

Dietary Approaches for Insulin Resistance & Type 2 Diabetes

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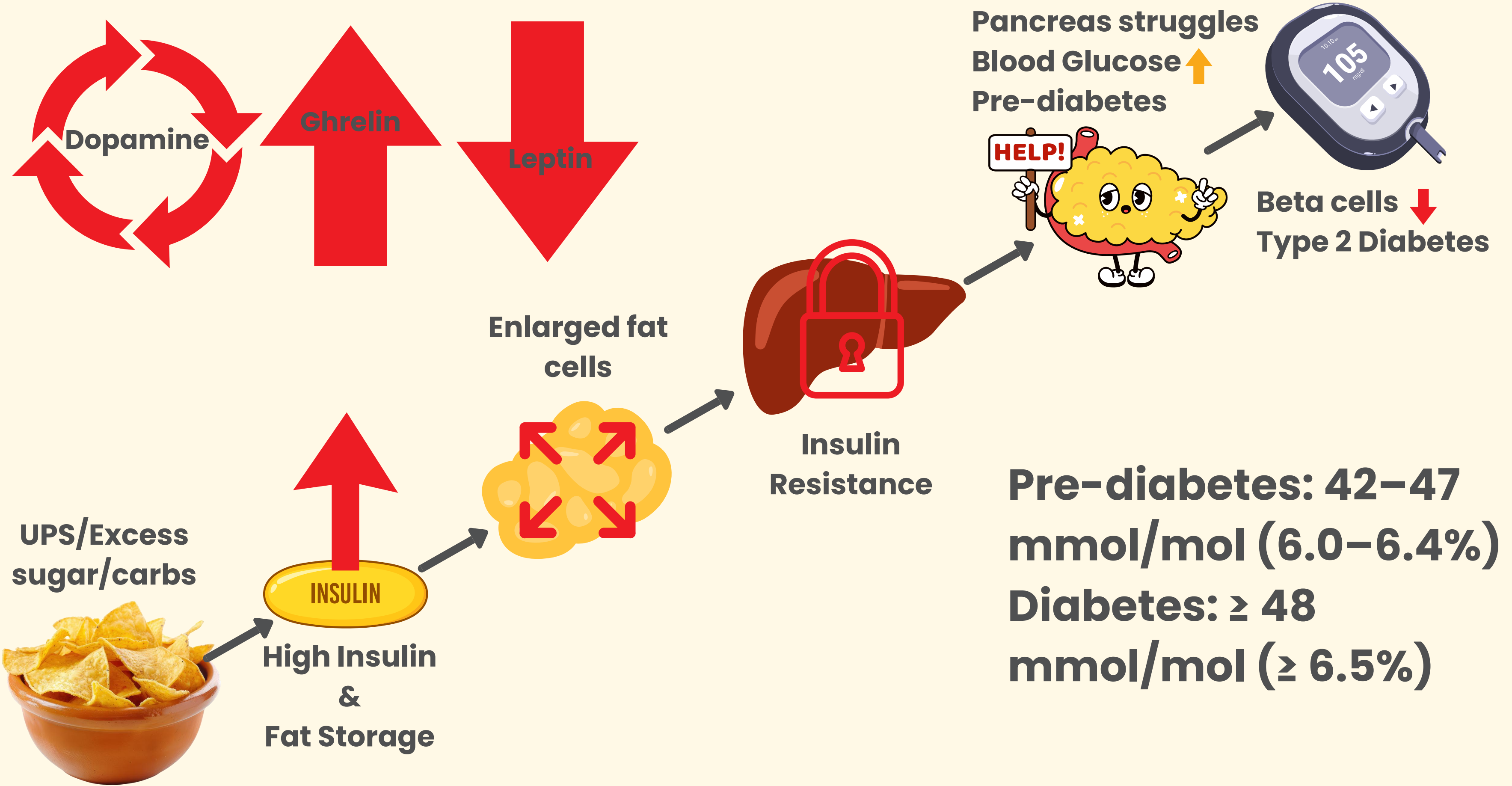
A woman walks into your surgery with an egg on her head...





