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| **About the Measure** | |
| **Protocol Id** | 721001 |
| **Domain:** | Tobacco Regulatory Research - Host: Biobehavioral |
| **Measure:** | Withdrawal from Tobacco Use |
| **Definition:** | Withdrawal is measured by the feelings and reactions experienced because of the absence of tobacco. |
| **Purpose:** | The Minnesota Withdrawal Scale -- Revised records the feelings and reactions experienced because of the absence of tobacco. |
| **Essential PhenX Protocols:** | Current Age [10101] Cigarette Smoking Status - Adult [30604] |
| **Related PhenX Protocols:** | Alcohol - 30-Day Quantity and Frequency [30301] Cigarette Nicotine Dependence [31001] |
| **Measure Release Date:** | February 20, 2015 |

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| **About the Protocol** | |
| **Protocol Release Date:** | February 20, 2015 |
| **Protocol Review Date:** | February 20, 2015 |
| **PhenX Protocol Name:** | Withdrawal from Tobacco Use |
| **Protocol Name From Source:** | The Minnesota Withdrawal Scale - Revised (MWS-R) |
| **Protocol Availability:** | Available |
| **Keywords:** | Withdrawal symptoms; drug withdrawal; tobacco withdrawal; smoking withdrawal; nicotine withdrawal; quitting; dependence; withdrawal |
| **Description:** | The Minnesota Withdrawal Scale - Revised offers a self-report protocol which reviews symptoms of withdrawal. This protocol has been validated for use with adults and adolescents. |
| **Specific Instructions:** | Instructions for Use of the Minnesota Withdrawal Scale - Revised  1. There are two scales: a self-report and an observer scale. Several items do not appear in the observer scale because observers cannot reliably rate them.  2. On the self-report scale, the first nine items are the well-validated items and are the ones to be used if calculating a total withdrawal discomfort score. The other six are promising candidate items.  3. See the attached table to further compare the content of the scales with the criteria for DSM-V and ICD-10 nicotine/tobacco withdrawal and the contents of other withdrawal scales.  4. We have participants complete the scale both before and after quitting.  5. We have participants rate over the last 24 hours and observers rate over the last week. We usually require observers to see the participant on average 2 hours/day.  6. We use the 0-4 response option so that we can have verbal anchors for each response. Larger response options (e.g., 0-100) are likely more sensitive but may be more difficult to interpret.  7. The scale is not labeled a withdrawal scale because subjects (1) are confused by filling out a "withdrawal" scale prior to cessation, and (2) will sometimes not report a symptom during abstinence if they do not believe it is the result of withdrawal.  8. We encourage readers to read recent reviews of methodological issues in measuring tobacco withdrawal (see references 3 & 4). |
| **Protocol:** | **Behavior Rating Scale - Self-Report**  Please rate yourself for the period for the last \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  1. Angry, irritable, frustrated  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  2. Anxious, nervous  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  3. Depressed mood, sad  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  4. Desire or craving to smoke  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  5. Difficulty concentrating  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  6. Increased appetite, hungry, weight gain  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  7. Insomnia, sleep problems, awakening at night  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  8. Restless  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  9. Impatient  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  10. Constipation  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  11. Dizziness  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  12. Coughing  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  13. Dreaming or nightmares  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  14. Nausea  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  15. Sore throat  [ ] 0 none  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  **Behavior Rating Scale - Observer-Rating**  Rate the subject on the following symptoms according to whether you observed the symptom in the subject in the last \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. It does not matter whether the subject complained of the symptom. We want to know whether you noticed the symptom.  a. Angry/irritable/frustrated  [ ] 0 not at all  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  b. Anxious/tense  [ ] 0 not at all  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  c. Depressed  [ ] 0 not at all  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  d. Restless/Impatient  [ ] 0 not at all  [ ] 1 slight  [ ] 2 mild  [ ] 3 moderate  [ ] 4 severe  1. How confident are you that this rating is accurate?  [ ] 0 not at all  [ ] 1 somewhat confident  [ ] 2 moderately confident  [ ] 3 very confident |
