



NP *İSTANBUL*
Brain Hospital



Addiction: A chronic brain disease

15 QUESTIONS ABOUT ADDICTION

Implant For Addiction

Internet Addiction

Gambling Addiction

Co-addiction



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Why we are different:

- NPİSTANBUL Brain Hospital; founded with the aim of contributing to the solution of problems related to mental health is Türkiye's first private neuropsychiatry hospital.
- NPİSTANBUL Brain Hospital; It has the accreditation certificate of JCI (Joint Commission International), the world's largest and most prestigious health accreditor. This accreditation is a special document that only three hospitals which are neuropsychiatry hospital in the world, including us, outside the USA have been entitled to receive.
- Türkiye's first "Brain Study" and the "Transcranial Magnetic Stimulation" (TMS) is performed in NPİSTANBUL Brain Hospital.
- NPİSTANBUL Brain Hospital is the pioneer of new approaches in Türkiye such as "Treatment by measuring brain functions" and "Thought-Oriented Medicine".
- The first private hospital in Türkiye with AMATEM license and thus has led to many working in the Addiction Center treatment field.



NP İSTANBUL Brain Hospital

- The first and only hospital in Türkiye that adopts and applies Pharmacogenetic approach in diagnosis and treatment processes (therapeutic drug blood level monitoring (TDM), Phenotyping, and Genotyping) in clinic.
- It is a scientific partner of Uskudar University. It engages in various collaborations with the university in technological, academic, and scientific fields.
- The first hospital in supporting their clients prepare pharmacogenetics and genetic profile card in Türkiye.
- It provides telepsychiatry (online therapy) services for clients outside the city and internationally.



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15 questions about addiction

1- What is addiction and what are the causes?

Addiction is to keep using a substance even it has negative effects on life and health. Another characteristics of addiction is that the individual cannot stop using the substance after he/she started using it. Addiction is a brain disorder and absolutely must be treated.

There are behavioral, social, biological and genetic causes of addiction but none of them, on its own are sufficient to give a proper explanation. Although there are numerous factors contributing



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to the transformation of substance use into an addiction, it is a biological process in basic terms. The most important factors causing the individual to start using a substance and become an addict are individual's mental state, genetic predisposition, environmental factors, access to substance, family structure, social environment and cultural feature.

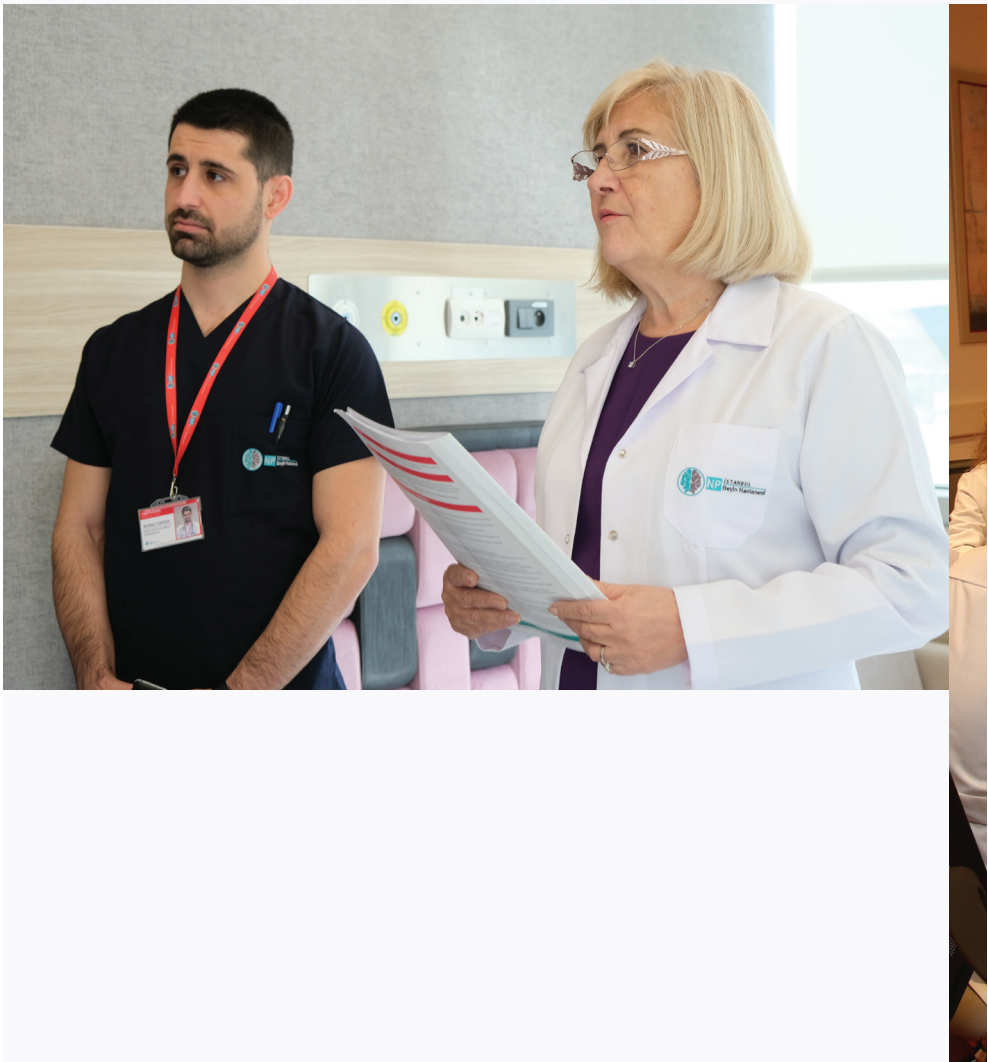
2- Who become addicts?