**A guy walks into your surgery
with a waist circumference the
same size as his height, 6'2"...**

- Insulin 50 units BD**
- Pioglitazone 30mg OD**
- Metformin MR 500mg 2 tab
BD**
- Atorvastatin 20mg OD**
- Fluoxetine 60mg OD**
- Omeprazole 20mg 1 cap BD**



What can you tackle in a 10-minute appointment? Identify Insulin resistance and it changes diet options



Healthy waist
circumference less
than $\frac{1}{2}$ height



Acrochordons



Acanthosis nigricans

Current dietary options for Type 2 remission:

- **NHS Path to Remission programme**
- **Low-fat, low-cal 'Eatwell Guide'**
- **Low-Carb**

- **NHS Type 2 Diabetes Path to Remission Programme**

Based on the DiRECT model: Low calorie 800–900Kcal/d for 12–weeks + support to reintroduce foods & monitoring for 12–months

5-year follow-up of the randomised Diabetes Remission Clinical Trial (DiRECT) of continued support for weight loss maintenance in the UK: an extension study

Michael EJ Lean, Wilma S Leslie, Alison C Barnes, Naomi Brosnahan, George Thom, Louise McCombie, Tara Kelly, Keaton Irvine, Carl Peters, Sviatlana Zhyzhneuskaya, Kieren G Hollingsworth, Ashley J Adamson, Falko F Sniehotta, John C Mathers, Yvonne McIlvenna, Paul Welsh, Alex McConnachie, Alasdair McIntosh, Naveed Sattar, Roy Taylor**



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After 2 years: 36% of participants in remission from type 2 diabetes

15%, $p=0.0004$), without antidiabetic medication (51% vs 16%, $p<0.0001$)

Of those in remission at year 2, 26% remained in remission at 5 years.

... (number of events per 100 patient years) were under half those

9.36% remission

Eatwell Guide

Check the label on packaged foods

Each serving (150g) contains

Energy 1046kJ 250kcal	Fat 3.0g LOW	Saturates 1.3g LOW	Sugars 34g HIGH	Salt 0.9g MED
13%	4%	7%	38%	15%

of an adult's reference intake

Typical values (as sold) per 100g: 697kJ/ 167kcal

Choose foods lower in fat, salt and sugars

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.

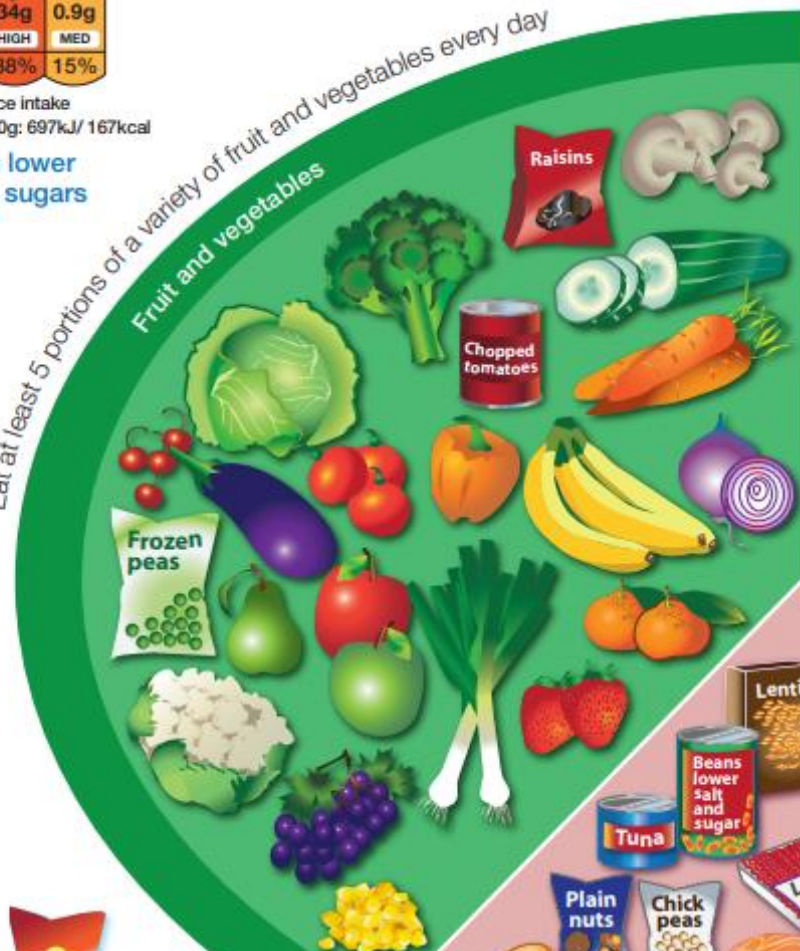


Water, lower fat milk, sugar-free drinks including tea and coffee all count.

Limit fruit juice and/or smoothies to a total of 150ml a day.

