



We are pleased to invite you to take part in a research study, which tests if a licensed diabetes drug called semaglutide can delay or even prevent Alzheimer's disease.

### **Aims and background of research**

The lack of effective treatments for dementia remains one of the key challenges to modern medicine and society. A leading cause of dementia is Alzheimer's disease, a condition where proteins (called amyloid and tau) build up in the brain causing inflammation and loss of nerve cells. Importantly, we now know that this process begins decades before first symptoms of dementia appear, offering an opportunity to stop it in its tracks with the right treatment.

Glucagon-like peptide-1 receptor agonists (GLP-1 RAs) are a class of medication used for the treatment of type 2 diabetes and obesity. They have been shown to reduce the risk of heart attack, stroke, and renal disease in people with diabetes, and people who have taken them also appear to have lower risk of developing dementia.

In this study, we will examine the effects of oral semaglutide (a GLP-1 RA tablet) on the build-up of Alzheimer's disease proteins, on brain inflammation and on thinking ability in people who have risk factors for the future development of Alzheimer's disease.

### **Why have I been approached?**

The study is reaching out to people who are aged 55 or above and appear to be suitable, based on factors such as age, sex, medical history, genetics and, if you have done the relevant tests, memory and thinking ability.

### **What you will do**

Firstly, we will give you a call to explain the study and, if you agree, to check if there is any immediate reason why you may not be suitable for the study so that we save you time and effort. If we proceed, you will be asked to attend in person for a more detailed check to see if you meet the criteria for the study. The key criterion will be through a head scan where researchers will check if you have elevated levels of amyloid protein in the brain. When looking at large groups of people, high levels of amyloid proteins are a risk factor for Alzheimer's disease, but the significance of this on an individual level is uncertain, as not everyone who has high amyloid levels develops Alzheimer's disease.

If you are included in the study the researchers will give you either semaglutide (GLP-1 RA tablet) or a dummy tablet for one year. You will be asked to come in for head scans, which detect the build-up of tau protein and brain inflammation before starting to take the drug, and again after one year. In this way, they will be able to see whether those given semaglutide tablets differ in tau protein and brain inflammation compared with those given dummy tablets.

### **What next**

If you are interested to find out more, our study team will be happy to discuss further or answer any questions before you decide if you want to take part.

The details of our team are Hannah Bass ; 01865 618291; hannah.bass@psych.ox.ac.uk  
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Yours sincerely,

**Dr Ivan Koychev Chief Investigator**