Firstly, it must be stated that all people using substance have the risk of becoming an addict. There is no substance we can safely use. In addition, people who are in search for new things, who easily take risks, people with a degenerate family structure, neglected adolescents, impulsive individuals and people with genetic predisposition are under higher risks.



3- How does the addiction develop?

Addiction is a vicious cycle. The individual first take interest in the substance but, at the same time, they are afraid of the substance's effects. If curiosity prevails over fear, the individual who starts using with the thought of "using for one won't harm anyone" assumes that they will never use it again but the expectation never comes true. In the following phase, they denies that they has a problem regarding substance use and presumes that they has control and they can quit whenever they wants. To them, warnings of other people are nothing but exaggerated concerns.




4- What is the age of addiction?

There are numerous studies in many countries conducted with statistical methods regarding the starting age of addiction. In a study performed in Türkiye, 2003, students in elementary and middle schools are included from 6 provinces picked from various geographical regions. This and similar studies indicate that the age of addiction has considerably dropped down.

5- What is the addiction progress?

Individuals having substance abuse problems, start to take more of these substances than they intend. They are continuously engaged in futile efforts to quit or use the substances in a controlled fashion. They spend a lot of time on acquiring, using and getting rid of the effects of substances. Consequently, they neglect their daily tasks. Their attendance to school and academic performance decreases and they have arguments with their family. Their social circle changes and they start to come home at late





They continue to use substance even though they are aware of the fact that they have physical and psychological problems. They make up their mind time over time to quit but never succeed. And because they didn't succeed, they feel guilt and failure.

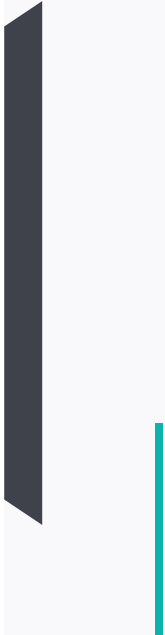
hours, tell lies and spend most of their times in their rooms. Adults, on the other hand, have trouble in the workplace, don't have enough neglect their families and constantly have arguments with them. In addition to all of this, they continue to use substance even though they are aware of the fact that they have physical and psychological problems. They make up their mind time over time to quit but never succeed. And because they didn't succeed, they feel guilt and failure. To get over these feelings, they use more drugs.

6- What is the biological aspect of addiction?

It is known that a lot of areas in the brain such as Ventral Tegmental Area, known as the reward center of brain; Frontal Cortex, which is responsible for numerous functions such as judgment, decision-making and impulse control; amygdala which deals with the management of feelings and Nucleus Accumbens and Striatum which is related with learning etc. play an important role in the development of addiction. In each stage of addiction, changes appear in different areas of the brain. Therefore the development of addiction is a very complicated process. Normally, pleasure inducing stimuli such as art and eating cause the dopamine level to

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increase, which is located in the reward system of brain. Substance use, too, cause the reward system to release increased level of dopamin. And this dopamin enables the feeling of pleasure.

Under regular conditions, an individual has numerous purposes and they have decided on some of them. The occurrence of purposes, giving values to these purposes and choosing the action is related with Frontal Cortex. One of the important aspects of addiction is that the selection of these purposes, most of the times, stay limited to the ones related with substance use. In the course of time the release of dopamin, triggered by substance use, affects the Frontal Cortex, which results in making wrong decisions and the fact that preferred actions are limited to substance use. Additionally, dopamin also affects learning related areas such as Nucleus Accumbens and Striatum and causes the learning ability to degrade. Additionally substance abusers' ability to learn, record and remember new information are deteriorated as well. The repetitive and excessive release of dopamin, prevents the individual from having pleasure from eating, enjoying art and music, which are also called as natural rewards that normally give sufficient pleasure.

7- Is addiction genetically determined?

Research suggest that some people are predisposed to addiction. How is this possible? Individuals having abnormal genes for some reasons produce abnormal proteins which results in the production of abnormal enzymes and receptors. These abnormal enzymes and receptors causes irregularities in neurotransmitters located in the pleasure and reward path of the brain. Consequently, this



forms the basis of control losses regarding substance use. Therefore, the genetically predisposed individual's use of substance doesn't just cause chemical irregularities but also initiates the process towards addiction. However, today's technology is not advanced enough to conclusively determine who is genetically disposed and who is not. Therefore use of alcohol/substance poses numerous risks.

8- What are the substances causing addiction?

Anything that includes rewards may cause addiction. If we need to reduce this to substance, that is, we need to call it accessible substance rather than substance. Roughly, some of the substances identified up until today are tobacco, alcohol, ecstasy, cannabis, heroin, cocaine, inhalant substances (bally, uhu, gasoline, synthetic cannabis (K2), paint remover, ether, halothane etc.), LSD, GHB, several types of mushroom, ketamine, anabolic steroids, and methamphetamine. In recent years, people started to use substances which are chemical derivatives of cannabis and that cannot be detected in routine toxicology examinations.

However, the internet, as well, is a type of addiction.

It is becoming a widespread addiction especially among adolescent and young adults. While betting and gambling are types of addiction existed for some time, online betting appeared as a new concept which is also a type of addiction. Additionally, computer games, internet addiction, and online shopping addiction are some of the addiction types which must be treated.

