
Leadership
NHS Innovator of the Year
Daryl Belsey
Trainee Emergency Ambulance Cr
London Ambulance Service NHS T
Microbiology and Bl
Chesterfield Royal Hospital NHS Founda
David Unwin
Partner GP
Northwood Surgery, Southport
Claire Jay and Dr Rakesh
Transformation Lead/Governing Body Membe
West Suffolk Clinical Commissioning Group
Richard
Head of School
Health Education
Mili Doshi

Best in Show 2015
Hesketh Bank

2015

Using the power of **HOPE** with a **LOW-CARB DIET** to beat **DIABETES** at Norwood Surgery… and beyond

Study population 50 patients: Average effects of low carb intervention over 19 months

Diabetes control improved; HbA1c down from 52.4mmol/mol to 42.4 mmol/mol

Weight down; 98Kg to 89 Kg (one and a half stone)

Cholesterol improved; 5.7mmol/L to 5.3mmol/L

Practice Population 9000: Results of 3 years of the low-carb approach at Norwood Surgery

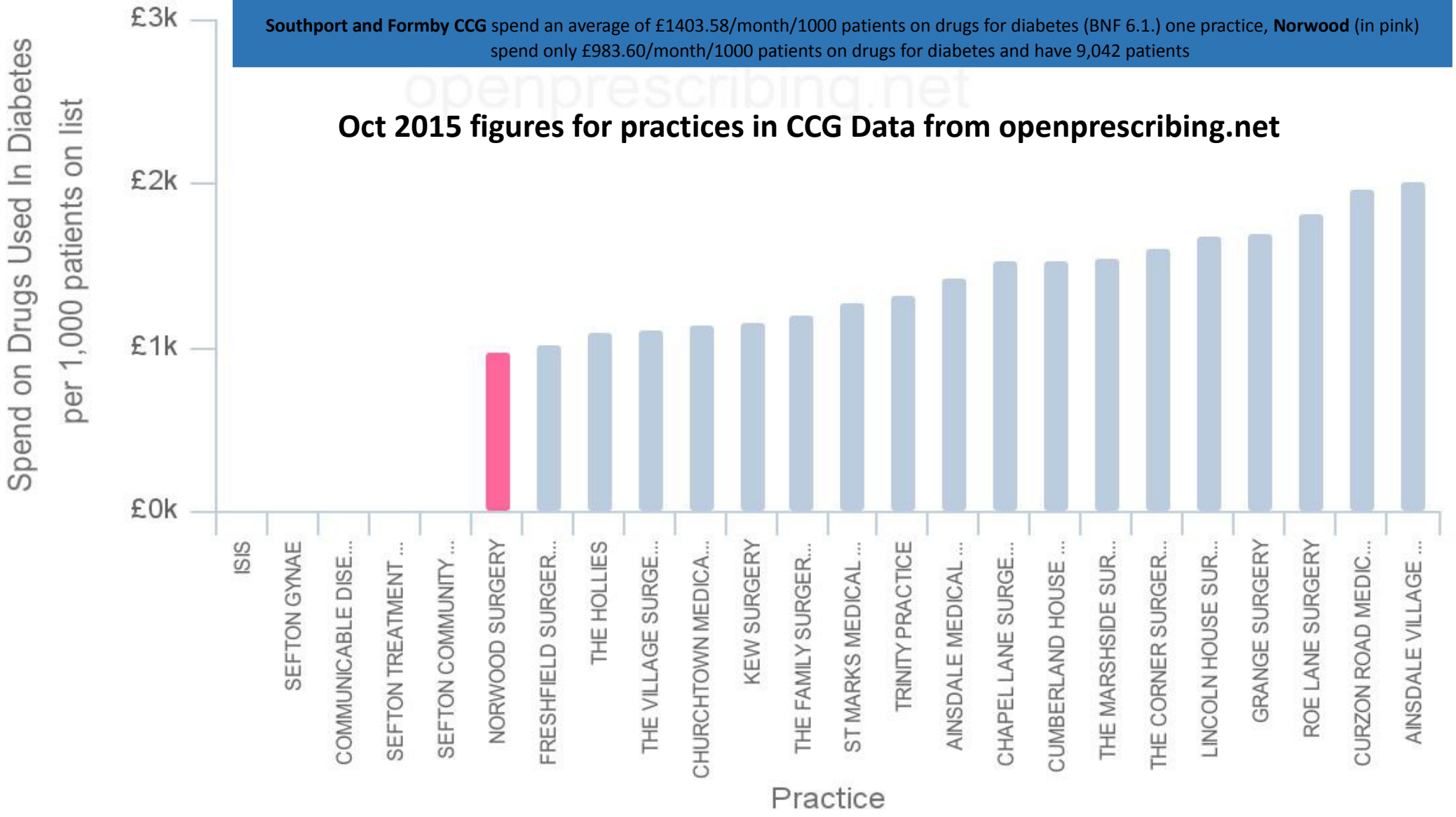
Obesity: QOF prevalence at Norwood dropping and lower than CCG and national averages.
Was 9.4% now 7.5%, this against a national average of 9.4%

