



ADDICTION

ALCOHOL, DRUGS, GAMBLING
SMOKING, ONLINE SHOPPING

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Alcohol Addiction



World Health Organisation report on alcohol abuse

The WHO report found that excessive drinking is associated with an increase in domestic abuse, particularly men towards women. The abuse can be:

- physical, such as beating
- psychological, such as constant belittling
- forced sexual intercourse
- controlling behaviour, such as isolating a person from their loved ones.

This abuse may be caused by the belief that alcohol causes violent behaviour and therefore drunk people use alcohol as an excuse. In Australia, restricting the hours alcohol was in sale in one town reduced the number of alcohol-related domestic violence cases that ended in hospitalisation.

A coupon-based alcohol rationing system in Greenland in the 1980s, which entitled adults to 72 beers worth of alcohol a month, led to a 58% reduction in police call outs for domestic abuse. Those in problem relationships may drink to help themselves cope. However, alcohol combined with pre-existing issues may also cause abusive behaviour.

While abuse can cause physical injury, such as miscarriages in pregnant women, it is also linked to emotional problems like suicidal thoughts and depression.

The WHO believes reducing social acceptance toward excessive drinking, and the expectation of men to act masculine, may help to combat abuse.

The importance of alcohol in social interaction

Why do people drink? To the person waiting at the bar on a hot summer evening, the answer seems simple – drinking is both a pleasure and a relief. To the health official reading the latest reports of alcohol's societal ruin, that answer might seem frustrating. Why would anyone drink, if it was so bad for them?

Evolutionary psychologists believe the answer can be found in new and interesting research, and the answer is both simple and complex... Here's why:

Humans are social animals with an urgent desire to schmooze and an awareness that alcohol helps our cause – friendships protect us against outside threats and internal stresses, and this inclination has been key to our evolutionary success.

Humans are not the only ones... Primate social groups, unlike most other species, also rely on social bonding to maintain social coherence, and for humans, this is where a shared bottle of wine plays a powerful role.

It isn't just because alcohol causes us to lose our social inhibitions and become over-friendly with our drinking chums, rather, the alcohol itself triggers the brain mechanism that is intimately involved in building and maintaining friendships in monkeys, apes and humans. This mechanism is written deep in the endorphin system.

Endorphins (the word is a contraction of endogenous morphine) are neurotransmitters that are intimately involved, through their opiate-like effects, in the management of pain. That opiate-like all's-well-with-the-world effect seems to be crucial for establishing bonded relationships that allow individuals to trust each other. Seen in this light, drinking could be considered a profound activity, enabling humans to open up their deepest selves, giving another twist to the ancient saying *in vino veritas* – in wine, truth.

Our love of alcohol dates back thousands of years. Of the many social activities – such as laughter, singing, dancing – that trigger the endorphin system in humans, the consumption of alcohol seems to be one of the most effective. There is an emerging view among some archaeologists that the reason humans started cultivating grains such as wheat and barley was not just to make bread, as was previously assumed, but also to ferment beer. The exploitation of naturally fermenting fruits such as grapes, may have an even longer history. For humans, fermented drink plays a central role in feasts the world over, and feasts are all about the celebration of friendship – and we need friends when we need a helping hand, or someone to listen to our problems. But friendship also has other hidden benefits...

One of the biggest surprises of the last few years has been the number of publications that show that our happiness, health and susceptibility to disease – even the speed of our recovery from surgery and how long we live – are all influenced by the number of friends we have. One study by Julianne Holt-Lunstad collated the results of 148 studies of heart attack patients in order to determine what best predicted the probability of surviving for 12 months after a first heart attack. The best predictor turned out to be the number of, and the quality of the friendships you had.

A short way behind that was giving up smoking (no surprises there). But a long way further down the list was exercise, obesity, alcohol consumption, quality of diet and even air quality.

It seems you can eat, drink and laze around as much as you want without affecting your survival rate. Having good friends is the key!

Loneliness is a growing health problem in the west – the UK even has a dedicated minister to address the problem, and how to beat loneliness has become a huge challenge. While the role of alcohol in sustaining friendship networks that provide us with psychological and emotional support is crucial, the endorphins triggered by what we do with friends may have hidden but equally important benefits, so socialising over a few beers or a bottle of wine at the pub may be a good place to start.

Social drinking appears to tune the immune system by activating the body's T-cells – part of the defence mechanism that gives us resistance to many common ailments. Many ex-soldiers complain they became ill more often than when they returned to civilian life. It wasn't that they weren't as fit as they'd been in the army, it was because they missed the camaraderie of Army life – including the odd pint.

Exercise, alcohol and friends are the three best ways to trigger endorphins. But of course, like everything else we consume, an excess of alcohol will make you ill. For instance, proteins, salt, fats and sugars are all good for you, but too much of it could make you diabetic, or result in obesity, cancer, hypertension, to name but a few. A few drinks will relax you and make you more sociable, but too much of a good thing will exact a price.

People who drink moderately tend to be social drinkers, whereas heavy drinkers often drink alone or drink past the point of being able to engage in the kinds of conversations on which friendships are built. Social drinking helps create friendships, it also protects against dementia because friendship encourages conversation which in turn keeps the mind sharp, triggers the production of endorphins, not only assisting social bonding but also the processes of healing.

A study carried out by the University of Oxford in collaboration with the terribly British Campaign for Real Ale looked at the benefits of old-style community pubs relative to the high street bars that have come into being in recent years. One part of the survey was a national survey of pub use. The survey showed that people who had a 'local' they patronised regularly had more close friends. Moreover, they felt happier, were more satisfied with their lives, more embedded into their local community, and more trusting of those around them.

A more detailed analysis found it was the frequency of pub visits that really mattered – those who visited the same pub more often were more engaged with, and trusting of, their local community, and had more friends. The three things most important factors were laughter, reminiscing and alcohol, all three of which trigger endorphins.

Another common theme was that most social drinking takes place in the evening, possibly a throwback to our ancestors' social bonding activities, talking by the fire after a long day's hunting and gathering around their campfires. When anthropologist Polly Wiesner listened to South African San Bushmen she found daytime conversations typically consisted of factual topics and discussions of trading agreements with neighbours, but evening conversations moved to social topics or involved stories and even jokes.

In the 21st century we devote an estimated two hours a day to scale interactions, and these interactions must be engaging rather than boring, and for most people, alcohol is an important part of the proceedings to bestow health, happiness and a sense of well-being.

Alcohol in moderation may have a number of unexpected health benefits. To begin with, there are the nutritional ingredients which – in moderation – help to reduce the risk of heart failure and boost brain health. Scientists writing in the *The American Journal of the Medical Sciences*. claim that beer boasts more protein and B vitamins than wine, is higher in antioxidants and can reduce the occurrence of cardiovascular disease.

The antioxidant content of beer is equivalent to that of wine, but the specific antioxidants are different because the barley and hops used in the production of beer contain different flavonoids from those in the grapes used in the production of wine. The scientists strongly suggest physicians should be aware of the growing evidence supporting the nutritional and health benefits of moderate consumption of alcohol as part of a healthy lifestyle.

Beer also contains trace amounts of minerals such as calcium, iron, magnesium, phosphorus, potassium, sodium, zinc, copper, manganese and selenium, fluoride, and silicon – all naturally occurring compounds found in plants that also benefit the human body and help to fight disease and help reduce the likelihood of developing diabetes and heart disease, while also protecting cognitive function. Drinking beer can also lead to greater levels of high-density lipoprotein, or ‘good’ cholesterol, helping to thin the blood and remove plaque in the arteries.

Alcohol abuse in adults

The benefits of drinking beer are only enjoyed when beer is consumed in moderation, not in vast quantities.

According to the UK's Chief Medical Officer, 14 units of alcohol a week is about the limit, although this will vary with body mass. This equates to six 175ml glasses of wine, six pints of larger, five pints of cider or fourteen 25ml glasses of spirits. Exceeding this could result in liver damage, heart disease and weight gain. And it goes without saying that this amount is spread over seven days and not consumed all at once.

Astonishingly, heavy drinkers are willing to tolerate painful electric shocks in return for alcohol. A study conducted in the United States discovered that those suffering from alcohol use disorder – men who drink more than 20 beverages a week and women who drink more than 1 – put up with the discomfort if it resulted in them being given a drink of their choice. The researchers believe this may explain why heavy drinkers risk prosecution, such as driving under the influence, if it means they get their alcohol fix.

Researchers from the National Institutes of Health, Bethesda, Maryland, analysed 19 heavy drinkers who were not seeking treatment for alcohol use disorder. The drinkers' brain functions were assessed using MRI scans both before and after being offered alcohol. Participants were allowed to have up to four alcoholic drinks of their choice in exchange for an electric shock to their wrists. The participants self selected the shock intensity at a level that was 'painful but not extremely painful'.

The experiment was repeated in 23 light drinkers, defined as less than 15 alcoholic beverages a week in men and less than 10 in women.

The results also suggest light drinkers are significantly less likely to tolerate pain in exchange for alcohol. They believe their findings demonstrate heavy drinkers take risks if it means they will get their alcohol fix.

The prospect of alcohol also activates areas of the brain associated with compulsive behaviours – particularly in heavy drinkers. Excessive alcohol intake is also associated with conditions such as liver disease, brain damage, and cancer of the mouth, throat and breast.

The findings were published in the journal *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*.

The negative affects of alcohol intoxication persist long after a person sobers up. A study conducted by the University of Victoria, British Columbia, Canada, confirmed that hangovers reduce electrical activity in the brain, affecting function short-term. The results, published in *Psychophysiology*, revealed that both learning and decision-making are impaired during the body's recovery period.

Such responses are similar to those caused by concussion, which also reduces electrical activity.

Common sense dictates that being intoxicated means we are, at least temporarily, mentally impaired. Common sense, and experience, dictates we are also impaired when we are hungover. In which case, will that reflect a difference within the brain?

In another study, 62 students took part in a computer-based computer game while their electrical brain activity was recorded. Almost half the participants were hungover, having consumed six alcoholic drinks the previous night. The resulting data confirmed that those who were hungover performed substantially worse than their teetotal counterparts.

So... if you are hung over, it's probably not be the best time to make important decisions.

A global alcohol league table showed that British men drink around 30g of alcohol a day – or three standard drinks. British men came 62nd in the male category, while British women are ranked among the heaviest drinkers in the world, just behind Irish women, although Ukrainian women came in first, averaging more than four drinks a day.

Alcohol and teenagers

Binge drinking is generally defined as consuming more than six units of alcohol in one session. This is the equivalent of around two-to-three glasses of wine or beer. Research has confirmed that binge drinking can be a cause of depression in teenagers and cause them to be subject alcohol related disorders in later life.

Teenage girls in England, Scotland and Wales made up three of the top six areas in a World Health Organisation league table of binge drinking across 36 European nations. In the US, one in six adults binge drinks around four times a month, with the habit being most common in those aged 18 to 34.

To determine alcohol's effect on the brain, the scientists analysed the postmortem results of 44 people who died in their mid-to-late fifties in Sydney, Australia. Of the deceased, 11 were heavy drinkers as teenagers, 11 binged in later life and the remaining 22 had no history of alcohol abuse.

The results, published in the journal *Translational Psychiatry*, revealed the brains of those who drank excessively as teenagers had between 30% and 40% less BDNF. Changing this protein's expression may increase an adolescent's risk of psychological problems – including alcoholism – as an adult. If levels are lowered due to alcohol exposure then the brain will not develop normally.

BDNF is needed for the brain's normal development and for connections to form between neurons which control fear and anxiety in the brain's grey matter. BDNF promotes the survival of neurons by playing a role in the growth, maturation and maintenance of these nerve cells. The protein is found in the amygdala, which detects fear and prepares the body for emergencies. Damage to this almond-sized brain region has been linked to depression and post traumatic stress disorder (PTSD).

The results further revealed the amygdala of the young drinkers had about 30% more of a molecule called BDNF-AS. This regulates the gene that produces BDNF, with more BDNF-AS leading to less BDNF. Alcohol is thought to lead to epigenetic changes when environmental factors influence a person's DNA, but only in those who drink under the age of 21.

This particular epigenetic process involves a chemical being added to another molecule, resulting in a change in gene expression. The epigenetic changes seen in the amygdala of early-onset drinkers can alter the normal function of the amygdala, which helps regulate emotions, causing individuals to be more susceptible to anxiety or the development and maintenance of alcohol-use disorder later in life.

The same researchers previously exposed rats to intermittent alcohol doses during the rat's equivalent 'teenage years'. The rats became more prone to anxiety in later life and were more attracted to alcohol.

Binge drinking

The definition of binge drinking is generally generally accepted to be five units for men and four units for women. Binge drinking elevates the blood alcohol level to 0.08 or higher in less than two hours.

In the UK, binge drinking is responsible for the deaths of about 1,825 people between the ages of 18 and 24 each year and 700,000 assaults. About 40% of students binge drink at least once a month.

Despite the lower frequency of alcohol use in young people compared to older adults, binge drinking for the purpose of getting intoxicated is more prevalent. As much as 90% of alcohol consumed by young people is consumed while binge drinking.

Binge drinking has an immediate toxic effect on developing teen brains and the damage done by heavy drinking gets worse every time they do it because it harms the brain at an accelerating rate beyond what would be expected from chronic dependence on alcohol.

When a session of heavy drinking is over and the hangover has cleared, teenagers can still find it difficult to remember what they have read in a text book or been told in the classroom.

There is plenty of evidence young brains that have been subjected to four years of partying to show the development of 'growing up' skill sets, necessary for a successful transition to adulthood, can be impaired. The same happens when teens take drugs such as cannabis, ecstasy or other mind-altering substances. Particularly affected are memory and learning – even with periods of abstinence between binges.

Repetitive binge drinking is known to impair social functioning – young people who binge drink will find it difficult to develop normal or useful interpersonal skills. Binge drinking stops the brain learning and evolving to make well-informed decisions. Again, drug addicts have the same problem, although in fairness, to a much greater degree.

Another big problem of habitual alcohol abuse is blackouts. During a blackout, the brain is unable to store new memories of facts and events, either partially or completely. Around 50% of students that drink have experienced a blackout at some time or another.

Someone in an alcohol induced blackout can appear to be behaving normally – engaging in conversation and interacting appropriately – and yet they will not remember any of it. This is because alcohol disrupts activity in the hippocampus, which helps store new autobiographical memories. There is enough evidence from neurobiological research to accept that alcohol has a substantial impact on the brain's ability to transfer information into long-term memory.

Drinking too much too fast can cause memory loss to the point of erasing any recollection of important events. Research suggests that binge drinking in teenagers and young adults can impair both learning and memorising. Deficiencies in both these processes will make studying more difficult and thus less productive, in which case, maintaining high academic achievement will be more difficult.

Too many young people refer to binge drinking as 'partying', but those of us who have studied addiction know that it represents a serious mental health risk for young people. We

understand the risks from assault or being involved in an accident or even suicide as a result of alcohol abuse, but the effects of binge drinking are not so easy to recognise because the effects happen over a long period of time and adversely affect the success of our transitions through life.

Researchers have a lot more to learn about blackouts. For one thing, we don't yet understand why blackouts continue in some people even after they reduce their binge drinking. Earlier binge drinking in young people has been associated with the continuation of blackouts even if the binges become less frequent.

While the brain is forgetting new memories, binge drinking also compromises the brain with uninhibited poor judgment. The consequences can be embarrassing, and worse, can include injuries, sexual assault, unsafe sex, drunk driving and criminal activity, such as vandalism or physical violence.

Throughout a person's development, important changes occur in multiple areas of the brain, especially in the prefrontal cortex, the area governing executive functions including planning and decision making. Any interference from alcohol as teenagers mature into adulthood can have lifelong consequences. The resultant altered brain functioning in affected teens and those in their early 20s, even when sober, can lead to risk-taking and thrill-seeking behaviour, regardless of the danger.

There has been an accepted, even celebrated relationship with alcohol but teen and student drinking should be viewed with greater concern.

Drug Addiction



The nature of addiction

Over the last nearly forty years, I have had some considerable experience dealing with drug addicts and more recently, problem gamblers. In 1980, the American Psychiatric Association recognised pathological gambling as a mental illness, similar to pyromania, kleptomania etc. Both gambling and drug addiction are equally destructive, to the addict and to the people close to them.

I came to the conclusion a long time ago that there is very little to choose between the druggies and the gamblers. Both groups display exactly the same behaviour, the same physical and mental symptoms and the same levels of denial, irresponsibility and disregard for others.