9- What are the psychological aspects of addiction?

There are many psychological explanations trying to explain the cause and maintenance of addiction. Some of them are as follows:

a- Classical conditioning

The theory based on classical conditioning is used to explain the phenomena of urges and excessive desire which forms the basis of addiction and its development. Environmental stimuli related with substance use may become conditioned factors. For instance, while the smell of grilled fish at seaside would make an alcoholic to think of drinking alcohol, an insulin injection might trigger the urge of a heroin addict to use heroin.

b- Cognitive model of addiction

According to this model, the individual's basic notion is activated by a critical event and this lead to addiction-related intermediate notions. And this, in turn, causes an excessive desire to use substance. Then, the excessive desire to use substance activates extremely tolerant intermediate notions leading to and allowing addictive behaviors. For instance, a child who acquired the basic notion of "a real man drinks alcohol" from his/her elders, develops the intermediate notion of "I must drink to prove that I am a man". The individual who correspondingly develops a desire to drink alcohol starts to drink alcohol. From that point, any excuse becomes a reason to drink alcohol.

c-Stages of change Model


This model emphasizes change processes of people. The main concept is that behavioral patterns differ in different stages of change.

10- What are the behaviors causing addiction?

Of course, we cannot assert that just one type of behavior or lifestyle causes addiction, but especially in childhood, the attitude of families,

Parent attitudes have a significant role in the development of addiction.

A mother who takes antianxiety drugs everytime she is upset, and a father that chain-smokes when he gets angry wouldn't do much good for their children in dealing with stress. Children copycat the behaviours of the parents which they see as role models, thus when they face a problem they use the behavioral patterns which they are copying.



the education received and religious beliefs play an important role in the emergence of addiction. In pre-school age, children having aggressive and ill-tempered dispositions are under risk because they are rejected by their peers and become isolated. After some time, they form social circles comprising from children with similar behavioral patterns and they start to neglect their education. In class hours, they hang out and go to cafes and their success in school deteriorates. Children of families who realize this problem and take necessary precautions may pull themselves together with a proper psychological, psychiatric and pedagogical support. Unfortunately, some families don't present the required care or interest towards their children and, so to speak, they entrust their children to the streets. Parent attitudes have a significant role in the development of addiction. A mother who takes antianxiety drugs everytime she is upset, and a father that chain-smokes when he gets angry wouldn't do much good for their children in dealing with stress. Children copycat the behaviours of the parents which they see as role models, thus when they face a problem they use the behavioral patterns which they are copying.

11- What are the psychiatric disorders accompanying substance use?

a- Substance Use and Psychosis

Nicotine, alcohol and psychostimulant substances are the most used substances which the psychotic patients use. Several studies showed that 70% of the schizophrenic patients smoke, more than 30% use alcohol and more than 20% smoke weed. When they are asked, most of them say that they use it for self-medication. They say that use alcohol for its relaxing effect and smoke weed to "shake off unpleasant moods"

On the other hand it is known that in cannabis and its derivatives plays an important role in the development of psychotic disorders in predisposed individuals.



It is also known that the individuals started using alcohol and other substances at early ages are more likely to suffer from depression in future periods when compared with individuals who don't use. There may be some similarities in symptoms between the deprivation period of substance use and depression, so it is possible that this diagnosis may be overlooked.

It is a known fact that stimulants such as LSD, Methamphetamine, Cocaine, Ecstasy cause hallucinations.

b- Substance Use and Depression

One fourth of the individuals diagnosed with major depression are also diagnosed with substance use disorder. It is also known that the individuals started using alcohol and other substances at early ages are more likely to suffer from depression in future periods when compared with individuals who don't use. There may be some similarities in symptoms between the deprivation period of substance use and depression, so it is possible that this diagnosis may be overlooked. Additionally the depression of individuals who use substance frequently accompanied by anxiety and insomnia. The combination of substance use and depression poses a great risk regarding suicide. Therefore, these patients had better be treated as inpatients in the first couple of weeks.

c- Substance Use and Anxiety Disorders

While 30% of women and and 20% of men in society suffer from anxiety disorder, this rate is 50% among addicts. Substance use and other psychiatric disorders are interrelated. For instance, 4-5% of substance abusers also suffer

from panic disorders and 16% of people having panic disorder also suffer from substance use disorder.

d- Substance Use and Adult Attention Deficit Hyperactivity Disorder

It is found out that 20% of the individuals having adult attention deficit hyperactivity disorder also diagnosed with substance use disorder and 50% of them have nicotine addiction. On the other hand, 50% of patients having alcohol, cocaine or heroin addictions also have attention deficit hyperactivity disorder. Due to the impulsivity and excessive curiosity caused by attention deficit hyperactivity, most of the adolescents tried many substances such as alcohol, cigarette, and weed. In this matter, preventive measures have a particular importance.

e- Substance Use and Eating Disorders

Studies indicates that substance use disorder is related with binge eating disorder but not related with anorexia. Individuals with binge eating disorder, abuse substances such as diuretics and laxatives. Since they think it prevents weight gains, these individuals generally nicotine addiction. Early diagnosis and treatment of



children with ADHD is of critical importance in preventing addictions. These young children experiencing attention and concentration disorders have difficulties in complying to the treatment because of the negative effects of the substances they use on their memory and other advanced brain functions. In comparison with individuals who don't have ADHD, their motivation is lower and it is quite difficult for them to continue to their treatment.



f- Sleeping Disorders Caused By Substance Use


A common problem of people trying to overcome their addictions of alcohol and other substances is related with sleeping. Because, after a course of time, the sleeping problem manifest itself as a severe and explicit disorder which also might result in using alcohol/substance again. There are 4 types of sleeping disorders related with alcohol-substance use.