Improving markers for diabetic control *HbA1c is< =59mmol/mol in last 12mths* is the national marker.
We were average, now improved by 10% to 69.1%, better than the National average of 61.5%

Yearly saving against our CCG average on drugs for diabetes (BNF 6.1.) =£45,569.50

Southport and Formby CCG spend an average of £1403.58/month/1000 patients on drugs for diabetes (BNF 6.1.) one practice, **Norwood** (in pink) spend only £983.60/month/1000 patients on drugs for diabetes and have 9,042 patients

Oct 2015 figures for practices in CCG Data from openprescribing.net

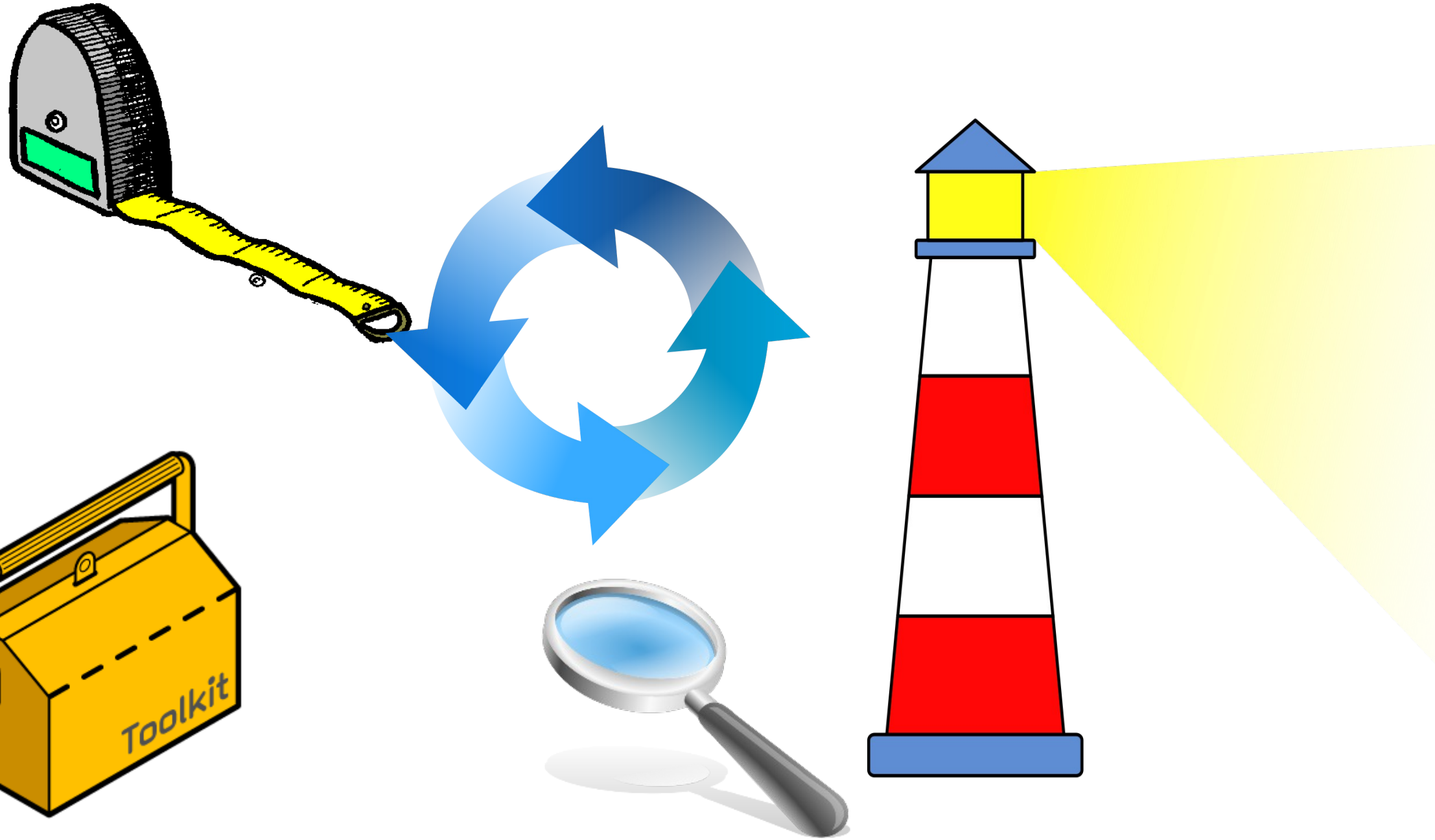


Chronic Disease ↑ Wellbeing ↓

Disease ▭ Wellbeing ▭ Psychological factors

Wellbeing ↑ Medication, Consulting, morbidity & mortality ↓

Wellbeing ▭ **Hope**


Toolkit

Diabetes motivation:

