

Collated  
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**PAUL DEVENYI: ADDICTIONS ARE NOT TREATABLE DISEASES  
and  
PAUL DEVENYI: PHARMACOTHERAPY OF ADDICTION NOT A  
SUCCESS STORY**

**Collated Document  
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This document includes Paul Devenyi's essays on Addictions Are Not Treatable Diseases and Pharmacotherapy of Addiction Is Not a Success Story and the exchange between Peter R. Martin and Devenyi that followed the first.

This collated document is now open to all INHN members for a final comment.

**Paul Devenyi            Addictions are not treatable diseases**

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**Paul Devenyi            Pharmacotherapy of addictions: not a success story**

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**PAUL DEVENYI: ADDICTIONS ARE NOT TREATABLE DISEASES**

In 1960 Dr. E. M. Jellinek (not a physician) wrote a landmark book: "*The Disease Concept of Alcoholism*". He did away with the commonly held concept that alcoholics are weak, morally bankrupt individuals and even offered a scientific classification for different forms of alcoholism (Jellinek, 1960). Many people jumped on the "disease concept" bandwagon and it was extended from alcoholism to other drug addictions. Political correctness demanded that addicts are to be regarded as unfortunate sick people who need treatment and not jail or other

harsh methods. We have lived under the "disease concept" for half a century. But not everybody bought into this concept (Heyman, 2009). Nonetheless, the addiction treatment industry mushroomed, ranging from dingy clinics to posh luxury resorts. The net result was that there was no progress in 50 years; addictions are just as untreatable today as they were half a century ago. Addictions are not diseases, but the results of foolish human behavior, nourished by individual or social-cultural facilitating circumstances. They are not diseases per se, but in the process they may reach disease proportions.

Treatment consists of counseling, ("stop drinking", "quit drugs") and occasional pharmacotherapy (e.g., disulfiram to create an unpleasant reaction to alcohol, naltrexone to block the brain opioid receptors thus render the drug useless). The pharmacological approaches failed, because the patients have to be motivated to take the drugs indefinitely or at least for long periods and they don't. The treatment centers (so-called: "Rehab") are largely useless. Currently the US congress is planning to conduct an audit of them.

After nearly 50 years practicing as an addiction internist (mainly concentrating on physical complications), I drew the above conclusions and I am offering the following points for debate:

1. Addictions are not diseases but disorders of choice.
2. Some addictions become diseases by virtue of their complications.
3. There has been no progress in "treatment" in the last 50 years.
4. There is spontaneous recovery in a minority of addicts, but that is independent of the intensity of "treatment".
5. To solve the problem of addictions is not a matter of individual therapy, but social engineering, such as law enforcement and education.

### **References:**

Heyman GM. *Addiction. A disorder of choice*. Cambridge: Harvard University Press; 2009.

Jellinek EM. *The Disease Concept of Alcoholism*. New Haven (Conn): College and University Press; 1960.

August 22, 2013

### **Peter R. Martin's comment**

Paul Devenyi succinctly explains why he believes that “addictions are not treatable diseases”, simultaneously calling into question whether addictive disorders are in the medical domain and also whether they are treatable disorders. He claims that addictions are instead “the results of foolish human behavior, nourished by individual or social-cultural facilitating circumstances” that only as a result of their complications “may reach disease proportions”. Of course, many illnesses physicians face in developed countries can be conceptualized in much the same way as Devenyi understands addictions. Most chronic diseases, the major challenge or modern medicine, require thoughtful management over a lifetime of exacerbations and remissions. “Cures” as can be obtained with antibiotic treatment of acute infections or surgical removal of pathologic tissue are simply not the goal for chronic diseases. A classic example of another disorder that closely resembles Devenyi’s description of addiction is over-eating. While over-eating can progress to type 2 diabetes mellitus and diverse end-organ damage eventually, what then is the primary problem, the over-eating that causes obesity or the resulting insulin resistance? According to Devenyi, insulin resistance and its complications are the disease and over-eating is beyond the scope of medicine. Fortunately, this viewpoint is starting to change in modern medicine.

