

Hyperbaric Oxygen to Assist Adults With Opioid Use Disorder in Reducing Methadone Dose

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Abstract

Opioid withdrawal symptoms can interfere with substance use disorder treatment goals. This study investigated the acceptability, feasibility, and treatment effects of hyperbaric oxygen therapy (HBOT) as an adjunct to reduce withdrawal symptoms for adults initiating a medically supervised methadone dose reduction. Adults prescribed methadone for opioid use disorder were randomized into either a hyperbaric oxygen group (n = 17) or an attention control group (n = 14). The study site was an outpatient opioid treatment program in the northwestern United States. Participants were asked to attend five consecutive daily 90-minute HBOT sessions offered at 2.0 atmospheres absolute with 100% oxygen in a pressurized chamber. Treatment attendance and reported satisfaction were measures of acceptability and feasibility. Medication doses were tracked posttreatment at 1 week, 1 month, and 3 months. Withdrawal symptoms were assessed at baseline and daily during the 5-day intervention period. After randomization, 13 (76.5%) followed through with medical screening and HBOT sessions, and of those, nine (69.2%) completed all five 90-minute HBOT sessions. At 3 months, the treatment group maintained, on average, a 4.3-mg methadone dose reduction compared with an average reduction of 0.25 mg for control group participants. Opioid withdrawal symptoms were reduced after Day 1 of HBOT by twice as much, on average, compared with the control condition. Satisfaction surveys found participants were generally satisfied with ease and comfort of the treatment. The evidence that HBOT is an acceptable, feasible adjunct warrants future trials to determine more conclusively effects on withdrawal symptoms associated with methadone dose taper.