

ENDS (Electronic Nicotine Delivery System, “E-cigarettes”) Treatment Recommendations

Measure dependence with the Penn State Electronic Cigarette Dependence Index (PS-ECDI)

[\[Penn State Nicotine Dependence Index - Penn State College of Medicine Research \(psu.edu\)\]](#)

(PS-ECDI) Score	Level of Dependence
0-3	Not Dependent
4-8	Low Dependence
9-12	Medium Dependence
13+	High Dependence

Adolescents

Dependence measured by the [\[Penn State Nicotine Dependence Index - Penn State College of Medicine Research \(psu.edu\)\]](#)

- American Academy of Pediatrics (AAP): “Given the effectiveness of NRT for adults and the severe harms of tobacco dependence, AAP policy recommends that pediatricians consider off-label NRT for youth who are moderately or severely addicted to nicotine and motivated to quit.”

Level of Dependence	Nicotine Gum	Nicotine Lozenge	Nicotine Patch
Medium	2 mg	2 mg	14 mg, step down
High	4 mg	4 mg	21mg, step down

[Nicotine Replacement Therapy and Adolescent Patients \(aap.org\)](#)

*Note: Youth < 18 years of age may need a prescription from a healthcare provider to access all forms of NRT.

Adult Non-Daily Users

<ul style="list-style-type: none"> Nicotine replacement therapy <ul style="list-style-type: none"> As needed NRT with 2-mg or 4-mg nicotine lozenge or nicotine gum 	Other Medication Options: <ul style="list-style-type: none"> Bupropion SR (also known as Wellbutrin and Zyban)
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ENDS (Electronic Nicotine Delivery System, “E-cigarettes”) Treatment Recommendations

Adult Daily Users

Medication Options:

- Varenicline usual dosing
- Nicotine replacement therapy (NRT)

Low Dependence	Medium Dependence	High Dependence
<p>As needed NRT with either 2-mg or 4-mg nicotine lozenge or nicotine gum</p>	<p>14-mg patch + as needed NRT with 2-mg lozenge, 2-mg nicotine gum or nasal spray with patch titration</p> <ul style="list-style-type: none"> • Titrate up the patch if they are using a large amount of nicotine lozenges, nicotine gum or nicotine nasal spray per day <p>Example: On a 14-mg patch and they are using 10 x 2-mg gum* per day, increase the patch to 21-mg and continue as needed NRT</p> <ul style="list-style-type: none"> • *Note: 1 mg of nicotine is absorbed from a 2-mg nicotine gum and 1.3 mg of nicotine is absorbed from the 2-mg nicotine lozenge <p>Example: On a 14-mg patch and they are using 10 or more nasal spray doses* (1 spray each nostril) per day, increase the patch to 21-mg and continue as needed NRT</p> <ul style="list-style-type: none"> • *Note: 1 mg of nicotine is absorbed from 1 dose of the nicotine nasal spray (1 spray in each nostril.) 	<p>21-mg patch + as needed NRT with 4-mg nicotine lozenge, 4-mg nicotine gum or nicotine nasal spray with patch titration</p> <ul style="list-style-type: none"> • Titrate up the patch if they are using a large amount of nicotine lozenges, nicotine gum or nicotine nasal sprays per day <p>Example: On a 21-mg patch and they are using 10 x 2-mg gum* per day, increase the patch to 28-mg and continue as needed NRT</p> <ul style="list-style-type: none"> • *Note: 1 mg of nicotine is absorbed from a 2-mg nicotine gum and 1.3 mg of nicotine is absorbed from the 2-mg nicotine lozenge <p>Example: On a 21-mg patch and they are using 10 nasal spray doses* (1 spray each nostril), increase the patch to 28-mg and continue as needed NRT</p> <ul style="list-style-type: none"> • *Note: 1 mg of nicotine is absorbed from 1 dose of the nicotine nasal spray (1 spray in each nostril.)