Insomnia: This sub-type is primarily characterized by having difficulties in falling asleep, maintaining the sleep or getting refreshing sleeps.

Hypersomnia: In this sub-type, the main complaint is constantly being in a state of somnolence.

Parasomnia: This sub-type is a sleeping disorder primarily characterized by abnormal behavioral situations related with sleeping or sleep transitions.

Complex: This sub-type is a sleeping disorder characterized by the symptoms of several sleeping disorders and which is related with a general medical situation.



On order for individuals to be successful and productive in their family, social and professional lives, the treatment plan must be focused on the proper needs and problems of individuals.

12- What are the principles of Substance Use Therapy?

It is not appropriate that all substance abusers are treated with the same method. On order for individuals to be successful and productive in their family, social and professional lives, the treatment plan must be focused on the proper needs and problems of individuals. The psychotherapy and the medication that are going to be used must be individual-oriented and planned exclusively.

The treatment must be accessible for 7/24. It is quite important that substance abusers who are having ambivalent thoughts about therapy must have access to therapy in the exact moment they decide to receive treatment.

For a treatment to be effective, the individual must be determined to solve their other biological, psychological and social problems in addition to their substance use problems. When planning the treatment, the patient's legal, social, medical and psychiatric problems must be taken into consideration as well.

During the process, the treatment plan may have to be altered according to the patients needs and deficiencies. For instance, the patient might not have told the issues about their spouse at the beginning of the therapy; and when it is found out the recurrence of the illness is related with the patient's issues with their spouse, couple therapy must be added to the treatment plan.

In order for the treatment to be effective, the patient continue to the treatment for a sufficient period of time. Studies show that the first 3 months after quitting the substance is extremely critical. Since most of the people applying to

the treatment do not complete the therapy program, they have frequent recurrences.


In treating addiction, counselling services and behavioral approaches are very important. With regard to the improvement of problem solving skills, relationships with people, social and domestic functionality; there are significant benefits of counselling services and behavioral methods.

Medication has an important role in the therapeutical process. As previously explained in detail, drugs such as naltrexone (for opiate addiction) and accamprosate (for alcohol addiction) significantly contributes to the treatment of addictions.

Although detoxification of the body is the first and important stage of the treatment, it is not sufficient, on its own, in order for the addict to stay away from the substance. Detoxification therapy is performed as a preparatory practice for the outpatient care, which forms the basis of the therapy program, minimizing the physiological and psychological effects of deprivation. It is not sufficient on its own.

In order for the treatment to be effective, permissiveness is not a necessary condition. Today, almost none of the substance abusers voluntarily apply to therapy programs. On the contrary, a great number of patients apply because of compulsory reasons such as legal requirement, spousal pressure, or the risk being fired. Studies indicate that there is no significant difference between people that come mandatorily and those who participate voluntarily regarding the motivation, the period stayed in the program, and the period of "staying clean".

Substance use therapy is a long term process where recurrences might occur and treatments must be repeated. Like in many other chronic diseases, substance us, too, may become severe and require intensive treatments. Both families and patients must realize that recurrences is not a sign of failure but a part of the process.



It is known that some of the patients use substance, although it is sometimes for trying, during the treatment process. This must be inspected with tests conducted from time to time, because if such a situation exists it must be evaluated within the therapy process and the underlying causes should be investigated and confronted.

Therapy program also includes the examination of accompanying internal and neurological illnesses and related disciplines must be consulted when necessary. Hepatitis B, Hepatitis C, epilepsy, and cardiovascular diseases are some of the internal and neurological illnesses which is common among substance abusers. The scope of the therapy program requires these illnesses' diagnosis its inclusion to the concerned expert's treatment program.

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13- In what situations inpatient care is required?

- Under the below-mentioned situations, the patient must be treated with inpatient care:
- The patient's response history regarding outpatient and follow-up care is not positive and the outpatient treatment have yielded no success for many times.
- The patient has delirium situations in his/her medical history or he/she has deprivational situations threatening other people's lives.
- He/she has a general medical condition in his/her history, which might threaten other people's lives when he/she continues to use alcohol-substance during the treatment,
- He/she has other accompanying mental disorders and there are active symptoms related to this disease,

Individuals with substance use disorders have a higher risk of developing physical illnesses. Heart and brain vascular diseases, hypertension, and even the risk of brain hemorrhage and heart attack with high-dose intake may occur. Substance use also impairs liver functions and may lead to liver failure.

- The patient has the risk of hurting himself/herself or other people when he/she is left in a less restrictive environment,
- The patient abuses more than one substances.

14- What is the content of the inpatient care?