Eat at least 5 portions of a variety of fruit and vegetables every day

Fruit and vegetables



Choose wholegrain or higher fibre versions with less added fat, salt and sugar

Potatoes, bread, rice, pasta and other starchy carbohydrates



Beans, pulses, fish, eggs, meat and other proteins

Eat more beans and pulses, 2 portions of sustainably sourced fish per week, one of which is oily. Eat less red and processed meat



Dairy and alternatives

Choose lower fat and lower sugar options



Oil & spreads

Choose unsaturated oils and use in small amounts



Eat less often and in small amounts

Per day 2000kcal 2500kcal = ALL FOOD + ALL DRINKS

The Eatwell Guide:
a prescription for
OVERNUTRITION & UNDERNOURISHMENT
=
MALNUTRITION OF OBESITY

Source: Public Health England in association with the Welsh Government, Food Standards Scotland and the Food Standards Agency in Northern Ireland

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Wheat receives on average 11 applications of pesticides:

4 x Fungicides

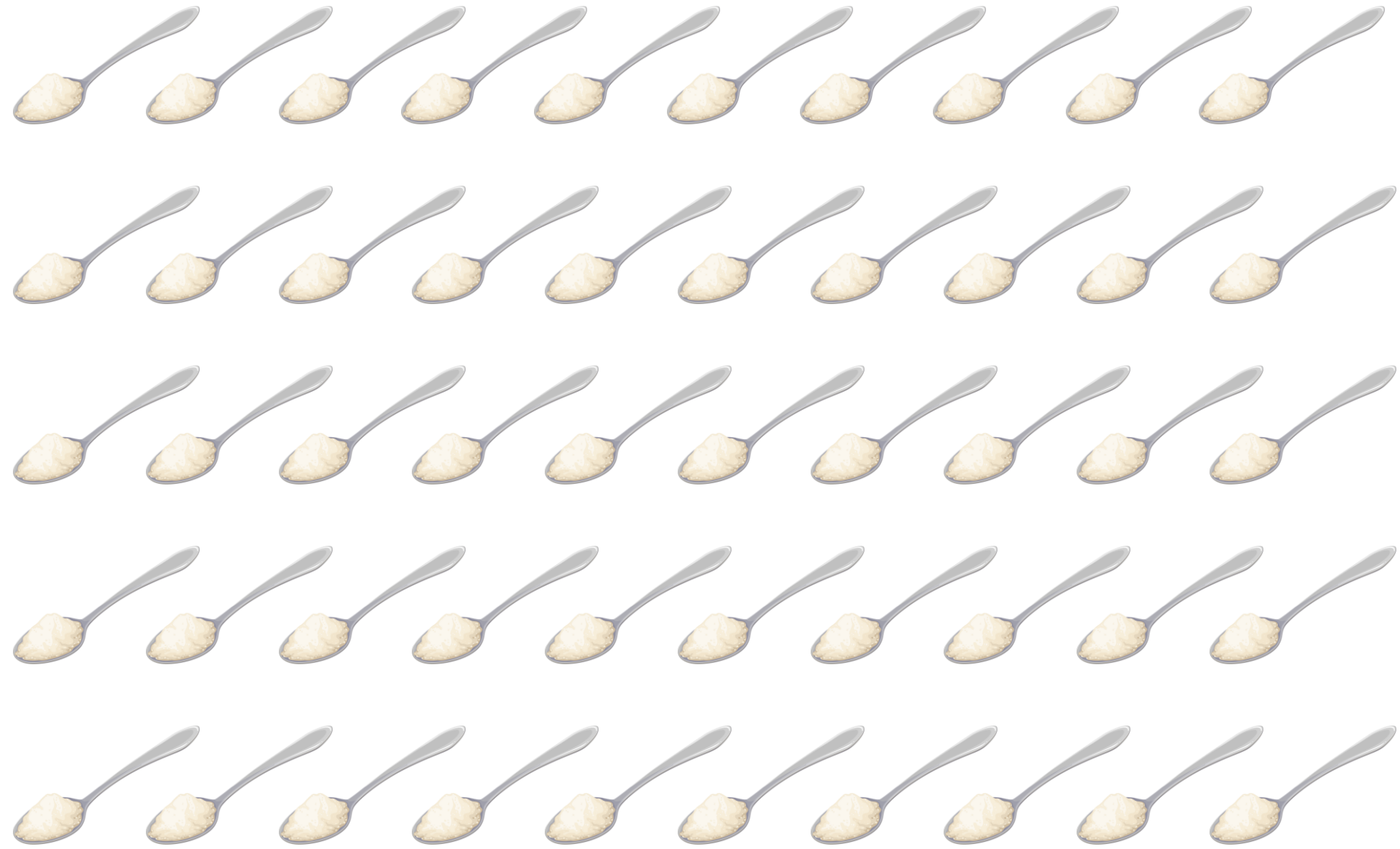
3 x Herbicides

2 x Growth regulators

1x Insecticide

1x Molluscicide

All pesticides are made from fossil fuels.