| **Selection Rationale:** | The Minnesota Withdrawal Scale is a widely used validated instrument which measures withdrawal symptoms. |
| **Source:** | [link[www.uvm.edu/~hbpl/?Page=minnesota/default.html|www.uvm.edu/~hbpl/?Page=minnesota/default.html]]  Hughes, J. R., & Hatsukami, D. K. (1986). Signs and symptoms of tobacco withdrawal. *Archives of General Psychiatry, 43*, 289-294.  Minnesota Nicotine Withdrawal Scale - Revised. The University of Vermont, 21 Aug. 2012. Web. 23 Sept. 2014. |
| **Language** | English Other languages available at source |
| **Participant:** | Adults 18 and over |
| **Personnel and Training Required:** | None |
| **Equipment Needs:** | None |
| **Standards** |  |
| **General References:** | The website for the scales is http://www.uvm.edu/~hbpl. The scales were originally reported in 1986 (Reference 2). Five articles have described the psychometrics of the scale (References 3-7). Three articles have comprehensively reviewed what is known about tobacco withdrawal (References 1, 4, 8).  Hughes, J. R. (2007). The effects of abstinence from tobacco: Valid symptoms and time course. *Nicotine & Tobacco Research, 9*, 315-327.  Hughes, J. R., & Hatsukami, D. K. (1986). Signs and symptoms of tobacco withdrawal. *Archives of General Psychiatry, 43*, 289-294.  Shiffman, S., West, R. J., & Gilbert, D. G. (2004). Recommendation for the assessment of tobacco craving and withdrawal in smoking cessation trials. *Nicotine & Tobacco Research, 6*, 599-614.  Hughes, J. R. (2007). Measurement of the effects of abstinence from tobacco. A qualitative review. *Psychology of Addictive Behaviors, 21*, 127-137.  West, R., Ussher, M., Evans, M., Rashid, M. (2006). Assessing DSM-IV nicotine withdrawal symptoms: A comparison and evaluation of five different scales. *Psychopharmacology, 184*, 619-627.  Etter, J. F., & Hughes, J. R. (2006). A comparison of the psychometric properties of three cigarette withdrawal scales. *Addiction, 101*, 362-372.  Javitz, H., Lerman, C., & Swan, G. (2012). Comparative dynamics of four smoking withdrawal symptom scales. *Addiction*, epub ahead of print.  Hughes, J. R. (2007). The effects of abstinence from tobacco: Etiology, determinants, epidemiology, significance. *Nicotine & Tobacco Research, 9*, 329-339.  World Health Organization. (1993). *The ICD-10 classification of mental and behavioural disorders. Diagnostic criteria for research*. Geneva, Switzerland: World Health Organization.  Etter, J. (2005). Self-administered questionnaire to measure cigarette withdrawal symptoms: The Cigarette Withdrawal Scale. *Nicotine & Tobacco Research, 7*, 47-57.  West, R., & Hajek, P. (2004). Evaluation of the mood and physical symptoms scale (MPSS) to assess cigarette withdrawal. *Psychopharmacology, 177*, 195-199.  McNair, D. M., Lorr, J., & Droppelman, L. F. (1992). *Profile of mood states manual*. North Tonawanda, NY: Multi-Health Systems.  Shiffman, S., & Jarvik, M. E. (1976). Smoking withdrawal symptoms in two weeks of abstinence. *Psychopharmacologia, 50*, 35-39.  Schneider, N. G., & Jarvik, M. E. (1984). Time course of smoking withdrawal symptoms as a function of nicotine replacement. *Psychopharmacology, 82*, 143-144.  Welsch, S. K., Smith, S. S., Wetter, D. W., Jorenby, D. E., Fiore, M. C., & Baker, T. B. (1999). Development and validation of the Wisconsin Smoking Withdrawal Scale. *Experimental and Clinical Psychopharmacology, 7*(4), 354-361.  Shiffman, S., Paty, J. A., Gnys, M., Kassel, J. A., & Hickcox, M. (1996). First lapses to smoking: Within-subjects analysis of real-time reports. *Journal of Consulting and Clinical Psychology, 64*, 366-379.  Hughes, J. R., Helzer, J. E., & Lindberg, S. A. (2006). Prevalence of DSM/ICD-defined nicotine dependence. *Drug and Alcohol Dependence, 85*, 91-102. |
| **Mode of Administration:** | Self-administered questionnaire and clinical assessment |
| **Derived Variables:** | None |
| **Requirements:** | |  |  | | --- | --- | | **Requirement Category** | **Required (Yes/No)** | | **Major equipment** | No | | **Specialized training** | No | | **Specialized requirements for biospecimen collection** | No | | **Average time of greater than 15 minutes in an unaffected individual** | No | |
| **Annotations for Specific Conditions:** | None |
| **Process and Review:** | Not applicable. |