Lifestyle: low-carb diets in diabetes

Lifestyle change is the mainstay of diabetes management. As clinicians, we all know that (although getting our patients empowered to change can be hard). Here we will focus on the recent trials on low-carb diets.

The definition of ‘low carbohydrate’ levels is <130g/d of carbohydrate (very low-carb diets are 20–50g/d). Remember that some low-carb diets (such as the Atkins diet) do NOT calorie restrict. In those who are overweight, calorie restriction is probably an important part of any regimen.

There have been lots of anecdotal reports about the success of low-carb diets for those with type 2 diabetes. What is the evidence?


- In the obesity epidemic, the low-fat message has got through, but carbohydrate intake has gone up, and so has total calorie intake.
- Trials have shown that low-carb diets are beneficial to glycaemic control, lipid and hormone parameters, even in the absence of weight loss. Low-carb diets typically result in reducing triglycerides and increasing HDL.

However, a Diabetes UK review of the evidence pointed out that (Diabetes UK Position statement, May 2017):

- Weight management should be the mainstay of glycaemic control in those who are overweight.
- Low-carb diets are safe and effective in the short term, and result in better glycaemic control, weight loss and CV risk factors.
- There is no clear evidence that low-carb diets are any better than any other approach to weight loss in the long term.

Diabetes UK concluded that low-carb diets are an option in type 2 diabetes, but have not been shown to be superior: patient preference and the ability to maintain any diet in the long run is probably more important!

However, since then, a trial has come out giving us some detailed data on low-carb diets in type 2 diabetes.

This was a trial of 300 patients recruited from UK primary care. All were aged 20–65y, had had diabetes for fewer than 6y and had a BMI of 27–45. None were on insulin. People were randomised to best-practice care or the intervention (DIRECT trial, Lancet 2018;391:541 and Lancet Diabetes and Endocrinology https://doi.org/10.1016/S2213-8587(19)30068-3).

The intervention involved a very low-calorie and low-carb diet (800 calories/d) using food replacement (shakes, etc.) for 3–5m. This was followed by the re-introduction of food over 2–6w, with long-term support and follow-up for 12m. All had their hypertensive and hypoglycaemic medication withdrawn for the duration of the trial.

Only 1 person had a complication that was thought to be intervention-related (biliary colic).

Analysis was based on intention to treat (21% withdrew from the intervention arm).

- Almost half of all patients in the intervention arm had remission of their diabetes, with an average weight loss of 10kg at 12m.
- This small trial shows significant benefit in those who used the low-carb diet, even 24 months later, with the benefit directly related to the amount of weight lost.
Outcomes

<table>
<thead>
<tr>
<th>Weight loss achieved</th>
<th>Outcomes after 12 months</th>
<th>Outcomes after 24 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention group</td>
<td>Control arm</td>
<td>Intervention arm</td>
</tr>
<tr>
<td>Weight loss of ≥15kg</td>
<td>24%</td>
<td>0%</td>
</tr>
<tr>
<td>Diabetes in remission</td>
<td>46%</td>
<td>4%</td>
</tr>
<tr>
<td>Mean body weight lost</td>
<td>10kg</td>
<td>1kg</td>
</tr>
<tr>
<td>Quality-of-life rating</td>
<td>Significant improvement</td>
<td>Worsened</td>
</tr>
<tr>
<td>On hypoglycaemic drugs</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

The proportion of people in remission varied according to the weight loss achieved:

<table>
<thead>
<tr>
<th>Weight loss achieved</th>
<th>Proportion with diabetes in remission after 12m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gained weight</td>
<td>0%</td>
</tr>
<tr>
<td>0–5kg loss</td>
<td>7%</td>
</tr>
<tr>
<td>5–10kg loss</td>
<td>34%</td>
</tr>
<tr>
<td>10–15kg loss</td>
<td>57%</td>
</tr>
<tr>
<td>&gt;15kg loss</td>
<td>86%</td>
</tr>
</tbody>
</table>

This study has completely changed the conversation I have with people with diabetes, particularly those newly diagnosed: this is not about having a chronic condition you have to live with; this could be about getting rid of your diabetes – but it will take hard work (and you, the patient, not me, the doctor, will have to do that hard work). Are you up for it?

The NHS is piloting this trial in several areas (on about 5000 people).

Books for patients explaining the diet are listed in the Useful websites box.