Both drug addicts and devotees of the amusement arcade spend all their waking hours preoccupied with their only real goal in life – gambling and getting more drugs. Both need increasing amounts of money, even though they have both already made repeated and unsuccessful attempts to stop or cut back.

Problem gamblers and druggies experience and display restlessness and irritability, not only when they don't have access to their drug of choice or their favourite machine, but also when attempting to stop or cut back – which never works. Woe betide any therapist or social worker who dares to question them about their addiction because this will always translate into overt displays of anger and resentment.

At the beginning, addiction is often a way of escaping problems or relieving moods such as feelings of guilt, helplessness, anxiety or depression. But the addiction eventually becomes a way of feeling normal. These emotions soon turn into a craving for instant gratification, the principal motivator in continuing the behaviour, behaviour that has a negative effect on not just their own health, mental and physical, but also on those close to them. Before long, they will jeopardise relationships, marriage, family life, children, job and educational opportunities.

Gamblers on a losing streak believe that by continuing, they will eventually make good their losses in the same way that drug addicts fool themselves into believing that they can give up any time they want.

Both types of addict will blatantly lie to their families, therapists and others in order to conceal their involvement. The lies will gradually become more barefaced and outrageous as they begin to steal to fund their habit. The usual victims of their theft are again usually

those closest to them, before they move on to committing more serious illegal acts, including prostitution, as they descend deeper into addiction. Overall, their ability to make rational and sensible decisions becomes severely impaired.

It would be a mistake to assume that all addicts are poorly educated. Drug and gambling addiction affects rich and poor alike, although it would be fair to say that most addicts come from poor backgrounds and have not received education of the same standards as those who hail from wealthier families. There are exceptions – the odd marquis and his son and heir – but they are in the minority. Either way, I believe that for whatever reason, they have at some stage in their lives become vulnerable.

Vulnerable people have specific sociological needs. Many suffer from depression, even though they may not recognise it. They do not realise they may be suffering from anxiety or that their dependence on short term 'highs' is because they are unable to manage stress.

But all that is only part of the story. My own experience suggests that addicts also have an unusually low tolerance for boredom – and idle hands make the devils work!

In the 1980's, levels of heroin addiction were higher in areas of the country where unemployment was also high. Gambling – and drugs especially – are great time-killers. Heroin was a plague that struck hardest in the grim inner city areas of cities like Liverpool and Manchester. It's also fair to add that many of the druggies had a family history of criminal behaviour. Certainly all the druggies I met either knew someone who had been to prison, who was in prison, or who was about to go to prison.

So as a hypnotherapist trying to ween my clients off cannabis and heroin, what was my success rate like? Actually, it was abysmal and I've pretty well given up. The reason? Any client going into therapy, no matter how skilled or patient the therapist, will only succeed if they really want to improve. It's the oldest psychological joke all over again: how many psychologists does it take to change a light bulb? The answer – only one, and only if the light bulb wants to change. And therein lies the problem.

For all the reasons above, dealing with addicts of any persuasion requires total honesty from the addict. It is the addict that has to uncover the truth, not the therapist. The great psychologist Carl Rogers, discovered the only worthwhile result is when the client stumbles on the truth and decides to act upon it.

Addicts are usually guarded and economical with the truth. By the time they get to me they are already skilled in the arts of guile and deception, and by that time, they are also kidding themselves.

Very rarely have I met an addict who genuinely wants to change and is willing to bare their soul to make this happen. Because of their addictions, they have become, universally, self-absorbed. Every last vestige of empathy with their fellow beings has evaporated. In that, they share many of the characteristics of the sociopath. [Sociopaths have learned and honed their skills to survive and often born with their brains wired that way.]

The most effective cures for addiction seem to lie in rehab clinics where there is time for addicts to explore and recover. One problem is that the best ones are too expensive, and the prisons are awash with drugs anyway.

Many of the dysfunctional personality traits and behaviours described above could easily apply to alcoholism or addiction to computer games or Facebook. But on a purely financial level, none is as devastating as addiction to drugs or gambling. Successive governments

have failed to control gambling – the betting machines that make the most money reside in areas whose inhabitants are made even worse off by their presence.

After more than thirty years of the so-called 'war on drugs' we are no nearer to eradicating them. In the meantime, our children continue to be targeted by unscrupulous and conscience-free dealers.

Where is our social conscience? We decry the shooting of an elephant in Africa and send money to charities that protect wildlife, yet we stubbornly remain blind to the tens of thousands of our own citizens who slowly commit suicide on a daily basis.

I cannot offer any easy solution to the devastating drug abuse that destroys families and fuels organised crime, except to try to understand the nature of addiction...

Addiction – a lifestyle choice?

Contrary to popular belief, addiction is not a brain disease – addiction is a *learned* behaviour, and a behaviour of choice! Informed by considerable experience dealing with drug addicts, I can assure you that addiction is a personality disorder the same as kleptomania or selfishness.

In the mid to late 1980's, I took on several clients who were heroin addicts. I offered this service free of charge because I genuinely thought that hypnosis could contribute something to recovery.

I have lost count of how many hours I spent talking to addicts, including some whose addiction had sent them to prison. Trying to understand why anyone would want to throw away their lives for a gramme of powder on a piece of tinfoil was like trying to solve a complex puzzle where the rules of the game were constantly changed. But I was able to come to some conclusions.

The first, and the most surprising was that most of the addicts who came to see me didn't want to be helped! Yes... they claimed they would do *anything* to come off heroin, and I believe they would... so long as it didn't involve *actually* giving it up! I know that sounds crazy, but that's the way it is with addicts – their minds simply don't operate the same way.

I tried some pain management techniques to help with withdrawal. This worked quite well with some addicts. I have witnessed addicts going through withdrawal, so I know what I'm talking about. Withdrawal starts within a few hours of the last 'fix' and includes stomach cramps, the inability to sleep properly, and flu-like symptoms. Withdrawal lasts for three to five days and after that, the body, and more important, the chemical imbalance in the brain return to their physically normal state.

The second, and even more shocking discovery was that once withdrawal was over, feeling 'normal' was for many, worse than continuing to take the drug the withdrawal! Without the ritual of getting money to 'score,' which usually involves committing some kind of crime, meeting up with the dealer, who is notoriously unreliable, finding a place to take the drug, and then somewhere to 'chill' for a few hours, leaves a huge void in the addict's lives. There is literally nothing to do!

So what is there to fill the void, where time drags on and there's nowhere to go? Addicts have lived on the fringes society for so long, they are unable to cope with the real world, with all its petty irritations and periods of boredom. The sense of false confidence heroin gave them has gone, and readjusting to normal life is a bigger challenge for the ex-addict than most people realise.

It's difficult to get a job without references and even more so if you have a criminal record. Potential employers are understandably reluctant to take on staff with a record of theft. Ex-addicts seldom know anyone outside their circle of fellow users, so there's no one to point them in the right direction. So addicts very quickly return to the comfortable and familiar routine they once knew... and prefer.

The United States National Institute for Drug Addiction defines addiction as 'a chronic and continually relapsing brain disease' but that really is a flawed concept and fails to see addiction for what it actually is. In fact it sidesteps the real problem because it provides an

excuse for bad and anti-social behaviour. In short, it is not a disease, it is a criminal activity. Colleagues who have experience dealing with druggies, some of whom are psychiatrists and psychologists agree.

To refer to addiction as a brain disease is to suggest that addiction is involuntary, but anyone who has had any experience with drug addiction will tell you that it comes down to something much more simple – choice! I also believe addiction is a choice, and that is a view supported by psychologists Gene Heyman and Marc Lewis, both of whom are experts in the field. These views are supported by many other international experts and academics.

In other words, addiction is a personality problem. I will go one step further and say that addiction could be treated as a criminal act in itself, one for which the punishment should be a period of re-education and enforced abstinence.

The problem with that rather perfect solution is that apart from drugs being readily available in prisons, given there are nearly 150,000 registered drug addicts in the UK, funding for such a large-scale project is not affordable.

There is no doubt that both brain structure and function is altered by repetitive abuse of cannabis, heroin, cocaine and alcohol. Even substance-free compulsive and ruinous gambling changes the circuitry of the brain involved in memory, anticipation and pleasure.

Addictions to substances or certain activities do assuage pain and elevate mood, which is why people form a strong attachment to them. Synaptic connections strengthen to form pleasant associations.

Smoking cigarettes for example is associated with other pleasurable activities, usually social in nature. But do changes in brain structure and function stymie the normal mechanisms of self-control and conscience? There is a considerable body of evidence that suggests this may indeed be the case, but actual damage to the relevant areas of the brain only becomes visible after years of addiction.

Addiction is not beyond the control of an addict in the same way the symptoms of Alzheimer's or dementia are beyond the control of the sufferer. No amount of reinforcement or punishment can alter the course of an entirely autonomous biological condition. Addicts on the other hand can – and often do – respond to the principles consequence and reward.

Professionals such as doctors who have succumbed to drug addiction are often suspended for a period of time but are usually allowed to return to work under strict supervision. If they don't comply with set rules, they have a lot more to lose than just their jobs – their income, social status, their homes and children's school fees might disappear. It should come as no surprise then that their recovery rates are high.

Of course it might also be because professionals are generally a bit more intelligent than a poorly educated common or garden smackhead, but it bears consideration. Addicts who are required to routinely undergo drug testing and who face sanction for failure are more able to stay on the straight and narrow than those left to their own devices.

Addiction is the triumph of instant gratification, often the result of a need to quell psychological discomfort or regulate mood set against the risk of long-term consequences. People don't use addictive substances because they want to be addicted – people take addictive substances because they want immediate relief and addiction always follows a familiar pattern: enjoyment of the effects of the drug increases whilst at

the same time, once-rewarding activities such as relationships, hobbies and family time recede in value.

Before very long, the appeal of taking the drug starts to fade as consequences pile up – spending too much money, disappointing loved ones, attracting suspicion at work – but the drug still retains value because it makes psychological pain disappear, at least in the short term.

The drug also continues to suppress withdrawal symptoms not to mention the intense craving that goes with withdrawal. Substitutes such as Methadone are rarely as satisfying as the drug they are supposed to replace – hence prescription Methadone is often traded for heroin on the street.

Motivation is an essential component of change. Counselling and therapy may well help, but it's a long road. The important thing is for both therapist and client to understand the role self-control and choice will play in treatment.

The addict must take steps to distance themselves from their so-called 'friends' and that of course includes their best friend, their dealer. This is also a choice, and a difficult one. Comfortable familiarity is a real problem because addicts all too often find it easier to return to their old stamping ground than try a new and possibly unfamiliar lifestyle.

Remember – addicts love comfortable familiarity, and the drug den is the one place they will always be truly welcome and feel accepted. Maybe it is a battle of intelligence after all. A change of environment would also be a good move, but this is not always possible. In short, life is full of tough decisions, but making the decision is not only the best, but probably the only way out of addiction.

There's been growing acceptance of mental illness over the last few years – even the younger Royals are championing the cause – and this is no bad thing. People who are genuinely mentally ill need and are entitled to help in a caring society, but there are some who cite mental illness as an excuse for unacceptable behaviour.

How can we expect addicts to behave themselves when so many 'celebrities' have publicly misbehaved? Their pattern is by now familiar – they get drunk, take drugs, indulge in antisocial behaviour, then appear before the cameras to make contrite apologies and excuses for their 'addictions.' Then they check themselves into an exclusive and comfortable clinic where they will be pampered and reassured by therapists who reinforce the belief that it's not their fault. Even when they haven't publicly made a fool of themselves, the self-serving announcement they are going into rehab offers a short cut to free publicity. The poor tortured soul – 'I don't mind if you think I'm pathetic, just don't ignore me!' With celebrities, the desire for fame can also be an uncontrollable addiction. Some celebs will say or do anything to get the front page. For the first time in human history, the victim has become the hero.

Taking drugs is not a medical condition. Getting drunk and lashing out at photographers is not a medical condition. Making racist comments or sexually assaulting women are not signs of mental illness, although in the new age of Woke, the latter can be career killers. But no one will criticise you if you're unwell or mentally disturbed. That's how it works when the perpetrator magically transforms into the victim. Going into rehab has become the traditional, PR-managed response to any indiscretion, no matter how appalling. The rich and famous go to rehab, the poor and insignificant go to jail. How very clever. How very cynical.

Believe it or not, alcoholism and drug addiction are not clinical conditions recognised in either of the psychiatric diagnostic manuals used by professionals. Addiction is a condition created to abdicate responsibility for one's actions. Addiction is now a convenient excuse for bad behaviour by selfish, self-centred, inconsiderate people who have no respect for what others might want or expect. Once something is given a medical-sounding label, any criticism seems cruel and uncaring and has no place in our new woke caring sharing society.

The idea that addiction is an illness is a fallacy first promoted in the late 1990's in America. The pharmaceutical companies were delighted of course because they were suddenly presented with an opportunity to sell replacements such as methadone, which is both expensive and profitable. It wasn't long before the idea found its way to the UK where it was embraced with enthusiasm.

But it's time to face an inconvenient truth. The abuse of alcohol and drugs is voluntary. Most doctors reject the idea that alcoholism and drug addiction are diseases. Calling addiction a disease or an illness is counter-productive because it removes any sense of responsibility or ownership. It also flies in the face of much of the psychological work that has been done with addicts. Furthermore, it definitely does not help the addict.

A review published in the medical journal *The Lancet Psychiatry* confirms that the research into addiction supports this view. In short, addiction is caused by poor coping strategies for emotional pain and psychological distress. Addicts use alcohol or drugs, or food, or whatever, as a crutch.

Addicts *consciously* choose to drink alcohol and take drugs. Whatever you may think about addiction and whatever you have been told about addiction is probably wrong. Substance abuse is a conscious decision that users make each and every day – pretending otherwise only serves to rob them of the chance to choose a different path.

The process of recovering from addiction involves taking responsibility for one's own life – realising, accepting, understanding and facing up to the fact that you are the architect of your own misery. It's time to man up!

No doubt my observations on this most sensitive subject will meet with disbelief from those who have been convinced addiction is an illness, and therefore should be treated as such, with lashings of understanding, bleeding-heart liberalism, and guilt laden mercy-mission. This is a position with which I most vehemently disagree, and I have the experience to make the point.

In the early 1980's I had a very occasional and casual friendship with a girl who was a functioning heroin addict. I regret nothing of this – we were not in any kind of romantic relationship and we didn't spend any great amount of time together, mainly because she spent long periods of time as a guest of Her Majesty, resurfacing months later, to remain 'clean' for a few weeks before returning to her old ways. Not so much a friend with benefits as a friend *on* benefits.

In the six or so years that I knew her, we met a total of maybe a couple of dozen times. She was charming, had a good sense of humour and came from what can justly be described as a criminal family. Her father had been regularly sent to prison and one of her brothers was at that time serving a life sentence. The rest of her family existed on the fringes of criminality. So crime, both petty and serious, was part of her upbringing. She possessed the intelligence to lead a more productive and honest life, but preferred to

gravitate toward the comfortable familiarity of her low-life friends, some of whom she met in prison.

Why I accepted this friendship is my business, but she was good company. I found her interesting, she made me laugh, but I confess keeping her away from the rest of my friends. We would discuss things most people would avoid talking about, but she was open and frank about her addiction – and her antisocial behaviour. Anyway, a pretty face has always been a weakness.

Part of the fascination was my own need to understand why she just couldn't, or wouldn't, use her brain and get a better life. I mean, why spend half your time foraging for drugs, or worse, wasting your life away in prison, with people whom she admitted were cretins and morons, when you didn't have to. It wasn't as if she was stupid – on the contrary, it was her intelligence that made her interesting. I admit to some kind of mission of mercy, but it was from our friendship that I learned a lot about the culture of drug addiction.

And then one day she took her fix in front of me. The process was simple. A tiny line of brown powder wrapped in a piece of tinfoil and heated by a match produced a wisp of grey smoke and inhaled through a short paper tube. For a minute we carried on talking before her whole appearance changed.

The pupils of her eyes shrank to the size of pinheads which made her blue eyes vivid and unnaturally bright. And then she started rambling, flitting from one subject to another, eventually closing her eyes and lapsing into unconsciousness. After about twenty minutes, she opened her eyes again and appeared normal, but with an exaggerated confidence I had not seen before. She was somehow... different.

A window had been opened to a world that I could never have otherwise imagined and I found the whole experience quite shocking and frankly, disturbing.

