

MINDD 1: Prediabetes, Delay Discounting and Executive Function

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Mechanism Description: Impulsivity will be measured using the following discounting tasks.

Adjusting Amount Discounting Task. Participants will complete the DD task for different commodities (e.g. money, preferred food, physical activity, and health gains) and between different types of commodities (e.g. sweets now versus health later, watching TV now versus health later).

Computerized/Experimenter administered assessments will provide participants with choices between a smaller amount of a hypothetical commodity available immediately or a larger amount available later. The magnitude of the immediate commodity is adjusted until it is subjectively equivalent to the later larger amount. Subjective equivalence will be obtained at delays such as; 1 day, 1 week, 1 month, 3 months, 6 month, and 1 year. To ensure comparison between money and non-monetary rewards, prior to running the discounting programs for food, physical activity and health, participants will indicate the amount of the commodity whose receipt “right now” would be equally valuable to the participants as receiving a set amount of money, for example \$100.

Adjusting Delay Discounting Task. The adjusting delay discounting task is a five trial task in which participants are asked how much money they would prefer (e.g. \$500) immediately or a larger reward after a delay (e.g. \$1000). This task is presented on a computer screen and is designed to measure the amount of monetary discounting that occurs when rewards are presented at a delay. This task adjusts the delay to the larger reward and allows for the calculation of k-values. This task will be completed matching each of the traditional tasks parameters (i.e. type and magnitude of the reinforcer).