Maintenance low-carb diets

One of the challenges facing those who lose weight is that as they lose weight, calorie expenditure goes down. This trial took people who had lost 12% of their starting weight on a diet and randomised them to 20 weeks on one of three maintenance diets (low, medium or high-carbohydrate diet). The maintenance diets were calorie controlled so that weight lost during the initial dieting phase was maintained (BMJ 2018;363:k4583). The study was small but demonstrated something important:

- Those on low-carbohydrate maintenance diets burnt more calories than those on high-carbohydrate diets, despite the same calorie intake.

So, it may be that once people have lost weight, they will be able to keep it off better if they stick to a low-carb diet in the longer term. This may be something to discuss with patients who yo-yo in their weight, regaining rapidly after losing weight.
| For professionals: |
|DVLA at a glance guide: [http://tinyurl.com/GPU-DVLA](http://tinyurl.com/GPU-DVLA) |

| For patients: |
| The book by Michael Mosley outlining the low-carb diet is: *Blood Sugar Diet: Lose weight fast and reprogramme your body* |
| There are several cookbooks including this one written by a GP: *The 8-week Blood Sugar Diet Recipe Book: 150 simple, delicious recipes to help you lose weight fast and keep your blood sugar levels in check* by Dr Clare Bailey. |
Our comprehensive one-day update courses for GPs, GP STs, and General Practice Nurses. We do all the legwork to bring you up to speed on the latest issues and guidance.

All our courses are:

<table>
<thead>
<tr>
<th>Relevant</th>
<th>Developed and presented by practising GPs and immediately relevant to clinical practice.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenging</td>
<td>Stimulating and thought-provoking.</td>
</tr>
<tr>
<td>Unbiased</td>
<td>Completely free from any pharmaceutical company sponsorship.</td>
</tr>
<tr>
<td>Fun!</td>
<td>Humorous and entertaining – without compromising the content!</td>
</tr>
</tbody>
</table>

Are they for me?

Our courses are designed for:

- GPs, trainers and appraisers preparing for appraisal and revalidation or wanting to keep up to date across the whole field of general practice.
- GP ST1, 2 & 3, looking for the perfect launch pad into general practice.
- GPs who want to be brought up to speed following maternity leave or a career break.
- General Practice Nurses.

What’s included?

- 6 CPD credits to help you with appraisal and revalidation, plenty of time for interaction, humour and video clips – to keep you focused and awake!
- The Handbook – comprehensive and fully referenced, covering all the most recent research and guidelines pertinent to primary care, but interpreted for real life General Practice.
- gpcpd.com – 12 months FREE access to 500 articles, covering 97% of the RCGP determined curriculum for primary care. Many articles with free online learning opportunities to earn extra CPD! Includes super-easy link up to FourteenFish appraisal app.
- Coffee, snacks and lunch – plenty of breaks to fuel your mind.
- NEW! A fancy Red Whale re-usable cotton bag to carry your Handbook home! We’re happy to say we’ve banished plastic bags for good!

What’s not included?

Our courses contain NO theorists, NO gurus, NO sponsors, NO reps on the day! Just real-life GPs who will be back at the coal face as soon as the course has finished.

www.gp-update.co.uk
The GP Update Course – our flagship course!

With the sheer amount of evidence and guidelines inundating us, it can be hard to know which bits should change our practice, and how. We collate and synthesise this evidence for you, so you don’t have to! We look at the most recent hot topics for primary care in the high impact journals national guidelines. Importantly, we also identify common clinical conundrums – the things that make consultations tricky – and proactively address these within the limitations of the evidence available. The GP Update Course is designed to be very relevant for all clinicians working in primary care. It offers abundant material to help you meet the requirements for appraisal and revalidation. Using a highly interactive lecture based format, the GP presenters discuss the results of the most important evidence and guidance, placing them in the context of what is already known about this topic. The day is challenging and fun and we guarantee you will come away with great ideas to put into practice tomorrow.

Southampton  Sat 28 Sep 2019
Exeter  Wed 2 Oct 2019
Cardiff  Thur 3 Oct 2019
London  Fri 4 Oct 2019
London  Sat 5 Oct 2019
Leeds  Wed 9 Oct 2019
Liverpool  Thu 10 Oct 2019
Manchester  Fri 11 Oct 2019
Birmingham  Sat 12 Oct 2019
Cambridge  Tue 15 Oct 2019
London  Wed 16 Oct 2019
Nottingham  Thur 17 Oct 2019
Inverness  Wed 6 Nov 2019
Edinburgh  Thur 7 Nov 2019
Glasgow  Fri 8 Nov 2019
Durham Roadshow  Thu 28 Nov 2019
Brighton  Fri 29 Nov 2019

The Women’s Health Update Course

This one day update will arm you with the skills to manage this area of general practice with confidence! Expect the latest on perimenopausal contraception, low libido, fertility, abnormal bleeding and the ‘abnormal’ cervix as well as benign breast disease and lots more! We promise it’ll be interactive, entertaining and relevant for ALL GPs and GP STs!