I read several books on the subject, and got her to talk more about her addiction. But what she told me – about her own experience of addiction, and that of others she knew – was not to be found in any book. This information was not based on any theory formulated by doctors or psychologists or social workers, it came from a real addict and her own real-life experience.

I was now convinced that it was not the addiction to the drug, or the fear of the withdrawal symptoms holding her back, but a simple preference for the life she was used to. As plain as the nose on your face really. That's all it was – a simple lifestyle choice. In other words, her addiction was... *voluntary*.

No one forces the user to take drugs, although peer pressure is undoubtedly part of the problem. No one forces the gambler into the casino and no one forces teenagers to spend hours playing World of Warcraft on a computer. In any kind of final analysis, these choices are clearly made by the individual.

In the year 2021, it seems that any and every sort of antisocial behaviour is deemed an illness. Crime is never the perpetrator's fault, but Society's. The same is true of addiction. The current wisdom, espoused by an army of general do-gooders, is that the addict is not a very naughty person, but a victim of society's ills. I have met social workers who know their charges are not victims at all, but who are afraid of opening their mouths lest they lose their jobs.

The new woke agenda states that any kind of addiction, whether it be to drugs, alcohol, gambling, pornography, computer games, religion, checking email or obsessional text

messaging, to name but a few, is to the addict an escape from the overwhelming drudgery of everyday existence and an attempt (often successful in the short term) to make the awful reality of a shit life more bearable.

Those who have had a head start in life are less likely to succumb to the delights of addiction, but that is not to say that addiction is only a council estate problem, because it obviously isn't. However, it is impossible to ignore the fact that addiction is more prevalent with those with time on their hands, and that's mainly the jobless, the hopeless, the bored, and the lazy.

It is absolutely imperative to understand that any kind of addiction is, first and foremost, a great time-killer. With most addicts, the means to service the addiction provides something to do – and it provides a structure in an otherwise empty life.

The druggie has to plan ahead how to get the money to buy the drugs, then find the dealer, who does not keep regular hours, then retreat to somewhere 'safe' to enjoy the delights of their purchase. They only seek the company of other druggies who swap information about the latest prices, where the best pickings are to be found, who amongst their friends and associates has been arrested and bailed or remanded in custody, and more depressingly, who has overdosed.

Finding the wherewithal to buy drugs is in itself a twenty-four-hour-a-day operation and keeps the addict busy seven days a week, fifty-two weeks of the year. Public and religious holidays such as Christmas Day are a nuisance because there are no shops open to steal from and no old ladies to mug.

But the brain is a complex structure, and the more one indulges in certain behaviours, the more connections are established between neurons and the more 'normal' the behaviour becomes. Valuable brain space, which was once reserved for morality and value judgement is given over to sly practice, opportunism and deviousness.

For most people, life is a series of hurdles – making new friends, passing exams, getting on to the swimming team, bettering oneself... All these are tests that most people are able to pass with a degree of application and effort. For most people, giving up a favoured pastime is just another hurdle. So why for addicts, is this particular test so hard to pass?

Our brain chemistry is the slave of our more primitive instinct to overindulge, especially when it comes to food and feeling good. It may be that because of these primordial urges, and the easy availability of an ever-increasing choice of products that promise pleasure, the brain's electro-chemical messages get mixed up. This of course gives the 'illness' theory a big boost.

It is well known and accepted by anyone who knows anything about psychology that gratification excites the pleasure centres in the brain and makes addiction more irresistible.

In the modern world, consumerism thrives because its purveyors make their products ever more attractive. Whether that is a result of putting more sugar, salt, fat or flavourings in food, or making that phone just that little bit more desirable, is irrelevant. The main problem is that some of us seem to be unaware of the difference between 'need' and 'want'. This is something that should be explained at an early age.

Within this ever growing cornucopia of twenty-first century delights, we observe that pornography is getting more explicit as well as more available, wine glasses are getting bigger, and instant gratification more and more desirable – and more and more *necessary*.

The advertising industry has become adept at manipulating our desires and expectations. But this unbridled consumerism has come at a terrible price. We no longer crave only the things necessary for our survival – nutrition, social contact, cooperation with, and respect for, our fellow beings – but we have been persuaded to turn our attention to the irrelevancies of designer handbags, ‘exciting’ new alcoholic drinks, gambling and mind-altering drugs – including the prescription kind. We now find ourselves craving rewards that are not only unnecessary and contribute nothing to our evolution and survival, but harmful to us.

As is the case with almost all the talking therapies, being mindful of the risks, effects and consequences can lead to conscious avoidance of, and immunity from, all kinds of addictions. That, and the good old-fashioned ability to make sensible decisions, without blaming others for our own lameness.

Let’s take a look at the similarities between gambling addicts, alcoholics, and drug users. They are all preoccupied with whatever it is they are addicted to, twenty-four hours a day. This results in keeping very irregular hours and helps to explain why they are often missing at unusual times of the day or night.

At the beginning, all addicts start to rely heavily on others for money. Sure enough, their addiction spirals out of control so that before they know it, they need increasing amounts of cash and will stop at nothing to get it. First to disappear are their sister’s MP3 player or their mother’s credit card!

Most addicts have experienced repeated, though unsuccessful attempts to stop or at least cut back, the tell tale signs being restlessness and irritability.

All addicts use their addiction as a way of escaping problems or of relieving dysphoric moods, for example, feelings of guilt, helplessness, anxiety, or depression. These feelings and emotions are so intense, they are not just easy to spot, they are staggeringly obvious. Once aware of them, the difficult part is not spotting the signs, but making the connection between the symptoms and the problem!

The addict habitually lies to his family, his therapist and any other interested party in order to conceal their addiction. This is something they become very adept at very quickly. You’d swear they were telling the truth they get so good at it! Eventually and inevitably, they will commit illegal acts which get more serious within a startlingly short period of time.

To addicts, nothing is sacred. They will willingly jeopardise relationships, marriages, jobs, educational opportunities – anything for just one more go on the magic roundabout! Alcoholics are the same. So are compulsive gamblers, and er... internet junkies, gluttons, porn addicts, and even people who have seen *The Sound Of Music* more than 167 times!

Addicts are almost universally bad decision makers, exercising poor judgement at a time when better decision making would be a good way to get out of the mire.

Some addicts are, admittedly, vulnerable persons, but many suffer from nothing more than a sense of entitlement and ridiculously high self-esteem. Try explaining the error of their ways to them and see how far you get.

Try offering solutions and see how far you get. Self-justification comes as second nature, as does your own unfortunate habit of making excuses on their behalf. Making excuses for them not only doesn’t work, but is also counter-productive in that it only serves to encourage their feeling of immunity to constructive criticism. I remember on occasion to making excuses on behalf of my rather strange blue-eyed friend.

Drug addicts in particular feel 'on top of the world' most of the time, which is why they get caught more often than non-drug using criminals – they make silly and obvious mistakes, mainly because, when 'high', they experience a sense of invulnerability and genuinely believe they are untouchable, which makes them careless.

One of the side effects of any addiction, especially drug addiction, is that so much time and effort goes into feeding and maintaining the addiction, addicts have little or no time left for anything else, like growing up. Because they are trapped in an endless and time consuming cycle, personality development is put on permanent hold.

If there was ever a perfect example of a child's mind in an adult's body, addiction provides it. Believe me, it's really strange watching an adult behave like a child, with childish thoughts and childish behaviour.

The vast majority of addicts have specific sociological needs when not indulging in their favourite pastime. Depression, anxiety, dependence, an inability to manage stress is an addict's normal. Again, the vast majority of addicts display certain recognisable personality disorders. They have a very low tolerance for boredom, are impulsive, have short attention spans, are often thrill-seekers, and end up with a history of criminal behaviour.

In 1980, the American Psychiatric Association recognised pathological gambling as a mental illness, similar to pyromania, kleptomania and a host of other antisocial behaviours. The tranquillising effect that indulging brings, the excitement of scoring the drugs, the lights and sounds of the arcade, the clink of ice in the tumbler, it's all part of the fun!

I have to stop here to make a point. Life for most people on planet earth is quite frankly, shit. Half the world's population live on less than \$2 a day for goodness sake! The pressures of modern life in the West are simply not anywhere near as severe as they were a hundred, even sixty years ago. Could it be that addiction is not so much an illness as an opportunity to over-indulge? Again, it seems to me that it *is* a choice.

One of my clients was a girl who had turned to prostitution to fund her drug habit. She told me that the only way to escape the absolute awfulness of having sex with a sweaty, smelly, dirty old man in a car was to... take more drugs. It's a vicious circle alright, but it's still a choice. There are so many people who would be only too willing to offer their support, if only the addict is willing to accept that kindness.

Look at it this way. Some of the greatest minds have been addicted to their own speciality, whether that addiction be an all-consuming love of physics, astronomy, music, or sport. That's called 'dedication' and it manifests itself in something of benefit for the rest of us. Addicts have somehow managed to push the self-destruct button, and the clock is counting down. Even so, it's easier than you think to pull the plug – all it takes is the courage to make the right decision.

It's always very difficult to get addicts to see the error of their ways, and I confess there have been times when I too have had a low tolerance level for them. So, you can talk to them about it until you're blue in the face, before you eventually understand the old adage that 'you can take a horse to water, but you can't make it drink' was never more true.

As with all things, the therapist can't change your life despite some ludicrous claims by some. It takes a team effort and a degree of willingness on the part of the addict. Only the individual can really change the life they inhabit.

Sometimes addicts have to be left to sink to rock bottom before they get the message, but sometimes that's what it takes. One addict had told me 'there's only one direction left to

go'. And she was right. She had cleaned herself up, got a job and had started a part time course – ironically – in criminology, at an adult college. She simply woke up one day and decided enough was enough. She told me 'It was just something I grew out of.' And in case you're wondering, yes... she had blue eyes. Which kind of makes me want to say 'I rest my case.'

Finally, a story about grandma:

Grandma goes into hospital for a hip replacement. After the operation she's given diamorphine, which is medically pure heroin. Over the next two weeks the doctors prescribe smaller amounts until it's time for grandma to go home. So here's the question – Why doesn't grandma come out of hospital a heroin addict...?

The answer may astonish you – it's because grandma has never had any interest in taking drugs. All grandma really wants now is to resume her life, see her grandchildren and socialise with her friends. The last thing on her mind is the drug she was given to ease the pain after her op.

To understand this better, we need to look at research carried out by Dr Bruce Alexander on the effects of addiction on laboratory rats.

Dr Alexander put each rat in a small empty cage with two water bottles – one dispensed pure water while the other dispensed water laced with heroin. The rats had a free choice of which bottle they could drink from and within a very short time, the rats almost always chose to drink from the heroin laced water because that was the one that made them feel good.

Once it was clear the rats had become addicted, they were transferred to a much bigger cage, one large enough for them to run around with objects for them to explore and toys to play with. What happened next was totally unexpected. Even though they were still given a choice of pure or heroin-laced water, the rats very quickly changed their preference and chose the pure water over the heroin.

What Bruce Alexander proved with his experiment is something that to me has always been blindingly obvious. Drugs are a great time-killer. If there is nothing else in life, then drugs provide the escape from a humdrum and pointless existence. The fact is that people who live busy, productive and fulfilled lives mostly don't do drugs. And throwing political correctness to the wind for a moment, drug addiction is rife in areas where there is high unemployment.

In my view, drug taking and heroin addiction is a symptom of boredom and hopelessness. The more I see it, the more I am convinced drug addiction is a matter of choice.

Managing addiction

Eating, drinking, smoking, shopping, sex, social media, drugs or chocolate – addictive behaviour is something that can tempt even the most saintly among us. It comes in all forms and affects most people.

Everyone on the planet has their own secret pleasure – it's just that for some people, addictive behaviour is one of the hardest things to control – mainly because of the effect it has on the pleasure centres of our brains. But... beating our addictions is probably the best strategy to make a difference in our lives.

All our habits and indulgences are triggered by something. The trick is being able to identify those triggers. Yes – it really is that simple – it's always the same stimulus that triggers your craving and thus your need to submit to the addiction of your choice.

The mistake we make is to focus on the behaviour itself rather than what it is that causes it in the first place. If you can identify the trigger, you can break the habit! Here are some clues:

1. Your cravings are triggered by at certain times or certain activities.

This could be a coffee break or social occasion. For example, smoking often goes with coffee or alcohol, chocolate is often a reward for a job done, time spent on social media can be a need to satisfy feelings of loneliness. All these things are learned behaviours, and they can be unlearned as easily as they were learned in the first place!

One easy step is to swap the addictive behaviour for something healthier, like swapping the cigarette at coffee break for a banana, something that will give you energy and is obviously better for you.

2. Your craving can be triggered by something you see.

This could be a bottle of wine, another person smoking a cigarette or eating an ice cream. Advertisements are particularly effective triggers, which is why they work so well! Visual triggers start the addictive behaviour because your brain associates the image with the feeling of pleasure you get when you indulge.

In order to prevent this chain reaction, you should try to keep visual triggers out of sight. Make sure you don't have tempting goodies in the house – if you have to leave the house to get them, it will be less likely you will succumb to the temptation.

It will also help to have your family and friends 'on message' so they don't accidentally trigger things for you. Perhaps you could ask them to support you and not smoke, eat chocolate or have sex in front of you. Disrupting triggers will help you break the pattern.

3. Whatever happens, don't punish or blame yourself for your addictive behaviour.

Punishing yourself will only make you feel worse. Trust me... punishing and blaming yourself only leads to more addictive behaviour.

A much better strategy would be to question and explore what's going on inside your head. Ask 'how am I feeling?' Can you see or recognise any patterns you could change? Is there something more constructive you can do to avoid or eliminate the behaviour? For instance, smoking is often about relaxation, so maybe there's something else you could do instead? Something absorbing like reading or going for a walk would be better, and better for you!

4. Lots of addictions – especially alcohol and drugs – are down to the need to escape stress and all the other crappy things life throws at you.

Because alcohol is physically damaging, it's important to take control of your drinking. The same obviously goes for cigarettes and drugs. You have to retake ownership of your life! Food addictions are usually linked to self-doubt or self-worth, or a need to feel loved. Food in our stomach triggers that warm fuzzy feeling of love and appreciation we all need from time to time and so it's easy for our brains to confuse them.

5. Stress is often experienced at an unconscious level and we are unaware of how tense we actually are.

In today's high-pressure world, tension is a very common cause for addictive behaviour. I once said to my father (who was a fighter pilot in the RAF in World War II) that I was under a lot of pressure. He laughed in my face. Then he said 'try having a Messerschmitt up your arse – that's pressure!' And he was right and I've never forgotten it. It's important to recognise pressure and put it into perspective.

6. Tension traps us in a cycle of addictive behaviour.

The more tense we are, the fewer pleasant brain chemicals we are able to produce, and this affects the way we think – we can become less clear and logical... and we can sometimes make bad choices. Consistently making bad choices is a perfect example of a symptom of addictive behaviour. So as well as working on breaking habits, it's important to learn how to relax.

7. Believe it or not, procrastination is also an addiction and it's more to do with fear of failure or risk aversion.

I went through a period of procrastination and it did affect my career to some degree, but when I got back on top of things and took control, I really did feel much better – I suddenly felt as if I was accomplishing things again. It was a much better feeling and it re-ignited my feeling of purpose in life.

8. The best way to break out of this cycle is to start getting used to taking small risks.

You can start with actions that carry low levels of consequence if they go wrong, like trying a new kind of restaurant or taking a different sort of holiday before moving onto bigger things. Over time you'll come to realise that taking risks is not only OK, it can also be exciting.

9. Look to the future.

It really does boil down to one thing – you have to replace your addictions with something healthier. So far, so simple, Except... it's going to take some degree of willpower. Hypnosis can help with this, but let's live in the real world – you are going to slip from time to time. If and when that happens – and it will from time to time – you have to start over. I don't care

what the NLP crowd tell you – in the real world you are going to relapse occasionally and you're still going to fail from time to time. Well guess what? You're allowed to do this!

The important thing is to set realistic short term goals. If you slip, pick yourself and start all over again. Will power is the real secret of success! Addictions are not always easy to break so if at first you don't succeed, try and try and try again!

It's also a good idea to be focussed on the present and not the past. It's always a mistake to dwell on the past – it can't be changed and you should use the past as a springboard, not a sofa. In fact, forget the past, it's no use to you now anyway.

10. If you take more exercise it will keep your weight down!

A lot of people benefit from going to the gym or taking up other forms of physical activity – even just going for a walk is healthier! Meditation, joining a choir, painting, reading, tidying the garden or generally improving your own living environment will do the trick. In fact anything that involves active participation rather than just being one of life's spectators. Sorting out your sleep patterns might also help!