50
teaspoons



Wholegrains = Sugar

INGREDIENTS:
 whole grain **WHEAT** (96.1%), sugar, invert sugar syrup, **BARLEY** malt extract, salt, molasses, iron, vitamin B3, B5, B9, B6, B2.
 May contain **PEANUTS** and **NUTS**.

% NUTRITION INFORMATION

Typical Values	Per 100g	Per 40g serving	Reference Intake*	%RI*
Energy	1540kJ 364kcal	616kJ 146kcal	8400kJ 2000kcal	(7%)
Fat	1.8g	0.7g	70g	(1%)
of which saturates	0.3g	0.1g	20g	(<1%)
Carbohydrate	70.4g	28.2g	90g	(6%)
of which sugars	12.5g	5.0g		
Fibre	12.0g	4.8g		
Protein	10.8g	4.3g		
Salt	0.72g	0.29g	6g	(5%)

VITAMINS & MINERALS:

	Per 100g	%RI*	Per 40g serving	%RI*
Riboflavin (B2)	0.91mg	(65%)	0.36mg	(26%)
Niacin (B3)	11mg	(69%)	4.4mg	(28%)
Vitamin B6	1.0mg	(71%)	0.40mg	(29%)
Folic Acid (B9)	112µg	(56%)	44.8µg	(22%)
Pantothenic Acid (B5)	4.0mg	(67%)	1.6mg	(27%)
Iron	7.7mg	(55%)	3.1mg	(22%)

*Reference Intake of an average adult (8400kJ/2000kcal)
 † Shreddies is a source of iron. Iron contributes to normal energy-yielding metabolism.

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Dr Jen Unwin's CRAVED Screening

CRAVED Screening

Assessing Symptoms(*)

Patient first needs to consider which foods they feel unable to control or moderate. Then ask: How many of the following statements **are true** for you or **have been true** at some time in your life? (* Based on ICD-10 Criteria for Pathological Substance Use)

- C** 1. Have you ever had such a strong desire or sense of compulsion at the thought of eating these foods that you could not resist the urge to eat them? (*Compulsion*)
- R** 2. Have you ever noticed that you need to use increasing amounts of these foods to get the same effect compared to when you started? (*Increased Tolerance = Reaching for more*)
- A** 3. Have you ever noticed a growing neglect towards planning of activities because you were too tired /hungover/ sick due to overeating these foods? (*Growing Neglect (of Activities)*)
- V** 4. Have you ever used more of these foods than you intended on more than one occasion? (*Loss of Control = more Volume*)
- E** 5. Have you ever experienced at least two of the following withdrawal symptoms (see i-list) when you cut down or stopped using these foods? (*Withdrawal symptoms from stopping or cutting down = Exclusion of foods causing withdrawal symptoms*)
- D** 6. Have you (ever) continued to use these foods despite you or someone else believing that your memory and concentration challenges, anxiety, unexplained mood swings, depression, panic attacks etc or other mental health problems were likely to be due to your use of these foods? (*Continued Use Despite Damage awareness*)

More than 3 'Yes' mean likelihood of Addiction / Pathological Use (*)



**What can you tackle
in a 10-minute
Appointment?**

**“Do you ever feel like you
are addicted to some
foods?”**

**“Would you say that you
are an emotional eater or
a stress eater?”**

Why does low carb work?

Weight-loss injections aren't the only way to boost GLP-1





- Amino acids
- Long-chain fatty acids

ANIMAL PROTEIN + FAT = MULTI-HORMONE SATIETY

- GLP-1 (Glucagon-like peptide-1)**
- PYY (Peptide YY)**
- CCK (Cholecystokinin)**
- OXM (Oxyntomodulin)**
- Amylin**



**Fermentable fibre -
slower & less potent
GLP-1 stimulation**

▶ [BMJ Nutr Prev Health. 2023 Jan 2;6\(1\):46–55. doi: 10.1136/bmjnph-2022-000544](#) 

