

Diabetes drug may hold potential as treatment for epilepsy

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Metformine, a widely used diabetic drug, might also be an effective and safe therapy for epilepsy, researchers report. This new approach may be especially helpful for the subset of patients who have recurrent seizures despite therapy with the best available drugs.

The basis for metformine's effect is similar to a ketogenic diet, which is an attempt to minimize dietary starch and sugar. Epilepsy patients have been using this severe dietary approach for centuries, which led Dr. Avtar Roopra and colleagues to wonder if drugs could tap into metabolic pathways and produce similar results.

The researchers identified a small molecule in neurons that senses how much energy is available on hand. Glucose normally turns on this sensor, but so does Metformine, a drug used to control blood sugar. By administering the proper dose, they could suppress over-active nerve cells by removing their ability to turn sugar into excess energy.

Roopra and colleagues now hope to apply their preliminary results to a mouse model of epilepsy.

Source: American Society for Biochemistry and Molecular Biology

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