FACT CHECK: It's much easier to start doing something new than to stop doing something you already do.

If by stopping doing something you leave a vacuum, it's easy to fall back into your old addictive ways. Whenever you stop an addictive behaviour, you need to look at your whole life pattern and think seriously about what you can do differently to create – and stick to – healthy habits.

Remember, nothing in life that's worthwhile is easy – no one is saying it is – it's your life and the bottom line is, it's the decisions YOU make that will define you and your future.

The evil weed

The differences between Tetrahydrocannabinol (THC) and Cannabidiol (CBD)

- Both Tetrahydrocannabinol (THC) and Cannabidiol (CBD) are derived from the cannabis plant – they are part of the cannabinoid group of compounds found in hashish, hash oil, and most strains of marijuana
- THC is the psychoactive compound responsible for the euphoric 'high' associated with marijuana.
- THC interacts with CB1 receptors in the central nervous system and brain and creates the sensations of euphoria and anxiety.
- CBD does not fit these receptors well, and actually decreases the effects of THC, and is not psychoactive.
- CBD is thought to help reduce anxiety and inflammation.

The dope people are smoking today is a lot stronger than it was in the eighties. What's more, people are growing their own supplies rather than relying on dealers, making marijuana a very cheap recreational drug... but there may be a higher price to pay...

Cannabis – also known as marijuana, pot, grass, ganga, dope, skunk, reefer, joint, draw, etc. Most people call it weed, because that's what it actually is – a weed. Left to its own devices it will grow and flourish anywhere. In the illegal cottage industry cannabis plantations we see on TV news programmes and reality cop shows, plants can be cultivated, harvested and ready to retail in less than three months.

Marijuana on its own is not as self-destructively addictive as heroin or methamphetamine or crack, or a host of other substances, including cocaine, ecstasy and speed – all drugs that target and rot specific areas of the brain. Marijuana may well be less harmful, but it's certainly not harmless and the long-term effects can be just as pernicious.

Smokers don't inject cannabis, so there isn't the same risk of infection associated with heroin addicts' dirty needles and HIV/AIDS. It's impossible to overdose because before you've had too much you fall asleep, which will prevent you from smoking any more. But like any other psychoactive substance, smoking weed does affect the brain. It gets you stoned (which is the point of smoking it) and thus puts immediate personal ambitions on hold. Stoned, the user's motto is *never do today what you can put off until tomorrow!*

Consequently, with habitual users, nothing ever gets done. There is also a considerable body of evidence that suggests it affects memory, and we will come to that later.

Cannabis gives you 'the munchies', which, for the uninitiated, means you experience cravings for food, and in ridiculously large amounts. Dope is the mother of late night feasts!

But it's also a useful and effective painkiller – sufferers of multiple sclerosis swear by it. Cannabis is widely believed to be beneficial not just for treating pain but also as a useful blocker for epilepsy.

Even occasional smokers know the drug is a barrier between them and the boredom, unfairness and injustice of the real world. Stoned, problems are temporarily put aside. Smokers retreat into their own imaginary worlds where the same 'creative' and fantastical thoughts go round and round in their heads.

In the United States, 24 states now allow the cultivation and sale of cannabis, although in most, its use is limited to medical marijuana, grown and sold by licensed growers and registered dealers. America is slowly coming round to the understanding that like prohibition, the war on *this* drug was lost a long time ago and legislatures have caved in to popular and democratic demand by decriminalising it. But new studies have confirmed that even occasional marijuana use causes laziness and in both the short and long-term, saps motivation.

To properly understand the effects of the recreational use of cannabis, we must understand that there is a difference between feeling lazy and being stoned. Smokers get stoned, but recover after 12 to 24 hours in much the same way most occasional drinkers recover from the effects of alcohol. But lazy is not the same as stoned and it would be wrong to assume that cannabis is the cause of laziness in people who are already lazy. It might be more accurate to suggest that lazy people are more likely to smoke cannabis. Nonetheless, it is an important question to ask – does weed make people who are not normally lazy, lazy?

There is plenty of data showing that habitual users become listless and lose motivation. It's ironic that something perceived as a social drug, something traditionally shared with others (joints are often passed around) eventually results in anti-social behaviour. A user's circle of friends very quickly becomes limited to other smokers – they go out to socialise less frequently and eventually just sit at home getting stoned. Intelligent conversation becomes the exception rather than the rule as more and more joints are rolled.

Regular users are averse to trying new experiences, preferring the comfortable familiarity of their own repetitive and familiar thoughts. A study carried out by Imperial College London found that marijuana use leads to individuals becoming withdrawn, lethargic and apathetic. Regular use can also lead to poor decision-making as projects are put on hold, important chores neglected and personal deadlines ignored.

At the neurological level, long-term use of the drug destroys dopamine, the feel-good chemical in the brain that inspires a spirit of 'get-up-and-go.' Dopamine levels in the striatum, a part of the brain involved in motivation, were found to be lower in regular cannabis users. In another study, carried out at the University of California, researchers found that those who smoked cannabis regularly also ended up with lower paying, less skilled and less prestigious jobs than those who were not regular smokers.

Users have told me that smoking it helps them to 'chill' and 'mellow out'. Nearly all users deny that cannabis is addictive and they could stop any time, but I do not believe this is true. On the other hand, I have spoken to many former users who told me that they simply grew out of it, which I do believe to be true.

I have met cigarette smokers who have said the same thing – they simply decided one day that they didn't want or need to smoke any more and just stopped, without any great effort.

A question I used to ask every dope smoker I met – one which was designed to make them think logically and sensibly about addiction – was this: *If you mislaid a ten pound note, how long would you spend looking for it? Five minutes, ten minutes possibly? But if*

you mislaid that last bit of weed, how long would you spend looking for it? The answer was always the same – they would turn the house upside down looking for it, even searching in the dustbin before they gave up. Nearly all of them admitted they had gone through ashtrays looking for un-smoked particles, pulling apart joint ends to find enough to build one more. Then I'd ask them again if they still thought they weren't addicted.

Having said all that, cannabis is cheap and unlike users of the more dangerous drugs such as heroin, cocaine or crack, smokers don't go around bashing up old ladies or shoplifting to finance their habit. A lot of users now grow their own and have a maybe a couple of small 'pot' plants hidden under the stairs.

Growing a marijuana plant for personal use makes getting stoned cost next to nothing. These days, the police will likely ignore single plants because they are far too busy arresting people who posted vaguely racist jokes on Twitter twenty years ago.

Many users admit that getting stoned can cause feelings of paranoia and when the drug is not available, they sometimes experience feelings of anxiety. Even so, withdrawal symptoms are not nearly as bad as those associated with heroin, methamphetamine or cocaine.

Nonetheless, it's difficult to get to sleep for a week or so after coming off cannabis and it can take weeks for more finely tuned motor skills to return to normal. After giving up, users can experience feelings of mild depression and some have confessed to irritability, short-temperedness and even short bouts of furious anger.

So it seems from behavioural observation that cannabis use does make people lazy, and does affect motivation in the long-term. All we need to confirm the theory are some laboratory rats to experiment on. It just so happens that 30 rats have been trained by researchers to complete a simple and rewarding task in order to find out if they became lazy if they were stoned.

The rats were given a choice of performing an easy or difficult task to earn a sugary treat. They could nudge either of two levers with their nose to signal whether they wanted the easier or more difficult challenge. Choosing the easy challenge resulted in a reward of one sugar pellet but choosing the more difficult challenge resulted in a reward of two sugar pellets.

Most of the rats repeatedly chose the more difficult task and earned the larger reward, thereby proving they were capable of completing the more difficult challenge. But when they were given THC (tetrahydrocannabinol – the active compound in cannabis) they switched to the easier option, despite earning a smaller reward, even though they had already proved they had the ability to perform the more difficult task. The experiment proves that cannabis made the rats lazy.

Armed with these results, the researchers repeated the study on a larger scale and this time with humans. Personally, I would have preferred groups made up of people with high levels of intelligence who are known to possess plenty of ambition and enthusiasm for self-improvement and another group consisting of listless jobless scatters to see if the theory really holds water, which I believe it does. Having spent hundreds of hours working with drug users in Liverpool in the 1980's, I can speak from experience. As with any scientific experiment, there has to be a control group.

It is one of the immutable laws of nature that the exertion of effort is essential to achieving success and so it is logical to assume that less effort will result in less success. Of course

one must also take into account the difference between working hard and working intelligently, but the study confirmed that users are less likely to choose tasks that require more effort if they are stoned. No big surprise then, but if only for the sake of completeness, this is how they did it:

Two experiments were conducted. In the first experiment, the group (who were already occasional smokers) were given the equivalent of one joint. They were then given a choice of two relatively simple tasks that would earn them different amounts of money.

The low-effort option involved pressing the space bar of a computer keyboard with their little finger 30 times in 7 seconds. If they were able to do this, they would win 50p. The high-effort option involved the slightly more difficult task of pressing the space bar 100 times in 21 seconds, this time for a reward of £2. The group also repeated the test using a placebo.

In the cannabis test, the by then stoned volunteers chose the high-effort option only 42% of the time, but in the placebo test, the participants chose the high-effort option 50% of the time. Humans have greater reasoning powers than rats and so the 8% difference is significant.

In the second experiment, 20 regular dope-smokers were pitched against 20 people who had never smoked cannabis and who were not allowed to consume alcohol or drugs, other than tobacco or coffee, for 12 hours before the study. In my view, coffee may have affected the results because caffeine perks people up – the opposite effect of cannabis – and therefore I believe the test is flawed. Nevertheless, both groups were again asked to perform the same task. No big surprise – the non-smokers came out on top.

It cannot be denied cannabis results in a significant increase in can't-be-botheredness. It must be by now blindingly obvious that cannabis impairs decision-making and the desire to try harder. I would like to have seen the experiment extended to discover how the drug affects attention span and memory, but no such luck.

In any event, it has long been known cannabis is a depressant drug which slows you down – it affects reaction times and changes the way you think. Gone is any sense of urgency or drive so it's not surprising that users end up less motivated.

Some users have told me that smoking cannabis made them more cautious and less likely to take risks. Again, there may be other factors coming into play here, such as environment or fear of losing a job or getting stopped and searched by the police. Possibly that's another reason they prefer to stay at home. Some addicts told me they felt uncomfortable in the company of people they didn't know, or who didn't know them.

A lot of users claimed they were more likely to drive carefully and within the speed limit when they had been smoking weed than they were normally, but of course that does not include driving at 45 mph on the motorway so as not to draw attention to yourself – a common mistake apparently.

So even smoking just one joint can reduce motivation in the short term and habitual abuse can reduce motivation long term. If you're smoking every day, then it seems you can wave goodbye to the realisation of any ambitions you once held and the better life chances you could have achieved and enjoyed.

It is well known that high achieving teenagers who smoke even small amounts see their grades drop very quickly – from top of the class to bottom often in a matter of weeks. The same can be said of high achieving professionals, although interestingly not in all cases.

This is because there are many other factors that play a part in achievement, such as luck, the support of other dedicated workers, and personality. And there's another question... could it be that those predisposed to ambition and hard work can remain unaffected, unlike those who lack motivation to begin with?

More research and experimentation is needed to find out, but for the time being we have to accept an inconvenient truth – the vast majority of users are from lower income groups where job satisfaction hovers around zero on the job satisfaction scale, presuming of course they have one in the first place.

We also have to accept (and this is going to be extremely unpopular with the lefties) that most people do not have the imagination or the drive necessary to start successful businesses or to become lawyers, surgeons or airline pilots. But if they come from a background of poorer education, of unemployment and benefits where there are far fewer opportunities, they are statistically more likely to sit around getting stoned. And that I'm afraid is the real truth of the matter.

It makes no difference whether cannabis is smoked or eaten in hash cakes and biscuits – it has the same destructive effect on memory and this is something that goes beyond simply affecting motivation. The active ingredient that gives smokers the zapped-out stoned feeling they enjoy so much (THC) damages brain circuits and causes significant long-term damage.

As we grow, our brains develop, constantly forming and reinforcing new connections between neurons that strengthen memory and link new experiences to old, helping us hone the skills we need to negotiate the world.

The thalamus, located in the centre of the brain, projects to the rest of the cortex to create neural circuits and these projections develop as we grow. In order for memory to be strengthened, the thalamus and cortex function and work together in unison, building connections and strengthening the synapses. As the brain develops, projections from the thalamus to the cortex spread even further.

During this process, our capacity for attention and information retention becomes sharper. It is these mechanisms that clear out non-essential projections, leaving only correct ones. In other words, the brain is able to remember important information whilst at the same time, discarding the trivia.

But cannabis stymies the formation of the same neural circuits responsible for our short-term memory that helps us remember what someone just said or where we parked the car! These connections also provide the foundations of long-term memory.

The active agents in weed that get you stoned release chemicals that also eliminate excess synapses, repressing neurons and connections responsible for memory. Weed destroys the connections that form memory circuits and this creates gaps. It's why dope smokers often have to pause mid sentence so they can remember what they were saying!

Researchers led by Dr Fumitaka Kimura at Osaka University have been able to identify several of these neural circuits and have raised serious concerns about how cannabis use affects the brain long-term, particularly in light of recent legalisation in some US states.

The medicinal effects of cannabis are now better understood and in the UK the Government has legalised cannabis for medicinal use and health officials accept that the drug has some restorative effects on the body. Cannabinoid, (CBD) is now classed as a

medicine by the Medicines and Healthcare products Regulatory Agency (MHRA) the UK regulatory body. There are now several UK companies licensed to grow cannabis.

The decision follows a review of a cannabinoid vapour dispenser that has been found to help thousands of people suffering from a range of conditions, most notably multiple sclerosis. CBD can help to control brain and nerve activity, energy metabolism, heart function, the immune system and even reproduction, but CBD by itself does not provide the high that users want. Tetrahydrocannabinol (THC) on the other hand, does, and medical practitioners can now legally prescribe it to ease muscle spasms.

The bad news is that cannabis use is also linked to brittle bones. A study carried out by the University of Edinburgh has found that heavy cannabis smokers run a higher risk of osteoporosis and more fragile spines and hips later in life. The bone-thinning side effect, which affects an estimated three million people in Britain, sees half a million admitted to hospital with fractures every year. Most users are unaware of this, but it serves to add to evidence of its harmful effects along with psychosis, schizophrenia and short-term memory loss.

THC, the ingredient that gets you high, causes the body to reabsorb bone faster than it can be regenerated. Heavy cannabis users weigh less for their height because of their reduced bone density because cannabinoid receptors in the body react to the drug, affecting bone mass and bone cell function. This new research, led by Professor Stuart Ralston of the University of Edinburgh's Centre for Genomic and Experimental Medicine and funded by Arthritis Research UK is published in the *American Journal of Medicine*.

Researchers looked at 170 cannabis smokers recruited from primary care such as doctor's appointments in UK inner cities between 2011 and 2014. Compared with 114 people who did not smoke cannabis, X-rays showed that heavy users had 5% lower bone density in their hips and spines than cigarette smokers who did not use the drug. They also suffered fractures and breaks more often.

For the purposes of the research, heavy cannabis use was defined as having smoked the drug on more than 5,000 occasions over a lifetime. Many regular cannabis users in fact smoke a lot more than that! Regular smokers go through at least two joints a day, every day, 365 days a year... that means that some people may smoke more than 20,000 joints in a lifetime. I have met people who smoke up to 10 joints a day!

The current wisdom is that long-term cannabis use poses a greater health risk than class A drugs. This may at first seem illogical.

Unlike heroin addicts, who quickly lose weight, dope smokers at least eat regular meals. Many smokers have steady jobs and are not forced to commit crime or turn to prostitution in order to get their fix, but heroin addict's lives revolve around the drug – their very existence is wholly dependent on getting more heroin.

Heroin addicts have no other interests in life outside their addiction, which is all consuming, so much so that they end up estranged from close family and friends. Dope smokers on the other hand continue to enjoy healthy relationships and can go for days or weeks or months without smoking. It's the lifestyle of heroin addiction that does for those addicts in the end.

Smokers rarely end up in prison and they don't share needles, with all the health risks that entails. Heroin costs up to a thousand times more than cannabis and some addicts can

easily spend £200 or more a day! Weed on the other hand is dirt cheap and if you grow your own, as many people now do, it's free!

