

## Using a clearer explanation of the glycaemic index for type 2 diabetes to improve results and save money

**20**  
YEARS OF  
**NICE**  
1999-2019

NICE guideline (NG28) for type 2 diabetes states “encourage high fiber, low glycaemic index sources of carbohydrate in the diet”, but how do we to best explain this vital information to the public?

To make this information more accessible, we re-calculated the glycaemic load of several foods into a more familiar conversion. The results? 56 delighted practice patients in drug-free diabetes remission. £40K saved from our diabetes drug budget! And worldwide media impact.

*“Our GP practice now sees type 2 diabetes drug-free remission on a weekly basis.”*

**Dr David Unwin**, GP, Norwood Surgery



### What we did and why

In 30 years our GP practice has suffered an 8 fold increase in patients with type 2 diabetes (T2D) despite increasing expenditure on drugs for diabetes. Is lifelong medication really the answer to this global epidemic?

In 2012 we saw T2D as a chronic deteriorating condition. At the time, while agreeing with NICE that helping patients make lower glycaemic index food choices was key to reducing the overall glucose burden, we were unable to help many people understand starchy carbohydrates like bread, cereals or potatoes are themselves made up of glucose, making poor dietary choices for those with type 2 diabetes.

Patients and health care professionals struggled to understand the glycaemic index and the related glycaemic load. We believed this was due to unfamiliarity with glucose itself. We felt recalculating the glycaemic load in terms of the far more familiar 4g teaspoon of table sugar may help people make better dietary choices.

The resulting teaspoon of sugar equivalent system lent itself very readily to being incorporated into one of 7 infograms that we produced. We published a paper on this in The Journal of Insulin Resistance in 2016.

### Outcomes and impact

In clinical practice when people with T2D understood, that for instance, 150g of boiled rice affected their blood glucose to the same extent as **10** teaspoons of table sugar they started eating something else.

Food Item	Glycaemic index	Serve size g	How does each food affect blood glucose compared with one 4g teaspoon of table sugar?
Basmati rice	69	150	10.1
Potato, white, boiled	96	150	9.1
French Fries baked	64	150	7.5
Spaghetti White boiled	39	180	6.6
Sweet corn boiled	60	80	4.0
Frozen peas, boiled	51	80	1.3
Banana	62	120	5.7
Apple	39	120	2.3
Wholemeal Small slice	74	30	3.0
Broccoli	15	80	0.2
Eggs	0	60	0

Other foods in the very low glycaemic range would be chicken, oily fish, almonds, mushrooms, cheese

So far we have 56 very proud patients who have achieved drug-free T2 diabetes remission. This represents **11%** of our diabetic population. Our GP practice is the cheapest for drugs for diabetes of the 18 local GP practices. Saving about £40,000 per year on drugs for diabetes alone

The infograms also proved to be very media friendly and were taken up by The New Scientist, Daily Mail & TV, as well as other websites & books They are included in several RCGP diabetes resources. The most popular has had 256,000 impressions on Twitter.

### What we learnt

As suggested by NICE, implementing lessons from the glycaemic index is vital to improving the T2D control of most patients. Given the opportunity and support, the majority of patients will implement significant dietary changes rather than be put on lifelong medication. Our approach has proven popular with patients as well as resulting in significant drug budget savings.

Drug-free remission of diabetes has now become a regular occurrence in our GP practice and others using this approach around the world. This gives hope which helps motivate other people to cut both sugar and refined, high glycaemic index carbohydrates out of their diets.

In our practice research cohort of 130 patients, the average improvement in diabetic control was such that 33 individuals were able to come off medication for diabetes. A bonus was significant improvements in blood pressure, liver function & lipid profiles and an average weight loss of 8.3 kg. For most people with diabetes, good control is mainly about sources of dietary glucose.

Our 7 Infograms are NICE endorsed & can be found attached to the T2D in adults guideline **NG28** or here <https://phcuk.org/nice/> for free.