strong urge to return and win more?
9. Did you often gamble until your last dollar was gone?
10. Did you ever borrow to finance your gambling?
11. Have you ever sold anything to finance gambling?
12. Were you reluctant to use "gambling money" for normal expenditures?
13. Did gambling make you careless of the welfare of yourself or your family?
14. Did you ever gamble longer than you had planned?
15. Have you ever gambled to escape worry or trouble?
16. Have you ever committed, or considered committing an illegal act to finance gambling?
17. Did gambling cause you to have difficulty sleeping?
18. Do arguments, disappointments or frustrations create within you an urge to gamble?
19. Did you ever have an urge to celebrate any good fortune by a few hours of gambling?
20. Have you ever considered self-destruction or suicide as a result of your gambling?

MOST COMPULSIVE GAMBLERS WILL ANSWER YES TO AT LEAST SEVEN OF THE ABOVE QUESTIONS.

## CONCLUSION

Addictive behaviors can be broadly characterized by a number of features. These characteristics include an intense desire to satisfy a need, either through chemical use or specific behavior, a loss of control over the substance or behavior, compulsive uncontrolled thoughts about the substance or behavior, and finally, engaging in use of substances or behaviors despite negative outcomes and consequences.

More so than many other impulse control disorders, the criteria for pathological gambling, share almost identical similarities to those of substance abuse disorders. With the repetitive use of alcohol or other substances or the continuous engagement in gambling following an urge, this may then reflect a united process; i.e. both behaviors may stem from the same underlying mechanism within the brain.

Information provided elsewhere in this document suggests that an underlying biological mechanism for urged based disorders involves the processing of incoming reward inputs by a specific brain system. This brain region, frontal cortex circuit contains cells that release the brain chemical dopamine. This circuit is thought to influence behaviors by directing motivation. Dysregulation in the system supporting the activity of dopamine and serotonin maybe the core in both alcohol disorders and pathological gambling. Further research is needed to link genetics and nervous system functioning to alcohol disorders and pathological gambling.

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