Biological Support Program

It includes both physical and psychiatric therapy. People having substance use disorder pose a higher risk of developing physical illnesses. For example, substances such as cocaine and ecstasy, which activate the sympathetic system, increases the risk of cardiovascular and brain diseases and high blood pressure, and they also can cause cerebral hemorrhages and cardiac arrests. The fact that alcohol ruins liver functions and causes liver failure is a public knowledge. Therefore, patients using this kind of substances subjected to cardiogram, pulse-blood pressure monitoring, liver and renal function tests and the drug therapy is conducted if necessary. If the patient exhibits symptoms of deprivation, a vascular access is established and he/she is provided with serum and vitamin supplements. For instance, in the delirium tremens chart, there would be fluctuations in the patient's conscious due to deprivation of alcohol and his/her vital functions would be in danger. In this phase, establishing a vascular access, providing a respiration support and giving B1 vitamin supplements will be a life-saving practice. If the B1 vitamin is given too late, permanent dementia chart might develop due to alcohol. After this emergency treatment, the patient's psychiatric drug therapy is also rearranged. The purpose of using psychiatric medication is to relax the patient, reduce the disturbance, remove the urge to use substance and to alleviate conditions emerged after the substance use such as depression, anxiety disorder, panic, paranoia, insomnia, anorexia.

Preventing Recurrence In Substance Addiction

The most important matter in substance abuse is the fact that recurrences appear quite frequently. Recurrence is an important fact that addicts, relatives or people engaged in substance use therapy need to confront sooner or later. Therefore, preventing recurrence, that is, developing strategies to cope with the risk of recurrence is an integrated part of addiction therapy. A rough definition of recurrence would be the situation in which the individual having addiction issues starts to use substance again. However, this definition is incomplete, because trying for one time and starting to use again in a regular basis are two completely different things. As the scientific studies has shown, the first use of substance after a certain period of time doesn't necessarily turn into extensive recurrences in which old substance using habits are regained.

Group Therapies

Group therapies help patients to confront their addictions, accept its harmful consequences and increase the motivations not to use substance. Patients learn several ways of dealing their emotional and interpersonal issues without consulting to stimulants.



The role of family is very important

There must be an agreement between family members and they need to form up a common language. Another important problem is that family members don't abide what they decide. Even the slightest sign of pressure, make them step back from what they decided.

15- What are the proper attitudes for families?

One of the most apparent problems noted in the monitoring and treatment of patients is the fact that there is no unity within the family. Either because of this or that, there is always polarization between family members.

Therefore, there must be an agreement between family members and they need to form up a common language. Another important problem is that family members don't abide what they decide. Even the slightest sign of pressure, make them step back from what they decided. And this leads to a situation where the addicts get what they want. Adopting a determined standpoint, is one of the most efficient factors that prevents recurrence. The rules must be predetermined and everybody should do their best to comply with these rules. In cases where the rules are disregarded, no one should take a step back. Individuals addicted to alcohol and substance also are addicted to rewards. Therefore when the positive behaviors are rewarded and the negative behaviors are overlooked, they will continue to exhibit positive behaviors to get the reward. Regarding the reward, the emphasis must be on fulfilling emotional needs such as having shared quality times, or providing materials for the development of personal abilities and hobbies.



Implant For Addiction

Naltrexone Implant

A naltrexone implant is a small pellet that is inserted into the lower abdominal wall under local anesthetic. The implant is effective for 3–6 months depending on the type of implant used and releases a controlled amount of naltrexone into the body. The implant works by blocking the effects of opiate drugs. It does this by binding to opiate receptors in the body which prevents opiate drugs like heroin or oxycodone from causing a person to experience the usual high. In blocking the effectiveness of the drug, naltrexone helps to break the cycle of drug use. It has also been successfully used in the treatment of alcohol dependency. Opioid antagonists bind to the opioid receptors in the brain and blocks them. This means that effects of drugs like heroin, morphine or hydrocodone are not experienced. A drug user will not feel the physical effects of euphoria, comfort or well-being associated with these drugs and it is anticipated that the user will not have the desire to take the opiate drug. Naltrexone interrupts the pathways in the brain that release the feel good chemicals like endorphins when the drug is taken and has proved to be effective in reducing the frequency and severity of relapse.

In NPISTANBUL Brain Hospital, we perform Naltrexone/Disulfiram Implant for addiction under local anesthesia.



Disulfiram Implant

Ten 100 mg pellets are provided in a glass container. Using general anaesthesia or regional infiltration by a local anaesthetic 8 to 10 pellets are implanted in a single operation, usually into the abdominal wall. The implant is effective for 3 months and releases a controlled amount of disulfiram into the body. The drug disulfiram is a useful deterrent against further drinking when inserted. It produces an unpleasant and alarming reaction if alcohol is then consumed. The features of the disulfiram-ethanol reaction (DER) include headache, generalized flushing, malaise, dyspnoea, palpitations and vomiting; hypotension and tachycardia are also present. Cardiovascular collapse can ensue in severe reactions; fatalities have occurred in exceptional instances, so their possibility must be explained to the patient before implanting disulfiram.

Types of behavioral addictions: Internet Addiction

Virtual addictions include behavioural addictions such as the internet, technology, computer, games of chance. Excessive use of the internet and computer creates a narcotic effect in brain which is similar to substance addiction. The brain chemicals of people, who tries to stay 24 hours in front of a computer and who eats and fulfill his/her other needs at a computer desk, starts to deteriorate as in substance abusers. In order for brain to get back to its previous state; patients whose situation is progressed is new treated as inpatients. Conducted research show that the damage of the internet and cocaine is pretty much the same.





Staying in front of a computer screen for a long time distorts the reward-punishment mechanism related with feeling of pleasure and while at first people can enjoy the internet for just an hour, eventually the time you spend on the internet to experience the same enjoyment is gradually increasing. This time may rise up to 24 hours. Consequently, the individual exhibits behaviours similar to substance abusers and starts to live a completely virtual life.

