Metformin can substantially reduce the risk of Parkinson's disease in diabetes

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A major 12-year study based on a Taiwanese population cohort has demonstrated that not only does diabetes increase the risk of developing Parkinson's disease more than 2-fold, the use of sulfonylureas, commonly used as treatment for diabetes, increases the risk further by about 57%. This study also found that by including metformin in the therapy, no increased risk in developing Parkinson's disease was recorded.

Metformin, found in the French lilac, *Galega officinalis*, was originally used in traditional European medicine, and introduced into France and Britain in the 1950s for the treatment of diabetes. It has a long and relatively safe record, is off patent and relatively inexpensive.

Professor Mark Wahlqvist, lead author of the study commented, "An exciting aspect of the finding is that metformin seems to be working to protect the brain against neurodegeneration which contributes to Parkinsonismin. This means it may also be considered a relevant therapy for the prevention of dementia as well."

While much needs to be done to understand the mechanism behind metformin's workings, a re-setting of the regulation of energy metabolism in cells, including the brain, probably takes place. A similar benefit would be expected from exercise and diet because that too is a way of establishing healthy energy regulation not only for the whole body, but for tissues and cells in the brain.

It appears that metformin has opened new ways to look at major diseases of modern society and how we may reduce the growing burdens of such diseases. Unlike other treatments for diabetes, metformin reduces cardiovascular mortality and several cancers, including those of the large bowel, liver and pancreas.

More information: The article is "Metformin-inclusive sulfonylurea therapy reduces the risk of Parkinson's disease occurring with Type 2 diabetes in a Taiwanese population cohort" by Mark L. Wahlqvist, Meei-Shyuan Lee, Chih-Cheng Hsu, Shao-Yuan Chuang, Jiunn-Tay Lee, Hsin-Ni Tsai DOI:10.1016/j.parkreldis.2012.03.010

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