

# Fagerström Test for Nicotine Dependence (FTND): description, strengths and knowledge gaps<sup>[1]</sup>

## Purpose

The six item Fagerström Test for Nicotine Dependence (FTND) screens for nicotine dependence.<sup>[2]</sup>

## Drug(s) of Concern

- Tobacco/nicotine

## Time-frame(s) of Interest

- Recent use

## Populations Tested

- Males & females<sup>[2,3]</sup>
- Adults<sup>[2,5]</sup>
- Military veterans<sup>[4]</sup>

## Settings Tested

- AOD specialist services<sup>[2,-4]</sup>

## Diagnostics

- Utility:
- ✓ Short and easy to use<sup>[2]</sup>
  - ✓ Closely related to biochemical indices of heaviness of smoking<sup>[2]</sup>
- Psychometric properties:
- Good test-retest reliability<sup>[5]</sup>
  - Correlates with psychological aspects of dependency rather than physical aspects<sup>[6]</sup>
  - Correlates poorly with the diagnosis of nicotine dependence with the International Classification of Diseases-10 (ICD-10) and the DSM-IV ( $r = 0.32$ )<sup>[3]</sup>

## Fagerström Test for Nicotine Dependence (FTND)

Please tick (✓) one box for each question

Q1 How soon after waking do you smoke your first cigarette?

	Within 5 minutes	<input type="checkbox"/> 3
	6-30 minutes	<input type="checkbox"/> 2
	31-60	<input type="checkbox"/> 1
	After 60 minutes	<input type="checkbox"/> 0

Q2 Do you find it difficult to refrain from smoking in places where it is forbidden? E.g., church, library, etc.

	Yes	<input type="checkbox"/> 1
	No	<input type="checkbox"/> 0

Q3 Which cigarette would you hate most to give up?

	The first in the morning	<input type="checkbox"/> 1
	Any other	<input type="checkbox"/> 0

Q4 How many cigarettes a day do you smoke?

	10 or less	<input type="checkbox"/> 0
	11-20	<input type="checkbox"/> 1
	21-30	<input type="checkbox"/> 2
	31 or more	<input type="checkbox"/> 3

Q5 Do you smoke more frequently in the morning?

	Yes	<input type="checkbox"/> 1
	No	<input type="checkbox"/> 0

Q6 Do you smoke even if you are sick in bed most of the day?

	Yes	<input type="checkbox"/> 1
	No	<input type="checkbox"/> 0

Score:

## Administrator, Rater, Scoring and Interpretation

Administrator: Clinician/Worker  
Client self-complete  
Online

Rater: Client

Scoring & interpretation: The FTND comprises 6 questions.

Questions 1 and 4 are scored on four-point scales (i.e., 0,1,2, or 3 points). The remaining questions (i.e., questions: 2, 3, 5 and 6) are each scored '0' or '1' point.

A total score is calculated by summing the responses to all six questions. The minimum total score possible is 0, and the maximum possible total score possible is 10 (i.e. total score range: 0-10).

### FTND score interpretation

Score	Interpretation
1-2	Low level of dependence
3-4	Low to moderate dependence
5-7	Moderate dependence
8 or more	High dependence

## Resources

Tool citation: Fagerström, K.O. *Measuring degree of physical dependence to tobacco smoking with reference to individualization of treatment*. Addictive Behaviors, 1978. 3(3-4): 235-241.<sup>[7]</sup>

Copyright: May be downloaded and used with appropriate acknowledgement.

Training/manual: None found.

Brief intervention: The Brief Tobacco Intervention Training Program: <http://ndri.curtin.edu.au/btntp/>.

Other: None found.

## Knowledge Gaps

The FTND is widely regarded and commonly recommended in policy, particularly smoking cessation/management guidelines in hospital and clinical settings. Reviews are recommended to:

- Map the ways in which the FTND has been applied within the Australia context
- Examine the veracity of the FTND as both a screening and outcome measure in smoking cessation interventions
- Ascertain acceptance of the FTND by administrators and raters.

Since the development of the FTND, the use of smoke-less tobacco (e.g., vaping) has emerged. In recent years it has become relatively common amongst young people and others attempting to cease tobacco smoking.<sup>[8]</sup> The application of the FTND with these populations was examined early in the emergence of smoke-less tobacco products.<sup>[9]</sup> More recent research is required to ascertain the FTND'S suitability for screening when smoke-less tobacco products are assessed.

## References

1. Fischer, J.A., Roche, A.M., and Duraisingam, V. *Fagerstrom Test for Nicotine Dependence (FTND): description, strengths and knowledge gaps*. 2021, National Centre for Education and Training on Addiction (NCETA), Flinders University: Adelaide, South Australia. (overview citation)
2. Heatherton, T.F., Kozlowski, L.T., Frecker, R.C., and Fagerstrom, K. *The Fagerström Test for Nicotine Dependence: a revision of the Fagerstrom Tolerance Questionnaire*. *British Journal of Addiction*, 1991. 86(9): 1119-1127. DOI: doi:10.1111/j.1360-0443.1991.tb01879.x.
3. DiFranza, J.R., Wellman, R.J., Savageau, J.A., et al. *What aspect of dependence does the fagerström test for nicotine dependence measure?* *Addiction*, 2012. 2013. DOI: doi.org/10.1155/2013/906276.
4. Payne, T.J., Smith, P.O., McCracken, L.M., McSherry, W.C., and Antony, M.M. *Assessing nicotine dependence: a comparison of the Fagerström Tolerance Questionnaire (FTQ) with the Fagerström Test for Nicotine Dependence (FTND) in a clinical sample*. *Addictive Behaviors*, 1994. 19(3): 307-317.
5. Fagerstrom, K.O. and Schneider, N.G. *Measuring nicotine dependence: a review of the Fagerstrom Tolerance Questionnaire*. *Journal of Behavioral Medicine*, 1989. 12(2): 159-182.
6. Lombardo, T.W., Hughes, J.R., and Fross, J.D. *Failure to support the validity of the Fagerstrom Tolerance Questionnaire as a measure of physiological tolerance to nicotine*. *Addictive Behaviors*, 1988. 13(1): 87-90.
7. Fagerström, K.O. *Measuring degree of physical dependence to tobacco smoking with reference to individualization of treatment*. *Addictive Behaviors*, 1978. 3(3-4): 235-241.
8. Chan, G., Leung, J., Gartner, C., et al. *Correlates of electronic cigarette use in the general population and among smokers in Australia—Findings from a nationally representative survey*. *Addictive Behaviors*, 2019. 95: 6-10.
9. Ebbert, J.O., Patten, C., and Schroeder, D. *The Fagerström Test for Nicotine Dependence—smokeless tobacco (FTND-ST)*. *Addictive Behaviors*, 2006. 31(9): 1716-1721.