Devenyi clearly enumerates in his essay five supporting points upon which his contentions are based and I will address each in turn:

First, “Addictions are not diseases but disorders of choice.” This simply implies that “choice” is a black box, the interior of which is a mystery and hence immutable. In fact, loss of control of choice, not the complications of repeated alcohol/drug use, is the primary symptom of addiction. Many addicts seeking help are incapable of stopping their self-destructive behaviors and are highly sensitive to relapse-triggers within the environment. In fact, the neurobiological underpinnings of the choices people make are currently the focus of active investigation. Elucidation of the neural pathways that mediate reward and decision making, as well as the molecular biology of learning and memory have led to better appreciation of the pathophysiology of addiction and should result in therapeutic advances. Hence, the out-of-control behaviors that are self-destructive (addiction) may be modified throughout a patient’s life using pharmacological as well as social and behavioral strategies. In fact, most of psychiatry

deals with emotions, sensory phenomena, cognitions, and other aspects of behavior that are not characterized by laboratory abnormalities, are not readily observed via radiologic studies, nor easily examined under the microscope. Neither can most psychiatric disorders be removed like an inflamed appendix. They, nevertheless, can be reliably diagnosed and managed by appropriate (non-curative) clinical interventions, a characteristic they share with a plethora of chronic medical diseases.

Second, “Some addictions become diseases by virtue of their complications.” In fact, the more we understand brain reward mechanisms, the more apparent it has become that these neural pathways are highly sensitive to repetitive out-of-control drug use. Thus, in addition to the clinically apparent complications of various organ systems resulting from drug use, to which Devenyi refers, the reward pathways that actually initiate and perpetuate drug use are allostatically modified during the life-course of addiction and thus may profoundly influence the “choices” the addicted individual ultimately makes. Moreover, much current research deals with personality and cognitive styles that predispose young people to impaired decision-making and subsequent drug use disorders prior to their first use of alcohol/drugs and such premorbid characteristics might rightfully be viewed as predisposition to, rather than consequences of addiction. Research findings are also accumulating concerning genetic factors that contribute to development of addiction, as well as environmental factors such as exposure to drugs in utero or early life events that occur prior to emergence of addictions. Choice is not a “black box”, but rather a difficult to unravel phenomenon with its own neurobiological underpinnings that should not be discounted. Some choices may ultimately lead to overt pathologies, but such choices can, nevertheless, be considered as pathologic even before the consequences are visible in tissue damage. Much as in cancer, early identification may lead to better outcomes using appropriate interventions. It is just the fact that wrapping one’s mind around choice is so very difficult that makes some believe that the complications of addictions are the only part of this process that merit the term “disease.”

Third, “There has been no progress in ‘treatment’ in the last 50 years.” There have certainly been no addiction “cures” in the past 50 years, and frankly, I doubt whether there will ever be. In fact, the greatest advance in addiction treatment has been to stop viewing the addiction treatment process in inappropriate surgical or infectious disease terms, but rather as a

chronic disease such as hypertension, diabetes, etc. If treatment of hypertension or diabetes is successfully managed with lifestyle changes and medications administered throughout the patient's lifetime, it reduces the probability of complications. Ultimately, management of addiction is also minimizing the emergence of the complications which Devenyi views as the only "real disease" component of addictions. There are, however, significant advances in cognitive behavioral and motivational approaches, as well as pharmacological strategies derived from our understanding of neurobiology, that alter the natural course of addiction. In fact, approaches to addiction treatment have served to shed light on a significant component of all medical diseases, namely health behaviors, so-called choices the patient alone can make, that are beyond the control of the physician, but nonetheless can enhance response to treatments offered by the medical profession. Consider recovery post-myocardial infarction (not to mention prevention of heart disease *per se*) or control of blood glucose in diabetes (if not prevention of the type 2 diabetes in the first place), among many other examples.

