

Researchers important markers of high risk of type 2 diabetes

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Doctors are aware of a range of risk factors, mostly related to the patients' family history, overweight, and lifestyle, that contribute to the risk of developing type 2 diabetes. Now researchers at the University of Warwick have found markers that indicate endothelial dysfunction (changes in the cells which line the blood vessels) and sub-clinical systemic inflammation can also help identify a far greater number of people at high risk for future development of type 2 diabetes.

In a study led by Dr Saverio Stranges, Associate Professor of Cardiovascular Epidemiology at Warwick Medical School at the University of Warwick, the team looked at a protein called E-selectin, whose presence is an indication of endothelial dysfunction, white blood cell count and levels of albumin, which are marker for sub-clinical systemic inflammation.

They found high levels of E-selectin and white blood cell count with low levels of serum albumin were clear predictors of high risk for type 2 diabetes. The researchers found that traditional risk factors such as obesity or family history helped identify 65% of all patients who were at high risk of developing type 2 diabetes. But when the information from these three markers was added this increased from 65% to 73% which means doctors could be able to spot a greater number of people at risk of type 2 diabetes at an early stage.

The research used data taken from the Western New York Health Study. This was a six-year longitudinal study of diabetes and cardiovascular risk

factors among residents of Erie and Niagara Counties, New York.

Dr Stranges said: "High levels of E-selectin and white blood cells with low levels of serum albumin can indicate endothelial dysfunction and sub-clinical systemic inflammation. These findings corroborate the notion that both these conditions play an important role in the development of the disease. Endothelial dysfunction is also regarded as a key event in the development and progression of atherosclerosis. Finding new markers for type 2 diabetes will help us gain a greater understanding of the condition and possibly open up new possibilities for the way we prevent and treat it."

Source: University of Warwick

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