

# **The Wager, Volume 8(21) - Thinking Outside the Box: Using Treatments for Substance Abuse to Inform Treatments for Pathological Gambling**

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The diagnostic criteria for substance dependence are characterized by tolerance, withdrawal, and narrowing of interests to drug seeking and ingestion (American Psychiatric Association, 1994). Pathological gamblers also develop tolerance and need to spend greater sums of money to achieve the same level of excitement as before on lower levels of wagering. Pathological gamblers experience withdrawal symptoms such as restlessness and irritability, and will narrow their range of interests to focus on gambling, at the expense of obligations to family and work (Griffiths, 1993; Lorenz & Yaffee, 1986; Wray & Dickerson, 1981). Petry (2002) considered that the similarities between symptoms of pathological gambling and substance dependence suggest that treatments for substance dependence might benefit pathological gamblers as well. In Table 1, this week's WAGER summarizes part of a literature review by Petry (2002) on the applicability of four pharmacotherapies to treat both substance dependence and pathological gambling. Specifically we report what Petry found regarding medications used to (1) treat withdrawal symptoms, (2) mimic the effects of the abused substance, (3) limit a person from consuming the substance by blocking positive effects or making the substance use aversive, or (4) treat concomitant psychiatric symptoms.

**Table 1. Pharmacotherapy treatments for substance abuse and pathological gambling (Petry, 2002).**

	<u>Medications for Withdrawal</u>	<u>Maintenance Drugs</u>	<u>Blockade Agents</u>	<u>Medications for Concomitant Disorders</u>
<b>Substance Abuse</b>	Medications include benzodiazepines for alcohol withdrawal, nicotine replacement therapy for nicotine withdrawal, and clonidine, benzodiazepines, or tapering doses of opioids for opioid withdrawal.	Methadone, levomethadyl acetate hydrochloride or buprenorphine have been used in the treatment of opioid dependence.	Naltrexone has been used to limit the reinforcing effect of opioid or alcohol use, and disulfiram has been used to exert aversive effects with alcohol use.	Antidepressants improved the outcome in some studies limiting cocaine, or methadone use. In other studies, antidepressants were more effective than placebo in treating depressive symptoms, but not substance dependence.
<b>Pathological Gambling</b>	No pharmacotherapy in use. Petry notes that perhaps because pathological gambling is associated with only mild withdrawal and does not exert a significant physiological dependence, the literature does not report medications used to treat pathological gamblers..	Apomorphine was shown to exert conditioned aversion to gambling in one study. Also Naltrexone has been shown to be useful in blocking urges associated with pathological gambling.	Apomorphine was shown to exert conditioned aversion to gambling in one study. Also Naltrexone has been shown to be useful in blocking urges associated with pathological gambling.	Selective serotonin reuptake inhibitors have been used with varying success to treat symptoms associated with pathological gambling.

Petry concluded, “In sum, much more research is necessary to better understand and treat pathological gambling” (Petry 2002, p. 189). In her review, Petry relies on DSM-IV diagnostic criteria to highlight the similarity between pathological gambling and substance dependence and suggests that these distinct disorders can be treated by similar interventions. If this is true, perhaps these disorders are not so different, and there is a weakness in the diagnostic system. Next, although Petry used substance abuse treatments to indicate potential and related pathological gambling treatments, we might consider how pathological gambling treatments can inform substance abuse treatments. Pathological gambling researchers have conducted innovative studies which might offer new clues to substance abuse researchers. In addition to seeking effective pharmacotherapies among current categories of medications used to treat substance abuse, researchers also should investigate pharmacotherapies that are outside those categories. For example, a recent report (Johnson et al., 2003) indicated that topiramate, a medication with applications for control of seizure disorders, was effective for treating alcohol dependence. Further research may discover similar non-conventional pharmacotherapies for use in pathological gambling.

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