Addicted individuals present depressive behaviours and go through a crisis when they are kept away from their computers. Eventually, they become ill-tempered and hit and smash objects. In inpatient treatment, the patient is isolated for 15 days. If the patient experiences abnormal states of crisis in this duration, which is also observed in substance abusers, this reaction of the brain is prevented through medication.



Gambling Addiction

Because of being an impulse control disorder, its compulsive structure, its clinical and pathological features similar to dependence syndromes, defining gambling addiction (PG) is difficult. The most common opinion is that gambling addiction is a mental disorder. Many studies point out similarities between substance abuse and gambling addiction. While gambling addiction is being examined under the spectrum of neurotic disorders, according to some opinions, it is actually an addictive behavior, and the inability to control one's own behavior underlies the addiction. Especially comorbidity with alcohol or other substance abuse disorders supports this opinion. Gambling addiction is a heterogeneous disease that differs in terms of the type and severity of the behavior, psychiatric comorbidity, family history, onset age and gender.

What is Gambling Addiction?

- It can be defined as the inability to prevent the urge of gambling despite all the losses it has caused in personal, family and business.
- It is seen in 3%. It can be seen in every income group. It is more common in men between the ages of 40-50. It is becoming increasingly common among young people.
- Alcohol and substance abuse is common in pathological gamblers.
- Alcohol and substance abuse is common in patients' families. In 25%, one of the parents is pathological gambler.

According to animal and human studies, no matter if it is gambling or substance, addiction is a disorder of the brain reward system. Functional brain imaging studies has shown that the same region has been activated in the brain of gambling and substance addicts when a photo related to their addiction has been displayed.


What is the effect?

- Gambling for excitement makes people forget everything around them.
- Needs to gamble with increasing amounts of money in order to achieve the desired excitement.
- Gambles to run away from problems or to get rid of an unwanted mood (helplessness, guilt, feelings of boredom, feelings of depression).

What are the risks?

- Gamblers hope to get back everything they have lost with one game. Whenever this does not happen, they try to cover up their losses and behavior with lies.
- In order to find money for gambling, they commit illegal acts such as fraud, theft, embezzlement, etc.
- The similarity of substance abuse and gambling addiction.





When the gambler becomes aggressive and starts to keep secrets, his/her relations breaks down. Ultimately, depression, suicidal thoughts and attempts are seen.

- Many studies point out similarities between substance abuse and gambling addiction. While gambling addiction is being examined under the spectrum of neurotic disorders, according to some opinions, it is actually an addictive behavior, and the inability to control one's own behavior underlies the addiction.
- Because of gambling, the gambler jeopardize or loses a significant relationship, his/her job, an opportunity to succeed in school or career.
- When the gambler becomes aggressive and starts to keep secrets, his/her relations breaks down. Ultimately, depression, suicidal thoughts and attempts are seen.
- Alcohol and substance abuse is common in pathological gamblers.

What are the diagnostic criteria for gambling addiction?

- Preoccupation with gambling (e.g. 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.
- Had repeated unsuccessful efforts to control, cut back, or stop.
- Feels restless or irritable when attempting to cut down or stop gambling.
- Gambles to run away from problems or to get rid of a dysphoric mood (desperation, guilt, anxiety, depression).
- After losing money gambling, individuals often return on another day to try to recoup their losses, a behavior known as (chasing losses).

- Lies to family members, therapist or others to conceal gambling.
- Commits illegal acts such as fraud, theft, embezzlement in order to find money for gambling.
- Jeopardizes or loses a significant relationship, job, or school or career opportunity because of gambling.
- Relies on others to provide money to relieve the desperate financial situation caused by gambling.
- Gamblers hope to get back everything they have lost with one game. Whenever this does not happen, they try to cover up their losses and behavior with lies. When the gambler becomes aggressive and starts to keep secrets, his/her relations break down. They commit illegal actions. They give forged checks, spend all of their savings and get into debt. Ultimately, depression, suicidal thoughts and attempts are seen. The patient realizes that he/she can't make up for the losses. However, he/she continues to gamble for excitement and arousal. They usually seek treatment at the last stage because of relationship problems or legal issues.

Relationship between substance and gambling addiction

While gambling addiction is defined as “Impulse Control Disorder not elsewhere classified” in DSM-IV-TR, it is defined in DSM-V under the title of “Substance-related and Addictive Disorders”. Addiction without substance use may be a new concept. According to animal and human studies, no matter if it is gambling or substance, addiction is a disorder of the brain reward system. Functional brain imaging studies has shown that the same region has been activated in the brain of gambling and substance addicts when a photo related to their addiction has been displayed.

Diagnostic criteria for gambling according to DSM-V:

A. Persistent and recurrent problematic gambling behavior leading to clinically significant impairment or distress, as indicated by the individual exhibiting four or more of the following in a 12-month period:

- Needs to gamble with increasing amounts of money in order to achieve the desired excitement
- Has made repeated unsuccessful efforts to control, cut back, or stop gambling, is often preoccupied with gambling (e.g., having persistent thoughts of reliving past gambling experiences, handicapping or planning the next venture, thinking of ways to get money with which to gamble).

- Is restless or irritable when attempting to cut down or stop gambling
- Often gambles when feeling distressed (e.g., helpless, guilty, anxious, depressed)
- 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 jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling
- Relies on others to provide money to relieve desperate financial situations caused by gambling.