London  Thur 3 Oct 2019
Cardiff  Fri 4 Oct 2019
Manchester  Thu 14 Nov 2019
London  Fri 15 Nov 2019
Birmingham  Thu 21 Nov 2019
Nottingham  Fri 22 Nov 2019
Durham Roadshow  Fri 29 Nov 2019

The MSK and Chronic Pain Update Course

MSK problems are the most common reason for a primary care appointment and represent 30% of repeat primary care appointments. Some of these consultations are straightforward, but others, particularly persistent pain can represent a real challenge. We want to help build your confidence. On the course we will tackle the evidence-base for common MSK conditions including back pain, osteoarthritis, spondyloarthritis, polymyalgia, fibromyalgia, hypermobility and much more. We will look at some diagnostic tricks and pitfalls. We will explore why chronic pain can only be ‘in the brain’ – and more importantly, what we and our patients can do about it. And we will provide you with a new narrative and a tool box of strategies you can start using the next day. If you see patients with MSK problems and persistent pain, this course is for you. We welcome all clinicians working in this field.

Leeds  Thur 10 Oct 2019
Nottingham  Fri 11 Oct 2019
London  Wed 13 Nov 2019
Manchester  Thur 14 Nov 2019
Durham Roadshow  Tue 26 Nov 2019

To book go to www.gp-update.co.uk, call us on 03330 093 090 or use the booking form.
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If you’ve been waiting for a job as a leader to develop your leadership and management skills then you’re missing out! Leadership starts with identifying and taking control over what is in your hands right now! The Lead. Manage. Thrive! Course will give you the confidence to skilfully negotiate, deal with difficult conversations, influence colleagues and bosses, delegate and be proactive about managing your workload. The course is for anyone who wants to step up, find a better way of working and gain a toolkit of strategies to become a successful and resilient practitioner!

**Birmingham**
Fri 11 Oct 2019

**London**
Thur 17 Oct 2019

**Durham Roadshow**
Wed 27 Nov 2019

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**The Cancer Update Course**

The role of primary care in supporting cancer patients is changing beyond recognition and the Red Whale Cancer Course can help you tackle the challenges this brings with confidence. The most recent epidemiological data suggests that 1 in 2 of us will get cancer in our lifetimes. With survival rates increasing, cancer becomes a long term condition for many patients which often interacts with other co-morbidities. And with so many news stories about cancer, patients want to know whether they need screening/risk assessments/ genetic tests. There is increasing evidence to support us in making early diagnoses and pressure to do so. Patients with a cancer diagnosis question if they might be suitable for new immunotherapies (and the small proportion that are suitable remain at risk of side effects for years after treatment). Patients living with cancer as a long term condition often experience late effects of treatment that can be complex and difficult to spot and treat. The Red Whale Cancer Course will guide you through these pitfalls and focus on practical help and useful tools.

**London**
Thur 14 Nov 2019

**Birmingham**
Fri 15 Nov 2019

**Durham Roadshow**
Wed 27 Nov 2019

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**Our Consultation Skills Courses**

Delivered by our longstanding partner EPI, these small group courses have a different feel and flavour to our topic-based Updates and are packed with interactive activities designed to review and refine your consultation skills! But don’t worry – we won’t ask you to role-play in front of the group! Perfect for GPs, GP STs and Practice Nurses. For more information, please visit [www.gp-update.co.uk/courses](http://www.gp-update.co.uk/courses)

**The Telephone Consultation Course**

**Cardiff**
Wed 2 Oct 2019

**London**
Thur 3 Oct 2019

**London**
Fri 4 Oct 2019

**Manchester**
Thur 10 Oct 2019

**Birmingham**
Fri 11 Oct 2019

**Edinburgh**
Fri 8 Nov 2019

**Durham Roadshow**
Sat 30 Nov 2019

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**The Effective Consultation Course**

**Manchester**
Wed 9 Oct 2019

**London**
Thur 17 Oct 2019

**Glasgow**
Thur 7 Nov 2019

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**The Medically Unexplained Symptoms Course**

**London**
Wed 16 Oct 2019

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**The Red Whale Durham Roadshow 26-30 November 2019**

Choose up to five courses from six Updates over five days!

