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Letter to the Editor

Manoeuvres for management of diabetes

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Dear Sir,

Type 2 diabetes is the scourge of our times. Globally there are over 425 million diabetics which is projected to rise to 629 million by 2045, suffering devastating consequences resulting in significant morbidity and mortality.[1-3]

Bringing blood sugars down can be challenging. Dietary control, lifestyle modifications and exercise can help but these can be difficult to implement.[4] Medically, drugs are the usual method of bringing blood sugar levels under control but they come with their attendant risks and ongoing costs.[5] Apart from drugs, the main arsenal against diabetes is exercise but due to one reason or another it is not very popular or practical. In the absence of antidiabetic medications and episodic exercises there seems to be no alternative left. So, when a person is unable to exercise or is not on hypoglycaemic agents, he is rendered defenceless against the deleterious effects of raised blood sugar levels. Regardless, muscles form the frontline defence against diabetes since muscles are the main modifiable factor in utilization of glucose by the body which they can do even in the absence of insulin.[6,7] Hence, muscles need to be the first line agents to fight diabetes. However, the muscles need to be activated when the blood sugars are high, that is, within minutes or hours after meals rather than exercising in the morning or evening when the blood sugar may be relatively low. The question is 'How do we get the muscles to start using up glucose right when it enters the blood stream?' This is where the manoeuvres described below can help since these can be done almost anytime and anywhere. Following are the proposed manoeuvres:

Calf contractions: Alternate contractions of calf muscles of each leg while sitting, giving a good squeeze to the calf muscles. Alternatively, one or both calves can be contracted and held for some time. This manoeuvre can be done even while lying in bed.

Pectoral pressure: One or both pectorals can be contracted and held for 30-60 seconds-longer the better. The strength of contractions will depend on one's motivation and ability. Alternatively, moderate contractions can be maintained for a longer duration.

Shoulder squeezes: The back has some of the strongest muscles which can be used to 'pulverise' the sugars. In this method the person can sit slightly bent forwards and the shoulders are pulled back and held in that position for 30-60 seconds.

These manoeuvres can be done either singly or combined with other manoeuvres described or with dietary modifications, regular exercises or medications for greater efficacy.

Of course, like the antidiabetic medications, these manoeuvres need to be titrated, especially when combined with hypoglycaemic agents, otherwise they can lead to hypoglycaemia.[8] Even without antidiabetic medication they have the ability to cause hypoglycaemia, if done excessively. Once the muscles get used to these manoeuvres it will be easier for them to use glucose and keep blood sugars down.

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