

## Steroids May Hold Key to Link Between Depression and Heart Disease

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Naturally occurring steroids in the body may make people with a history of depression more vulnerable to coronary heart disease, according to new research from the University of Birmingham.

The small-scale trial of Metyrapone, which inhibits the production of the steroid hormone cortisol, significantly improved the function of the blood vessel lining, known as 'endothelium', in people who had a history of depression. The results, which are published in the current edition of the Journal of the American College of Cardiology, suggest that cortisol may play a significant role in causing damage to the endothelium of people who have recurrent depression.

Professor Michael Frenneaux, British Heart Foundation Professor in Cardiology, who led the research, explains: "We already know that people with a history of depression are at greater risk of heart disease. Our previous work has also shown that these people have significant problems with the lining of their blood vessels, which increases their risk of vascular problems or coronary heart disease. These results suggest that cortisol plays a role in creating these problems, which increases the risk of heart disease."

66 people, half of whom had previously suffered from depression, were involved in the trial, taking either Metyrapone or a placebo. The trial looked to assess whether blocking cortisol could improve the function of the blood vessel lining. The research team measured each person's endothelial function before, and six hours after, receiving Metyrapone, a drug which blocks the production of cortisol.

The results showed improvement in the function of the endothelium in those people who received Metyrapone compared to the control group.

Professor Frenneaux continues: "Those people with a history of depression who received a cortisol inhibitor showed an improvement in blood vessel function compared to the placebo group. Although this was a small-scale trial it does open up the possibility that suppressing cortisol in patients who have a history of depression could be a way of reducing their higher risk of developing heart disease."

### ENDS

#### Notes to Editors:

The research is funded by the British Heart Foundation. For further information, visit: <http://www.bhf.org.uk>

The study, Metyrapone Improves Endothelial Dysfunction in Patients With Treated Depression, is published in the Journal of the American College of Cardiology.

Metyrapone is a drug used in the diagnosis of adrenal insufficiency.

#### Further information:

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