For more information about the courses available and to book your place, visit: [www.gp-update.co.uk/Durham2019](http://www.gp-update.co.uk/Durham2019) or call us on 03330 093 090.
To book go to www.gp-update.co.uk, call us on 03330 093 090 or use the form below.

I would like to come on the following course(s) (please write legibly!):

- The GP Update Course (location) ............................................................... (date) ................................
- The MSK and Chronic Pain Update Course (location) ............................................................... (date) ................................
- The Lead. Manage. Thrive! Course (location) ............................................................... (date) ................................
- The Cancer Update Course (location) ............................................................... (date) ................................
- The Women’s Health Update Course (location) ............................................................... (date) ................................
- The Telephone Consultation Course (location) ............................................................... (date) ................................
- The Effective Consultation Course (location) ............................................................... (date) ................................
- The Medically Unexplained Symptoms Course (location) ............................................................... (date) ................................

I can’t attend a course, but would like to order your Handbook:

- GP Update Handbook and 12 months’ access to GPCPD £150
- Lead. Manage. Thrive! Handbook (no GPCPD) £70
- Pharmacist Update Handbook (no pharmacist-CPD) £70
- GPN (Nurse) Update Handbook (no GPN-CPD) £70
- Women’s Health Update Handbook (no GPCPD) £70
- Cancer Update Handbook (no GPCPD) £70
- MSK and Chronic Pain Handbook (no GPCPD) £70
- Working at Scale? Handbook (no GPCPD) £70

Name .............................................................................................. Address ..............................................................................................

Email ..............................................................................................

(We will send your booking confirmation and receipt to you via email. We would also like to send you our FREE clinical updates and information about our other courses. Please tick here if you are happy to receive our emails: ☐ Rest assured we will never share your information with anyone else. To see our privacy policy please go to www.gp-update.co.uk/privacy).

Mobile Number (We can’t complete your course booking without this, but it will only be used if we need to contact you urgently about the course.)

Price as stated in the flyer for each course. If applicable, please provide your discount code here ..............................................................................................

Please send this form with your cheque payable to GP Update Limited to: Red Whale, University of Reading, Reading Enterprise Centre, Earley Gate Entrance, Whiteknights Road, Reading, Berkshire RG6 6BU.
Deep Dives WEBINAR SERIES

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What?

Red Whale Deep Dives are monthly webinars, created to support the educational needs of busy primary care practitioners. They’re designed to be a little bit different – capturing the magic of a face-to-face course, and transferring it to the small screen.

Why?

A lot happens in a year, and some subjects are better suited to a deeper exploration than we can offer on our action and information packed one-day Update courses.

The Red Whale team is always uncovering answers to niggly primary care conundrums, PUNS and DENS if you like – and we want to share them with you!

Sometimes you need a bit of inspiration to find those extra CPD points to complete your appraisal. Or you just need a bit more Red Whale in your life!

Red Whale Deep Dives are split into bite-sized learning chunks – so you can choose to watch the whole hour in one go, or just one short segment at a time. Watch them at a time which suits you – when you can relax and learn at your best – preferably with your feet up and a cuppa in hand, or a cheeky G&T!

www.gp-update.co.uk/deepdives
Red Whale Deep Dives give you:

- A chance to take a ‘deep dive’ into important, difficult or controversial topics in more detail.
- At least 3 ‘microlearning segments’ per webinar – or Quick Dips as we like to call them – perfect for fitting into your busy daily routine.
- Cases, quizzes and polls to test your knowledge.
- Great resources to download and use back at the surgery the next day.
- The most relevant information for primary care, delivered by the Red Whale team.

How it works

- You choose which webinars you want access to and buy them online.
- Each webinar lasts one hour and you can either watch them live on the dates and times shown or on demand.
- You’ll also have access to lots of useful resources to download and use straightaway in your practice!
- Get each webinar at an introductory discounted price of £20 per webinar (normally £25!).

Where do I sign up?

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www.gp-update.co.uk/deepdives

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Inflammatory bowel disease: It’s all diarrhoea isn’t it?

Available on demand now!
The menopause laid bare

Available on demand now!
Anxiety: A Cinderella condition?

LIVE 10 September 8pm
Diabetes in remission: A story of hope?

LIVE 22 October 8pm
Contraception laid bare

LIVE 14 November 8pm
Emergencies in primary care

LIVE 12 December 8pm
The best of 2019: Our top 10 practice-changing points