Fourth, "There is spontaneous recovery in a minority of addicts, but that is independent of the intensity of "treatment"." A wise pediatrician told me while I was in medical training that most acute otitis media resolves without antimicrobial treatment; this does not negate the value of antibiotics, nor indicate that antibiotics might not help some cases of otitis media. Addiction likewise can resolve without treatment. That says little about the value of the treatment, but rather suggests that not all individuals who are diagnosed as having addiction are identical. Nor would we expect them to be the same, as we really do not fully understand the etiopathogenesis of any psychiatric disorder, not just drug use disorders.

Finally, "To solve the problem of addictions is not a matter of individual therapy, but social engineering, such as law enforcement and education." These environmental interventions can certainly influence the prevalence of alcohol/drug use disorders, but if an alcoholic is placed on an island where there is no alcohol, will he/she be cured, or will other behaviors emerge that replace the alcohol?" I ask this question to be thought provoking rather than because I know the answer. However, the more we investigate drug use disorders, the more we recognize that the problem(s) do(es) not only lie in the availability of the agent of abuse, but rather in individual differences in experiencing the world and coping with its challenges, and many of these pathological differences pre-date actual initiation of alcohol/drug use. Many of the psychoactive

substances that people use in an out-of-control manner do not cause, but rather, they contribute to the suffering experienced by the addicted individual. Fortunately, in the last half century significant improvements have occurred in how we view and approach our patients afflicted with these disorders without deluding ourselves that we can cure their disease (Martin, Weinberg and Bealer 2007).

## **Reference**

Martin PR, Weinberg BA, Bealer BK. *Healing Addiction. An Integrated Pharmacopsychosocial Approach to Treatment*. Hoboken (New Jersey): John Wiley & Sons; 2007.

September 12, 2013

## **Paul Devenyi's reply**

Peter Martin was a very talented research fellow in the institution I used to work. I am pleased to see that he developed into a very talented and highly respected psychiatrist. His response is eloquent, making many good points. I don't believe he is violently opposed to what I said, but he certainly has a more optimistic view about the future of addictions and their treatments, than I have. I highly respect that.

The comparison between alcoholism and type 2-diabetes is often made. Yes, insulin resistance is the underlying disease along with several other factors (genetic, immunological). If, as in Martin's example, we compare the control of diabetes as a chronic disease with that of alcoholism, the latter is so far behind that similar outcomes in diabetes would give our health care system the shivers.

I agree with Peter that "loss of control" defines addictions more than for example cirrhosis defines alcoholism; when addiction reaches the "loss of control" stage, we can really talk about a disease. I am glad Peter is optimistic that "addiction may be modified throughout a

patient life using pharmacological and behavioral strategies". I think pharmacological approaches failed so far perhaps behavioral ones might produce some success.

As to "pre-morbid characteristics" being predisposing factors, I never came to term with "addictive personality". I still think addiction will be largely determined by the family a patient comes from, by cultural determinants and values of his social milieu and the peer group he associates with. Genetic factors underlying addictions have been proposed, but the evidence so far has been weak.

I still believe that "social engineering" represented by educators, the media, police, judges, social agencies, etc. could have more impact on the prevalence and perhaps the outcome of addictions, than the medical profession.

As to Peter's alcoholic who is "placed on an island where there is no alcohol, will he/she be cured or will other behaviors emerge that replace the alcohol?" As Peter, I don't know the answer either. My guess is that even after many years of escaping from the island, he/she will drink in an uncontrolled fashion again. In the meantime, if the island has a medical school, he/she may become a psychiatrist.

Peter, thanks again for your reply and I am heartened by your overall optimistic approach that an old cynic as I, doesn't have.

