

Assessing ENDS Use

ENDS use assessments are limited by lack of research on their psychometric properties but there is some guidance on how to assess ENDS use.

First generation e-liquids typically ranged from 1.5 to 6 mg per mL, while some of the newer e-liquids range from 11 to 36 mg per mL or more.

When assessing ENDS use, you should start by asking your patient about the nicotine concentration and about of juice/pods they use each day.

Sample Assessments:

Assessing Amount of Nicotine Use:

1. Do you use e-cigarettes, vapes, or other electronic nicotine devices? (not THC)
2. What concentration of nicotine do you typically use in your e-cigarettes?
 - 0 mg/mL (0%) 24 mg/mL (2.4%)
 - 3 mg/mL (0.3%) 30 mg/mL (3.0%)
 - 6 mg/mL (0.6%) 50 mg/mL (5.0%)
 - 12 mg/mL (1.2%) Other
 - 18 mg/mL (1.8%)
3. How much juice (or how many pods) do you use each day?



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Learning Objectives:

1. Delineate how to accurately measure the amount and frequency of ENDS use.
2. Review how to measure psychological and behavioral indicators of nicotine dependence.
3. Summarize the current limitations in assessing ENDS use.

Sample Nicotine Concentration in Popular Brands

Brand	Nicotine Concentration	Amount of Liquid in Typical Pod/Tank
Blu	1.2%; 2.4%	1.5 mL
Fin	1.6%	16 mL
Juul	3%; 5%	.7 mL
Logic	2.0%; 2.7%	1.7 mL
NJOY Daily E-Cigarettes	4.5%; 6%	Disposable e-cigarette (~300 puffs)
NJOY ACE Pods	2.4%; 5%	1.9 mL
Vuse Alto	1.8% 2.4%; 5%	1.8 mL
Vuse Solo*	4.8%	0.5 mL
Devices		Tank Size
Innokin Sub-Ohm Tank	N/A	5.5 mL
Innokin Prism T18 Tank	N/A	2.5 mL
Innokin Sceptre	N/A	3 mL
SMOK RPM 40	N/A	4.3 mL
SMOK Nord 2	N/A	4.5 mL
SMOK Novo 3	N/A	1.7 mL
Voofoo Drag S Starter Kit	N/A	4.5 mL

*approved by FDA for marketing

Assessing Nicotine Dependence:

E-Cigarette Fagerstrom Test of Nicotine Dependence (eFTND)

Score

* 1. How many times per day do you usually use your electronic cigarette? (Assume that one "time" consists of around 15 puffs or lasts around 10 minutes.)	<input type="checkbox"/> 0-9 times/day (0) <input type="checkbox"/> 10-19 (1) <input type="checkbox"/> 20-29 (2) <input type="checkbox"/> 30+ (3)	
* 2. On days that you can use your electronic cigarette freely, how soon after you wake up do you first use your electronic cigarette?	<input type="checkbox"/> 0-5 mins (3) <input type="checkbox"/> 6-30 (2) <input type="checkbox"/> 31-60 (1) <input type="checkbox"/> 61-120 (0)	
* Two Item Heaviness of Smoking Index (eHSI) used to assess dependence quickly. 2-item scoring: 0-2: low dependence, 3-4: moderate dependence, 5-6: high dependence	Subtotal 1 & 2 eHSI Score	
3. Do you find it difficult to refrain from vaping in places where it is forbidden (e.g. in church, at the library, in the cinema)?	<input type="checkbox"/> Yes (1) <input type="checkbox"/> No (0)	
4. When would you hate most to give up e-cigarette use?	<input type="checkbox"/> In the morning (1) <input type="checkbox"/> During/after meals (0) <input type="checkbox"/> During/after stressful situations (0) <input type="checkbox"/> None of the above (0)	
5. Do you use your e-cigarette more frequently during the first two hours of the day than during the rest of the day?	<input type="checkbox"/> Yes (1) <input type="checkbox"/> No (0)	
6. Do you use your e-cigarette when you are so ill that you are in bed most of the day?	<input type="checkbox"/> Yes (1) <input type="checkbox"/> No (0)	
Sum items 1-6 for Total eFTND score: 0-2 = low dependence, 3-4 = low to moderate dependence, 5-7 = moderate dependence, 8+ = high dependence	Total 1-6 eFTND Score	

CAGE QUICK Assessment:

Check the box for affirmative.

- C** is for "cut down." Have you ever felt a need to cut down or control your ENDS use but had difficulty doing so?
- A** is for "annoyed or angry." Do you ever get annoyed or angry with people who tell you to stop using ENDS?
- G** is for "guilty." Do you ever feel guilty about your ENDS use?
- E** is for "eye-opener." Have you ever vaped (or used another type of ENDS) within half an hour of waking up?

If a patient responds affirmatively to two or more questions, this is considered a positive screening.

Patient is likely suffering from nicotine dependence and would benefit from referral for tobacco treatment.

References

Direct Vapor. Retrieved March 11, 2023 from <https://www.directvapor.com/voopoo-drag-s-pod-starter-kit>.

Electronic Tobacconist. Retrieved March 11, 2023 from <https://www.electrictobacconist.com>.

Johnson, J. M., Muilenburg, J. L., Rathbun, S. L., Yu, X., Naeher, L. P., & Wang, J. S. (2018). Elevated nicotine dependence scores among electronic cigarette users at an electronic cigarette convention. *Journal of community health, 43*, 164-174.

Piper, M. E., Baker, T. B., Benowitz, N. L., Smith, S. S., & Jorenby, D. E. (2020). E-cigarette dependence measures in dual users: reliability and relations with dependence criteria and e-cigarette cessation. *Nicotine and Tobacco Research, 22*(5), 756-763.

Vuse Vapor. Retrieved March 11, 2023 from <https://vusevapor.com>.

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