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Short Measures Of Tobacco Dependence Optimized For Biological Research

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E. **Abstract** - Biological research requires valid and reliable measures of the biologically-based aspects of dependence. Traditional dependence measures focus on behaviors (e.g., patterns of use), that can be constrained by sociocultural factors such as cost and restrictions on smoking. When dependence measures reflect non-biological factors, they are less suitable for biological research. We will present new data concerning several tobacco dependence measures that assess only biologically-based symptoms. The **Levels of Physical Dependence** (PD) is a 3-item instrument that assesses how subjects experience the urge to smoke that is triggered by withdrawal. It provides a quantitative measure of a person's progression along 4 levels of PD. As all tobacco users progress through the 4 levels of PD in the same sequence, biological events associated with level 2 must precede events associated with level 3. This measure provides a unique and valuable time perspective to the interpretation of data. The **Hooked on Nicotine Checklist** assesses 10 symptoms of dependence. It's excellent sensitivity and reliability allowed it to demonstrate a nearly perfect correlation (r=-.96) with changes in neural density that accompany the progression of PD. The **Latency to Withdrawal** (LTW) is a single item subjective measure of the length of time a person can forgo the use of tobacco before experiencing a withdrawal-triggered urge to smoke. Valid values for the LTW vary from minutes to weeks. The LTW is an important biological factor to consider in studying withdrawal and cue-induced craving. By focusing on the subjective symptoms of dependence rather than the behaviors prompted by those symptoms, the measures discussed here are all universal measures, that is, they are valid for all forms of tobacco use and with tobacco users of all ages.