



ENDS Treatment Recommendations

(ENDS - Electronic Delivery System, “E-Cigarettes”)

MEASURING LEVEL OF DEPENDENCE

In order to measure an individual's level of dependence to electronic cigarettes, refer to the [“Penn State Electronic Cigarette Dependence Index” - Penn State College of Medicine Research \(psu.edu\)](#)

- Upon completion of the assessment, refer to the table below to determine dependence level

PENN STATE ELECTRONIC CIGARETTE DEPENDENCE INDEX SCORE	LEVEL OF DEPENDENCE
0-3	Not Dependent
4-8	Low Dependence
9-12	Medium Dependence
13+	High Dependence

ASSESSING ADOLESCENTS

Start by assessing the adolescent's level of dependence using the [“Penn State Electronic Cigarette 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 DAILY USER MEDICATION OPTIONS

VARENICLINE

- Days 1 to 3: 0.5 mg orally once a day
- Days 4 to 7: 0.5 mg orally twice a day
- Continuing Weeks: 1 mg twice daily for a total of 12 weeks

NICOTINE REPLACEMENT THERAPY (NRT)

Low Dependence	Medium Dependence	High Dependence
As needed NRT: <ul style="list-style-type: none">- 2-mg or 4-mg nicotine lozenge or nicotine gum	14-mg patch + as needed NRT with 2-mg lozenge, 2-mg nicotine gum or nasal spray with patch titration <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><i>Example:</i> 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><i>Example:</i> 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.)	21-mg patch + as needed NRT with 4-mg nicotine lozenge, 4-mg nicotine gum or nicotine nasal spray with patch titration <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><i>Example:</i> 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><i>Example:</i> 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.)

OTHER MEDICATION OPTIONS:

- Bupropion SR (also known as Wellbutrin and Zyban)

ADULT NON-DAILY USERS MEDICATION OPTIONS

Nicotine replacement therapy :

- As needed NRT: 2-mg or 4-mg nicotine lozenge or nicotine gum