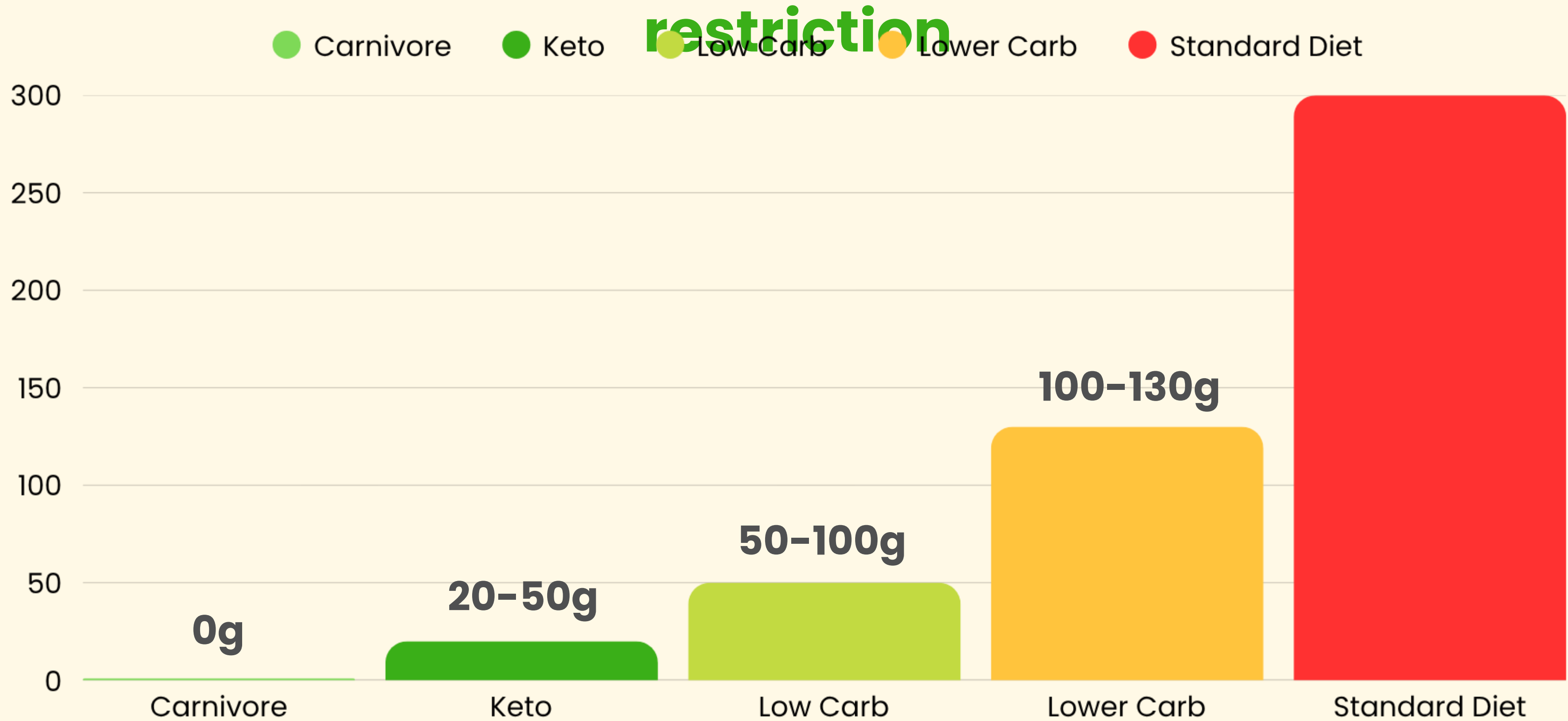
What predicts drug-free type 2 diabetes remission? Insights from an 8-year general practice service evaluation of a lower carbohydrate diet with weight loss

[David Unwin](#)^{1,2,}, [Christine Delon](#)^{1,3}, [Jen Unwin](#)⁴, [Simon Tobin](#)⁴, [Roy Taylor](#)⁵

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The spectrum of therapeutic carbohydrate restriction





Clinical Intelligence

Adapting diabetes medication for low carbohydrate management of type 2 diabetes: a practical guide

Campbell Murdoch, David Unwin, David Cavan, Mark Cucuzzella and Mahendra Patel

British Journal of General Practice 2019; 69 (684): 360-361. DOI: <https://doi.org/10.3399/bjgp19X704525>

'Pocket Guide' to medication changes by Lydia Bazzano, Cucuzzella, Eric Westman, William Yancy

<https://www.guidelinecentral.com/guideline/41586/pocket-guide/42182/#section-anchor-303502>

If you can't help...

Ultra processed food addiction-

Liberate is an 8-week online course with weekly support for 12 months created by food addicts, for food addicts.

<https://liberatetoday.org>

Thank you for listening



Email: info@nutritionali.org

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