GRADUAL NICOTINE TAPERING STRATEGIES FOR SMOKING CESSATION: CHALLENGES AND OPPORTUNITIES

Moishe Liberman[1], Catherine Dalmau[1], Christelle Luce[2], Nigel Ward[1], and Mehdi El Hassani[3]

[1]Ditch Labs
[2]McGill University Faculty of Education
[3]Université de Montréal

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Abstract

Smoking remains the leading cause of preventable death worldwide. Nicotine Replacement Therapies (NRTs) are the most commonly used smoking cessation medications. However, the scope of these treatments is limited: drop-out rates are high and their effectiveness is modest. We believe that nicotine tapering plays an important role in overall smoking cessation efficacy. However, each of the NRTs currently on the market have been approved on the basis of either a unique tapering strategy or none at all. Therefore, it is unknown whether improved efficacy and safety outcomes could have been achieved by using different approaches. Moreover, dosing regimens of marketed NRTs lack personalization. They are based on a "one-size-fits-all" approach, which is not optimal given that smokers represent a highly heterogeneous group. The emergence of digital health and Electronic Nicotine Delivery Systems (ENDS), which have demonstrated superior outcomes compared to NRTs in terms of smoking cessation rates, give way to the development of new innovative ways to gradually reduce nicotine in a personalized fashion, without the limitations of currently approved NRTs.

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