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**Funding body**

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**Summary of research**

diet, diabetes, working memory, lifestyle

**Application Lay Summary:**

**1a:** This project aims to investigate the relationship between working memory and dietary intake and weight in people with and without diabetes while also taking into account other health and lifestyle factors. We will also use biomarker data when this is available to understand these relationships further.

**1b:** Understanding the relationship between cognitive functioning and dietary intake in people with and without diabetes meets the UKBiobank's aim to "improve the prevention, diagnosis and treatment of illness". In developing understanding of this relationship in both those with and without diabetes, we develop understanding of how diabetes could be treated. For example, if a relationship exists, it would suggest that improving cognitive functioning, such as through neurocognitive training, may improve dietary intake, which ultimately will improve diabetes control. Improved diabetes control will delay the onset of other health complications, such as neuropathy, kidney failure, retinopathy and neuropathy.

**1c:** This project will use data collected from 200,000 people tested at baseline by the UKBiobank to look at whether short-term memory ability is related to dietary intake (FFQ and 24hr recall) and BMI. We will compare this across those with and without diabetes.

**1d:** We agree with the reviewer's suggestion that we should use the data collected from the 200,000 people who completed the cognitive function tests at baseline and look at diet as assessed through (a) the touchscreen FFQ and (b) through the 24-hr recall in order to allow for a larger sample size. We will look at how cognitive functioning relates to dietary intake (FFQ and 24hr recall) and compare this across those with and without diabetes.