

Everyday drugs could combat dementia, according to major study

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(Medical Xpress)—Medications used to treat hypertension, diabetes and skin conditions could be doubling as treatments for Alzheimer's within 10 years according to researchers. A groundbreaking new study funded by Alzheimer's Society and led by King's College London identifies four existing drugs and one drug class which could reduce risk or slow down symptoms of the disease. The study, published in *Nature Reviews Drug Discovery* today forms a key part of ongoing drug discovery work which aims to accelerate the search for a cure and drugs for dementia by looking at existing treatments.

The drugs or classes of drugs identified as potential Alzheimer's treatments by the study are:



- <u>High blood pressure</u> medications including Nilvadipine from the <u>calcium channel blockers</u> family which research suggests could substantially reduce risk of <u>dementia</u>.
- <u>Diabetes medications exenatide</u> and liraglutide, which stimulate the brain and have been shown to reduce the formation of plaques on the brain a key hallmark of dementia.
- Minocycline, a tetracycline antibiotic used to treat acne.
- Acitretin, a <u>drug</u> used to treat psoriasis which researchers have shown to modify the way that proteins linked to dementia form.

The study saw academics conduct a systematic review of research of existing treatments that are already licensed for conditions such as diabetes, high blood pressure and hypertension and prioritise potential treatments for further study. The identified drugs have additional actions that previous studies have shown could be effective in treating the changes that occur in the brain in Alzheimer's disease. Further research to increase our understanding of how these drugs work and how they could be used to treat Alzheimer's is already underway including studies into liraglutide funded by Alzheimer's Society. The study also highlights the huge opportunity to explore available drugs for other conditions to find further new treatments for Alzheimer's disease.

Development of new treatments for Alzheimer's can take decades and cost millions of pounds per drug. However, as the drugs that are being looked at here are already available, they will be cheaper and quicker to translate into dementia treatments if successful. Whilst these treatments hold huge promise, more research is needed before we will know exactly how they could work for people with Alzheimer's. As a result people should not take these drugs for anything other than the conditions they are currently prescribed for.

Dementia is caused by diseases of the brain and affects 800,000 people in the UK. The condition currently has no cure, and a number of recent



clinical trials of targeted dementia drugs have failed.

Lead author, Professor Clive Ballard who is Director of Research at Alzheimer's Society and Professor of Age Related Diseases at King's College London, said:

'Defeating dementia is one of the biggest challenges facing both medicine and society as a whole. Developing new drugs to treat the condition is incredibly important, but comes with a huge price tag and, for those affected by dementia, an unimaginable wait.

'This study identifies existing treatments and shows the potential to identify other similar drugs which are safe and if effective in clinical trials could be used to treat Alzheimer's disease in 10 years or less. We are urgently working to take this work forward to start making a difference to the lives of people with dementia.'

Dr Ann Johnson, 59, from Manchester, who lives with Alzheimer's disease said:

'Access to drug treatments has made a huge difference to my life. Before I was prescribed them I knew what I wanted to say but I couldn't find the right words. I had low self-esteem and used to dread getting lost. It was terrifying. Now I'm able to live life to the full.

'I'm lucky that I've found an Alzheimer's drug that works for me. However, these drugs don't work for everyone so we must continue the search for more and better options.'

Provided by King's College London

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