But there is already evidence that new and more potent super-strength strains of cannabis such as skunk, are the cause of one in four cases of psychosis. Because of its strength, skunk is now the smoker's preferred choice. The result of this upgrade is that users are now five times more likely to develop schizophrenia as someone who has never smoked it. This compares to 1.9 times for hallucinogenic drugs such as LSD and 1.24 times for amphetamines.

Researchers led by Dr Carsten Hjorthøj at Copenhagen University Hospital's Mental Health Centre trawled the medical records of more than 3.1million people in order to study links between cannabis use and schizophrenia. The study looked at people who were cannabis abusers and had been diagnosed by their doctors as schizophrenic.

They discovered that pregnant women who used cannabis gave birth to children who were then six times more likely to become schizophrenic, suggesting the physical effects of the drug can be passed on in the womb. This is a prima facia case of child abuse if ever there was one.

More than nine million people in England and Wales have smoked cannabis at some point. Pro-cannabis campaigners say the drug cannot be proven to cause psychosis, claiming that some smokers may already be schizophrenic before they started using cannabis and thus more likely to take the drug in the early stages of illness to calm themselves. This is again, in my view, an incorrect assumption.

Cannabis releases the pleasure hormone dopamine – schizophrenia is a disorder of the brain linked to dopamine and cannabis affects dopamine levels. The new super-strength skunk may indeed be twice as addictive as normal strains of cannabis. Skunk now makes up most of the cannabis sold on Britain's streets and grown privately.

Dr Tom Freeman, who headed a study conducted by University College London, says that skunk can lead to dependency for 43% of those who smoke it as opposed to just 22% for those who prefer the less potent strain.

16 to 23-year-olds are now exposed to cannabis that is far stronger than the cannabis available two decades ago. The illicit cannabis market is now dominated by high-potency skunk – its greater addictiveness derives from its higher levels of THC, the constituent that gives smokers the high. It is THC that ramps up the properties of cannabis that make people dependent. Skunk has little CBD, which dampens those effects.

From occasional marijuana use to indulging every day increases the risk of psychosis and/or depression by a staggering 159% because the two conditions are linked. Frequent abuse of Marijuana also significantly reduces users ability to resist socially unacceptable behaviour, such as sudden bad-tempered outbursts and violence if provoked.

Research carried out at the University of Montreal and published in the *Journal of Child Psychology and Psychiatry* confirms that becoming a more regular marijuana user during adolescence is associated with increased risk of psychotic symptoms. Symptoms may be infrequent and so not necessarily problematic for the adolescent, but when these experiences are reported continuously, year after year, there will inevitably be an increased risk of a first psychotic episode or other psychiatric condition.

Researchers led by study author Josiane Bourque analysed around 4,000 13-year-olds from 31 high schools in the Vancouver area. Every year for four years, the study's

participants completed questionnaires about any substance abuse and psychotic experiences. Symptoms included perceptual aberration, such as feeling that something external was part of their body or thinking that they had been unjustly or badly treated. The participants also completed cognitive tasks that allowed the researchers to assess their IQ, memory and stimuli response.

An increased risk of depression – symptoms of which include negative thoughts and low mood – could explain the relationship between frequent marijuana use and the increase in psychotic-like experiences in youth.

Although drug-induced psychosis is most commonly associated with LSD or amphetamines, it can also be caused by marijuana, cocaine and alcohol. According to a report published by Addictions.com, marijuana is America's favourite recreational drug, making up more than 70% of all drug use. One result of this free for all is that researchers are struggling to keep up with the pace of legalisation.

The legalisation of cannabis in the United States has given rise to a booming industry of dispensaries, cannabis 'healthcare professionals' and drug paraphernalia. In California, medical marijuana can be used as a treatment for anxiety. In other states, anyone suffering from anxiety or depression can apply for a medical marijuana license if their condition is considered to be severe and debilitating.

But meticulous research shows that increased risk of depression as a result of frequent marijuana use is thought to be behind the onset of psychosis. Many people are using the drug to self-medicate for things like depression and anxiety despite research showing that in the long run, it does more harm than good.

Psychosis is defined as a condition that affects the mind and causes the sufferer to lose touch with reality. Symptoms include:

- delusions and hallucinations
- feelings of paranoia and suspiciousness
- disorganised thinking and speaking
- loss of or decreased motivation
- loss of or decreased ability to initiate or come up with new ideas
- difficulties expressing emotion

There is no doubt that psychosis and depression are linked. Frequent abuse also significantly reduces a user's ability to resist socially unacceptable behaviour when provoked – even when not under the influence of the drug. In fact tempers are more likely to flare in users when the marijuana is absent.

There are of course different variables such as how long it's been used, when a user first started, how concentrated or potent the marijuana they are using is and how they are taking it.

If all this isn't bad enough, marijuana use increases the risk of dying from high blood pressure by more than three times. The more cannabis is used, the more the risk increases. Results suggest that marijuana use is more dangerous for heart health than tobacco, despite campaigners insisting the opposite.

A study carried out by Georgia State University has investigated whether the health benefits of so-called 'medicinal' marijuana outweigh the potential health, social and economic risks. Researchers studied 1,213 people aged 20 or over who had been involved in a National Health and Nutrition Examination Survey. In 2005 and 2006, the study's participants were asked if they had ever used marijuana and if so, how old they were when they first started.

The results revealed that marijuana users are 3.42 times more at risk of high blood pressure related death than non-users. This risk increases by 1.04 times for every year of cannabis use.

Marijuana stimulates the sympathetic nervous system, leading to increases in heart rate, blood pressure and oxygen demand, even more so than cigarettes, but no link was found between using marijuana and dying from heart disease.

This research was published in the *European Journal of Preventive Cardiology*.

Support for liberal marijuana use is partly due to claims that it can be beneficial for certain conditions such as multiple sclerosis and no more harmful to health than tobacco or alcohol. Despite the widely held belief that cannabis is benign, this research adds to previous work suggesting otherwise.

In conclusion, we know from previous research that marijuana exerts an effect on the brain, heart and lungs, and because it affects a person's circulatory system, marijuana can increase the chances of heart attack or stroke. It can increase heart rate and blood pressure and exacerbate chest pains that some people experience while exercising.

We also know the drug impacts a person's mental faculties by affecting reaction time, ability to focus, decision-making abilities and emotions. Researchers at the University of South Australia discovered cannabis use can result in subtle changes in the way you move, affecting the way your knees, elbows and shoulders move when you walk.

However, marijuana has been proven to ease pain and nausea that are caused by some medical treatments. Marijuana for medical use is now legal in 30 US states, including Washington, DC because research has proved it can help ease side effects of intense medical treatments. In some states, people may be eligible to use medical marijuana if they suffer from Crohn's disease, Tourettes, epilepsy, multiple sclerosis, glaucoma, amyotrophic lateral sclerosis (ALS) and anorexia.

There is an obvious conflict here. I am of the opinion that medical cannabis/marijuana should be available to those who need it to manage their pain and ease suffering, but there is also an overwhelming body of evidence that indicates long-term harmful effects. In that case, marijuana is also an instrument of self-harm and its legalisation for recreational use is unwise.

Research also suggests that weed adversely affects sexual performance and may be a cause of sexual dysfunction. But another study has found the opposite to be true. Some studies found that weed affects sperm count and erectile function, while others have shown that it stimulates sexual arousal.

New research from the Stanford University School of Medicine has found that cannabis users have 20% more sex than non-users. An analysis of more than 50,000 Americans aged between 25 and 45 revealed that frequent marijuana use doesn't impair sexual motivation or performance. If anything, according to the study's senior author Michael

Eisenberg MD, assistant professor of urology, getting stoned is often associated with *increased* sexual activity.

The most recent data from the US National Institute on Drug Abuse shows that more than 20 million American adults use marijuana and numbers are rocketing as more states legalise the drug for both recreational and medical use.

Participants in the study were questioned on how many times they'd had sex in the previous month, and how much marijuana they had consumed over the year.

The instances of marijuana increasing sexual activity applied to both sexes, all races, ages, education levels, income groups, religions, health status, marital status and whether or not they had children. They found that 24.5% of men and 14.5% of women reported a higher frequency of sexual intercourse than those who hadn't.

Overall, women who did not use marijuana had sex around 6 times a month, compared to those who did – they had sex an average of 7.1 times a month. The difference was more striking in men. Non-marijuana users had sex 5.6 times a month, whereas daily users had sex an average of 6.9 times a month.

Overall, marijuana use increased sexual activity by an average of 20%. Although the research does not categorically prove weed directly boosts sexual activity, it does call into question previous studies that suggest the opposite.

It could be that there is a link between marijuana use and a greater sexual desire – one already present in those who also wish to experiment with drugs.

Or, it could be that users are naturally less sexually inhibited or become less sexually inhibited.

Or it could be that in the absence of anything better to do, they engage in more sex because they have more time on their hands. It could also be that the old adage 'idle hands make the devil's work' is true, and in the absence of anything else to think about, other forms of experimentation will inevitably present themselves.

The above research was published in the *Journal of Sexual Medicine*, October 2017.

Sex, drugs and rock 'n' roll

The Sex, drugs and rock 'n' roll lifestyle has become a celebrity cliché. But what is it with that attracts people so strongly to put them on a path to self-destruction? And what does it mean for the rest of us?

If I made a list of all the stars who had fallen 'victim' to the dissolute lifestyle for which they are also famous, it would fill a book – a 'Who's who of hedonistic, alcohol fuelled, drug addicted, sex addicted celebs.' But it would be pointless because we already know who they are.

Having spent some of my life working in the entertainment industry as a stage hypnotist, I was always puzzled why stars, even with their vast wealth can afford to waste vast amounts of money on substance abuse. Or maybe if all your friends in the industry are shoving stuff up their noses and guzzling five bottles of champagne every day, it might seem normal. I know that when they're not touring, musicians especially, and entertainers in general find themselves with time on their hands and drugs might fill a gap.

For thee famous, there's never any shortage of women – or men for that matter – who are only too willing to sleep with them. Sexual excess is as just addictive as drugs – anything to the extreme – so long as you keep getting more. But understanding human behaviour is never so simple – there is more to this than simple frequency of opportunity, there has to be neurological correlations with addiction, just as there are with any other kind of behaviour.

The part of our brain that feels pleasure from sex, drugs, nicotine, food, music, gambling, being in love, or religious or spiritual experiences are all linked. Specifically, a region of the brain known as the nucleus accumbens, processes reward and also plays a role in addiction.

Researchers from Montreal's McGill University, led by cognitive psychologist Dr Daniel Levitin, have confirmed the connection between pleasure-boosting opioids as a result of gratification and those produced by the enjoyment of music. Individuals who harbour a love of music, with all its excitement, passions and emotion, are more likely to enjoy a deeper pleasure from sex, recreational drugs or food and the like. Logically, this should also work the other way round – those who love food and fine wine will also enjoy great music, great sex, and of course, drugs.

The McGill team used naltrexone – a widely prescribed drug for treating addiction disorders – to block opioids in the brains of test subjects. Then they measured the subject's responses to music and found that even their favourite songs failed to trigger a positive response. *'I know this is my favourite song but it doesn't feel like it usually does... It sounds pretty, but it's not doing anything for me.'*

Addictive pleasures such as sex, drugs, alcohol and food can harm lives and destroy relationships. Understanding the chemical origins of pleasure in the brain has therefore been a key goal for neuroscience research for decades. Technology has only recently provided tools such as fMRI scanners to examine more fully the relationship between pleasure and addiction.

Of course, drugs are illegal and music isn't, but it's music's universal appeal and ability to affect emotions that add to an already burgeoning body of evidence that points to an evolutionary biological origin for addiction. Music can calm the savage breast and it can also send men off to war. And now we have discovered a connection to the rest of life's guilty pleasures.

So that explains some of the behaviour of our celebrity role models and their wild self-indulgent partying, public displays of inadequacy and frequent sojourns at the £2,500 a week Priory Clinic. It's time to face the reality of drug addiction.

There is a misunderstood urban mythology that new 'designer' drugs like MDMA are not as bad as heroin or crack-cocaine was for the last generation. Nothing could be further from the truth. Cocaine use increases the risk of stroke by six times every time it is taken.

The latest research reveals that amphetamines such as speed, ice, ecstasy and other party drugs popular with the glitterati, cause the hearts of teenagers to age at an alarming rate. Amphetamines are already known to age the skin, speed up the heart rate, and increase blood pressure.

Users of MDMA, speed and ice are left with arteries so frail they could be mistaken for those of a pensioner. MDMA also interferes with stem cell function – the cells involved in tissue repair and renewal.

Scientists at the University of Western Australia measured blood flow through the upper arm's brachial artery and the forearm's radial artery of 713 participants aged between 30 and 40 who had attended specialist clinics for substance abuse. This enabled the researchers to assess the degree of arterial stiffening – a known risk factor in heart disease. Patients abusing amphetamines were questioned about their drug use.

Their cardiovascular systems seemed to be ageing much faster as they had stiffer blood vessels, even after taking into account weight loss and cholesterol levels.

Both men and women were shown to be equally at risk from the effects of amphetamines, which send the production of adrenaline into overdrive and almost certainly ages the whole body – not just the cardiovascular system. This damage may be irreversible, highlighting the global epidemic of recreational stimulant use.

We have already lost the war on drugs. As soon as one drug is made illegal or eliminated from the market, another takes its place – users and dealers simply find another source or a replacement 'high.'

Less than 2% of the population of the UK habitually use drugs. We should redeploy the tens of millions we spend on fighting drugs to better and more effective anti drugs education. Maybe we could even allow users to solve the problem themselves by drugging themselves into an early grave, thus allowing evolution to remove the stupid gene from future generations.

The full McGill research is published in *Nature 'Scientific Reports'*.

Cannabis and its effect on memory

Laboratory mice exposed long-term to cannabinoids suffered 'significant' memory impairment. Brain scans confirmed the finding, and showed cannabis can stop vital memory-controlling regions of the brain communicating with each other.

The Advisory Council on the Misuse of Drugs (ACMD) agreed cannabis does possess a medicinal benefit, but experts fear both recreational users and those who rely on it to combat their health conditions may be at risk of memory problems. Medicinal cannabis also contains the potentially harmful cannabinoids.

For years scientists have warned smoking cannabis can lead to mental health problems such as schizophrenia. Studies have shown cannabis can also shrink memory-related structures in the brain – most notably the hippocampus. But there is little understanding of the potential negative side effects of cannabinoids, such as CBD.

A new experiment, led by scientists at the universities of Lancaster and Lisbon, highlights the dangers. They studied the effects of cannabinoid drug WIN 55,212-2 in mice. It is similar to THC, the compound that causes the high in cannabis users.

The researchers discovered long-term exposure to the cannabinoid impaired the learning ability and memory of mice. The mice who had been exposed to the drug could not even distinguish between a familiar and novel object. Brain scans backed up the initial finding, showing the drug affected the healthy function of brain regions involved in learning and memory.

Cannabinoid stops the hippocampus and prefrontal cortex from communicating with each other. Lancaster's Researchers, led by Dr Neil Dawson, suggest this link-breakage was to blame for the negative effects of cannabinoids on memory.

Ian Hamilton, a drug researcher at York University agreed that heavy use of cannabis impairs memory, although this can be reversed if the person abstains. Obviously, young people need to avoid daily use of cannabis as it will hinder their ability to learn and recall information.

However, evidence published in other respected journals shows the drug can help to combat epilepsy, multiple sclerosis and chronic pain, and in recent years, Spain, South Africa, Uruguay and several states in the US have made recreational cannabis use legal.

As with all medicines, cannabinoid-based therapy can be beneficial, but can also have negative side effects.

These findings were published in the *Journal of Neurochemistry*.

Many adolescents see cannabis as safer than alcohol. Teenagers who regularly smoked marijuana but then stopped saw a huge boost to their memories within a month.

A new study at the Center for Addiction Medicine at Massachusetts General Hospital, Boston, involved 88 participants aged 16 to 25 who smoked marijuana at least once a week. The participants had to either cut down on their use or quit altogether. Regular assessments of their thinking and memory were carried out during the study period, along with urine tests to verify they were sticking to the instruction.

Within a week, those who went cold turkey fared much better on memory tests, and improved more after a month of abstinence.

The study supports evidence that the drug's psychoactive chemicals reduces young people's IQ by damaging their brain, but can be reversed if they just say no. The ability to learn new information – a critical facet of success in the classroom – improved with sustained non-use of cannabis. Some even saw a measurable improvement in vital memory functions and were thus better positioned for academic success.

No aspect of cognitive functioning improved among those who continued cannabis use.

