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A new drug for diabetes

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Indian scientists have found that a plant-derived substance called chalcone can be used to make an effective anti-diabetic drug. Chalcone, which is ubiquitously found in many plants, improves insulin sensitivity and reduces blood glucose levels in the same way as commercially available anti-diabetic drugs.

Patients with type-2 diabetes are unable to utilise sugar properly. After a meal, their blood glucose levels remain elevated for prolonged periods of time. Gradually their muscles become insensitive to insulin, the hormone that converts unspent blood glucose into glycogen which is stored in the liver. Since the amount of glycogen also reduces with time, patients develop cholesterol disorders.

Scientists from the Central Drug Research Institute (CDRI), Lucknow, have reported that treating muscle cells with a particular type of chalcone can improve glucose uptake. This makes it particularly useful for diabetic patients. Since their muscles are insensitive to insulin resulting in poor glucose uptake, chalcone can help manage diabetes by improving glucose uptake. Of several chalcones tested, aryloxypropanolamine had anti-diabetic properties.

In addition to its efficacy, animal studies confirmed that chalcone is non-toxic and safe. It is stable under human stomach-like conditions, invigorating its potential as a good drug.