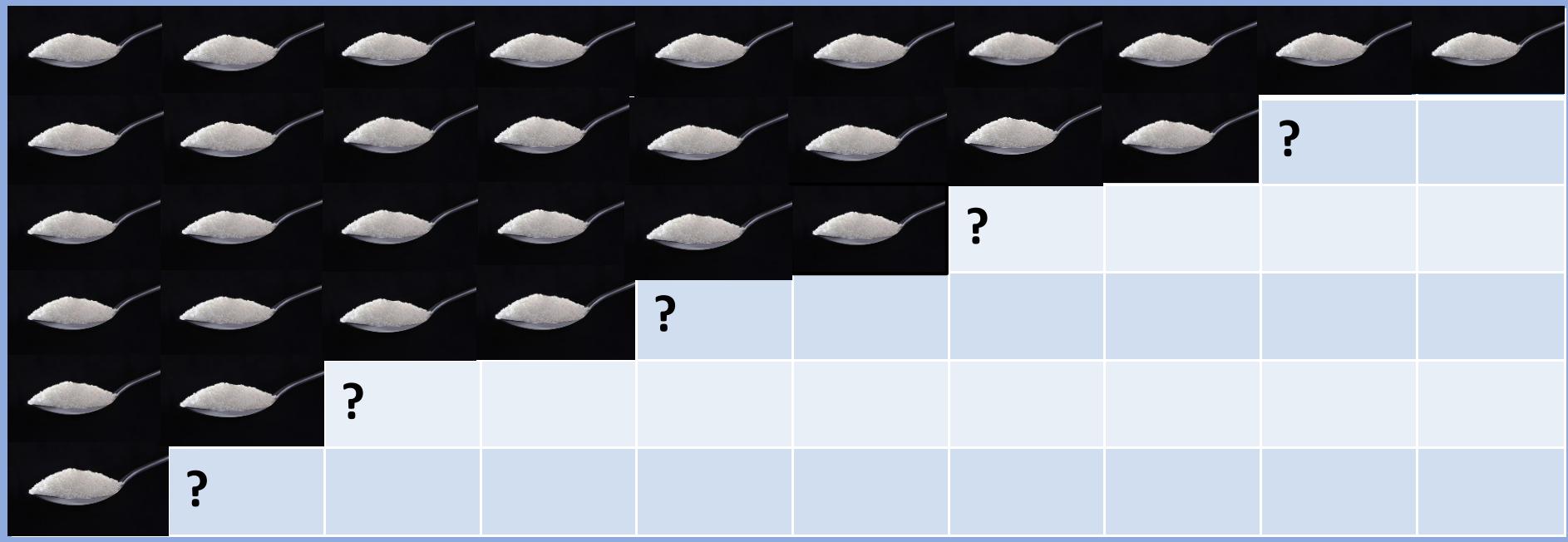
- Shared direction of travel… GOALS
- Small steps
- What is already working, strengths, resources?
- Noticing

Diabetes education:

- Less sugar from all sources
- More green stuff
- Some protein
- Some good fats, no bad fats

Diabetes is largely about sugar

- People with T2 Diabetes struggle to metabolize glucose
- So that for many a ‘moderate amount’ of sugar leaves them ‘moderately poisoned’
- Where, oh where is all this sugar coming from?