This analysis was published in the *Journal of Clinical Psychiatry*.

The teenage brain changes on a dramatic scale - even IQ does not seem to be stable. In terms of size, the brain is pretty much set by the age of seven.

During adolescence the brain ruthlessly prunes connections between cells and synapses. It is during this period that the structure and function of the brain changes. But the adolescent brain is more susceptible to cannabis than the adult brain.

Psychoactive chemicals, the main element being a chemical called tetrahydrocannabinol (THC) provides the 'chilled out' sensation associated with smoking cannabis, but is also linked to memory impairment.

Cannabis and its link to mental illness

First, there is some evidence that supports the benefits of marijuana:

- For those that like to feel high, THC – the psychoactive property in marijuana – does make you feel high.
- The National Academy of Medicine says medical marijuana has been shown to ease pain and nausea for patients on chemotherapy, but more trials are needed before they could properly endorse that.
- The United States National Academy of Medicine says that CBD – the non-psychoactive element of cannabis – has provided relief for some patients who suffer from epilepsy, but scientists have struggled to replicate those findings widely.
- Medicinal cannabis has been shown to treat a host of conditions including arthritis and MS, as well as in patients who suffer chronic seizures.
- The drug may offer some relief for the growing number of people with anxiety, the Academy said, but more studies are needed.

Beyond that, there is only unreliable anecdotal evidence.

And now the bad news:

Schizophrenia

Researchers questioned more than 6,500 teenagers aged 15 and 16 on their cannabis use and monitored them to the age of 30. Smoking cannabis as a teenager can triple the risk of psychotic symptoms alongside major depression and schizophrenia in later life, according to the study at The Academy of Finland and published in the *British Journal of Psychiatry* in March 2018.

Socially unacceptable behaviour

Researchers from the University of Montreal analysed around 4,000 13-year-olds from 31 high schools in the surrounding area for four years. Progressing from occasional marijuana use to using every day increases the risk of psychosis by up to 159%. Frequent abuse also significantly reduces a user's ability to resist socially unacceptable behaviour when provoked. The research was published in the *Journal of Child Psychology and Psychiatry* in July 2017.

Negative emotions:

Scientists at the National Institute on Alcoholism and Alcohol Abuse in Bethesda analysed 60 people, half of which were cannabis dependent. The study's participants completed a questionnaire that asked them about their feelings of stress, aggression, reactivity and

alienation. Cannabis users are more likely to experience negative emotions, particularly feeling alienated from others. People who use marijuana are significantly more likely to feel that others wish them harm or are deceiving them. The research was published in *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* in January 2018.

Panic attack reaction:

Researchers from the University of Vermont scanned the brains of teenagers in Europe and found smoking just two joints is enough to change the structure of a teenager's brain, causing changes affecting how likely they are to suffer from anxiety or panic. Researchers found 14-year-old girls and boys exposed to THC had a greater volume of grey matter in their brains. This means the tissue in certain areas is thicker – the opposite of what usually happens during puberty when teenagers' brain matter gets thinner and more refined. The study was published in *The Journal of Neuroscience* in January 2019.

Bipolar Disorder

Researchers at Warwick Medical School analysed 3,370 women's cannabis use at 17 years old. At 22-to-23 years old, the participants completed a questionnaire. Those who used cannabis at least two to three times a week at 17 years old are more likely to experience hypomania in their earlier 20s. Hypomania is defined as elevated mood alongside irritability or an inflated ego, an unrealistic sense of superiority, a reduced need for sleep and frenzied speech. Such symptoms frequently occur in bipolar disorder sufferers. The research was published in *Schizophrenia Bulletin* in December 2017.

Women who smoke cannabis during pregnancy almost double the risk of their baby being born with autism and that cannabis use in pregnancy was also linked to an increased risk of premature birth. Marijuana use during pregnancy has been linked to up to a 2.3 times greater risks of stillbirth.

The main problem with habitual cannabis users is that many of them start smoking it from the moment they wake up until they go to bed – so they're stoned all the time. Trying to reintegrate them by getting them to join a local football team or an art class is very difficult because they are always so stoned they have no motivation to climb out of the hole and address their psychosis.

Cannabis-induced psychosis has reached crisis levels because of the new strain, skunk now flooding Britain's streets. There has been a series of killings committed by skunk users suffering psychosis due to their use of the drug. They often become delusional, even hearing voices. Drug users who experience skunk induced psychosis.

Professor Sir Robin Murray was the first British scientist to prove a link between cannabis and psychosis.

New research from Montana State University suggests the legalising of recreational marijuana for US adults in some states may have slightly reduced the likelihood of teens using pot. One reason may be that it's harder and costlier for teens to buy marijuana from licensed dispensaries than from dealers.

Researchers analysed national youth health and behaviour surveys from 1993 to 2017 that included questions about marijuana use and responses from 1.4 million high school students. There was no change in medical marijuana legislation, but teen use declined

almost 10% after recreational marijuana laws were enacted. There was a decline in teen use after sales of recreational pot began in 2014 in Washington state. Thirty-three states have passed medical marijuana laws and 11 have legalised recreational use – mostly for those over the age of 21.

Dr Kenneth L Davis, CEO of Mount Sinai Health System, and Dr Mary Jeanne Kreek, head of the Laboratory of the Biology of Addictive Diseases at Rockefeller University, warn that the few studies we *do* have all suggest cannabis deals a heavy blow to teen brains.

The National Academy of Medicine says medical marijuana has been shown to ease pain and nausea for patients on chemotherapy – but that more trials are needed before they could properly endorse that. Their scientists say that CBD (the non-psychoactive part of cannabis) has provided relief for some epilepsy patients, but scientists have struggled to replicate those findings so they stopped short of advocating its use.

The Academy said the drug may offer some relief for the growing number of people with anxiety, but more studies are needed.

Another study shows that regularly smoking cannabis can affect teenagers so severely that they end up three years behind their classmates in terms of brain development. The results of that investigation, which involved almost 4,000 secondary school children in Canada led researchers to conclude cannabis is more toxic for youngsters' brains than alcohol. Persistent use of the drug seriously affected basic reasoning skills – while it also had a disastrous effect on self-control.

The Royal College of Surgeons in Ireland (RCSI) studied 808 teens who used cannabis at least weekly for at least six months and 5,308 who did not use the drug and discovered that regular dope smokers suffer a decline of two IQ points over time compared to those who did not use cannabis during their teen years.

Further, verbal IQ, linked to understanding concepts, abstract reasoning and memory, declines by three points among cannabis smokers. Teen marijuana smokers with mental health disorders are THREE times more likely to self-harm and teenagers with bipolar disorder or depression who smoke cannabis are at increased risk of death and self-harm.

Researchers from Ohio State University found teens with a mood disorder and a cannabis habit are 3.28 times more likely to self-harm.

These findings were published in the journal *Psychological Medicine*.

There is hard evidence that changes in the brain that trigger schizophrenia are caused by the main psychoactive compound in cannabis, tetrahydrocannabinol (THC). In the high school study, researchers at Montreal University studied pupils from the time they entered the Canadian seventh grade – aged 12 or 13 years – for four years. They regularly asked the young volunteers about their cannabis and alcohol use and put them through computer tests examining reasoning skills, short-term memory and self-control.

Not only did they find cannabis users tended to do worse than non-users, but also that those pupils who smoked cannabis saw their results deteriorate when their use of the drug increased.

The researchers really expected alcohol to have a more powerful effect on brain health than cannabis, but that didn't seem to be the case. What they did find is that in terms of neuro-development, cannabis might be quite a risky drug for young people. There is an undeniable link between regular use during adolescence and lower achievement at school,

addiction psychosis and neuropsychological decline, increased risk of motor vehicle accidents, and of course the respiratory problems associated with smoking.

Another problem is that when schools provide drugs education, it often backfires, raising interest in cannabis that would not otherwise be there.

If you're a cannabis user, and you used it this year and last year, you lose three years of development.

Rats given THC during adolescence went on to develop schizophrenia-like problems when fully grown, including memory impairment, high levels of anxiety, depressive-like symptoms and social interaction problems.

The link between depression and juvenile cannabis use has been attributed to the strength of marijuana available on the streets today which is far higher than the relatively mild stuff that was available in the 1980s and 1990s.

Marijuana can cause aggression, psychosis, suicide and acts of violence. Its legalisation in Washington triggered a 40% increase in murders. In the US there has also been a proven 50% increase in schizophrenia hospital admissions for since 2006.

In other developed countries, such as Denmark, schizophrenia cases have increased by 25%, and in Finland, the rate has increased 100%. The only possible cause is the increased cannabis use.

Scientists in Montreal, Canada, found that it was cannabis use that predicted future violent behaviour in patients at psychiatric hospitals. The Canadian team spent a year tracking 1,136 men and women on psychiatric wards in three US cities – Missouri, Massachusetts, and Pittsburgh. The patients who had habitually used marijuana were twice as likely to experience violent outbursts than those who hadn't used it.

Robin Murray, professor of psychiatry of King's College London presented a review of 10 other studies that showed a clear correlation between cannabis use and psychosis. One of those studies found that the risk of psychosis increased as the potency of the cannabis increased. This is significant, given that the THC (the psychoactive ingredient of cannabis) used in the US is now 20 times stronger than it was in the 1970s!

Psychosis occurs when someone's thoughts and emotions become disconnected from reality, and psychosis is definitely linked to homicide. The overwhelming evidence is that cannabis is absolutely linked to psychosis, and thus also to the murder rate.

Britain has also been plagued by a succession of brutal killings linked to cannabis in recent years. Some lawyers have even argued that perpetrators should not be found guilty of murder because they were suffering from psychosis.

In December 2015, Femi Nandap stabbed Jeroen Ensink to death outside his home in North London. Mr Ensink, had popped out to post cards announcing that his wife Nadja had given birth to a daughter. Forensic psychiatrist Dr Samrat Sengupta, of Broadmoor Hospital, told the Old Bailey court that the Nandap's heavy cannabis use had triggered a psychotic illness. Nandap was given an indefinite hospital order after admitting manslaughter on the grounds of diminished responsibility.

I have often observed the rapid mood changes in people who regularly smoke cannabis. Ironically, it's when they aren't smoking it that they become moody, angry and aggressive – ready to explode into fits of rage at the slightest provocation. But as soon as they start

smoking again, they become calm and relaxed. The second irony is that they become too relaxed, assuming a couldn't-care-less attitude to work and life in general. This pattern of 'good day, bad day' becomes more apparent the longer they are addicted.

Scientists involved in a landmark study of almost 300,000 teenagers and young adults believe that over time, prolonged cannabis use profoundly alters the brain, making the user less able to control their temper. People who regularly smoke cannabis are almost three times more likely to commit a violent offence. Addicts may also suffer from withdrawal symptoms, making them irritable and prone to lashing out. Psychiatrist Professor Sir Robin Murray, a world-leading expert on the neurological impact of cannabis, has stated that the link between cannabis use and violence was a 'neglected area'.

A team from Montreal University, Canada discovered 26 of the 30 studies showed a tendency towards higher levels of violence among cannabis users. They found that users were more than twice as likely to have committed a violent offence as non-users. Among persistent heavy users the risk of violence was 2.81 times higher. Even accounting for different life circumstances which might mean cannabis users were more likely to grow up in violent surroundings, they concluded that 'the effect remained significant'.

Citing neurological research, they said cannabis use during adolescence 'may cause deterioration of neural structures associated with inhibition and sensation-seeking', adding 'Such neural deficits are expected to limit one's ability to suppress the urge to act out violently and heighten the risk of developing antisocial behaviours in adulthood.'

Cannabis can be the cause of road accidents, domestic violence, and other appalling violence. We accept that alcohol can just make people want to go to sleep, but it can also trigger acts of violence – cannabis addiction is exactly the same. Prominent neuroscientist Douglas Fields, a world class expert who has studied marijuana's effects on the brain, agrees with this hypothesis. Fields said he has long been concerned about how marijuana impacts the brain, and its long-term impact on society.

All drugs are the same – the receptors in the brain that cannabis stimulates are there for a reason – and they have a function. Messing with them is akin to throwing petrol on a fire.

The idea that an attractive leafy plant that grows from God's green earth can enhance one's mind is both naive and ridiculous. The scientific evidence is that cannabis has an injurious effect – and especially on the adolescent brain.

Doctors and scientists rarely appear in public. They are cautious by nature, generally only presenting their results to audiences of fellow academics, and of course they are also busy treating patients. They also speak their own scientific language which is often full of words that will confuse most people. But at the same time the scientists and researchers are quietly amassing and collating their data, the marijuana lobby is shouting, protesting and getting themselves on news programmes, demanding legalisation and drowning out the truth.

Marijuana advocates claim cannabis can reduce people's reliance on addictive painkillers and even help addicts recover, but there is no hard evidence medicinal cannabis is effective for helping people come off powerful opioids. Nor is there any hard evidence to even suggest that cannabis cures cancer or any other illness for that matter. These ideas are propagated by Facebook experts and internet quacks.

There is no scientific evidence that shows medical cannabis is effective at treating people with mental health conditions. Australian scientists reviewed 83 studies involving 3,000

people and found no proof cannabinoids relieved the symptoms of depression, anxiety, ADHD, Tourettes syndrome, PTSD or psychosis. They concluded that the use of medicinal cannabis for mental health problems cannot be justified on the basis of current evidence.

Findings published in *The Lancet Psychiatry*, found insufficient evidence medicinal cannabinoids improve mental health problems overall or their symptoms. In fact, cannabis has proved to be no more effective than a placebo!

The UK Office for National Statistics (ONS) reported there were 4,359 deaths from drug poisoning recorded in England and Wales in 2018 – the highest number since records began in 1993. Males accounted for more than two-thirds of drug poisonings – 2,984 compared with 1,375 females.

The number was also the highest annual increase since records began, rising 16% (603 deaths) from 2017.

The figures also include accidents and suicides involving drugs, and complications such as deep vein thrombosis or septicaemia from intravenous drug use.

More than half of the deaths involved an opiate (2,208 deaths). Deaths caused by the availability of a wider variety of substances known as 'legal highs', doubled in a year to 125. Deaths involving cocaine doubled over the three years to 2018, reaching their highest ever level.

Most of the recorded deaths were due to accidental drug poisoning – 80% of males and 67% of females and then intentional self-poisoning – 16% of males and 30% of females. The remaining deaths were caused by mental and behavioural disorders as a result of drug use or assault involving drugs.

The idea that cannabis is a non-addictive substance is prevalent among those that support and lobby for relaxation of drug laws around the world. But researchers from Queen's University in Kingston, Ontario examined data from 23,000 marijuana users and discovered it is far more addictive than campaigners claim. Instead, they found that regular marijuana users suffered from what they called 'cannabis withdrawal syndrome' when trying to give up.

The more someone uses the drug, the greater the risk of withdrawal effects, and men are more likely than women to suffer from withdrawal symptoms. These include irritability, anger, aggression, anxiety, sleep disturbance, restlessness, depression, headaches, sweating and nausea.

Cannabis can cause serious withdrawal symptoms in regular users when they try to quit, including insomnia, headaches, anger and anxiety.

For addicts who quit, the first week is always the hardest and it's common for addicts to start remembering the good times and forget the bad times. The following weeks will be just as rough as users struggle to distance themselves from their dealers – and the nostalgia.

One healthy thing to do is to make a list of all the things that are better since you quit – maybe you sleep better, maybe your lungs start to work better, maybe your head doesn't feel like it's in a permanent fog... just keep at it. Yes, it will take time, but it will be worth it in the end.

Gambling Addiction



The Game

In 1989 I spent three months in Las Vegas doing my hypnosis show and during that time I gained first-hand experience of the might of the gambling industry, although I did not gamble myself – not one red cent!!!

So I'd like to start with an example of how important gambling is to the casino bosses.

On the first night of my run at the Riviera Hotel, I overran by just 3 minutes. The next day, I was politely told by Mr DeStefano, the casino's vice president of entertainment, that under no circumstances must the show run overtime. The reason? The casino works on the basis that on average, customers spend an average of two dollars a minute gambling. I had performed to 750 people and my time-keeping, or lack thereof, had cost the casino \$4,500! The situation was made very clear... if I overran again, they would deduct \$1,500 from my \$15,000 per week fee for every minute I overran.

Gambling is a mug's game. The proof is there for all to see on the Las Vegas strip – staring you in the face – where multi million dollar casinos are financed mainly by profits from gambling. In the end, the gambling machines, the roulette wheels and the blackjack tables always win.

