

# Ultrasound reveals thickening of neck artery is evident in young patients with early psychosis

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New research presented at this week's International Early Psychosis Association (IEPA) meeting in Milan, Italy (October 20-22), shows that young people diagnosed with early onset psychosis (EOP) and bipolar disorder (BPD) already show signs of atherosclerosis (blood vessel inflammation and thickening) in their major neck artery (the left carotid artery). The research is by Dr Hannes Bohman, Karolinska Institutet, Stockholm, Sweden, and colleagues.

EOP and early onset BPD include several devastating mental disorders with an age of onset of generally under 18 years. Several studies have shown the strong relationship between these disorders and later risk of developing cardiovascular disease, with high rates of mortality. However, it is unknown whether blood vessels are already affected in childhood and adolescence in these patients, or if these changes develop later after the emergence of other risk factors including [high blood pressure](#), continuing lack of physical activity, and overweight/obesity.

In this study, the authors used a relatively new technique of high frequency ultrasound (HFU) to analyse changes in the main neck artery. This technology has been used in recent years and has made it possible to detect intima media pathology in several conditions such as pre-eclampsia and [systemic lupus erythematosus](#) (lupus).

With ageing, the outer layer of the artery (the media) gets thinner, while

the inner layer (intima) becomes thicker, with the overall effect of constricting blood flow through the artery. The authors used HFU to measure carotid artery thickness in 29 young people with EOP and BPD (42% female, mean age 17 years) and 28 matched controls (28% female, mean age 17 years).

The results showed a substantial difference in intima thickness (0.13 mm in EOP / BPD patients versus 0.08 mm in controls), but there was no significant difference in media thickness. The authors say: "This finding suggests that the blood vessels are already affected in early onset psychosis and that the process of atherosclerosis is initiated. The results may have implications for the understanding the pathophysiology of cardiovascular disease and for the development of new treatment strategies for reducing future risk of cardiovascular diseases in patients with early onset psychosis."

They add: "More trials are needed to investigate these early physiological changes in young people with serious mental disorders, with high frequency ultrasound evaluated in prospective studies. It is possible that the thicker intima in patients might be reversible when psychotic symptoms decrease with treatment. The possible confounding effects of drug treatment should also be investigated."

Provided by International Early Psychosis Association

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