B. The gambling behavior is not better explained by a manic episode.

Criteria are the same as in DSM-IV TR, but there are a few small differences in words.

Changes in DSM- V:

The criteria “Commits illegal acts such as fraud, theft, embezzlement in order to find money for gambling” excluded, the item with “lie” meets it. By these changes and reclassification, it will be provided to update the subject, to raise awareness and reduce the stigma.

DSM-IV

No matter if it is gambling or substance, addiction is a disorder of the brain reward system. The same region has been activated in the brain of gambling and substance addicts on functional brain imaging when a photo related to their addiction is displayed.

DSM-IV

Preoccupation with gambling

Gambling to run away from problems

DSM V

Often preoccupied with gambling

Gambling when feeling distressed



I Co-addiction

Addiction which is the one of the most important health problems of today has brought many different concepts and conditions into the field of health and in everyday life. One of these concepts is “Co-addiction”.

In 1960s, together with the associations established by the families of those attending Alcoholics Anonymous in the United States, alcoholism has started to be regarded as a “family” disease, and the foundation of the concept “co-addiction” has been laid. The idea emerging in these meetings and family studies is that the problem does not derive from alcoholic only, and the network of relatives plays an important role in addiction.

Well, what is this network actually?

Around the addicted person, there is often a spouse, a parent, a friend, or a relative. While the caregiving process by these people continues, unhealthy and inappropriate behaviors of parents or family form the basis for the co-addiction. After a while, they start to live the life of the addicted person, to “exist” through the addiction. The sense of responsibility is a positive concept, however, when it turns into excessive responsibility, different problems can arise. Together with the behaviors developed at an obsessive level, they can't realize what they lost or sacrificed. However, the basics of a healthy empathy and care shall develop at a conscious level.

In co-addict relations; privacy issues, dysfunctional communication and boundaries, often high reactivity is

observed. In such relationships, one makes possible, supports or controls other person's addiction, immaturity or irresponsibility. In relationships, co-addicts find themselves in the role of a person who is supportive or is a savior. They are dependent on the weak functionality of the other person to satisfy their own emotional needs. They are preoccupied with the needs of the addicts.

Common features of co-addicts;


- Their interpersonal relationships are strained, not stable
- They can't tolerate loneliness
- Feelings of emptiness and boredom are common
- Their needs are subordinated to the order of the addict
- They have a strong incentive to accept and commit
- Denial and weak self-image

It shall be noted that one of the basic requirements of being a parent requires making sacrifices in a variety of subjects, but these sacrifices shall be in line with one's own physical and mental needs, not at an unhealthy and destructive level.

There are various treatments of co-addiction as it is in addiction. Treatment of co-addict does not necessarily depend on the treatment of the addict. Although treatment standards are not clear yet, cognitive behavioral therapies, drug therapies and support groups play an important role in treatment. In co-addicts who haven't receive an appropriate treatment, various psychiatric disorders such as alcoholism, legal drug addiction, eating disorders, psychosomatic complaints and social phobia may occur.

The network established by relatives has also an important role in addiction.

Around the addicted person, there is often a spouse, a parent, a friend, or a relative. While the caregiving process by these people continues, unhealthy and inappropriate behaviors of parents or family form the basis for the co-addiction.



*A Kind Of Harm To
Patient Is To Leave
Patient Without Treatment.*

Prof. Nevzat Tarhan (M.D)

TREATMENT OPPORTUNITIES IN NPGROUP

“New option in the treatment of addiction: Neuromodulation therapies”

In order to reduce craving (desire for substance use) which is the most important step in addiction treatment, neuromodulation therapies such as TMS (Transcranial Magnetic Stimulation) and tDCS (Transcranial Direct Current Stimulation) are applied in addition to medication therapies and psychotherapies. In recent scientific studies, TMS is defined as an appropriate treatment tool to reduce craving.* Application of repetitive TMS reduces the desire for substance and acts by stimulating addiction-related brain regions. TMS applied in low and high frequency according to the type of the substance used by the patient, usage frequency and clinical picture increases the success of treatment.

*Gorelick, David A., Abraham Zangen, and Mark S. George. "Transcranial magnetic stimulation in the treatment of substance addiction." *Annals of the New York Academy of Sciences* 1327.1 (2014): 79-93.

1. **Psychotherapy:**

It is known that drug therapy alone is not sufficient in psychiatric treatments. In our clinics, effective use of psychotherapy enhances the success of treatment by providing more rapid and sustained improvement. The aim of psychotherapy is to improve weaknesses and skills, to acquire applicable knowledge and skills for stress factors, to replace negative behaviors with positive ones, to provide changes by increasing awareness. In collaboration with physicians and psychologists, based on the assessment performed after personality analysis, appropriate therapy method is defined. As therapy is a dynamic process, other psychotherapeutic techniques can also be applied over time. Some of the therapy techniques applied in our clinic are: Dynamic Oriented Therapy, Cognitive Behavioral Therapy, EMDR, Inpatient Interaction Groups, Addiction Group Therapy, Neurobiofeedback, REHACOM, and Game Therapy for Children.

2) Inpatient Treatment:

Inpatient treatment is an efficient alternative in cases where the patient risks the safety of himself/herself and other people, and situations where the patient resist to the treatment.

Full security services arranged according to the needs of psychiatric patients and the experienced staff provide both comfortable and safe environment.