October 3, 2013

### **Peter R. Martin's response to Paul Devenyi's reply**

Paul Devenyi is hardly an old cynic! Rather Dr. Devenyi has a tremendous amount of clinical experience as an internist dealing with patients who have medical complications of drug use disorders. He voices opinions which many would endorse and he expresses them well, indeed. His perspective is clearly guided by the patients he has seen, those who are fairly late in their addiction, when the physical consequences of drug/alcohol abuse begin to overwhelm the

clinical presentation. This may well explain our different perspectives. All the same friends can differ without acrimony and can both be correct to some extent.

We are not doing as well with type-2 diabetes as Dr. Devenyi suggests, or stated otherwise, the outcomes are not much worse in addiction than in other common medical conditions (McLellan et al, 2000). Accordingly, the health care system is definitely shivering (paraphrasing Devenyi) and some of the principles employed in addiction treatment might actually benefit those with obesity and type-2 diabetes - if only internist/endocrinologists would recognize that the problem in these type-2 diabetes patients is substantially affected by their *behavior* (overeating) and the insulin resistance may emerge as a consequence (if you feed a rat excessive amounts of a high fat diet, it will develop insulin resistance, as do humans, probably) (Pendergast et al, 2013).

Second, loss of control typically occurs in the very early stages of addictive disorders (Koob and Le Moal, 2005), not just in the later stages as Dr. Devenyi implies. Devenyi's perspective makes sense, because as an internist, he predominantly saw patients at a stage when various end-organs were affected by behaviors that had been ongoing for sometimes a decade or more. It is the longitudinal study of those with family histories of addiction that has allowed us to state that neuropsychological deficits may precede the development of addictive disorders (Tarter RE et al. 2003). Plenty of research suggests that such subtle abnormalities of brain wiring may be strongly influenced by genetic factors, a series of investigations that has its origins in Begleiter's seminal findings in boys at risk for alcohol dependence published about three decades ago (Begleiter et al, 1984).

I do not dispute Dr. Devenyi's notion that "social engineering" represented by "educators, the media, police, judges, social agencies, etc. could have [an] impact on the prevalence and perhaps the outcome of addictions". However, I do not believe the medical profession can wash its hands of these self-destructive out-of-control behaviors which are squarely in the realm of psychiatry. In fact, it is just such issues that now are permeating the rest of medicine, and hence, expertise in management of these *behaviors* is increasingly of interest to physicians outside of my specialty.



Finally, let me close with mention of that poor alcoholic soul on a desert island without alcohol - let us hope he will have access to a medical school rather than alcohol. But who is to say he will become a psychiatrist? In my opinion, he may equally well turn to internal medicine or surgery....

Paul, it is quite enjoyable having this intellectual joust with you, and I sense that you have enjoyed it as well. Perhaps at this stage, we might have input from other colleagues in our community.

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Pendergast JS, Branecky KL, Yang W, Ellacott KLJ, Niswender KD, Yamazaki S. High-fat diet acutely affects circadian organization and eating behavior. *Eur J Neurosci* 2013; 37(8): 1350-6.

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October, 31, 2013

## PAUL DEVENYI: PHARMACOTHERAPY OF ADDICTIONS NOT A SUCCESS STORY

As an internist I somehow strayed to this website and got myself embroiled in some controversies about my view that addictions are not treatable diseases, perhaps not diseases at all, but self-induced irresponsible behaviors of choice. This point of view is not popular, of course, and not politically correct. Unless psychiatrists and behavioral scientists come up with some useful behavioral strategies, the future does not look promising. I came to this conclusion after 50 years of (wasted?) career in addiction medicine where I was involved more in the management of medical problems and complications than in addiction per se. Since programs ranging from 12 steps to individual and group counseling did not produce overwhelming success, there was an increasing demand from public and professional circles, that we come up with some viable pharmacotherapies, whereby the addicts go home with a prescription, take it and presto, he is no longer an addict. I thought it would be appropriate to this website to briefly review the available pharmacotherapies, which so far have not been a success story.