Of course it's possible to have the occasional win, but for every player that does strike it lucky, there are dozens of losers. I saw a woman sitting on the sidewalk outside one well-known casino in tears. She was being yelled at by her husband because she had gambled away 'every damn penny' their life savings.

The secret allure of gambling lies within our own minds – too easily excited by colourful lights and joyous sounds which excite the pleasure centres deep within our brains. Even a small win causes our naive and inexperienced brain to be flooded with dopamine, a naturally produced feel-good opiate that allows us to ignore reality. We crave that pleasurable feeling so much we will risk our life's savings on a throw of the dice.

Many gambling companies have employed psychologists who advise them how to make customers spend more money, and sound and light is just two of many ruses to keep people feeding the machines. Put bluntly, gambling is a scam.

So how do they get away with it?

Outside the murky world of gambling, consumers are for the most part able to recognise potential scams, but a study from the University of Plymouth's School of Psychology and Scripps College in the United States, has found that people who tend to 'see the glass half full' are more likely to fall victim to scams.

The study found that consumers who positively view the promise of a big pile of money means they are more likely to discount the risks that are part and parcel of scams. They also found that less-educated consumers are more likely to be susceptible to the possibility of a large reward.

Researchers monitored over 500 adults in an experiment designed to identify the underlying psychological factors involved in falling for scams. They used 25 real scam solicitations that had been successful at hooking in victims in the Los Angeles area. The scams promised a chance to win large sums of money up to \$25,000. These sums influenced the perceived risks of participation, such as the possibility of identity theft. They also explored how activation fees, such as paying \$5 to claim a prize, might impact interest in responding to the scams.

The researchers found the most important factor in deciding whether to respond was the person's assessment of the risk versus the potential reward – exactly as in gambling. Almost half the people indicated an interest in responding, which was more than the researchers had expected.

When the study added a requirement that people pay an activation fee of \$5 to \$100, nearly a quarter of the subjects still had an interest in responding.

In the second experiment, participants were less likely to indicate they were willing to call when there was an activation fee, although they also discovered there was no difference between \$5 or \$10. Similar to the first experiment, risk and benefits assessments remained the highest predictors of intention to respond.

The study also found that age and education levels each had a high influence on responses. Older adults and highly educated people were less likely to 'make the call' and high activation fees deterred individuals who otherwise would have responded. These are exactly the same demographics we see in the gambling industry.

Welcome to the twilight zone where time and space is suspended and the only way out comes at a hefty price...

Of all the gambling opportunities, slot machines are the most popular – and the most pernicious. Slot machines are the major magnet of gambling addiction. Problem gamblers prefer slot machines because they're fast and allow continuous play. Gamblers can fall into a state of hypnosis while playing these machines without realising it – and the problem is especially acute with gamblers who are more suggestible.

The tricks that Casino operators use to encourage people to gamble are well known. There are no clocks in gambling environments and little or no natural light, so gamblers are more likely to lose track of time. The trays into which winners' coins clatter are made from a special kind of metal that makes a lot of noise every time the machine pays out – and this sound is specifically designed to encourage other gamblers to keep playing.

Wins are celebrated with bells and whistles that are audible all over the gambling floor. Blinking lights and exciting jingles are also specifically designed to encourage others to keep gambling.

Researchers from the University of British Columbia, Canada fitted eye trackers onto 100 volunteers and let them loose in a casino. They soon discovered people behave far more recklessly in the presence of lights and jingles – even when the odds were stacked against them. This may explain why addicts struggle to resist the lure of casinos and online betting sites.

Noteworthy was that participants in the experiment paid less attention to information about odds when jingles accompanied the wins. The researchers also noticed greater pupil dilation among the participants exposed to the sensory cues. Participants were even more aroused or became more engaged when winning outcomes were paired with sensory cues.

Conversely, in the absence of sensory cues, the participants demonstrated more restraint in their decision-making. Either way, the results provide an insight into the role played by audiovisual cues in encouraging risky choice. The results could partly explain why some people persist in gambling despite unfavourable winning odds.

All the gambling addicts [and all the drug addicts] I have dealt with had very short attention spans. Within five minutes of the commencement of a session, I noticed a sense of urgency in them, as if they were worried about getting to another urgent appointment somewhere else (which in fact they were!) and that's if they bothered to turn up in the first place!

Both drug and gambling addicts are afflicted with impulsiveness, a personality trait they already possessed before they became addicted. It might well be that it was their impulsiveness that first assisted them on the road to ruin. In the case of the drug addicts, they will not hesitate to use (or more correctly abuse) alcohol when drugs become temporarily unavailable. I do not know whether the same would be true of compulsive gamblers, though I suspect it might be.

Both gambling and drug abuse produce a strange tranquillising effect. 99% of drug addicts go through the same ritual on a daily basis, first to obtain money to buy drugs – which usually involves some petty crime – before spending interminable hours waiting for their dealer to turn up.

Believe it or not, this simple and often unproductive exercise provides some structure in their lives! The 'highs' and 'lows' of that frustrating inactivity play havoc with the brain's chemical balances as feelings of inner dread and desperation of withdrawal symptoms become more unbearable. In contrast, the sheer joy of finally obtaining the precious magic powder are visible in the addict's sudden joyous mood change. For the addict, it's a desperate life, but one that is also familiar and ironically, comfortable.

The same can be said of the compulsive gambler. Most compulsive gamblers are addicted not to the roulette wheel, but to machines which offer a much higher frequency of play. The same emotional highs and lows are evident when players achieve a win (no matter how small) or a near win (which is actually a loss.)

Play exerts a tranquillising effect on gambling addicts that is often enhanced by the excitement of the lights and sounds of the machines that help perpetuate play. The casino, with all its meaningless noise is a safe haven where the gambling addict can forget about their responsibilities of life outside.

Celebrity endorsement of gambling machines, that is, machines with familiar and recognisable images, such as machines with pictures of familiar characters from the

Simpsons or Star Trek, also enhance the player's experience. Players unconsciously feel that *their* machine is a better machine than all the other machines. Consequently, the player unconsciously believes the machine is trustworthy.

Again, unconsciously, they believe that a Simpsons endorsed machine will be more fun to play, or if they are knowledgeable about Start Trek, they will be able to get better results from that machine. This train of thought is of course delusional, but the illusion is cleverly maintained when the machine produces comical or familiar sounds even when there is a loss. Gambling arcades also use a lot of red lighting, which increases arousal.

Other tricks the designers of gambling machines build in to the machines include an increase in the speed of pulsating sounds and lights when a gambling decision has to be made, creating more of a sense of urgency and thus excitement. The same is true when addicts buy drugs from their dealer. Dealers are often just a phone call away, and a promise to meet the addict within a certain time frame offers hope and thus encouragement. And of course the excitement of not getting caught and the urgency of the deal is all part of the addiction.

It's important to understand that many heroin or gambling addicts have little else of import in their lives, except perhaps often ignored responsibilities to their families. They have no other interests or hobbies aside from getting high or gambling. The desire to gamble or take drugs surpasses even the natural instincts of caring for their children. [I believe the children of addicts should be taken into the care of a normal, addiction-free, foster family. I also believe that drug dealers are no better than murderers and should be treated as such.]

More and more modern machines have the ability to communicate with the gambler verbally. The machine offers encouragement by the overt use of flattery and can become a substitute for real friendship. Drug dealer's customers' are treated as best friends – the more successful dealers take time to ask how users are and even exchange gossip and hugs – also a useful way of transferring the drugs without detection!

So both the gambler and the user build a relationship with their favourite machine or their dealer. Problem gamblers form relationships with machines in the same way druggies develop a loyalty to one dealer. If a dealer is arrested or sent to prison, the user has to build a new relationship with another dealer from scratch, which means establishing 'trust.'

The machine addict will experience an enormous sense of loss if his beloved machine is removed from the arcade. This is especially true of machine addicts who play not for money, but to get their initials on the Space Invaders machine. Their addiction is to improve their score and stop anyone else from getting *their* initials on the screen. Players are known to experience feelings of jealousy if someone is playing 'their' machine!

Many, if not most, gambling machines use tokens instead of real money – the effect of this is that the player loses the sense of the real value of the money they are spending. This suspension of good judgement is common with drug addicts too – as the user descends deeper and deeper into addiction it becomes increasingly unlikely they will be using their own hard-earned money!

Machines often award players 'free goes.' The effect is to bamboozle the player into thinking they have got something for nothing when in truth, the desired result is that the player ends up putting even more money into the machine. It is for this same reason drug dealers sometimes give new clients free drugs – secure in the knowledge they will soon be back for more.

Modern technology has made playing slot machines even easier – the old fashioned mechanical workings of the machines have been replaced by electronics – so the barrels spin faster and stop sooner and thus increase the frequency and opportunity of play.

Frequency of play makes gambling even more addictive, because repetitive actions, like feeding the machine, are habit forming. Very few get addicted to weekly National Lottery draws because the ‘frequency of play’ is very low.

Repeating the same actions over and over again, in a darkened environment where the brightest light comes from the machine itself, seduces players into an immersed state – exactly like hypnosis – where they can escape from feelings of stress or boredom. As with drug addiction, boredom is a big factor in problem gambling.

The reels in the machine – for example two lemons and a barrel – arranged in such a way that players can just see a third lemon, which the brain interprets as a ‘near’ win, which in turn excites the pleasure centres in the brain just as much as an actual win, thus encouraging the gambler to keep feeding money into the machine.

A study carried out at the Centre for Gambling Research at the University of British Columbia (UBC) involved two groups of participants. One group consisted of UBC undergraduate students, most of whom had never played a slot machine, and the other group was made up of experienced slot machine players. Both groups played the machine in the UBC laboratory casino for 30 minutes.

The machines had been modified by adding screens on each side that showed moving geometric shapes – a white circle and a red square and participants were told to press a button whenever they noticed the shapes change.

Members of both groups said they felt higher levels of immersion while playing – strikingly similar to the experience of participants in stage hypnosis shows who report exactly the same sense of immersion. They also find themselves in an artificial environment with bright lights, no indicators of the passage of time, and perform a series of repetitive tasks in quick succession.

The researchers measured the volunteer’s heart rates both during and after play. Players were asked if they felt like they were in a trance or had lost track of time. The experienced slot players – those at higher risk of problem gambling – were more likely to miss a shape change on the side of the machine. They also felt they lost track of time *and* their surroundings.

Again, these are the same phenomena experienced by participants in stage hypnosis shows. Both volunteers in stage hypnosis and those who play slot machines are attention focussed, concentrating hard on the task in hand, so perhaps it should come as no surprise they find time flies by. Being immersed in the game leads to paying less attention to the visual world outside the machine – as with stage hypnosis. It also means paying less attention to how much money they’re losing.

The researchers suggested that slot machines could be designed in such a way that promotes more responsible gambling by disrupting the slot machine zone state, but given the ethos of the gambling industry – to take as much money as possible from as many suckers as possible – the introduction of any device to inhibit gambling seems unlikely.

Psychologists discovered that habitual gamblers place bets quicker after a loss rather than after a win – this is known as ‘post-loss speeding’. Researchers found people who lost a bet involving real money started the next game up to 20% faster after a loss. They also

found higher rates of post-loss speeding with larger losses, suggesting the more gamblers lose, the faster they try to get their money back.

Post-loss speeding is a mental process which is initiated by the need to recoup losses as quickly as possible and is most likely triggered by frustration or regret. This failure to adjust behaviour and learn from negative experiences is also central to substance abuse and addiction.

Other studies have confirmed that gamblers who lose do not approach their next play with greater caution. In short, gamblers will continue gambling in an attempt to recover their losses. Typically, a loss 'frustrates' people because they do not get what they want, and this encourages them to try again as quickly as possible.

Gambling is a game of pure chance and so quickly trying again after a failure might seem advantageous, but in any gambling game, the odds are always stacked against you.

When gamblers are losing money gambling, they return as soon as possible to try to get even. This is known as 'chasing' but as we all know, gamblers never get even!

In 2017 study of gambling led by Dr Frederick Verbruggen, a cognitive psychologist at Ghent University, Belgium, researchers found that losses also speeded up later decision-making tasks that were unrelated to gambling or money, suggesting that any kind of loss has a general effect on action.

In further experiments carried out in the UK, the US, Portugal, Poland, Italy, Greece, Russia, Germany, Japan and more, participants behaved in much the same way. Consistent with the first experiments and the original 2017 study, participants started the next game faster after a loss than after a win. Overall, people who lost their bet started the next game 10 to 20% faster after a loss than after a win. Losses energised subsequent behaviour.

This behaviour challenges the 'post-error slowing effect' theory, where undesirable outcomes lead to restraint and increased caution. Failures to win in gambling can stimulate subsequent actions and increase impulsiveness. In other words, negative outcomes do not always result in more cautious behaviour.

In 2006, American psychologist Charles S. Carver carried out experiments which supported the concept of a 'meta monitoring loop' – the thinking process within the mind of a gambler, where their current position of success is compared with an ultimate goal.

Gambling behaviour is adjusted depending on how well the individual is doing in reaching this goal. For example, when a player is doing well and winning a large amount of money, subsequent effort is reduced such as by taking a pause after a high win. But if the individual is performing badly in reaching the goal, subsequent effort is increased and behaviour is stimulated.

The decision-making mental processes involved in gambling and negative outcomes could be applied to other failures in life and could lead to a better understanding of the development of maladaptive behaviour. People often slow down and become more cautious when things go wrong, but not when it comes to gambling, and especially problem gambling.

The complete study was published in *Royal Society Open Science*.

Problem gambling

Problem gambling is defined as gambling that disrupts or damages personal, family or recreational pursuits. The urge to gamble is irresistible despite obvious harmful negative consequences or even a desire to stop.

The British NHS provides the following questionnaire for those who fear they may be a problem gambler:

Answer each question and award yourself the following points:

- Score 0 for each time you answer 'never'
 - Score 1 for each time you answer 'sometimes'
 - Score 2 for each time you answer 'most of the time'
 - Score 3 for each time you answer 'almost always'
-
- Do you bet more than you can afford to lose?
 - Do you need to gamble with larger amounts of money to get the same feeling?
 - Have you tried to win back money you have lost (chasing losses)?
 - Have you borrowed money or sold anything to get money to gamble?
 - Have you wondered whether you have a problem with gambling?
 - Has gambling caused you any health problems, including feelings of stress or anxiety?
 - Have other people criticised your betting or told you that you had a gambling problem (regardless of whether or not you thought it was true)?
 - Has your gambling caused any financial problems for you or your household?
 - Have you ever felt guilty about the way you gamble or what happens when you gamble?

If your total score is 8 or higher, you may be a problem gambler.

Can someone's impulse to gamble be predicted? Scientists at Ohio State University believe they can – by observing how they move a cursor across a computer screen.

In a computerised gambling experiment, volunteers were given the choice of either clicking on a 'safe' option or a 'risky' option for monetary reward.

Those whose cursor drifted toward the safe option on the computer screen before they decided to take the more risky bet turned out to be more risk-averse. Those who moved the mouse toward the risk before accepting the safe option turned out to be more open to risk.

Those who ultimately click on the safe option are not necessarily bigger risk-takers than those who ultimately choose the risk, but the subconscious mouse-tracking experiments revealed hidden impulses.

Online gamblers who engage in lots of mouse movements when they have to make a key decision could be experiencing internal conflict.

The researchers claim that measuring mouse movements while participants are deciding between a risky gamble and a certain payout gives away their conflict about the options, and this conflict strongly predicts their risk preferences. The degree to which their hand is drawn to the choice they don't make reveals a lot about how difficult the decision was for them.

Mouse tracking could have applications beyond gambling. For example, companies could monitor online purchase behaviour and learn about customer's preferences. For that matter, scrolling on a phone screen could also provide information on how people are making decisions. In effect, what is being measured is a physical manifestation of hesitation which offers clues to internal conflict.

The researchers told some participants to treat the experiment as a stock trader would – instead of focusing on individual gambles, they would instead build a portfolio of winning choices. The mouse tracking showed they were less conflicted when they accepted gambles and more conflicted when they rejected them – just as expected.

Mouse-tracking is a very useful tool for tracking people's decision-making processes, providing a real-time feed of how close they are to making a choice.

In most gambling experiments, simply asking a participant what choice they would make does not reveal their subconscious conflict over how they arrived at a decision.

Mouse tracking has proved in can accurately reveal the strength of a person's preference or how close they were to making the other choice. In some cases, the researchers could accurately predict how people would behave in the future after being observed just once – a rarity in predictive experiments.

