

Brain estrogen shows promise as schizophrenia treatment

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An estrogenic drug that influences neurotransmitter and neuronal systems in the brain is showing promise as an effective therapy for women who suffer from schizophrenia.

A study has found that Raloxifene - a synthetic estrogen currently used to treat osteoporosis - has beneficial effects on postmenopausal [women](#) with [schizophrenia](#), with a test group experiencing a more rapid recovery from psychotic and other symptoms compared to control groups.

Research project leader and Director of the Monash Alfred Psychiatry Research Centre (MAPrc) Professor Jayashri Kulkarni said women in the trial who were given 120mg a day of the unique selective [estrogen receptor](#) modulator had a significantly greater improvement in psychosis symptoms compared with those on placebos and lower doses.

"The results were very promising. Under daily treatment with this 'brain estrogen', the women in the study had improvement in their key psychosis symptoms and also experienced enhanced memory and higher learning capacity," Professor Kulkarni said.

"Many patients in this study had longstanding, persistent schizophrenia, so we are delighted that they experienced improvements in their mental well-being. We will continue to investigate the efficacy of Raloxifene which is a currently available treatment for osteoporosis in postmenopausal women."

"Unlike estradiol, the standard estrogen found in the oral contraceptive pill or hormone replacement treatment, this type of estrogen did not have the side effects on breast, uterus and ovarian tissue that we worry about with other forms," Professor Kulkarni said.

While the findings were still tentative given the

relatively small sample size, the research team is cautiously optimistic that ongoing trials will further confirm the positive therapeutic potential of the drug for postmenopausal women, and potentially for other cohorts.

Professor Kulkarni said the findings, published in *Psychoneuroendocrinology*, would offer hope to the hundreds of thousands of women in Australia who suffer from schizophrenia.

"Our results indicate that this therapy really could revolutionise treatment options for women with schizophrenia. While at this stage we are just investigating its use in [postmenopausal women](#), we are planning further research using hormone treatments in younger women and men suffering from psychotic illnesses," Professor Kulkarni said.

"One in five of us will experience a mental illness at some point in our lives. These conditions have a huge impact not only the sufferer, but on their families and Australian communities, so it is critical that governments and the private sector invest in research to develop effective treatment options."

Professor Kulkarni pioneered research into hormonal factors and treatments in psychosis after assessing epidemiological studies that indicated gender differences in the age and onset of schizophrenia, and from clinical observations that symptoms were more severe in women during premenstrual, perimenopausal and postnatal phases. The current study follows on from previous trials of estrogen and anti-estrogen treatment for women and men with a variety of mental illnesses.

Provided by Monash University

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