# NO NREM PHASE 3-4 (DEEP SLEEP) AMONG BENZODIAZEPINE ABUSE PATIENTS IN METHADONE MAINTENANCE 

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Aims: As benzodiazepines (BDZ) abuse is highly prevalent among former heroin addicts, current MMTpatients, and poor sleep is highly prevalent complaint, we studied objective sleep patterns by polysomnography (PSG) and it relation with BDZ abuse.

Methods: Urine results for BDZ (and opiates, cocaine, cannabis, amphetamines) which are routinely monitored, were taken at the month before PSG night. Pittsburgh Sleep Quality Index (PSQI), a self report questionnaire, questionnaire for pain (chronic pain defined if patient had current pain that lasted for $\geq 6 \mathrm{month}$, of moderate or worse intensity), and DSM-IV-TR lifetime psychiatric diagnosis were studied.

Results: Of 67 patients, $44(64.7 \%)$ were positive to BDZ. Patients included $86 \%$ males, $64.2 \%$ with any DSM-IV-TR axis I psychiatric diagnosis, $47 \%$ with chronic pain, with no differences between BDZ groups. PSQI scores and objective sleep efficiency were similar between yes and no BDZ groups ( $12.4 \pm 4.1$ vs. $11.1 \pm 4.5, \mathrm{p}=0.3$, and $78 \pm 17.4 \%$ vs. $74 \pm 19.5 \%, \mathrm{p}=0.4$ ), but architecture differed notably. Specifically, 23(53.5\%) of BDZ group had no non-REM deep sleep (phases 3+4) at all as compared with 4(16.7\%) of the no-BDZ patients. REM phase was shorter among BDZ group ( $10.5 \pm 8.9$ vs. $15.4 \pm 7.3, \mathrm{~F}=5.4, \mathrm{p}=0.02$ ). No other differences were found, and the absence of phase 3-4 was not related to methadone dose, treatment duration, or history of opiate abuse.

Conclusions: Chronic / prolonged use of BDZ (which at times are prescribed for sleep), may disturb sleep, as shown to absolutely delete all restorative sleep phase. BDZ discontinuation is of important, but further studies are needed to establish the best way.