The ‘SUGAR SPECTRUM’

where we start from dictates

next steps

Three different sources of sugars that make up our total dietary ‘sugar burden’; shown as 4g teaspoon of table sugar equivalents*

1 Naturally occurring sugars	2 Foods with added sugars	3 Foods digested down into sugars
Banana **4.9** teaspoons/100g	Coco Pops®, average **24.4**teaspoons/100g	Brown bread **10.8** teaspoons/100g
Honey **17.6** teaspoons/100g	Fanta orange **3.4** teaspoons/100ml	Boiled spaghetti **3.7** teaspoons/100g
Skimmed Milk **0.9** teaspoons/100ml	Digestive biscuits **8.8** teaspoons/100g	French fries **5.1** teaspoons/100g
Raisins **17.1** teaspoons/100g	Malt loaf **14.7** teaspoons/100g	Basmati rice **6.8** teaspoons/100g
Apple juice **4.3** teaspoons/100ml	Rasberry yoghurt **2.4** teaspoons/100g	Baked potato **6.3** teaspoons/100g

*as each food would effect blood glucose, from the International tables of glycaemic index and glycaemic load (Atkinson, Foster-Powell et al. 2008) as per the calculations in a paper submitted to The Journal of Insulin Resistance ‘It's the glycaemic response to, not the carbohydrate content of food that matters in diabetes and obesity: The glycaemic index revisited.’ D J Unwin et al.

How was it done?
The nuts and bolts:

1. **One to one** with GP or PN
- Personal health goals
- Past successes
- Who cooks/shops
- Low carb information
- Measuring weight and waist
- Review inc feedback, sincere compliments
- No failure only learning

2. In groups of 20 with GP or PN
- Personal health goals
- Past successes
- Who cooks/shops
- Low carb information
- Measuring weight and waist
- Review inc feedback, sincere compliments
- No failure only learning
- Use of patient experts sharing tips
- Food demos

NICE diabetes guidelines Dec 2015

'Treatment and care should take into account individual needs and preferences. Patients should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals'

1.3.3 Encourage high-fibre, **low-glycaemic-index sources of carbohydrate** in the diet

1.3.6 **Individualise recommendations for carbohydrate** and alcohol intake

Nearly all breads & cereals are high glycaemic –index carbs

Green veg high in fibre, vitamins & very low in sugar

One slice of wholemeal toast = 5 teaspoons of table sugar

A small baked potato of 150g = 8 teaspoons of table sugar

I am often asked why we don't advocate much calorie counting or food weighing for our patients?

Patients mostly work out portion control for themselves IF WE FIRST WORK ON MOTIVATION through positive individual health goals.

Most patients already know obesity is portion and food-type related.

Often help with motivation, continuing support and feedback is a lot more help than threatening with the dire consequences of 'bad habits' and then giving detailed advice which does not fit in with their lives.

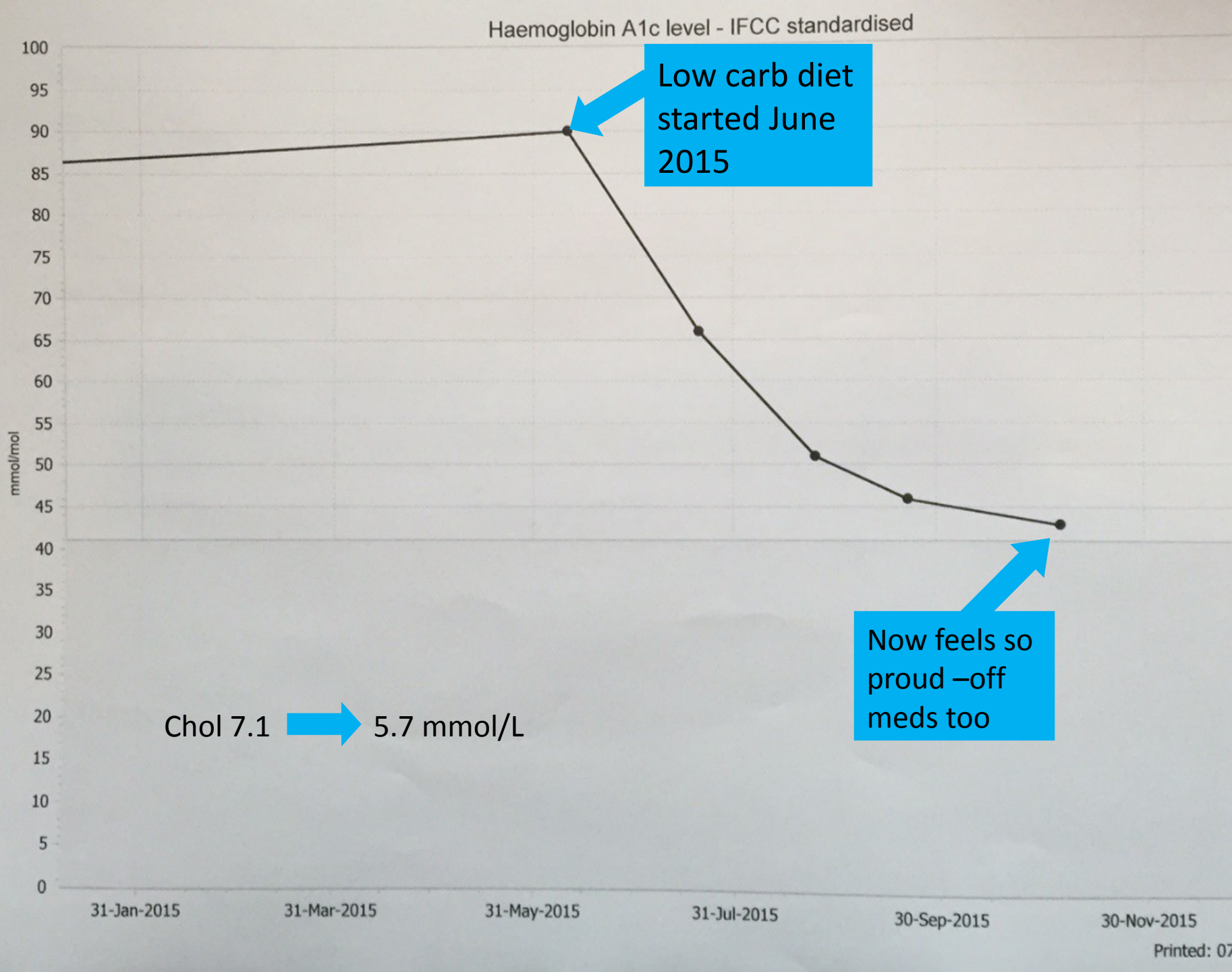
Motivated, informed patients solve problems for themselves