The oldest drug therapy for alcoholism has been **Disulfiram (Antabuse)** with more than 60 years history and still going. The drug arrests alcohol metabolism at the intermediate acetaldehyde level and the accumulating acetaldehyde causes a variably unpleasant reaction. The idea is that the alcoholic voluntarily takes the drug and if he drinks on it, gets punished therefore he would be too scared to drink. Attempts were even made with involuntary administration such as by a concerned spouse or an employee health nurse; these attempts usually fail, because alcoholics are clever to cheat and wiggle out of the forced administration. Voluntary use of the drug, which is the standard today, is unsuccessful because the minority of alcoholics who accept it at all, don't take it long enough to be useful. I just mention in parenthesis that depot injection of disulfiram was abandoned, because the drug does not absorb reliably from depot sites.

For opioid addiction a feasible treatment appeared to be **naltrexone**, an opioid antagonist which - by blocking the receptors - would render the opioid ineffective, thus wasteful. It was assumed that the narcotic addict would voluntarily protect himself from the pleasures of his drug, thus won't use it. Like with disulfiram, the trouble is that most addict won't take it and certainly not long enough to extinguish the dependency. A few years ago reports appeared that naltrexone, in a non-specific way somehow decreases alcohol craving, thus people would find it easier to

abstain or would drink less. To my knowledge this did not catch on and I did not find a single alcoholic in my practice, to whom it did anything. Similar anti-craving effect has been claimed for **acamprosate (Campral)**, long popular in Europe and relatively new in North America, which supposedly controls the alcohol craving of the already detoxified alcoholic, thus he won't drink again.

In the 1980s Doug Teller and I ran a study on **bromocriptine**, for cocaine addicts, a dopamine antagonist which supposedly diminished cocaine craving, by decreasing the pleasure-causing effect of dopamine (Cocaine increases dopamine in the brain). We could not distinguish the effect from placebo.

**Methadone**, a long acting opioid is an old and more or less accepted drug substitute treatment for heroin and sometimes other opioid addiction. In my view, true and long lasting successes are not unheard of, but rare. **Buprenorphine**, a partial opioid agonist with a long half-life, has been used in the last few years for opioid dependence and withdrawal, preferred by some over methadone. I don't know of any overwhelming success; personally I did not use it.

Several drugs are used in addiction medicine for **detoxification** or drug withdrawal. "Cold turkey" withdrawal is inhumane and at times dangerous.

Depressant drugs are withdrawn gradually to avoid unpleasant and sometimes dangerous withdrawal symptoms. As such, it is a successful treatment. As to maintain a drug free lifestyle, withdrawal tapering seldom has a lasting impact. In principle you taper the same drug what the patient was using or a long acting equivalent, such as methadone for opioids and diazepam for benzodiazepines. Alcohol is an exception; you don't use alcohol for its withdrawal, the commonly used drugs are benzodiazepines, thiamine to treat or prevent Wernicke encephalopathy and peripheral neuropathy, haloperidol for delirium tremens.

Non-depressant drugs, such as cocaine, cannabis, etc. do not require tapering.

A newer and intriguing approach to addictions - still in experimental phase - is **immunization**. At Cornell, they experimented with cocaine vaccine: cocaine, a small molecule that is complexed with a large protein (common cold virus), producing a cocaine antibody response when exposed to the drug and prevents cocaine to reach the brain and produce euphoria. The Chileans are working on an alcohol vaccine. This is an entirely new avenue to treat addictions and some animal experiments have been promising. One still has to doubt that

this will be the panacea. It is not just the question that will it work, but whom, at what age, under what circumstances to vaccinate? The medical ethicists would have a field day.

Finally, a word about **cigarette addiction**. I am not a believer that the various pharmaceutical agents are that effective (Nicotine substitution, Zyban, Chantix). A lot of people quit spontaneously and the major factor is social pressure: education, propaganda, legal restrictions - the very factors that are mentioned in my first essay in controversies that can have more of an impact on addictions than drugs or individual treatment techniques.

December 5, 2013

Thomas A. Ban

November 17, 2016

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