***N*-acetylcysteine Pharmacotherapy for Cannabis Use Disorder**

**Mechanism:** *N*-acetylcysteine (NAC) is an antioxidant that may affect drug use via glutamate modulation. NAC restores the cystine-glutamate exchanger in the nucleus accumbens after the exchanger is down-regulated by chronic drug use.

**Evidence:** In an 8-week randomized controlled trial of 116 adolescents with cannabis use disorder, NAC 1200 mg twice daily added to contingency management and brief counseling resulted in 2.4 times greater likelihood of producing THC-negative urines than placebo (Gray et al. 2012).

**Formulations:**

*Over the counter*

NAC 600 (GNC): 600 mg capsules

Ajipure NAC (Ajinomoto Pharmaceuticals): 600 mg capsules

PharmaNAC (BioAdvantex): 900 mg effervescent tablets

Note: *N*-acetylcysteine is also available as Mucomyst (Bristol-Myers Squibb), 10 or 20% solution for inhalation and Acetadote (Cumberland Pharmaceuticals) 20% sterile solution for injection. These formulations are indicated for the treatment of acetaminophen overdose. These are not the recommended formulation for use as pharmacotherapy for cannabis use disorder.

**Dosing:** 1200 mg twice daily, no titration necessary.

**Side Effects:** Mild side effects may include drowsiness, nausea, vomiting, sore mouth, runny nose, clamminess, fever, and GI upset. Rare serious side effects include bronchoconstriction and chest tightness (most likely from nebulized form).

**Drug-drug Interactions:** None documented.

**References:**

Gray KM, Carpenter MJ, Baker NL, et al. A double-blind randomized controlled trial of *N*-acetylcysteine in cannabis-dependent adolescents. *Am J Psychiatry* 2012 169:805-812.

Mucomyst® Prescribing Information. Bristol-Myers Squibb (Princeton, NJ), 2001.