3) Implant:

In NPISTANBUL Brain Hospital, we perform Naltrexone/ Disulfiram Implant for addiction under local anesthesia.

4) Family Information Training:

Addiction is a disease that affects not only the person who uses the whole family. This is why people in the family, along with treatment, it is aimed to change. For this reason, both families to learn appropriate behavior and attitudes continue to support the release of their relatives be informed about this disease as well as trainings are organized.

5) Clinic Pharmacogenetic Laboratory:

In patients using drugs, drug-blood levels above values of treatment or drug interactions may cause impairments in brain functions. In order to determine this, drug-blood levels (TDM) is tested.

6) Electroconvulsive Therapy (ECT):

During active episodes, anesthetized ECT can be applied to hospitalized patients. Seizures are electrically induced in patients to regulate electrochemical processes of the brain.

7) Transcranial Magnetic Stimulation (TMS):

It's a new treatment method used in psychiatric and neurologic patients. Through the magnetic field applied on the affected areas of the brain, electrical activity of the brain is regulated. It provides faster and more effective therapy than drugs. In our clinic, it is used in drug-resistant depression. It is used in low frequencies in cases where ECT cannot be applied (anesthesia risk, according to patients' and their families' request).

8) EMDR:

It is a special therapy technique used especially in patients exposed to psychological trauma. Eye Movement Desensitization and Reprocessing is based on reprocessing negative emotions and thoughts related to traumatic experiences in mind. It is aimed to eliminate the emotional burden.

9) Hypnotherapy:

Performing interaction with a person's subconscious during hypnosis, therapeutic purpose in life in a positive direction, can be obtained significant and lasting changes.

10) Neurobiofeedback:

It indicates the bond between one's own processes and physiological functioning. Through the sensor/electrode attached on the fingers or hairy skin, body temperature and brain waves are transferred to the computer and monitored. It provides monitoring of body functions that can change depending on thoughts and feelings, and that are not recognized under normal conditions. The aim is to learn to control these functions.

11) Biofeedback:

Body temperature, skin resistance, respiration, muscle tension and a system that visualizes the relationships between bodily sensations and thoughts of measuring a person's heart rate with special electrodes.

12) REHACOM (Computerized Training Modules):

For regaining mental skills or improving existing skills, personalized attention training program can be used. Rehabilitation of mental skills, such as planning, organization, attention management, can be done using computerized training modules.

13. Clinic Pharmacogenetic Evaluation:

Monitoring the blood levels of drugs and used drugs based on the genetic profile is increased the success of treatment.

With this system, patients' are prevent unnecessary or side effect drugs treatments. Personalized treatment is arranged with the data obtained.

14) Sleep Laboratory:

In patients with sleep disorder or suspected epilepsy, Polysomnography, 12/24-hour video- EEG monitoring can be performed. The relationship between patient's sleep profile and psychiatric/ neurologic condition is investigated.



Services For International Patients

Our International Team are compassionate and sensitive to the special needs of all cultures and they strive to make every patient's experience as pleasant and comfortable as possible.

In order to meet the diverse needs of all our patients NPİSTANBUL Brain Hospital provides personalized liaison services & Concierge services, which include the following:

- Medical Consultations after receiving the medical report
- Second Opinion
- Prepare the treatment plan and estimated cost
- Scheduling medical appointments
- Accomodation assistance (hotel, aparts etc.)
- Arranging transportation from the airport
- Assisting with visa procedures
- Estimating the cost of services
- Assisting with hospital admissions
- Ensuring that the patient understand the instructions provided by the physicians
- Obtaining and delivering the copies of medical reports following the consultations
- Assisting with discharge processes and payment procedures
- Assisting with international insurance companies
- 24-hour emergency services, including air ambulance coordination services
- 24-hour translation services
- Transfer of medical records to & from your primary physician
- Fulfilling any special nutritional or spiritual needs
- Coordination of advance deposit payments (wire transfers, etc)



NP İSTANBUL
Brain Hospital

NP İSTANBUL BRAIN HOSPITAL

Yamanevler Mah. Ahmet Tevfik İleri Cad. No:18 34768 Ümraniye / İstanbul
T: 0216 633 06 33 F: 0216 634 12 50
www.npistanbul.com bilgi@npistanbul.com

NP FENERYOLU MEDICAL CENTER

Ahmet Mithat Efendi Cad. No:17 (Bağdat Cad. Sahil Yolu Kalamış Mevkii)
34726 Fenerbahçe-Kadıköy / İstanbul
T: 0216 418 15 00 F: 0216 418 15 30
www.nptipmerkezi.com np.feneryolu@uskudar.edu.tr

NP ETİLER MEDICAL CENTER

Nispetiye Cad. No:19 Etiler 34330 Levent-Besiktas / İstanbul
T: 0212 270 12 92 F: 0212 270 17 19
www.nptipmerkezi.com np.etiler@uskudar.edu.tr

ÜSKÜDAR DENTAL HOSPITAL

Saray Mah. Site Yolu Cad. No: 13-15A 34768 Ümraniye / İstanbul
T: 0216 633 25 25 F: 0216 474 12 59
www.uskudardishastanesi.com bilgi@uskudardishastanesi.com

ÜSKÜDAR UNIVERSITY

Altunizade Mh. University Street No:14 34662 Üsküdar / İstanbul
T: 0216 400 22 22 F: 0216 474 12 56
www.uskudar.edu.tr bilgi@uskudar.edu.tr



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