

PRESS RELEASE

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NICOTINE CLUES FOR SCHIZOPHRENIA TREATMENT

The way nicotine boosts attention and memory could point the way to a new treatment to help people with schizophrenia, a Belfast psychiatrist said today (29 July).

The majority of people with schizophrenia smoke cigarettes. Dr Ruth Barr from Queen's University, Belfast, suggests that this could be a form of self-medication to try and improve cognition. She hopes this should be an incentive to develop new treatments for cognition in schizophrenia that could include drugs based on nicotine but without the dangerous effects of cigarette smoking.

Although previous research has shown some beneficial effects of nicotine on cognition in people with dementia and ADHD, previous studies conducted in schizophrenia had been carried out in smokers. "There was a big gap: there had been no research in non-smokers so it was unclear if the previous benefits described were simply due to reversing the effects of nicotine withdrawal," Dr Barr told delegates at the British Association for Psychopharmacology conference in Oxford.

Sixty non-smokers participated in the study. Twenty eight had schizophrenia and the remaining 32 did not. They received a single dose of nicotine from a patch and then took part in a series of tests. The tests included showing the participants a series of numbers on a computer screen which they had to match. Dr Barr found that nicotine improved attention in all participants and that the people with schizophrenia were less impulsive, therefore making few errors.

"We don't know how these small effects translate to real life," said Dr Barr. "For example, paying attention to a conversation or shopping list."

The nicotine in patches or cigarettes acts on the nicotinic receptors in the brain. These receptors are the proteins on cells that respond to nicotine and produce its effects. This study provides scientists with further evidence that drugs that act in a similar way to nicotine, but without the same addictive properties, may have potential in the treatment for schizophrenia

This preliminary study, although small, is significant. The next step is to find out whether repeated administration of nicotine or other drugs that act at the nicotinic receptor have a continuous beneficial effect on attention.

“As we all know, smoking causes illness and death. If we can understand why so many people with schizophrenia smoke then we can go some way towards addressing their addiction,” said Dr Barr.