The study was originally published in the *Proceedings of the National Academy of Sciences*.

The consequences

An Oxford University study showed the devastating impact on the health of those who get into financial trouble because they bet more than they can afford.

A gambler who spends 30% of their available income on gambling was a third more likely to die within five years than a non-gambler. Even someone gambling a tenth of their income was 12% more likely to die over the same period.

There is a clear relationship between gambling and mortality – especially at higher levels. Problem gamblers are likely die younger, leaving a trail of debts, broken families and ill health.

The Responsible Gambling Strategy Board claims nine out of ten young people have been exposed to gambling adverts and marketing on TV and social media. As a result, gambling risks are becoming normalised in the minds of many children – with the risk that more are sucked into betting at a young age.

In the most comprehensive study of its kind ever conducted in the UK, and published in the journal *Nature Human Behaviour*, explains in detail how Britons' gambling habits affect their finances.

Researchers analysed the 2018 spending habits of 6.5million anonymous Lloyds Bank customers and found that just over two in five Britons spend money on gambling, depositing money in a betting account on average once a week or paid for with a debit card, credit card or direct debit.

The average amount spent on gambling was £1,345, or £112 a month, although that figure is skewed by big spenders. The top 1% of gamblers, approximately 218,000 people, spent at least £1,838 a month which is 58% of their available income, including money spent on housing, food and utility bills, suggesting many could not afford their losses.

508,000 gamblers spent more than £933 per month on gambling – 40% of their disposable income. 2.2million people gambled at least £153 a month. Half of all players spent an average of £10.41 a month.

The data did not include lottery tickets or scratch cards bought in shops or cash bets.

The Gambling Commission estimates the number of problem gamblers to be about 400,000, including 55,000 children, with an additional two million people 'at risk' of harm.

The study also found that players who devoted a larger proportion of their spending to gambling were more likely to struggle to pay for housing and bills. In the transactions analysed there was a sharp acceleration in signs of financial distress – missing a mortgage, loan or credit card payment – when gamblers devoted more than 4% of their spending to betting.

This is only £80 for a person who spends £2,000 per month, or the take-home pay of someone on an annual salary of £30,000.

Britain is currently [2019] undergoing the biggest shake-up of gambling laws in 15 years. Under proposed changes, bookmakers will be forced to carry out affordability checks on

customers. The Gambling Commission is also looking at a 'soft cap' on spending of between £100 and £450 per month. The Oxford study showed that a cap of £275 would affect about a tenth of gamblers, or 2.1million people.

The Betting and Gaming Council has recently introduced a number of safeguards and interventions, such as enabling customers to self-exclude completely and closing over a million online accounts in the past year.

Statement by Stewart Kenny, Chief Executive of gambling giant Paddy Power from 1988 to 2001

When online gambling started to take off in the UK, I had been a bookmaker for close to three decades. But despite my many years of experience, I failed to see the scale of the emerging challenge, until too late.

I resigned from the board of the company I co-founded in 2016 because of deep concern that bookmakers were failing to take effective action to curb gambling addiction – but I have not written about it in public until now.

Even in the mental health arena, where I now work, gambling was considered by many to be only a quasi-addictive pursuit.

But online gambling, which places a 24-hour casino and bookmaker into every pocket and home in the country, has shifted betting from a camouflaged addiction to one that's now front page news. Its pervasiveness has harmed thousands of families across Britain, but despite the compelling evidence of its destructive force, the industry remains in denial.

The failure to regulate this growing problem is in full view today after research revealed the incredible sums lost by Britain's heaviest gamblers.

Years of experience both inside and outside the board room has led me to believe that you'll never get the bookies to self-regulate – so the Government must step in and protect the young and vulnerable from the risk of developing serious gambling addictions, as it did with cigarettes.

But, as my former board colleague Fintan Drury (Paddy Power chairman 2002-2008) has said, there is a 'troubling partnership' between the bookies and the British government that 'facilitates the addictive tendencies of hundreds of thousands of citizens'. And as two industry veterans we have to accept our responsibility for not seeing the potential for societal damage.

But we also have to ask – are some of the billions of pounds earned by Rishi Sunak's Exchequer legitimate when many vulnerable gamblers are being harmed? I propose three steps that can be taken now.

First, the Government should legislate to introduce mandatory deposit limits – for all customers. All online bookmakers have voluntary deposit limits where a customer can put a maximum amount in their betting account each day, week or month. Sadly, the very people who most need to apply these limits are the ones who choose not to.

Optional limits are really no more than an industry fig leaf. The deposit limits need to be mandatory, enabling 'at risk' customers to avoid self-destructing at a point where rational behaviour has been compromised.

Another initiative that would make a fundamental difference is a £2 stake limit on online slots – in line with the limit for fixed odds betting terminals (FOBTs).

This fundamental change considerably eased the worst excesses of in-store gambling, but it was only made after a strenuous campaign by this newspaper and others, by cross-party parliamentary collaboration, and by the principled resignation of a government minister, Tracey Crouch MP.

While a few individual industry figures campaigned for the change, the sector as a whole invested all its resources to stop and then to delay the introduction.

This is important context for where we stand now on elements of online gambling and on how government, whatever the consequences to the Exchequer, needs to force the hand of the industry.

Finally, we also need to see moves to stop the cross-selling of more addictive casino products to under 25s, who go online to bet on their favourite sport. Again the industry seems unprepared to act so ministers must. For all three suggestions the review of the 2005 Gambling Act, launched in December, provides ample opportunity.

None of these suggestions would lessen the enjoyment of those who love having a bet, but they would protect the young and vulnerable.

The Oxford research makes clear that three-quarters of gamblers spend less than £36.50 per month. For the majority of their customers betting is an enjoyable pastime, but for hundreds of thousands it leads to despair.

The industry of which I was part for decades has for far too long hoped for a ‘magic wand’ solution that would curb gambling addiction without affecting profits. But the bosses who have followed in my footsteps have a bitter pill to swallow – they will have to sacrifice some of their profits, maybe up to 15 per cent, in order to make some products less addictive. And it is the Government that must drive this.

As an industry veteran, I accept my responsibility for not seeing just how much the development of online gambling would damage vulnerable people and parts of society.

I acknowledge that I shoulder some of the blame for the harm caused by the addictive nature of some online gambling products. I wish I’d been a lot more pro-active. The fact I did not do more leaves me with deep regret.”

Stewart Kenny co-founded Paddy Power in 1988. He resigned from its board in 2016 over its failure to tackle problem gambling and now works as a psychotherapist.

Paddy Power is now part of Flutter Entertainment plc, the world’s largest gambling firm.

Smoking Addiction



Nicotine is no more addictive than a placebo

Smokers...! Pay attention!

It's not the nicotine that gives you the 'rush' but the dopamine the brain produces when nicotine enters the body that's the real culprit! It's the dopamine rush that's the real cause of your addiction! Ingesting cigarette smoke directly into the lungs is a very efficient way of directing nicotine straight into the bloodstream.

But there's something else to take into consideration here and that is the smoker's *belief* that the cigarette will deliver a 'high.' This notion confuses the brain – it's the placebo effect in action.

Researchers led by Dr Xiaosi Gu and Dr Read Montague at the Centre for Brain Health at the University of Texas at Dallas have made a remarkable, if unsurprising, discovery.

The study involved 24 chronic nicotine-addicted smokers, each of whom underwent fMRI scans (designed to capture neural activity in the insula cortex) before and after each session. The insula cortex plays a key role in bodily perception and self-awareness and is also associated with drug related craving and addiction.

- In the first experiment, the subjects were told the cigarette contained nicotine, but it was actually nicotine-free.
- In the second experiment, the subjects were told the cigarette was nicotine-free, but was actually a normal nicotine cigarette.
- In the third experiment, the subjects were again told the cigarette contained nicotine, which it did.
- In the fourth experiment, the subjects were given nicotine-free cigarettes and were told they were nicotine-free.

Before each session, and again after smoking the cigarette, the participants rated their levels of craving.

As expected, the fMRI scans showed significant neural activity correlated to craving when participants smoked a nicotine-free cigarette and were told it was nicotine free.

Conversely, when they were given a nicotine-free cigarette but believed was a normal cigarette, the neural activity related to craving was almost completely absent.

These results support previous findings that belief can alter a drug's effects on craving.

Expectation also plays a part. Studies involving fake drugs given to student volunteers have proved this to be correct. The belief that they have taken the real thing alters their perception and their behaviour. When questioned about the 'drug' experience, most participants reported feelings of being disorientated and even 'spaced out.'

All this research has important ramifications for addiction in general.

The research suggests that for drugs to have an effect on a person, they need to believe the drug is present.

The researchers hope that their results will provide insights into possible avenues for new methods of addiction treatment.

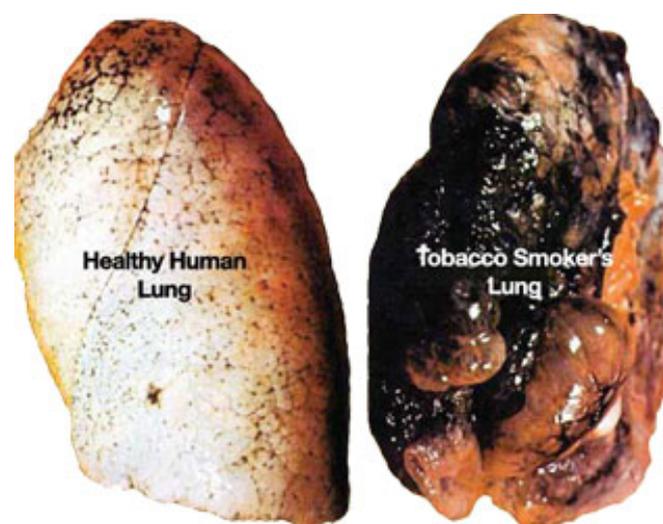
For a long time we have understand that one of the major causes of addiction has a lot to do with boredom and lack of things to do to occupy the mind. Now we understand that the temptation/reward mechanism is an integral component of all addictive behaviour and it's as pertinent a driver for smoking as it is for alcohol and gambling.

Smoking is addictive, yet no one who smokes can say that cigarettes actually taste good – they don't – in fact they taste like shit. Ask a smoker about this and you'll be surprised by the answer. The act of smoking a cigarette is not pleasant – it's the nicotine kick the smoker likes.

It's actually hard to start smoking – again, you can ask any smoker – the first few cigarettes make the novice cough because it's difficult for the lungs to ingest smoke and in many cases, cigarettes induce feelings of nausea.

Again, the application of a little mindfulness will help the smoker think more carefully about their habit – and the fact that smoking makes your clothes smell and your house stink of stale tobacco.

Addiction is *a/ways* a matter of choice. There are lots of obvious reasons to stop smoking, but here's another one:



Stopping smoking is easier than you think

We've all made that resolution to stop smoking - and then started again a couple of weeks later.

Every time I do a show or a talk, I get requests from people who want to give up the vile weed. Well... *giving up tobacco is a lot easier than you think!*

If you're in a meeting, or on a long haul flight, or at the cinema, I'll bet you don't miss having a cigarette. So why should any other time be different? And in any case, do you wake up in the night every half hour gasping for a cigarette? I don't think so. Here's why...

We all know that smoking damages your health (and the health of your children) but surprisingly, it's not the nicotine that's addictive, it's the HABIT that is the real addiction.

This is because the mind associates smoking a cigarette with having a good time. The truth is that the 'hit' only lasts for a few seconds - but even so, people feel they have to smoke the whole cigarette because they've paid for it!

Smokers always say they enjoy it, but when pressed, they find it impossible to explain why!

Think about it for a moment... there isn't really any long-term physical pleasure in smoking at all.

Remember your first cigarette? It probably made you feel awful, so why did you continue?

If you didn't smoke, would you let someone poison you over a period of time and make you pay for the privilege?

Smoking is like being trapped in a prison where the door has been left unlocked - so why not take ownership of your life and just walk out? After all... no one is stopping you!

Maybe it's time to ask yourself 'Who is in control - me or the cigarette?' I mean... would you normally consider suicide?

Physical withdrawal symptoms from nicotine last only a few hours and so the physical withdrawal is negligible. *Again, it's the habit that you have to beat!*

People tend to exaggerate the difficulty of giving up smoking.

Turning your back on cigarettes is not a sacrifice! *Giving up the one thing you don't want in life is actually much easier than you imagine...*

It's all about changing your perspective. And guess what - going without cigarettes gets easier, not harder, because habits can be broken as easily as they were created in the first place.

People who light up every time they are stressed are only fooling themselves - the problem will still be there after the cigarette is finished. If you can deal with any situation without smoking, then you can deal with anything life throws at you.

Here's another little known fact: not one cigarette company executive smokes – even the cigarette companies and their advertising agencies admit that their product will kill you eventually!

If cigarettes were invented tomorrow, they would be banned immediately because tobacco is a uniquely dangerous product, and the only dangerous product to be sold legally.

Consider this: the craving for a cigarette only lasts for a few seconds.

Every time you overcome the craving you have not only scored a small victory but you are also training your mind to think straight.

Think of the money you will save. If you smoke an average of 20 a day, just pause for a moment and work out what it costs you every year!

Stop smoking altogether and you will soon notice your body getting fitter and healthier.

Try not to think about how long it has been since your last cigarette because this creates a mental block – one you can do without.

Think of stopping smoking as a huge relief!

Your faithful friend is actually a traitor, and one that you're better off without.

The bottom line is that dependency on cigarettes is always psychological rather than physiological.

The idea that there will be terrible withdrawal symptoms is a myth – there won't be! You are irritated by life's troubles, not by going without a cigarette.

In other words, if you expect to feel this way, the odds are that you probably will. This is just a trick your own mind plays on you, and it's otherwise known as 'perception.'

One of the most successful ways to give up is to make yourself aware of your smoking. We are constantly bombarded with information from all sorts of sources that tell us it's hard to give up *and this is an illusion!*

Hypnosis can change the way you feel and think about smoking permanently because it focuses your attention on your smoking as soon as you reach for a cigarette. It's also a profoundly relaxing experience. And it's also a great cure for stress!

Some people use hypnosis to help them to sleep better at night.

I dare you to try...



Shopping Addiction



Most psychologists and behavioural therapists think that being addicted to online shopping should be recognised as a mental disorder. Researchers have been able to recognise distinct symptoms and characteristics of online shopping addiction and how it affects behaviour.

'Buying-shopping disorder' (BSD) has been recognised for many years, even though it has not yet been officially classified as a disorder. But it is part of a category named 'other specified impulse control disorder'. In the meantime, experts say it is taking on a whole new meaning because of the undeniable growth of online shopping. BSD now affects one in 20 people – 5% of the population. Having such serious psychological causes and effects means it deserves more serious attention.

People obsessed with spending online may end up hoarding the things they order. Inevitably they lose all self-control, end up in debt, and argue with loved ones. Psychotherapists at Hannover Medical School, Germany, say the condition had gone unrecognised and ignored for too long.

The Hanover team examined evidence from 122 patients seeking help for their online shopping addiction and discovered they had higher than usual rates of depression and anxiety.

They believe the rise of online stores and apps, and the convenience of home delivery have added an entirely new dimension to the concept of a shopaholic.

Compulsive Buying Disorder often happens alongside other mood, anxiety or eating disorders, and even substance abuse and often starts to appear in the late teens or early twenties, and usually gets worse over time.

Symptoms include:

- Accumulating debt;
- Hiding purchases from loved ones;
- Tensions or breakdowns in relationships between friends and/or family;
- Compensating for negative feelings by buying things;
- Trying to stop shopping but are unable to.

The internet has not only made shopping more accessible, it has enabled addicts to shop anonymously. Online shops are open 24 hours a day, and goods bought online are often cheaper than in the shops and therefore more affordable. Even better, you can buy almost anything online, and sites like Amazon and Wish can undercut high street prices by huge

amounts. Shoppers can buy things without facing a shopkeeper or carrying them down the street. All these advantages conspire to ensnare the compulsive shopper.

One major and disturbing problem is that more and more young people are showing signs of BDS, often driving themselves into debt. In particular, the online form of BSD can cause a loop of extreme cravings for buying things and unnaturally high levels of satisfaction when spending money, and opening the package when it's been delivered. It's not unknown for people to constantly check Tracking Apps which tell the consumer how many stops away the delivery driver is!

This extreme behaviour can then lead to a breakdown in self-control, relationship difficulties, extreme distress, physical clutter, debt, and other psychiatric problems.

The research was published in the journal *Comprehensive Psychiatry*.

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