Result of Low-Carb Diet for one 43yr old patient

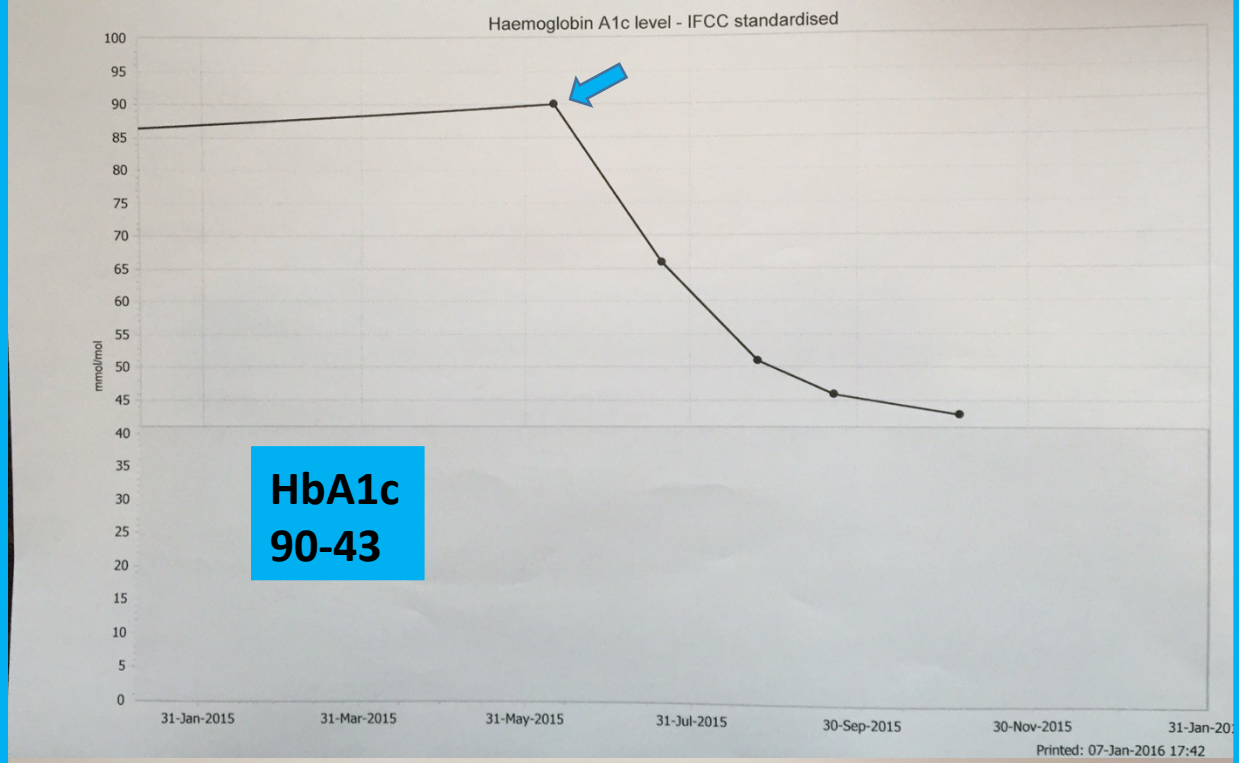
Graph of HbA1c, down from 90mmol/mol to 43mmol/mol in five months

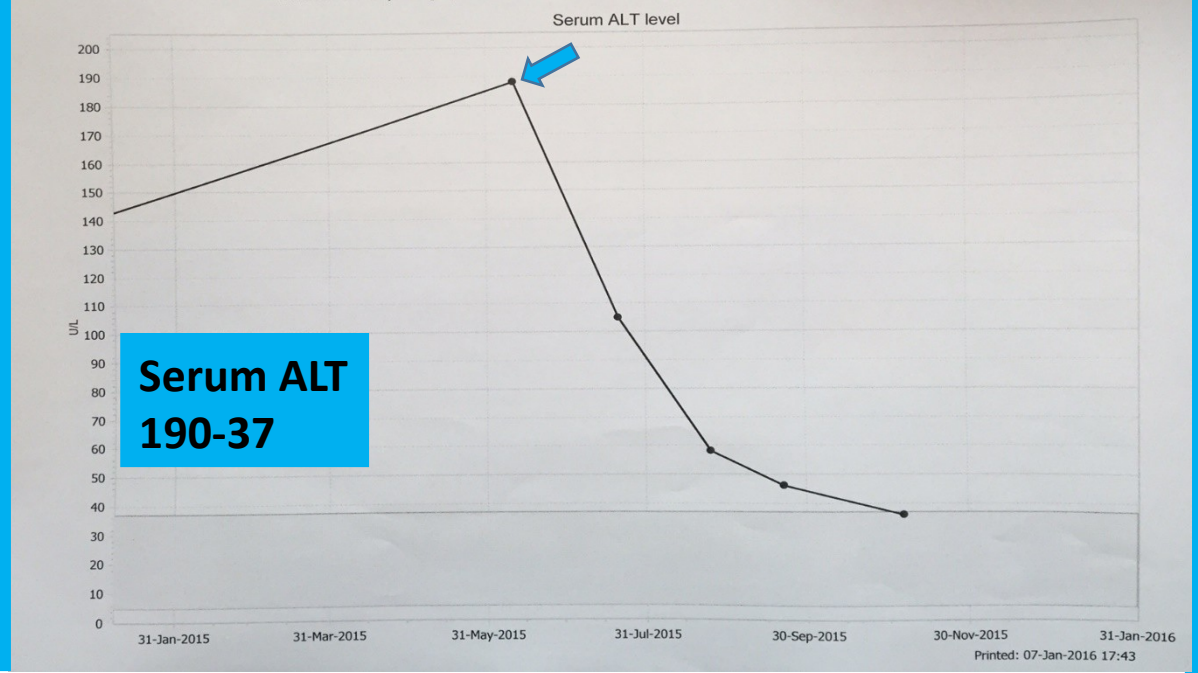
Also

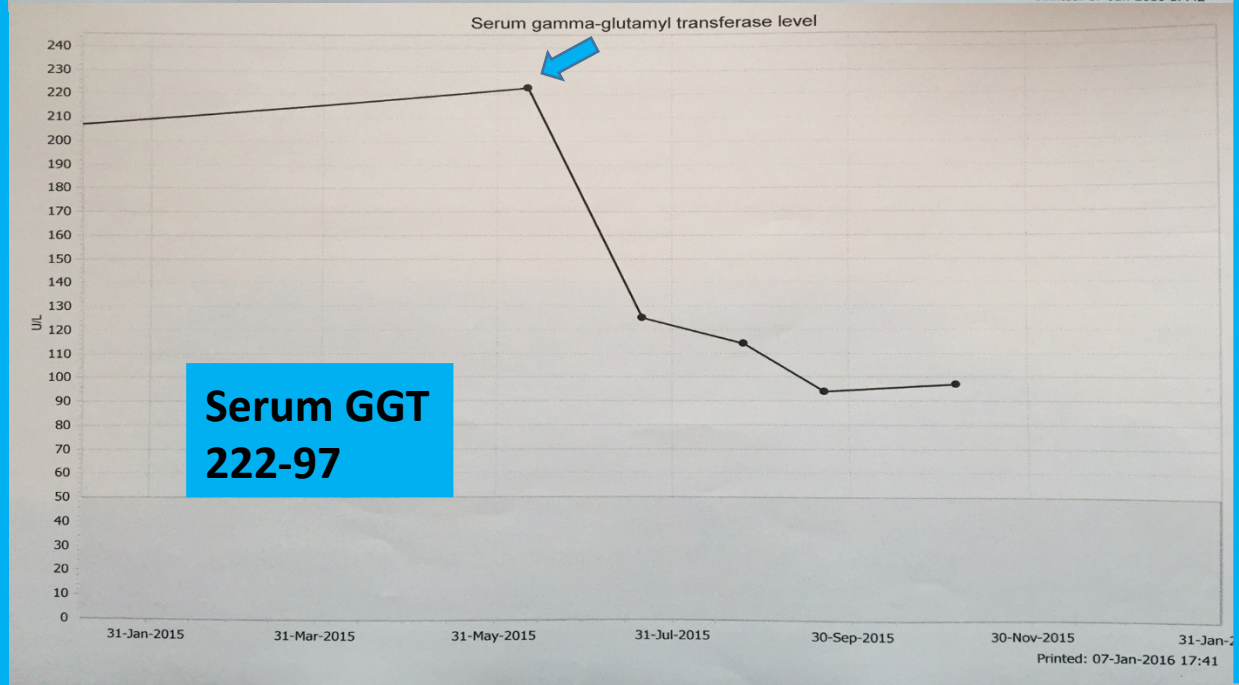
- 14Kg weight loss
- Improved BP
- Off Metformin
- He feels 'in control'
- No breathlessness now
- Off painkillers




O/E - weight
kg
Diet started here
Weight loss 12Kg
31-Jan-2015
31-Mar-2015
31-May-2015
31-Jul-2015
30-Sep-2015
30-Nov-2015
31-Jan-2016
Printed: 07-Jan-2016 17:42

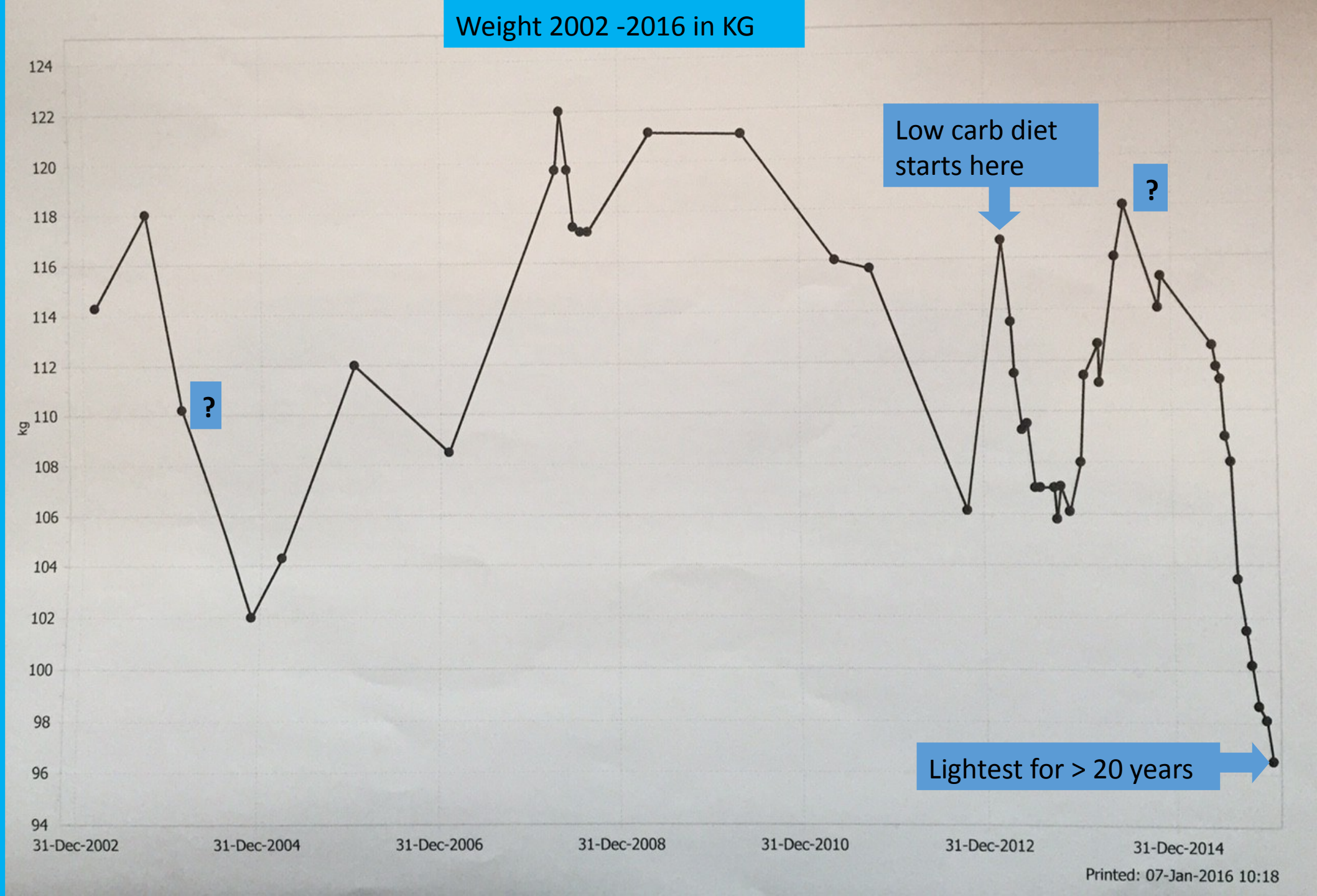

Haemoglobin A1c level - IFCC standardised
mmol/mol
HbA1c 90-43
31-Jan-2015
31-Mar-2015
31-May-2015
31-Jul-2015
30-Sep-2015
30-Nov-2015
Printed: 07-Jan-2016 17:42


Serum ALT level
U/L
Serum ALT 190-37
31-Jan-2015
31-Mar-2015
31-May-2015
31-Jul-2015
30-Sep-2015
30-Nov-2015
31-Jan-2016
Printed: 07-Jan-2016 17:43


Serum gamma-glutamyl transferase level
U/L
Serum GGT 222-97
31-Jan-2015
31-Mar-2015
31-May-2015
31-Jul-2015
30-Sep-2015
30-Nov-2015
Printed: 07-Jan-2016 17:41

Weight by Year 2002-2016

"I am the lightest for over 20 years and feel younger, looser, more mobile




…but will it roll out David?
Dr Michael Mosley
Media Star
Simon Stevens
Chief Exec NHS
England
Dr David Unwin
Provincial GP
BMJ Awards Night 2016

#savingmum

David’s mum, Peggy aged 80, winning the family plank-off!

Before LCHF 312lb or **141**Kg
HbA1C was 8.6% (70.5 mmol/mol)
BP 160/100
Fatty liver
Loss of sensation to feet

After LCHF 232lb or **105**Kg
HbA1c 5.4 % (35.5 mmol/mol)
BP 110/70
Fatty liver resolved
Sensation returning to feet.

Diabetes.co.uk
the global diabetes community

On-line, Low Carb Program: 10 weekly parts

Launched on November 14, 2015

128,000 members in 103 days

- **6.2Kg, about a stone** average weight loss at 6 months
- **48%** have improved sleep, also improved BP, waist
- **Representative split** amongst hard-to-reach communities – South Asian *(10%)*, elderly *(16% over 65+)*, people from lower incomes (15% earn less than £13,000)
- **HbA1c results to be evaluated*

Diabetes.co.uk
the global diabetes community

Low carb Diet and Hope.

An effective combination to fight diabetes

Unwin, D. Diabesity; Perhaps we can make a difference after all? **Diabesity in Practice;** Vol No.4, 2014.

Unwin, D. , Cuthbertson, D., Feinman, R. & Sprung, V.. Raised GGT levels, Diabetes and NAFLD: Is dietary carbohydrate a link? **Diabesity in Practice**; September 2015.

Unwin, D. & Tobin, S. A patient request for some 'deprescribing'. **BMJ;** 03 August 2015.

Unwin, D. & Unwin, J**.** Low carbohydrate diet to achieve weight loss and improve HbA1c in type 2 diabetes and pre-diabetes: experience from one general practice. **Practical Diabetes**; 31(2):76, 2014.

Unwin, J et al. A prospective study of positive adjustment to low limb amputation, **Clinical Rehabilitation**, 23, 1044-1050.

Unwin, J & Dickson, J. Goal Focused hope…and wellbeing. **RSSSR**, 21, 161-74, 2010.

	n	Pre-intervention	Post-intervention	P Value
Weight (Kg)	64	97.8 (93.6, 101.9)	89.0 (84.9, 93.1)	<0.001
GGT (iu/l)	65	76.9 (58.3, 95.6)	41.8 (33.0, 50.3)	<0.001
HbA1c >41(mmol/mol)*	38	52.4 (48.0, 56.9)	42.4 (39.7, 45.0)	<0.001
Total Cholesterol (mmol/l)	58	5.7 (5.4, 6.0)	5.3 (5.0, 5.7)	<0.001
Chol:HDL ratio	57	4.3 (3.9, 4.6)	3.8 (3.5, 4.1)	<0.001

Clinical characteristics prior to and following the implementation of a low CHO diet for a minimum of three months (mean of 13 months)